Dividends, Labor Remuneration, and Worker Shares in Worker Cooperatives

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Article

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Abstract: This paper analyzes the possibility of creating worker cooperatives in which members are not paid through wages, but through dividends calculated on the residual income of the organization, as envisaged by Ward's (1958) model of the labor-managed firm. It is shown how this solution makes it possible to link dividends paid to members to the value of their financial stake in the firm's capital, even in the absence of a market for the firm's shares. The introduction of a share market allows to issue and allocate cooperative shares both to members and to external non-member investors, which may solve the problem of undercapitalization of worker cooperatives. The last section analyzes the criteria of distributive equity of labor income and cooperative shares among members, hypothesizing that the maximin criterion or Rawlsian difference principle is the most appropriate distributive principle for democratic and collective governance in worker cooperatives, which may imply effects of reduction of wealth and income inequality at the macroeconomic level.

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1. Introduction

This paper aims to show how a different interpretation of labor remuneration for worker-members of worker cooperatives in terms of dividends from net residuals rather than wages, may allow the development of new financial instruments, or worker shares, that can enable worker cooperatives, at least in principle, to achieve efficient capitalization, as highlighted in the seminal contributions of Vanek (1970, 1977), Furubotn and Pejovich (1970), Furubotn (1976), Jensen and Meckling (1979), and Pejovich (1990). The paper is developed as a 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.

This paper's arguments start from Ward's (1958), Vanek's (1970), and Meade's (1972) neoclassical model of the labor-managed firm (Bonin, Jines and Putterman, 1993; Uvalic, 2010; Pérotin, 2013). In that model, designed to describe the functioning of productive organizations in the former Republic of Yugoslavia cooperative members are remunerated through dividends of shares of value-added, more precisely of net residuals (EBIT or Earning Before Taxes, that is value added net of the cost of capital, depreciation and amortization), and not through wages, which instead represent the cost of labor in investor-owned, or capitalist, enterprises. This solution is consistent with the economic and institutional nature of worker cooperatives, since worker-members are not employees of the cooperative, but have membership or control rights over it. However, it is well known that worker cooperatives' historical and institutional evolution in market economies, especially in Western countries, has led them to remunerate worker members through wages, much like employees in capitalist companies. In other words, in most existing models of worker cooperatives, members are salaried employees. In some cases, such as Mondragon in Spain, members receive, in addition to wages, rebates as shares in the net surplus at the end of each accounting period. This discrepancy between economic theory and the historical institutional evolution of worker cooperatives creates a case for new theoretical elaboration to consider

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the economic and financial implications of distributive models that replace wages with dividends from net residuals or economic value added.

The paper is organized as follows: Section 2 discusses the economic nature of the employment relationship in capitalist enterprises; Section 3 shows how dividends can substitute for wages in worker cooperatives; Section 4 proposes a new model of worker cooperative in which cooperative shares are introduced in the hands of worker-members and also (potentially) outside investors, and remunerated through value-added distribution (dividends); Section 5 analyzes the patterns of distributive equity in terms of dividend distributions and new share issuance in this type of organization; Section 6 concludes.

2. Overcoming the Employment Relation

In recent years, some authors, both from the Marxist and radical liberal tradition, have developed a series of microeconomic and organizational theories that demand the overcoming of the contractual relation between employer and salaried or subordinate worker in worker cooperatives or self-managed enterprises, according to different versions (Ellerman, 1984, 2005, 2016; 2021; Screpanti, 2001). Underlying these arguments is the idea that the labor contract is the instrument used by capitalist enterprises to impose a hierarchical relationship between employer and employees, based on a transaction that establishes the subordination of wage workers to investors. This implies the use of the productive capacities of workers in a relationship of authority, as also affirmed by neo-institutionalist writers (Coase, 1937; Simon, 1951; Screpanti, 2017).

The imposition of hierarchy results from the payment of a wage (equilibrium price of labor as a factor of production in the labor market) by the employer in exchange for the worker ceding the right to use her/his labor services. The creation of democratic worker-led organizations based on the "one head or one member, one vote" rule of governance, i.e., worker cooperatives, would require overcoming hierarchy (the employment relation) as a relation of subordination, but also overcoming the form of remuneration inherent in that relation, i.e., the wage as the price of the transfer of labor services from the worker to the employer on the labor market (see also Ellerman, 1984, 2005; Dow, 2003; Cheney et al., 2014; Screpanti, 2017). To these are added some other observations typical of the radical neoliberal tradition that spread in recent decades, which emphatically evidence the importance of remunerating entrepreneurial work activity based on the dimension of the enterprise residual (dividends on invested capital), and not in terms of a fixed contractual wage (Kiyosaki, 2017).

Philosophical arguments have also been proposed as a basis for overcoming the employment relation since the transfer of labor services from the worker to the enterprise would 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 inalienable and non-transferable or duplicable personal rights, in the same way that civil and political rights are (Ellerman, 2005, 2016, 2021). In Locke's (1690) labor theory of property, natural rights require that all the product of labor be appropriated by those who produced it.

In the perspective proposed in this paper, such philosophical positions enter as a necessary premise into an evolutionary path leading to the introduction of financial instruments that deny both the hierarchy between employer and employee and the payment of a fixed salary for labor services. On the other hand, worker-members' subjective rights, which cannot be alienated, duplicated, or transferred, would be respected through the creation of mutualistic and democratic governance structures, based on the delegation of decision-making responsibility to elected representatives, which is typical of worker cooperatives, as opposed to the transfer or alienation of responsibility, which characterizes capitalist corporations (Ellerman, 2005, 2016, 2021; Cheney et al., 2014).

