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DIVIDENDS, LABOR REMUNERATION AND CAPITALIZATION IN LABOR COOPERATIVES. WORKER SHAREHOLDING

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ABSTRACT

This paper is devoted to the possibility of creating worker cooperatives in which worker members are remunerated not through wages, but through dividends calculated on the added value produced by the enterprise, that is, cooperatives in which there is no labor cost, but only dividends on the net economic value produced by collective venture. It is shown how this solution makes it possible to unambiguously link dividends paid to worker members in each accounting period with the value of the member's financial stake in the equity capital of the enterprise, that is, with the value of the shares held by each individual member even in the absence of a real market for corporate shares. In the presence of a capital market, that is, an equilibrium price for the shares held by members, it will be possible for the cooperative to issue shares to be allotted to worker members but also sold to investors outside the membership. The paper concludes by discussing possible fairness criteria in the distribution of income and shares to members and concludes that the Rawlsian maximin criterion seems to be the most suitable for the democratic and collegial governance of worker cooperatives.

KEY WORDS: worker cooperative; dividends; wages; labor contract; agency model; cooperative shares; Rawlsian distributive equity.

1. INTRODUCTION

The objective of this paper is to show how a different interpretation of the remuneration of labor for worker members of worker cooperatives, not in terms of wages, but in terms of dividends from the value-added produced, may allow for the development of new financial instruments, or labor shareholding, that can enable worker cooperatives, at least in principle, to achieve high and adequate capitalization, as highlighted by seminal contributions such as those of Furubotn and Pejovich (1970), Furubotn (1976), Jensen and Meckling (1979), and Pejovich (1990). The paper is developed as an intellectual experiment (thought experiment) since, to the author's knowledge, the financial, remunerative and distributive instruments proposed in this paper have not yet been introduced in any cooperative organization, to date.'

The arguments in this paper refer, as a starting point, to Benjamin Ward's well-known 1958 neoclassical model of the labor managed firm. In that model, designed to describe the functioning of productive organizations in the former Republic of Yugoslavia, members of cooperatives are remunerated by shares of value added, net of the cost of capital, not by wages, which instead represent the cost of labor as calculated and distributed by capital firms. This solution is consistent with the economic and institutional nature of worker cooperatives, since worker members are not employees but have control rights over it. It is well known, however, that the historical and institutional evolution of worker cooperatives found in market economies has led them to remunerate worker members through wages, in much the same way as employees in corporations. In other words, in all existing models of worker cooperatives, members are wage earners. In some cases, such as Mondragon in Spain, members receive, in addition to wages, rebates as shares of net residuals at the end of each accounting period.

2. OVERCOMING THE CONTRACTUAL RELATIONSHIP BETWEEN EMPLOYER AND WAGE OR SALARIED WORKER (EMPLOYMENT CONTRACT)

This strong discrepancy between the economic nature of labor cooperatives as represented by economic theory, and concrete institutional practice in market economies, is the starting point of the present work, which will lead to theorizing the replacement of "wages" with "dividends" on the return on invested capital and, eventually, the introduction of real forms of labor share ownership.

Some authors, from both the Marxist and radical liberalism traditions, have developed in recent years a number of theories that require the overcoming of the contractual relationship between employer and salaried or subordinate worker (employment contract) in worker cooperatives or self-managed enterprises, according to different versions (Screpanti, 2001; Ellerman, 2005, 2016; 2021; Tortia, 2022). Underlying these arguments is the observation that the employment contract is the instrument used by capitalist enterprises to impose a hierarchical relationship between the employer and wage earners (employees), based on a transaction that establishes the subordination of the wage workers to investors. This implies the use of workers' productive capabilities in a relationship of authority, as also affirmed by the neo-institutionalist tradition (Coase, 1937; Simon, 1951; Screpanti, 2017).

The imposition of hierarchy results from the payment of a wage (equilibrium price of the labor factor of production in the labor market) by the employer in exchange for the worker's ceding to the enterprise the right to use his/her labor services. Creating democratic organizations run by workers based on the "one head or one member, one vote" rule of governance (worker cooperatives) would require overcoming this hierarchical relationship. Strictly speaking, overcoming hierarchy implies both overcoming the relationship of subordination, and thus the labor contract, and also overcoming the remunerative form inherent in that relationship, i.e., wages as the price of the transfer of labor services from the worker to the enterprise (see also Dow, 2003). To these elaborations must also be added some other theoretical positions, typical of the radical neo-liberal tradition that has become widespread in recent decades, which emphatically emphasizes the importance of remunerating entrepreneurial work activity based on the dimension of the enterprise's residual, and not in terms of a fixed contractual or wage (Kiyosaki, 2017).

Philosophical arguments have also been proposed as the basis for overcoming the employment relation since the transfer of labor services from the worker to the firm would also imply the transfer of subjective responsibility for the decisions made by the worker. This transfer is incompatible with the Western tradition of both natural rights in John Locke's (1690) labor theory of property, and the theory of subjective rights as personal rights that are both inalienable and non-transferable or duplicable, in the same way that civil and political rights are (Ellerman, 2005, 2016, 2021). Natural rights in Locke's labor theory of property (1690) require that the entire product of labor be appropriated by those who produced it.

In the perspective proposed in this paper, such theories enter as a necessary philosophical premise for the creation of an evolutionary path leading to the introduction of financial instruments that provide neither for the subordination relationship between employer and employee nor for the payment of labor services based on a wage or price of such services. On the other hand, the personal and subjective rights, which cannot be alienated or transferred, of worker members in worker cooperatives would be respected through the creation of a mutualistic and democratic governance structure, based on the delegation of decision-making responsibility to elected decision-makers from the social base, typical of worker cooperatives, and not based on the transfer of decision-making responsibility, typical of employed labor in capitalist corporations (Ellerman, 2005, 2016, 2021).

3. DIVIDENDS AS A FORM OF PAYMENT OF LABOR CONTRIBUTION IN LABOR COOPERATIVES

The thought experiment begins by considering the simplest possible forms of labor remuneration, and then making them more complex and realistic as new elements of the workings of markets, both labor and financial markets, and organizations are added to the initial picture.

The simplest possible form of labor remuneration is a payment to a self-employed or independent worker for example a professional or artisan. In this case labor remuneration is simply the economic net residual at the end of the accounting period. The radical and socialist liberal tradition in political economy, beginning for example with Giuseppe Mazzini (1860) in Italy and John Stuart Mill (1871) in the United Kingdom, has from the beginning interpreted worker cooperatives simply as mutualistic entrepreneurial forms of an associational nature, in which the worker members are independent workers who join together to establish a mutualistic and democratic, non-hierarchical enterprise. The same interpretation of worker cooperatives represented the legal basis for the formation in the 1950s of the well-known Mondragon group of worker cooperatives, which is considered the most important in the world for this type of enterprise (White and White, 1989). In that context, during Francisco Franco's military regime, worker cooperatives were not banned, but considered self-employed associations. To this day in Mondragon, the monthly remuneration of worker members is not considered a real wage, but an “advance” on the net business result. It is supplemented at the end of the year by rebates on the overall economic result of the enterprise (White and White, 1988; Morrison, 1989).

This paper takes up this radical liberal tradition and views worker cooperatives as simply self-employed associations in which members are remunerated with dividends of each accounting period's net residual, or dividends, to obtain which non-labor costs, depreciation of assets, and cost of capital are subtracted from the firm's income. In other words, labor remuneration is exactly equivalent to the remuneration of a self-employed worker when it is calculated as a share of the collective remuneration, or dividend, of all the collective of members in the cooperative. Taken literally, this interpretation implies that labor costs in worker cooperatives are zero since (in the absence of wage labor) members are remunerated exclusively by dividends from the value-added produced.

In financial terms, the dividend is instead interpreted as return on the financial investment in the firm's capital. The apparent incompatibility between these two definitions lies in the fact that while in terms of labor remuneration the dividend refers to the economic net residual *in the absence of cost of labor or wages*, in the financial definition, the dividend refers to the net residual or profit after subtracting labor costs or wages. The two definitions can be reconciled when it is considered that the net residual of the enterprise comes to coincide with the remuneration of labor when workers control an enterprise of an associative nature (the labor cooperative), then appropriate its net residual, and the labor cost or wage bill is zero.

The coincidence between these two definitions of the dividend of economic activity (remuneration of labor and remuneration of financial capital invested) requires that the mechanisms through which it is possible to trace back from the value of the dividend paid to the worker members, to the value of the financial assets corresponding to the worker members' associational participation in the cooperative enterprise, are made explicit.

3.1. In the absence of financial markets: the capital structure in the Mondragon system and the Slovenian proposal of European ESOPs

In the absence of financial markets, it is not possible to assign a real price to the value of the financial assets held by the worker members of a cooperative, since there is no intersection between supply and demand for such financial securities. In such a case, the economic valuation of financial assets remains implicit, as the only recognizable economic valuation is the labor income or dividend paid by the enterprise to the worker. This dividend may correspond to some value of the member's financial position in the enterprise, but it is unspecified in the absence of

supply and demand. For this reason, several proposals regarding employee financial participation and the capital structure of worker cooperatives, which refer to major employee financial participation schemes in the United States (Employee Stock Ownership Plan or ESOP) and the capital structure of Mondragon cooperatives, have preferred to disregard the market valuation of financial assets held by members, and instead refer to the book value of these financial positions, typically the Net Asset Value or NAV. This solution has the advantage of making references to accounting documents such as the capital and of disregarding the high volatility of market prices of financial assets. It may not, however, be able to give a realistic representation of the actual value of these financial positions based on the expected (future) earnings of the organization.

In systems similar to Mondragon's, members accumulate their rebates yearly based on the residual earnings received at the end of the year (White and White, 1988; Morrison, 1989). The rebates are automatically capitalized to increase the company's net worth and finance investment projects (Tortia, 2007). As a rule, capitalized rebates, held in individual capital accounts, cannot be liquidated and cashed in by the member before the termination of the membership relationship, which may occur through voluntary resignation, dismissal, or retirement (Ellerman, 1986).