3. Dividends in Worker Cooperatives as Payment of Labor Contributions, and Remuneration of Capital Shares

The thought experiment envisaged in this paper begins by considering the simplest possible forms of labor remuneration. It then makes them more complex and realistic as new elements of the functioning of markets, both labor and financial markets, are added to the initial argument.

 doi:10.20944/preprints202411.0888.v1

The simplest possible form of labor remuneration is a payment to a self-employed or independent worker, such as a professional or artisan. In this case, labor remuneration is simply the net economic residual. Radical liberal and socialist traditions in political economy, for example, Mazzini (1860) in Italy and Stuart Mill (1871) in the UK, interpreted worker cooperatives simply as associative and mutualistic business forms, in which the members are independent or self-employed workers who join together to establish a mutually beneficial, non-hierarchical and democratic economic venture. The same interpretation of worker cooperatives established the legal basis for the formation in the 1950s of the well-known Mondragon group in the Basque region of Spain, considered the most important group of worker cooperatives in the world (White and White, 1989; Marcuello, 2023). In that context, the military regime of Francisco Franco did not prohibit worker cooperatives, but considered them to be associations of self-employed workers. Still today, in Mondragon, the monthly remuneration of worker-members is not considered a real salary, but an "advance" on residual net income. It is supplemented at the end of the year by rebates on the company's overall economic result (White and White, 1988; Morrison, 1989).

This paper takes up this radical socialist-liberal tradition and considers worker cooperatives as associations of self-employed workers in which members are remunerated with dividends from the net surplus of each accounting period. In other words, the remuneration of labor is equivalent to the remuneration of a self-employed worker when calculated as a part of the collective income realized by the cooperative. Taken literally, this interpretation implies that labor costs are zero (in the absence of wage labor).

In financial terms, on the other hand, the dividend is interpreted as the return on the financial investment in the capital of the company. The apparent incompatibility between these two definitions lies in the fact that while in terms of labor remuneration the dividend refers to the net economic residual in the absence of labor costs or wages, in the financial definition, on the other hand, 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 dividend in its financial definition can coincide with the remuneration of labor when workers control the firm and are paid a share of the net residual (the labor cost or wage bill is zero), and the firm's equity is not financed by outside investors. The reconciliation between these two definitions of the dividend of the economic activity requires that the mechanisms through which it is possible to trace from the value of the dividend paid to the worker-members to the value of the financial stake that they own in the capital of the cooperative be made explicit. This will be done on the basis of real cases of employee financial participation.

3.1. In the Absence of Capital Markets: The Capital Structure in the Mondragon System and the Slovenian Proposal of European ESOPs

When cooperatives are characterized as collectively owned or wholly individually owned by their members, and members cannot trade their membership or financial position in a financial market, it is not possible to assign a market price to members' financial stake in the cooperative, as there is no supply and demand for this stake.

In such cases, the economic valuation of the financial assets remains implicit, since the only recognizable economic value is the labor income or the dividend paid by the cooperative to the worker. This dividend may correspond to some marketable value of the financial stake, which, however, is indeterminate in the absence of supply and demand. For this reason, some well-known proposals on worker financial participation and capital structure of worker cooperatives, for example the ESOP (Employee Stock Ownership Plan) in the USA, and the capital structure of the Mondragon cooperatives in Spain, do not take into account the market valuation of a cooperative's assets, preferring to use its book value, usually the Net Asset Value (NAV). In these cases, members' financial positions are valued and repaid at their nominal value (plus interest), as in Mondragon's internal capital account system (Ellerman, 1986). This solution has the advantage of referring to accounting documents such as the capital statement, and of not accounting for the high volatility of prices in financial markets. However, it does not provide a realistic representation of the real value of these assets in terms of expected (future) profits.

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In systems similar to Mondragon's, members accumulate their rebates annually in individual internal capital accounts according to the realized residual profits (White and White, 1988; Morrison, 1989). Rebates are automatically capitalized to increase the net worth of the enterprise and to finance investment projects (Tortia, 2007). As a general rule, capitalized rebates cannot be liquidated and cashed out by the member before the termination of the membership relationship, i.e. before voluntary resignation, dismissal or retirement (Ellerman, 1986).

In a recent reform project led by the Institute for Economic Democracy in Ljubljana, Slovenia, and implemented in cooperation with the Slovenian government, a new proposal for self-financed capitalization in worker cooperatives based on the Mondragon internal capital account system and the ESOP scheme in the United States has been elaborated (Ellerman, Gonza, and Berkopec, 2022a, 2022b). This proposal foresees the transformation of capitalist companies into worker cooperatives based on the allocation of company shares to workers and their payment to investor-owners according to the NAV valuation. The workers' shares would be held in a trust fund and would not be attributed to the worker-members until the debt issued to purchase the company is repaid (the workers' shares would be held in trust as collateral for the buyout). Once the transition process is completed, the members' shares would not be saleable in the market, but their value would increase with realized profits (not expected future profits), in the form of rebates or year-end dividends.