In a recent reform project by the research group headed by the Institute for Economic Democracy in Ljubljana, and coordinated by Prof. David Ellerman, and being implemented in cooperation with the Slovenian government, a new proposal for self-financed capitalization for worker cooperatives has been introduced that is similar to the Mondragon capital structure, and incorporates several key features of ESOPs in the United States. This proposal envisages the transformation of capitalistic enterprises into worker cooperatives based on the division of enterprise profits that would be allocated to members as undistributed rebates that would go into individual capital accounts owned by members. The capital of the cooperative would be held in a trust that, especially during the transition from the capitalist to the cooperative form, would hold the entire capital of the enterprise, which would neither be allocated nor distributed to the members. Allocation and distribution could begin only at the end of the transition period. The distribution of the capital shares accumulated by the members through capitalized rebates would take place, unlike in the case of Mondragon and the U.S. ESOPs, before the member's retirement or voluntary resignation, based on a predetermined schedule that depends on the amount of profits made by the enterprise (which is an indicator of the speed with which the initial cost of converting from a capitalist corporation to a cooperative can take place), on the total amount of

capital the enterprise needs to make its investments, and finally, on the number of incoming members who can contribute to the capitalization of the enterprise and thus relieve the financial requirements of existing members. In this way, usually within a few years, the partners could have their share of the profits made by the firm in previous years liquidated (Ellerman, Gonza, Berkopec, 2022a, 2022b).

This mechanism is based on accumulating and distributing already realized earnings, not future earnings. For this reason, it may not be able to account for the firm's future economic performance and provide the right incentives for firm members to invest and innovate since future earnings may not be their own (Tortia, 2007, 2021; Galor, 2015, 2019).

3.2. U.S. ESOPs and the presence of a market for employee equity shares

In systems where individual equity shares held by employees (not necessarily members of a worker cooperative) can be traded in the market, as in the case of ESOPs in the United States, there is a market valuation for these securities. In the case of ESOPs, employees of an enterprise that introduces this type of financial participation usually hold a limited or even marginal percentage of the enterprise's total shares, which are either purchased by the enterprise and allocated to employees or issued anew and allocated to supplement and not replace contractual wages, as a private supplementary pension plan in the form of financial participation in the enterprise's capital. The shares allotted to workers are held in a trust in charge of collectively representing workers at the company's shareholder meetings. The shares owned by workers are redeemed at the current market price at the time of retirement (Rosen, 2023). This form of financial participation has shown important potential in increasing the labor productivity and competitiveness of U.S. firms that have adopted it. Several empirical studies measure an increase in labor productivity of more than 5 percent in the presence of an ESOP scheme (Kumbhakar and Dunbar, 1993; Blasi, Kruse, and Weltmann, 2013). A considerable number of firms that have adopted the ESOP scheme are listed on publicly regulated markets such as NYSE (New York Stock Exchange), while in most cases the market for the exchange of equity shares in these firms exists but is private (private equity market). A solution similar to U.S. ESOPs, i.e., holding workers' equity shares in a trust and limiting or blocking the ability (in some cases temporarily, in others permanently) of workers to sell those shares, to eliminate the risks of demutualization and sale of workers' shares to outside investors, is usually followed, albeit in the absence of peremptory legal obligations to do so, by employee-owned companies in the United Kingdom and the United States,

such as the well-known case of the John Lewis Partnership in England (Storey, Basterretxea and Salaman, G., 2014; Salaman and Storey, 2016).

As the percentage of shares out of the total held by employees increases, the space for the implementation of a real market for shares in the company's capital decreases, both in private and public regulated markets, given the constraints imposed on the sale of shares by employees and also given the fact that the number of players operating in this market tends to decrease due to the preponderance of the financial and strategic choices of the company's workers over outside investors. This possibility, although limited and residual, should be accounted for, because U.S. corporate law does not prohibit the enterprise from being held exclusively by its employees through the use of the ESOP scheme. If this occurs (or at any rate the percentage of shares held by employees is high), the market for corporate shares continues to exist, but it becomes predominantly internal, i.e., exchanges take place predominantly among the worker-owners themselves, not externally so as not to dilute workers' exclusive ownership. An internal stock market is subject to obvious limitations because of the small number of trading parties and of the individual financial constraints to which these parties (employees) are usually subject. Given of these limitations, it can be assumed that share prices set by an internal market may be an imperfect and distorted signal of the real financial value of shares held by both worker-owners and outside investors.

4. A NEW PROPOSAL FOR WORKER-MEMBER OWNERSHIP AND WORKER SHARES IN WORKER COOPERATIVES

Based on the theoretical and applicative (institutional) premises in the previous paragraphs, this section proceeds to formulate a new proposal regarding the possibility and implementation of new forms of share ownership for worker members of worker cooperatives.

The theoretical starting point of the proposal concerns the agency relationship between employer and employee in capitalistic companies. Based on the model of agency proposed by Jensen and Meckling (1976), it can be said that the agency relationship between employer and employee, is characterized by contrasting interests. The two contractual parties enter into an employment contract such that the worker agrees to cede control over his or her labor services to

the employer in exchange for a wage (fixed or variable).¹ The worker agrees to exert the work effort specified in the contract in exchange for the payment of a wage (Handy, 2022; Angus, 2023). The contrast in interest arises from the inverse relationship between wages (which are a cost) and the firm's output (profit). As wages increase, profit decreases, and vice versa. In the presence of information asymmetries, the agency relationship between employer and employee gives rise to so-called agency costs, i.e., costs of controlling and incentivizing the worker's work effort. These costs can be reduced through the introduction of appropriate monetary incentives and control mechanisms but never eliminated, thus giving rise to a second-best solution (Tortia, 2022).