The distribution of the value thus accumulated to individual accounts, unlike the Mondragon case and the ESOP case in the USA, could be cashed out by members before retirement, based on a predetermined schedule or rollover mechanism that depends on the amount of net profits earned by the cooperative, the amount of reinvestment of realized rebates (which is strictly linked to the total amount of capital the cooperative needs to finance its investment programs), and the speed at which new incoming members are able to replace the shares of incumbent members with their own capitalized rebates (linked to profits earned annually). This way, members' financial positions could be partially liquidated and repaid, usually within a few years (Ellerman et al., 2022a, 2022b). This mechanism may not be able to account for the future economic performance of the firm and provide correct financial incentives for members to invest and innovate, as it is based on the accumulation and distribution of realized profits, not on prospective future profits (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 worker shares (not necessarily members of a worker cooperative) can be traded, as in the case of ESOPs in the United States, there is a market valuation for these securities. In these cases, the employees of a company that implements this type of financial participation scheme usually own a limited or even marginal percentage of the company's total shares, which are either acquired by the company and allocated to the employees or are issued anew and allocated to supplement rather than replace contractual salaries, in the form of a supplementary private pension plan. The shares allotted to workers are held in trust to collectively represent workers at the company's shareholder meetings. The shares owned by workers are redeemed at the current market price at the time of retirement (partially also at the time of voluntary resignation; Rosen, 2023). This form of financial participation has shown important potential in increasing the labor productivity and competitiveness of U.S. companies adopting it. Several empirical studies measure an increase in labor productivity of close to 5 percent or more in the presence of an ESOP plan (Kumbhakar and Dunbar, 1993; Blasi, Kruse, and Weltmann, 2013; Kruse, 2022). Although in most cases the stock market for these companies exists but is private, a significant number of companies that have adopted an ESOP plan are listed on publicly regulated exchanges such as the NYSE. This solution follows the logic of holding workers' shares in a trust and limiting or blocking their ability (in some cases temporary, in others permanent) to sell those shares, to eliminate the risks of demutualization and sale of workers' shares to outside investors. Similar patrimonial solutions are followed by UK and US worker-owned companies, although with no legal obligation to do so. One of the best-known cases is the John Lewis Partnership in England, which started the process of being co-owned by its employees more than a century ago (Storey, Basterretxea and Salaman, 2014; Salaman and Storey, 2016). Finally, similar results have been obtained for Italy (Jones and Svejnar, 1985).

 doi:10.20944/preprints202411.0888.v1

As the percentage of total shares held by employees increases, there is less room for the establishment of a true market for company shares, both in private and publicly regulated markets. One reason for this is the limitations imposed on the possibility for employees to sell their shares to outside investors. A second reason is that these markets tend to be thin due to the preponderance of employees' financial and strategic decisions 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. When the percentage of shares in the hands of the workers is high and allows control of the company's organs, the company's share market continues to exist, but becomes predominantly internal, i.e., exchanges take place among the worker-owners themselves, not externally so as not to dilute the workers' exclusive ownership. An internal stock market is subject to obvious limitations because of the small number of trading parties and the individual financial constraints to which these parties (employees) are usually subject. Given these limitations, it can be assumed that share prices set by an internal market may be an imperfect and distorted signal of the company's actual market valuation (Ang, 1992).

4. A New Proposal for Worker-Member Ownership and Cooperative Shares

Based on the theoretical and applicative institutional arguments 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 capitalist companies. The agency model proposed by Jensen and Meckling in 1976 stipulates that the relationship between shareholder-owners and managers is characterized by contrasting interests. By extension, the existence of contrasting interests can be easily demonstrated in the employer-employee relationship as well, due to the inverse relation between wages, which are a cost, and the firm net earnings. As wages increase, profits decrease, and vice versa (cfr. Sfraffa, 1960). The contractual relationship between employer and employee requires that the latter cedes to the former control over his or her labor services and agrees to exert the work effort specified in the contract in exchange for a fixed wage (Prendergast, 1999; Handy, 2022; Angus, 2023). Wages are not necessarily fixed since numerous instances of wage flexibility are known. However, fixed wages and, more generally, wage rigidity are dominant and stable features of all market economies (Keynes, 1936; Screpanti, 2001; Albanese, Navarra, and Tortia, 2019).

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 by introducing appropriate monetary incentives and control mechanisms, but never eliminated, resulting in a second-best solution that deviates from the socially optimal solution (Prendergast, 1999; Tortia, 2022).

This paper applies the same tools and arguments that the agency literature has been applying to conflict of interest and agency costs in the capitalist corporation (both between managers and shareholders and between employers and workers; Prendergast, 1999) to address the serious negative impact that agency costs can have on the efficiency of investor-worker relations in a worker cooperative. The objective is to align economically and financially the objectives of the worker-members with those of investors outside the organization, who are not worker-owners.

If worker-members are remunerated dividends of residual earnings and not by salaries, their remuneration can be equated to that of the shares held by outside investors. In this way, the contrast of interests between these two categories can be limited or eliminated, since both will have as their dominant objective the same type of income, i.e. the distribution of the residual surplus of the cooperative. The possibility of this type of alignment was already highlighted in the best-known work of Jensen and Meckling (1976), in which the authors hypothesized that the competing interests between shareholder-owners and managers or directors (e.g., revenue maximization or size of the organization; cf. Berle and Means, 1932, on the separation of ownership and control in capitalist firms) can be overcome or greatly reduced by introducing appropriate financial incentives - e.g. share ownership or

 doi:10.20944/preprints202411.0888.v1

stock options - for top executives. Reducing agency costs associated with the hierarchical relationship between shareholders and managers has the potential to increase managerial productivity, efficiency, and profitability of the capitalist company (Jensen and Meckling, 1976; Jensen and Smith, 2000; Hill and Snell, 2017).