The goal of the proposal in this work is to overcome the conflict of interests between employer and employee by means, in economic and financial terms, of aligning (rather than contrasting) the objectives of worker-members of worker cooperatives with the goals of investors outside the organization who are not worker-owners. In other words, if worker members are remunerated through dividends and not wages, their remuneration can be equated with that of external investors. In this way, the contrast of interest between these two categories ceases to exist, since both categories will have as their dominant goal the maximization of the same kind of income, that is, dividends from the sharing of the total surplus produced by the enterprise. The possibility of this kind of alignment was already highlighted in Jensen and Meckling's well-known 1976 paper on agency costs, in which the authors hypothesized that the conflicting interests between the goals of the owners of the firm (maximization of profits for shareholders) and the goals of the managers or directors (maximization of revenues or size of the organization; cf. also Berle and Means, 1932, on the separation of ownership and control in the capitalist enterprise) can be overcome by the introduction of appropriate financial incentives, such as profit sharing, share-ownership, and stock options, for the managers of the firm. This type of financial incentive in capitalist corporations has precisely the function and characteristic of aligning managers' goals with those of shareholders thereby minimizing (but not eliminating) agency costs associated with the hierarchical relationship between shareholders and managers. If managers are remunerated through the company's profits, they too will take as their dominant goal the maximization of the company's value in the market (shareholder value). This paper extends the same arguments and

¹ Wages are not necessarily fixed since numerous instances of wage flexibility are known. However, fixed wages and, more generally, wage rigidity turn out to be dominant and stable features of all market capitalist economies (Keynes, 1936; Screpanti, 2001; Albanese, Navarra and Tortia, 2019).

tools not only to managers but also to the entire body of workers who are members of the enterprise, to align their objectives with those of potential or actual outside investors. For this alignment to occur effectively, the source of conflict of interest between investors in the enterprise and employees, namely the payment to the workforce of a fixed contractual wage, must be eliminated at the root.

4.1. The organization of work and the free riding problem

As pointed out in the second section, however, overcoming the hierarchical relation, that is, the agency relation between employer and employee requires the creation of a new institutional structure for the organization, which is precisely the mutualistic structure of the worker cooperative, in which the hierarchical relation between employer and worker and the agency relation are overcome (Navarra and Tortia, 2014; Albanese, Navarra and Tortia, 2019). Instead, there is horizontal coordination and self-organization, institutional solutions that themselves may be subject to failure, often falling under the broad category of so-called “failures of collective action,” as in the foundational contributions of John Commons (1950) and Elinor Ostrom (1990). In a mutualistic organizational structure such as the worker cooperative, managerial control is collective (also referred to as collective entrepreneurship, Olson, 1965; Cook and Plunkett, 2006; Bijman and Doorneweert, 2010; Lomuscio, 2024) and decision-making power is delegation from worker members to their representatives in charge of managing the enterprise (Ellerman, 2005, 2016).

Collective management of work organization in worker cooperatives has given rise to very severe criticism concerning the possibility of achieving adequate levels of productive efficiency precisely because of the failures of collective action that can be traced, in purely theoretical terms, to the prisoner's dilemma scheme of analysis, and in organizational terms to the problem of free-riding (Ostrom, 1990; Alchian and Demsetz, 1972). The main criticism is based on the idea that collective management in the presence of joint production that cannot be divided exactly according to individual work contributions and imperfect information must necessarily lead to the phenomenon of free-riding. Every worker would have an incentive to reduce his or her own work effort in an attempt to opportunistically take advantage of the work effort of other workers, since effort is a cost to the worker, which is minimized by the worker (Alchian and Demsetz; cf. Bowles and Gintis, 1984; Putterman, 1989 for a response favorable to democratic enterprises). Free riding on individual work effort would inevitably lead to sub-optimal levels of efficiency that deviate

negatively from the socially optimal solution for the organization. In capital firms, on the other hand, the owner's goal is to maximize the net profitability and market value of the firm (Friedman, 1970). He or she, therefore, will implement those control mechanisms over worker performance that can ensure that the optimal (efficient) second-best solution is achieved (net of agency costs; Alchian and Demsetz, 1972; Jensen and Meckling, 1976).

The free-riding problem, or of suboptimal reduction of work effort, has been addressed by worker cooperatives through various means, such as horizontal peer control mechanisms (peer pressure). Many cooperatives have also resorted to monetary and nonmonetary incentive mechanisms, and in some rare cases even financial ones, such as the distribution of refunds linked to the company's economic performance. Such control and incentive mechanisms have generally yielded positive results, although some recent empirical evidence would seem to confirm the existence of fairly pronounced productivity reduction and free-riding phenomena in cooperatives in Uruguay (Blanchard, Burdin and Dean, 2024). Evidence concerning lower wages in worker cooperatives than in capital firms also seems to point in the same direction, although free riding is certainly not the only determinant of wage differentials between worker cooperatives and capital firms. Worker-member characteristics such as education level and the level of capitalization of the enterprise also play a very important role (Clement et al., 2012).

In this paper, we highlight the fact that the problem of free riding and more generally of too low labor productivity could be overcome through the introduction of an appropriate system of financial incentives, as observed, for example, in the lumberjack cooperatives that existed in the United States in the 20th century in Washington State on the Pacific North West. In such cooperatives, the presence of a market for membership rights, and thus the possibility for worker members to cash in the economic market value of productivity gains made in the enterprise (the present value of future profits), enabled the achievement of decidedly high levels of labor productivity and thus also labor incomes, usually higher than those of employees in joint-stock enterprises with similar characteristics (similar size and operating in the same industry). In other words, the market for membership rights in worker cooperatives has been shown to overcome the problem of inefficiency in the production process due to free riding and suboptimal work effort (Craig and Pencavel, 1992, 1994; Pencavel, 2001; Dow, 1986; 2003; Tortia, 2022). However, it should be noted that the group of U.S. cooperatives that implemented this type of market for

membership rights has essentially disappeared due to the demutualization (sale to outside investors) or closure of most of these enterprises usually when members reached retirement age.

4.2. Overcoming the employment relationship and the introduction of worker shareholding

Reconnaissance of the various theoretical problems and organizational solutions presented in the previous pages leads, in this paper, to highlight some initial conclusions. Above all, the implementation of appropriate financial incentive mechanisms can be able to lead to the overcoming of problems related to collective work organization in worker cooperatives (failures of collective action in the classics of Hardin, 1968; Olson, 1965; and Ostrom, 1990) and also to the improvement of financial incentives to invest in the enterprise, as evidenced by the classics of this literature (Vanek, 1970, 1977; Furubotn and Pejovich, 1970; Furubotn, 1976). On the other hand, the collective organization of work and mutualistic structure of the enterprise make it possible to overcome the hierarchical agency relationship between employer and employee and the agency costs associated with it.

The overcoming of both the employment contract and wage labor leads to zero labor costs through the elimination of wages as the remuneration of worker-members. As anticipated in the introduction, wages would be replaced by dividends calculated by means of appropriate criteria on the net economic accounting value of the residual resulting at the end of the fiscal year. In the case of the absence of a market on which to exchange individual capital shares and thus the absence of a market valuation of the net financial position of worker-members, the labor income calculated as dividend would not correspond to any market valuation of the enterprise. Instead, a portion of total labor income could be set aside at the end of the year to build up the firm's equity, finance investment projects, and serve as collateral to enable the firm to obtain credit from financial intermediaries, as is already the case in cooperative forms similar to Mondragon's and in the Slovenian European ESOP project discussed above.

On the other hand, when the possibility of issuing equity securities exchangeable in the market and thus potentially sellable to outside lenders is introduced, it is necessary to make explicit the mechanisms through which such securities would be issued and sold, under what conditions, and how it might be possible to calculate their (potential) market value. Paying working members through dividends instead of wages would equate the shares held by members with those held by outside lenders, thus aligning the goals of these two categories of stakeholders. The calculation of

the putative value of such securities can be, at first, simple and made explicit through an example. Assuming for simplicity that each worker member earns the same labor income (e.g., 30 thousand euros per year) and holds only one share, if the labor income paid as dividend is equal to x and the average dividend paid in the financial markets by firms with similar characteristics to the cooperative under consideration is equal to some percentage d of the market value of the shares (e.g., on average 10%), the presumed market value of the single share held by each individual member is x/d ($30000/0.1=300000$ euros in the example). This calculation is for illustrative purposes only because, as is well known, the price of shares and, more generally, of securities is influenced by a wide array of variables, primarily the future profitability (expected earnings) of the enterprise.²

Shares thus generated by cooperatives, which under various conditions can be issued at a premium or discount, can in principle be sold to outside investors. Shares held by working members and those held by outside investors have, in this model, essentially the same characteristics, thus also the same market valuation and dividend remuneration, as is normal in capital markets.³ The right to vote to elect representatives to the board of directors is believed to be a personal, inalienable, and unduplicable right, thus to be allocated exclusively to worker members on a per capita basis, not on the basis of the quantity or value of shares held (one member one vote; Ellerman, 2005, 2016, 2023). As a result, no voting rights are assigned to purchasing outside investors.

Nonetheless, excessive concentration of share ownership in the hands of outside investors could lead to the formation of an unbalanced capital structure, in which working members hold too small a share of the total issued by the cooperative, insufficient, for example, to constitute adequate collateral to obtain financial support (loans and mortgages) from intermediaries. For this reason, it may be advisable for worker members to hold a minimum percentage of the total equity capital of the enterprise. Above this minimum percentage, worker members may be allowed to

² Clearly, such shares can be sold fractionally. In the example given in the text, each share can have a value equal to $1/100$ or $1/1000$ of the value of the financial position held by each cooperative member, which would correspond to a price equal to 3000 or 300 euros, respectively.

³ The possibility of the issuance of different types of shares, which is certainly possible, such as ordinary shares and preferred shares will be dealt with separately.

sell their holdings in the market, thereby cashing in the market valuation, a transaction that would amount to an insider's sale of shares.