4.1. The Organization of Work and the Problem of Free-Riding

As pointed out in previous sections, overcoming the hierarchical agency relationship between employer and worker requires the creation of a new institutional structure for the organization, which is precisely the mutualist structure of the worker cooperative, in which hierarchy is overcome by democratic association (Cheney et al., 2014; Navarra and Tortia, 2014; Albanese et al., 2019). Hierarchy is replaced by horizontal coordination and self-organization, institutional solutions that themselves may be subject to imperfections, often encompassed in the broad category of so-called "collective action failures," as in the foundational contributions of Commons (1950), Olson (1965), Hardin (1968) and Ostrom (1990). In a mutualistic organizational structure, managerial control is collective and also entrepreneurial action can be considered collective (Cook and Plunkett, 2006; Bijman and Doorneweert, 2010; Lomuscio, 2024), while decision-making power is delegated from worker-members to their representatives (Ellerman, 2005, 2016).

Collective management of the labor process in worker cooperatives has raised very severe criticism regarding the possibility of achieving adequate productive efficiency precisely because of the failures of collective action which 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 Desetz, 1972). The critique is supported by the idea that collective management, in the presence of imperfect information and joint production that cannot be accurately attributed to individual labor contributions, must necessarily lead to free-riding on effort contributions. Each worker would have an incentive to reduce his or her work effort in an attempt to opportunistically take advantage of the work effort of other workers, since effort is a cost that the worker wants to minimize (Alchian and Demsetz, 1972; cfr. Bowles and Gintis, 1984; Putterman, 1989 for a favorable response to democratic firms). Free riding by individual workers would normally lead to suboptimal levels of efficiency that deviate negatively from the socially optimal solution for the organization. In capitalist enterprises, instead, the owner's goal is to maximize the net profitability or market valuation of the enterprise (Friedman, 1970). The owner, therefore, will put in place those control mechanisms over the labor process that can ensure an optimal (efficient) allocation of work effort, resulting in the second-best solution net of agency costs (Alchian and Demsetz, 1972; Jensen and Meckling, 1976).

The free-riding problem, or suboptimal reduction of work effort, has been addressed by worker cooperatives through various means, such as horizontal peer control mechanisms (peer pressure) or participation in decision-making processes (Putterman, 1988; Bowles and Gintis, 1993; Tortia, 2022). Many cooperatives have also resorted to monetary and non-monetary incentive mechanisms and, in less frequent cases, to financial incentives, such as the distribution of rebates linked to the enterprise's economic performance. These control and incentive mechanisms have generally yielded positive results, although some recent empirical results seem to confirm the existence of fairly relevant phenomena of productivity reduction and free riding concerning members of worker cooperatives in Uruguay (Blanchard, Burdin and Dean, 2024). The evidence on lower wages in worker cooperatives than in capitalist firms also seems to point in the same direction, although free riding is certainly not the only determinant of wage differences between the two types of firms. Worker-member characteristics, such as educational level, and the level of capitalization of the firm, also play a key role (Pencavel, Pistaferri, and Schivardi, 2006; Clemente et al., 2012).

This paper emphasizes that the problem of free riding and, more generally, of too low labor productivity can be overcome by introducing an appropriate system of financial incentives, as was observed, for example, in the plywood worker cooperatives that existed in the 20th century in the US Pacific Northwest, Washington State (Craig and Pencavel, 1992, 1994; Pencavel, 2001; cfr. Zevi, 1982, 2005). In such cooperatives, the presence of a market for membership rights and, therefore, the possibility for worker-members to realize the market value of productivity gains and the expected higher income in terms of a higher price for their membership positions, allowed high levels of labor

 doi:10.20944/preprints202411.0888.v1

productivity to be achieved. In these cases, productivity was similar or higher than that of corporations with similar characteristics (similar size and operating in the same sector; Craig and Pencavel, 1992, 1994). In other words, a financial incentive structure such as the market for member rights has been shown to have the potential to overcome the free-rider problem in the production process (Craig and Pencavel, 1992, 1994; Pencavel, 2001; Dow, 1986; 2003; Tortia, 2022). However, it should be noted that U.S. plywood cooperatives that applied this type of ownership structure largely disappeared due to demutualization (sale to outside investors) or closure and liquidation when most members reached retirement age.

4.2. Overcoming the Employment Relationship and the Introduction of Worker Shareholding

Some initial conclusions can be drawn from the recognition of the various theoretical issues and organizational solutions presented in the previous sections. While financial participation in terms of the introduction of appropriate financial incentive mechanisms can overcome collective action problems in the production process, the collective organization of work and the mutualistic structure of worker cooperatives make it possible to overcome the hierarchical agency relationship between employer and employee and reduce the agency costs associated with it.

Overcoming both the employment relation and salaried work leads to the elimination of labor costs as remuneration for worker-members. As anticipated in the introduction, wages would be replaced by dividends calculated on the net economic income of the organization. In the absence of a market in which to exchange individual equity stakes and thus in the absence of a market valuation of the net financial position of the worker-members, the labor income of the members would not correspond to any accurate market valuation of the company, which could still be demutualized and sold following standard balance sheet accounting measures (e.g., net asset value). In this case, a portion of the total labor income can be set aside and reinvested to build up the equity to finance investment projects and serve as collateral for obtaining credit from financial intermediaries, as is already the case in most existing cooperatives.

On the other hand, when introducing exchangeable shares in the market, it is necessary to make explicit the mechanisms through which such securities would be issued and allocated to members, and how it would be possible to calculate their putative or nominal value. This calculation can be, in the first instance, simple and made explicit through an example. Assuming, for simplicity, that each worker-member receives the same labor income and owns a single share of the cooperative capital, if the member's dividend in the net income of the cooperative is equal to x (for example, 30 thousand euros per year) and the average shareholder dividend paid in the financial markets by companies with similar characteristics is equal to some percentage d of the market value of the shares (for example, an average of 10%), the presumed nominal value of the single members' share is x/d (30000/0.1=300000 euros in the example). Cooperative shares could be issued on the market at this nominal or face value. On the other hand, their market price may well differ from the nominal value, since share prices are influenced by a wide range of variables (primarily, the expected future profitability of the company).

4.3. Market Valuation of Cooperative Shares

In purely economic terms, consistent with Meade's (1972, 1986, 1989) work on the capital-labor partnership, labor services are a flow, while human capital is a stock that grows with work experience, training and investment in education, while it depreciates with age (Schultz, 1961; Becker, 1993). Similarly, financial capital is a stock and is remunerated by a flow which is the dividend or paid-out net earnings (Lintner, 1962; Farsio, Geary and Moser, 2004; Skinner and Soltes, 2009). Members of worker cooperatives invest their human capital and are remunerated in the same way as an investor. In this sense, worker-members can be called "internal investors", while investors who only contribute financial capital without using their labor services in the cooperative should be defined as "external investors" or "financial investors". Both categories would own the same financial securities (shares of the cooperative) to simplify any administrative process (i.e., minimize transaction costs), align economic objectives and eliminate potential conflicts of interest. However, the right to elect representatives to organizational bodies is considered to be a personal, inalienable and non-duplicable right that belongs to the mutual and democratic nature of cooperatives (Cheney et al., 2014). Consequently, voting rights

 doi:10.20944/preprints202411.0888.v1

should be allocated exclusively to worker members per capita, rather than based on the number of shares held, partly to avoid a possible resurgence of conflicting interests between two different stakeholder groups with governance bodies (Ellerman, 2005, 2016, 2023). Instead, external investors would hold non-voting shares with the same dividend rights as voting shares.

In fact, corporate governance scholars and financial analysts increasingly view the issuance of non-voting shares as beneficial or non-detrimental in capitalist firms as well, since non-voting shares can make corporate governance more efficient. This is because non-voting shares can enable firms to reduce their cost of capital by reducing agency and transaction costs, as it spreads voting power between informed shareholders who value their voting rights (in this article, worker-members of a worker cooperative) and uninformed and "weakly motivated" shareholders who do not (in this article, outside investors in the same cooperative; Lund, 2019).

The number and remuneration of cooperative shares in each category should be calculated accurately and in the same way, since uncertainty about these quantitative dimensions would result in the inability of external investors to get involved. The residual income of the cooperative would be allocated to all existing shares following the simple proportionality rule. Outside investors could be sold fractional shares with a face value lower than the value of the members' shares. In the above example, if a member has a total financial stake worth €300,000 at face value, fractional shares could be sold to outside investors at 1/30,000 of the value of the member's shares (i.e. 10 euros). In addition, cooperatives, like capitalist corporations, may issue shares at a premium or discount (Koller, Goedhart, and Wessels, 2020). In all cases, capitalist firms that place shares on the market face largely the same exchange and pricing problems, although the two organizational forms may approach these problems in partially different ways.

Excessive concentration of share ownership in the hands of outside investors could lead to the formation of an unbalanced capital structure, with the worker-members owning too small a share of the total issued by the cooperative, insufficient, for example, to provide adequate collateral to obtain financial support (loans and mortgages) from banking intermediaries. For this reason, it may be advisable for worker-members to hold a minimum percentage of the total share capital of the enterprise. Above this minimum, they may be allowed to sell their shares on the market, thus collecting the market valuation, a transaction that would be equivalent to an insider share sale (Jeng, Metrick, and Zeckhauser, 2003).

Although both members and outside investors would receive the same dividend for the same number of shares owned, it is likely that cooperatives would first establish labor income for their members, since voting members are concerned first and foremost with their livelihood and job stability. Presumably, this type of cooperative would strive to smooth over time the income paid in an effort to ensure a stable livelihood for members. Conversely, the value of the cooperative shares could have a markedly fluctuating value.