Although both working members and outside investors would receive the same dividend for the same number of shares owned, cooperatives first establish the labor income (or dividend) given to members since their livelihood depends on this income. It can be presumed that the value of labor income paid to members would smoothed out and relatively stable over time, again in an effort to ensure a stable livelihood for members, while conversely the value of shares held by both members and outside investors might have a markedly fluctuating value. Except clearly for special cases such as business crises, cases in which members' labor income might fluctuate markedly (downward), as already observed in existing cooperatives. Corporate crises drive down the market value of all company shares (held by both members and outside investors), as the latter have an incentive to sell their shares so as not to suffer capital losses. In such cases, however, members have the opportunity to buy back their cooperative's shares at lower market prices. Share buybacks, which involve exchanging cash for a reduction in the number of shares outstanding, can recapitalize the company. Reacquisition allows members to increase the number of shares held or the cooperative to hold its own shares as treasury stock, available for reissuance.

The absence of wage labor and thus of labor costs means that the well-known problem of wage rigidity, which is a major cause of the onset and exacerbation of economic cycles (Keynes, 1936; Meade, 1982, 1986) can be overcome or at least greatly reduced by the high flexibility of labor income or dividend received by worker members, as also observed by several studies, including recent ones (Bartlett et al., 1992; Bonin, Jones and Putterman, 1993; Burdin and Dean, 2009; Borzaga, Carini and Tortia, 2021).

Due to fluctuations in the firm's present and future economic performance, the variability of labor income can be too great. In such cases, cooperatives can use insurance contracts or swap-type contracts, so that the risk of variation in labor income is exchanged for the cost of the contract for a smoother income profile. These types of contracts can be expensive, so cooperative members shall consider which of the two solutions best suits their needs and income capacity (no insurance contract and variable income, or stable income in exchange for the cost of insurance).

4.3. Issuance of new shares to members

The issuance of new shares to members can take place either inside or outside the organization. Within the organization, it occurs through the repurchase of own shares to be allotted to members, through the issuance of new shares (usually at a discount), or through the stock option mechanism (which in any case involves the issuance of new shares or the repurchase of own shares to cover option contracts).

Outside the organization, new shares are issued to incoming members, who receive the number of shares due to them based on the dividends they received when they joined the cooperative. Shares allocated to incoming members can be sold at a discount based on the organization's recruitment policy. The discount is usually expected to be particularly high for incoming members, given the fact that they are often subject to stringent liquidity constraints. If there is a market price for shares in the enterprise, the amount of shares to be allocated to new members is easily calculated based on the market price of shares and the annual income at entry. For example, if each incumbent member has an annual income of 50 thousand euros and owns one share in the enterprise, an incoming member who is allocated an entry income of 25 thousand euros will be allocated 0.5 shares. Of course, if the market valuation of the cooperative's shares increases, the incoming members will receive a proportionately smaller amount of shares. The opposite will happen if the market valuation decreases.

As is well known, issuing new shares and placing them on the market, or allotting them to shareholders, especially at a discount, can cause the value of already issued shares to decline due to the increase in the total number of shares on the market and the consequent dilution of their value. The issuance of new shares always carries the risk that investors will sell the shares they hold in order not to suffer capital losses. For this reason, the issuance of new shares or stock options to members should be carefully weighed and, as a rule, occurs when the entry of new members raises the firm's prospects for future profitability, an eventuality that, when realized, may counteract or reverse the decline in the value of existing shares, for example, when there are scale economies in the technology used by the enterprise.

Shares issued to outside investors, on the other hand, are sold on private equity markets for firms that are not publicly traded but, in principle, it is possible to imagine them being sold on publicly regulated markets as well. The market value of shares issued by a firm is very difficult to predict because it is influenced by many different variables, both micro and macro, besides the

future profitability of the company. However, it is possible to measure and track it empirically.⁴ As in the case of capitalist firms, the listing of these shares on capital markets can be overseen and supported by specialized intermediaries such as venture capitalists or business angels, who can finance them with venture capital in the initial stages of their creation and development, accompanying them toward stock market listing through an IPO (Initial Public Offering).

4.4. The dismissal of worker partners

While in capitalistic firms the dismissal of redundant workers for economic reasons may be considered a routine and necessary practice due to wage rigidity (the firm is forced to lay off workers paid a fixed wage, when the worsening of its profitability in the presence of a fixed or rising cost of labor reduces the enterprise's development prospects), several contributions both theoretical and empirical have shown that cooperative enterprises, not only worker cooperatives, tend to reduce layoffs markedly compared to capital enterprises, even during phases of enterprise crisis. The main reason for this is that the cooperative enterprise is created for providing a stable flow of goods and services to its members, in a logic similar to that of clubs and thus the production of collective goods (Ben-Ner and Van Hoomissen, 1991). Since the cooperative will tend to keep the supply of goods and services to members stable even during a crisis, employment in the cooperative will also be stable (Borzaga et al., 2022).