In special cases, such as business crises, members could be forced to accept lower and fluctuating incomes, as has already been observed in existing cooperatives. Business crises would also reduce the market value of cooperative shares held by both members and outside investors, as the latter have a clear incentive to sell in order to avoid capital losses. If members are forced to reduce their labor income during a crisis, the value of dividends held by outside investors would also decline. This could induce investors to sell. On the other hand, however, lower dividends and labor income also mean lower cash outflows, which could indicate a willingness to reduce income and dividends in the short term to contrast the crisis, in order to increase them again in the longer term, when the organization's economic conditions recover. Finally, when the value of shares is severely depressed by negative economic results, members may consider it appropriate to repurchase their cooperative's shares at lower market prices. Share buybacks, which involve reducing the number of shares outstanding in exchange for cash, can slow down the fall in prices. Repurchase allows members to increase the number of shares they own or the cooperative to keep its own shares as treasury stock, available for reissue. Repurchase is generally considered an alternative form of dividend, as it increases the market valuation of shares, which can be applied at management's discretion (Song, 2002). With regard to capitalist corporations, a recent work by Jamadar et al. (2024) shows, in the context of UK corporate finance, that the key

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factors behind buy-back decisions correspond best to cash flow theory and signaling theory. Excess liquidity, undervaluation and leverage are regarded as key determinants of share buybacks. The results reveal that companies repurchase shares to distribute cash to shareholders with excess liquidity.

In worker cooperatives, absence of wage labor and, therefore, of labor costs, means that the well-known problem of wage rigidity, which is one of the main causes of the onset and exacerbation of economic cycles (Keynes, 1936; Meade, 1986, 1989) can be tackled more effectively thanks to the fluctuation of labor incomes, especially in times of crisis (Bartlett et al., 1992; Bonin et al. 1993; Burdin and Dean, 2009; Navarra and Tortia, 2014; Albanese et al., 2019). Fluctuations in the firm's present and future economic performance may in some cases induce excessive fluctuations in labor income. This problem can be partially addressed by resorting to insurance or swap-type contracts, so that the risk of variation in labor income is exchanged for the cost of the contract to obtain a smoother income profile. These types of contracts can be expensive, so cooperative members should consider which of the two solutions best suits their needs and earning capacity (no insurance contract and variable income, or stable income in exchange for the cost of insurance).

On the other hand, the price of shares held by members and outside investors could also increase. This can happen either because of an increase in expected future net earnings, which could drive the exchange price of shares up, even in the absence of higher income (dividends) paid to members, or because of an increase in income paid to members, when the cooperative's realized profits increase. In the latter case, other things being equal (e.g., the average percentage of dividends paid on shares in the same industry), an increase in dividends paid to members implies a proportional increase in the implied nominal share price. In the above example, an increase in labor income from €30,000 to €40,000 would imply the same proportional increase in dividends paid to outside investors and also a proportional increase in the implied par value of shares held by members from €300,000 to €400,000. As mentioned above, the market price may differ from the par value due to a wide range of market conditions (supply and demand) and expectations.

4.4. Issuance of New Shares to Members

The issuance of new shares to members can take place either inside or outside the organization. Inside the organization, it occurs through the repurchase of own shares to be allotted to incumbent members, through the issuance of new shares (usually at a discount) to be purchased by members, 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; Bens et al., 2003).

Outside the organization, new shares are issued to incoming members, who receive the number of shares they are entitled to according to the dividends (labor income) they received when they joined the cooperative. Shares allocated to new members may be issued for free or sold at a discount depending on the organization's recruitment policy and financial needs. The discount may be particularly high for new members, as they are often subject to strict liquidity constraints. If each full member owns one share and has an annual income of 50 thousand euros, while an incoming member is allocated an entry income of 20 thousand euros, the latter will be allocated 0.4 shares, irrespective of the exchange price (market valuation) of the shares.

The issue of new shares to members (new and existing) for free or at a discount may induce outside investors to sell their holdings to avoid capital losses due the increase in the total number of shares outstanding or dilution. For this reason, the issuance of new shares or stock options to members must be carefully weighed and, as a general rule, occurs when the entry of new members increases the company's productivity and profitability prospects, an eventuality which, when it materializes, can counteract or reverse the fall in the share price (for example, when there are economies of scale in the technology used by the enterprise).

On the other hand, shares issued to external investors may be sold in private equity markets for unlisted companies, but in principle this type of company could also be listed publicly. As the market price of shares issued by a public company is very difficult for investors to predict due to the influence of many different variables, both microeconomic and macroeconomic, in addition to future profitability, specialized intermediaries such as venture capitalists or business angels or crowdfunding

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can finance new and emerging companies that may also seek to transition from private to public status through an IPO (Capizzi and Carluccio, 2016; Blackburn, De Clercq, and Heinonen, 2017; Bonini and Capizzi, 2019).

4.5. The Dismissal of Worker Members

While in investor-owned enterprises layoffs for economic reasons may be considered a routine and necessary practice due to wage rigidity (the enterprise is forced to lay off workers with a fixed income, when the worsening of its profitability may damage its development prospects or lead it to bankruptcy), several theoretical and empirical contributions have shown that cooperative enterprises, not only worker cooperatives, tend to significantly reduce layoffs compared to their capitalist counterparts, even during phases of macroeconomic or business crisis. The main reason is that cooperatives are created to provide a stable flow of goods and services to their members, in a logic similar to that of clubs and thus to the production of collective goods (Ben-Ner and Van Hoomissen, 1991; Pérotin, 2013). 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 even during a crisis, since the service they offer to their worker-owners, as the main patron of the organization, is to procure employment opportunities under better conditions than the open labor market (Bartlett et al., 1992; Craig and Pencavel, 1992, 1994; Pencavel et al., 2006; Berman and Berman, 1989; Burdin and Dean, 2009; Delbono and Reggiani, 2013). During recessions, members will undertake a number of actions aimed at minimizing the likelihood of economic layoffs, for example, by reducing hourly wages (which thus become flexible), reducing the number of hours worked per member, and using reserves for insurance purposes to cover periods of declining demand and production activity (Miyazaki and Neary, 1983; Craig and Pencavel, 1993; Navarra, 2011, 2016; Navarra and Tortia, 2014; Albanese et al., 2019; Tortia 2022).

In the cooperative model presented in this paper, the nature and relevance of economic dismissal changes radically. Even if the work relation between the member and the cooperative is terminated by voluntary resignation or involuntary dismissal, the member remains in possession of his or her financial stake in the enterprise and continues to receive the corresponding dividends, just like the rest of the shareholders. The terminated member becomes, in essence, an outside investor. Obviously, the termination of membership eliminates the member's rights to be represented on the cooperative's bodies, and also to the associated additional benefits, such as earned income increases and the possible granting of new shares or stock options.

From the organization's point of view, as far as existing financial positions are concerned, layoffs do not entail any cost gains, unlike in capitalist enterprises. The absence of a fixed labor income eliminates the most important cause of the routine use of layoffs to reduce costs when the economic conditions of the organization worsen. In the generality of cases it can be presumed that this model of worker cooperative would lack economic and financial reasons to dismiss worker-members, thus also forestalling negative macroeconomic implications, such as a decrease in aggregate consumption (Pérotin, 2013; Tortia, 2022).

5. External and Internal Distributive Equity

In worker cooperatives, where decisions are delegated to elected representatives in the governing bodies of the organization, the distribution of resources, especially of the value added produced, assumes a key role in ensuring the equity and internal cohesion of the collective venture. A fair distribution of a limited added value requires decisions to be made that are perceived as such by the members and that these decisions withstand democratic scrutiny (Lind et al., 1992; Lind and Van de Bos, 2002; Benveniste, 2024). Therefore, in the organizational model presented in this paper, it is important to ask what equity criteria are applied in the distribution of labor income and the issuance of new shares allocated to members (Sattinger, 1993; Sandmo, 2015).

The theoretical approach of some authors (Kremer, 1997) pointed out that worker cooperatives are incapable of distributing their added value fairly among members because democratic decision-making leads to the less endowed members (in terms of skills and professional experience) obtaining

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excessively high remuneration to the detriment of the more qualified members. This result is reached by applying the median voter theorem when the qualification level of the median members is below average. On the other hand, worker cooperatives in real economies have developed over time forms of self-regulation that can guarantee a high degree of distributive equity (Tortia, 2024a). In some cases, maximum ranges of variation in labor income have been established, as in the Mondragon cooperatives (Reuten, 2021). In other cases, a high homogeneity of the tasks performed by members and, therefore, a homogeneity of member characteristics and preferences is found (Hansmann, 1988, 1996). In the US plywood cooperatives, for example, job rotation made it possible to achieve high distributive equity by paying very similar wages to all members and, at the same time, achieving high labor productivity (Pencavel, 2001).

In the cooperative form proposed in this paper, the remuneration of members in terms of dividends implies that the labor remuneration represents a radical departure from standard distributive patterns, and can be assimilated to a radical form of profit sharing, which would then become the norm combining both productivity and financial incentive. In fact, numerous studies show a positive and statistically significant correlation between the use of various forms of profit sharing and labor productivity (Blasi et al., 2013; Kruse, 2022). Distributive equity should be measured both in terms of fixing members' relative income (in relation to that of other members) and in terms of issuing new shares, allocating shares repurchased by the cooperative, or granting stock options to incumbent members.

With regard to the distribution of labor income, a distinction should be made between the determination of the initial income and the modification of the income of the incumbent members already in the cooperative. The determination of the initial income of new members does not seem to be problematic, since it will be decided, as in existing enterprises, both capitalist and cooperative, on the basis of the skills, age and professional experience of the incoming member, as well as, of course, his or her psychological and relational (e.g. motivational) characteristics, thus relying on already known search, matching and screening criteria. These criteria may be, in some respects, different in cooperative and capitalist enterprises, but these issues are outside the scope of this paper.

As for the variation in the income of the incumbent members, it is expected to be more complex because it has to be carried out taking into account both the individual productivity of the worker and her/his career progression, but also, at the same time, questions of distributive equity among the members. Adjusting incomes to productivity growth would be necessary to adjust individual member incomes over time, as too low incomes would induce the most productive members to leave when external labor market valuations are higher than the income paid by the cooperative. On the other hand, income differences among members cannot be too wide so as not to generate perceptions of unfairness. The exact balance between these two opposing economic forces (distributive equity and productivity growth) is not given in advance, but can be measured a posteriori, interpreted and analyzed in theoretical terms (Baily, Burtless and Litan, 1993; Lal, 1999). Furthermore, 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. A positive change in labor income implies a proportional increase in the face or nominal value of members' shares and also a proportional increase in the dividends paid to outside investors, while the granting of new shares or stock options to members implies an increase in the number of members' shares.