Worker cooperatives show a particularly strong propensity not to lay off their members even during a crisis (Craig and Pencavel, 1992, 1994; Berman and Berman, 1989; Burdin and Dean, 2009; Delbono and Reggiani, 2013). The service offered to members, as the main patron of the organization, is to procure employment opportunities on better terms (higher incomes) than those offered by the open labor market. During downturns, the members will undertake a series of actions aimed at minimizing the probability of layoffs due to economic reasons, for example, reducing hourly wages (which in this way become flexible), reducing the number of hours worked per member, and using reserves for insurance purposes to cover periods of declining demand and thus reduced production activity of the enterprise (Miyazaki and Neary, 1983; Craig and Pencavel, 1993; Navarra, 2011, 2016; Navarra and Tortia, 2014; Albanese et al., 2019; Tortia 2022).

In the enterprise model presented in this paper, the nature and relevance of economic dismissal changes substantially. Even if the work relationship between the member and the

⁴ For this reason, the issue of market pricing of this type of cooperative shares will not be explored here.

cooperative is terminated, the member remains in possession of his or her financial stake in the firm and continues to receive the related dividends, as do all other shareholders. The former member becomes, in essence, an outside investor. Clearly, the termination of the member status would eliminate membership rights and access to additional benefits associated with them such as increases in earned income (dividends received) and the possible award of new shares and stock options. However, as far as already received and existing financial positions are concerned, termination does not lead to any cost gain, contrary to what happens in capitalistic firms. The absence of fixed labor income (wages), eliminates the most important economic driver of the routine use of layoffs to reduce staff when the company's economic conditions, expected rather than actual, worsen. It can be presumed that, in the generality of cases, the lack of an economic and financial motive, can reduce or altogether eliminate the need to lay off worker members (Tortia, 2022).

5. EXTERNAL AND INTERNAL DISTRIBUTIVE EQUITY

In worker cooperatives, where all relevant decisions are made collegially, that is, by means of delegation to elected representatives in organizational governing bodies, the distribution of resources, especially of the added value produced, assumes a crucial role, and one that is particularly delicate and difficult to manage because of the need to make choices that are fair and that are perceived as such by members (Lind et al., 1992; Lind and Van de Bos, 2002; Tortia, 2008). It is therefore important to ask how both labor income and the issuance of new shares to members will be managed in terms of distributive equity.

While the theoretical approach of some authors (Kremer, 1997) points out that worker cooperatives are unable to distribute their resources equitably because democratic decision-making mechanisms (cfr. the theorem of the median voter) lead to members who are less gifted in terms of skills and professionalism getting excessively high remuneration to the detriment of more skilled and professionally experienced members who would instead be harmed, worker cooperatives in the contexts of real economies have developed over time forms of self-regulation that may be able to ensure a high degree of distributive equity (Tortia, 2024a). In some cases, maximum ranges of labor income variation have been set, as in Mondragon cooperatives. In other cases, high homogeneity of tasks performed by members (thus homogeneity of worker

characteristics and member preferences, as pointed out by Hansmann, 1988, 1996) and job rotation allowed high labor productivity to be achieved while at the same time achieving high distributive equity through the payment of very similar wages for all members, as in the lumberjack cooperatives of U.S. Pacific North West (Pencavel, 2001).

In the case of the worker cooperatives proposed in this paper, the remuneration of members in terms of dividends and not in terms of wages implies that such remuneration represents a radical form of profit sharing, which would then become the standard mode of labor remuneration and productivity incentive. Indeed, numerous studies show a positive and statistically significant correlation between the use of various forms of profit sharing and labor productivity (Cruse, ...; Blasi, ...). Distributive equity should be measured as much in terms of setting relative incomes allocated to each worker member relative to other members, as in terms of issuing new shares, allocating shares repurchased by the firm, or granting stock options to members.

In terms of distribution of labor income, a distinction should be made between the setting of income at entry, and the change in income of members already in the enterprise. The determination of initial income for new members does not appear problematic, since it will be decided, as in existing capitalist enterprises and cooperatives, on the basis of the skills, age and professional experience of the incoming member, as well as, of course, the psychological and relational (e.g. motivational) characteristics of the new member, thus on the basis of labor market search and matching and screening criteria, assessments already widely known and practiced. On the other hand, as far as income variation for incumbent members is concerned, this is expected to be much more complex because it has to be carried out taking into account both the individual worker's productivity advancement and distributional equity with respect to other members. In addition, it should not be forgotten that labor income in this type of organization is directly related to the number and value of shares held by members, and thus a positive change in income necessarily also implies an increase in the number of shares held by a member, as well as the granting of stock options to the most productive members with managerial responsibilities. Adjustment of income to productivity growth over time would be required to adjust individual member's incomes to external labor market valuations, as incomes too far below market valuations could push more productive members to leave the organization when they receive better and higher-paying job offers from other firms (both capitalistic firms and other worker cooperatives).

The increase in income and shares allotted to members may not correspond to a similar increase for outside investors, who usually simply bargain for shares in the market. In that case, the increase in income and shares for members corresponds to an increase in the concentration of ownership of the shares held by them. In case there is dilution of the overall market value of the shares, outside investors may prefer to sell them. However, as mentioned above, in a context where the cooperative's labor productivity and expected profits are increasing, the issuance of new shares and members' shareholding may not lead to market value dilution.

Finally, it should not be forgotten that, given the sensitive nature of the distribution problem in worker cooperatives, which risks generating conflicts among members and thus increasing the organizational costs incurred by the enterprise (Hansmann, 1988, 1996), there is a default solution whereby all members receive the same percentage increase in income received, a solution that would sterilize the distribution problem by eliminating litigation risks, but at the same time would substantially reduce the incentive potential of increased income and shareholding for the most productive and performing members.

Given the democratic and collective management of decision-making in worker cooperatives, it is possible to expect that, even in the progression of members' incomes, equity criteria of a tendentially egalitarian type would be applied, such as the Rawlsian maximin criterion, such that inequality between members' incomes would be accepted not only based on different levels of productivity of the members themselves but especially in cases where it corresponds to the improvement of the income conditions of all members i.e., even the least productive members. The maximin criterion or difference principle stipulates that economic inequalities among citizens (in this case, among members of a workers' cooperative) are acceptable from the standpoint of economic policy and equity as a moral distributive criterion, only when such inequalities improve the condition of the less well-off citizens (in this case, members; Rawls, 1971, 1985, 2001; Tortia, 2024a). In the terms of the proposals in this paper, it is possible to envisage that the progress of incomes distributed to worker members may benefit all members, precisely based on the Rawlsian difference principle, but that, at the same time, the more able members who have greater experience and professional skills will obtain greater increases, as, moreover, has already been observed in existing cooperatives.

Finally, outside investors may be excluded from major financial decisions and discriminated against in distribution policies because they do not have the right to vote in the election of the

firm's governing bodies. This may occur, for example, when dilution of the market value of shares is caused by increased members' share-ownership, and cause them to reduce their exposure to the firm's shares or close their investment position altogether. In an attempt to reduce the risk of this kind of perverse effect, which could again lead to a marked under-investment phenomena in this type of organization (Furubotn and Pejovich, 1970; Vanek, 1970), it is possible to imagine the creation of assemblies representing the interests of outside investors, with advisory, informational and even consulting functions vis-à-vis the firm's financial choices. Such a body would clearly also have a function of monitoring the work of the governing bodies elected by worker members, who would instead have operational and strategic decision-making power. In other words, this type of organization would be characterized by multi-stakeholder governance, as is common to observe in several existing mutualistic organizational forms (Tortia, 2024b).

5. CONCLUSION

This paper has been devoted to hypothesizing the establishment of worker cooperatives in which members' labor income is not a contractual wage, as in an agency relationship between employer and employee. Instead, the possibility of a remuneration scheme based on “dividends” of the value added produced by the enterprise in the absence of the cost of labor, i.e., wages, as already hypothesized in Ward's well-known 1958 model, has been considered. The payment of dividends instead of wages would lead to univocally linking the labor income of the members with the value of their financial participation in the capital of the enterprise, that is, with the value of the shares held by each member. The payment of a given dividend would implicitly define the value of the shares held by members, even in the absence of a market on which these shares are traded. In the presence of a capital market, a price would be observed for this type of financial asset. It could be issued and traded not only by members of worker cooperatives but, under the same conditions of value and remuneration through dividends, also by external investors. In this way, cooperatives could issue equity securities that could be sold on a private market (private equity) or even on a publicly regulated market (publicly traded stock).

Then some existing examples were brought of the implementation of capital structures of cooperatives or employee-owned companies in which worker members own at least partially the capital of the company, although not actual shares, for example, the case of the Mondragon

cooperatives, of ESOP financial participation schemes in the United States, cooperatives in the American Northwest characterized by the presence of a market for membership rights, and finally the case of employee-owned companies in Anglo-Saxon countries such as the John Lewis Partnership in the United Kingdom.

It has been pointed out that, in the solution proposed in this paper, labor income i.e., dividends received by the working members, could have a relatively stable and increasing trend over time to meet the livelihood needs of the workers, based not only on their initial skills but also on the human capital accumulated by the individual member over the years. Only in the case of economic or financial difficulties of the enterprise is it expected that labor income could undergo significant (downward) changes and adjustments. In contrast, it is to be expected that the market value of shares would be subject to greater variability due to fluctuating prospects of future firm profitability.

The last section discussed distributional equity issues related to trends in the value of dividends and the number of shares distributed to members. Given the democratic and collective management that characterizes the decision-making processes and governance structure of worker cooperatives, it was pointed out that distributional changes are likely to be interpreted in terms of the maximin criteria in the Rawlsian sense of the difference principle. In other words, the internal inequality between the incomes received by members would probably serve both to ensure the adjustment of incomes to the productivity growth of individual workers, as required by labor market equilibrium, but at the same time also to promote an equitable distribution of incomes, since the higher productivity of the best-performing workers would allow the incomes of the least-performing workers to rise as well.

Finally, it is believed that this proposal is not necessarily incompatible with the presence of indivisible capital reserves, as highlighted in other writings by the same author (Tortia, 2021). Partial indivisible reserves (absorbing a limited portion of net residuals and constituting some fraction of the firm's total net worth) can be voluntarily established by this type of organization to pursue social goals, as in the social enterprise and nonprofit organization model (Galera and Borzaga, 2011; Defourny and Nyssens, 2011; Poledrini and Tortia, 2021), or to stabilize the value of the firm's assets, obviously at the cost of weakening the financial incentives associated with individual ownership of cooperative shares.

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