The adjudication of shares to incumbent members (through e.g. share repurchase and stock options) may not correspond to a similar increase for outside investors, who instead can only purchase shares at market prices either from the cooperative or from other investors. When shares are allotted to members and not to investors, ownership concentration in the hands of members increases. When shares are allotted to members free of charge or at a discount there can be dilution of the overall market value of the shares, which can induce outside investors to sell their holdings. However, as mentioned above, in a context where the cooperative's labor productivity and expected profits are increasing, the issuance of new shares to members and ownership concentration may not lead to market value dilution (Edwards and Weichenrieder, 2004; Lund, 2019; Larrain and Urzúa I, 2013).

 doi:10.20944/preprints202411.0888.v1

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 and shares 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 to be expected that, even in the progression of members' incomes, equity criteria of a tendentially egalitarian type, such as the Rawlsian maximin criterion, will be applied, according to which (increasing) inequality between members' incomes would be accepted not only based on the different levels of productivity of the partners themselves, but especially in cases where it corresponds to the improvement of the income conditions of all members, i.e. even of the less productive ones (Ralws, 1971, 1985, 2001). The Rawlsian maximin criterion or difference principle stipulates that economic inequalities among citizens (in this case, among members of a worker 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 in society (in this case, members; Ralws, 1971, 1985, 2001; Schaller, 1998; Tortia, 2024a). In other words, in worker cooperatives, inequality would only be accepted when it can reconcile a higher remuneration of productivity growth for the more productive members and distributive equity or welfare improvement also for the less productive ones. In the proposals in this paper, it is possible to foresee that the progression of income could benefit all members, based precisely on the Rawlsian difference principle. At the same time, members with greater experience and professional skills will obtain larger increases. This distributive pattern in cooperatives is likely to imply more equitable macroeconomic outcomes than what is observed in market capitalism (Piketty, 2013; Milanovic, 2016)

Finally, outside investors holding only non-voting shares would be excluded from major financial decisions and potentially discriminated against in distribution policies. This may occur, for example, when the dilution of the market value of shares is due to an increase in the members' shareholding. This may induce investors to reduce exposure to share ownership or to cancel it altogether. To cope with the risk of this kind of perverse effect, which could again lead to underinvestment and undercapitalization of worker cooperatives (Furubotn and Pejovich, 1970; Vanek, 1970; Ellerman, 1986), it is possible to imagine the creation of assemblies representing the interests of outside investors, with advisory, informational and even consulting functions concerning members' financial choices. Such a body would also have the function of controlling the decisions of the governing bodies, which 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 commonly observed in various types of existing mutualistic organizations (Tortia, 2024b).

6. Conclusions

This paper has hypothesized the creation of worker cooperatives in which the members' labor income is not a contractual wage, as in an agency relationship between employer and employee. Instead, a compensation scheme based on "dividends" of the net value added or residual income generated by the firm in the absence of labor costs, i.e., wages, as already hypothesized in Ward's well-known 1958 economic model of the labor-managed firm, is considered.

The payment of dividends instead of wages would can uniquely link the labor income of cooperative members to the nominal value of their financial stake in the capital of the enterprise. If there were a capital market, the nominal value at which cooperative shares are issued would simply be the value of the financial shares held by members. Shares could be sold on a private market (private equity) or even on a publicly regulated market (publicly traded stock). Cooperative shares could be issued and traded under the same conditions of value and remuneration not only to cooperative members but also to external investors who are not registered as workers of the cooperative.

 doi:10.20944/preprints202411.0888.v1

Some existing examples of the implementation of cooperative or employee-owned capital structures were then presented, where employee-members own at least part of the capital of the company, although there are no actual shares and capital markets. For example, the case of the Mondragon cooperatives, the ESOP scheme in the United States, cooperatives in the U.S. Pacific Northwest characterized by the presence of a market for membership rights, and finally the case of employee-owned companies such as the John Lewis Partnership in the United Kingdom.

It has been pointed out that in the solution proposed in this paper, dividends as members' labor income could have a relatively stable and increasing trend over time in order to meet the livelihood needs of workers and their productivity improvements. Only in the case of economic or financial difficulties of the company is it expected that labor income could undergo significant (downward) changes and adjustments. In contrast, the market value of shares is expected to be more volatile due to fluctuating prospects of future company profitability.

The last section discussed distributional equity issues related to trends in the value of members' labor income. Given the democratic and collective management of mutualist organizations such as workers' cooperatives, it was hypothesized that distributive changes would conform to the Rawlsian difference principle or maximin criteria. In other words, the internal inequality of 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, and to promote a fair 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.

References

1. Albanese, Marina, Cecilia Navarra, Ermanno C. Tortia. 2019. Equilibrium Unemployment as a Worker Insurance Device: Wage Setting in Worker-Owned Enterprises. *Economia Politica: Journal of Analytical and Institutional Economics* 36, 653-671. https://doi.org/10.1007/s40888-018-00139-z
2. Alchian, Armen A., and Harold Demsetz. 1972. Production, Information Costs, and Economic Organization. *The American Economic Review* 62: 777–795.
3. Ang, James S., 1992. On the Theory of Finance for Privately Held Firms. *Journal of Small Business Finance* 1: 185-203. https://doi.org/10.57229/2373-1761.1121
4. Angus, Ian. 2023. The War against the Commons: Dispossession and Resistance in the Making of Capitalism. New York, NY: Monthly Review.
5. Baily, Martin N., Gary Burtless, and Robert E. Litan 1993. *Growth with Equity: Economic Policymaking for the Next Century.* Washington, DC: Brookings.
6. Bartlett, Will, John Cable, Saul Estrin, Derek C. Jones; Stephen C. Smith. 1992. *Labor-Managed Cooperatives and Private Firms in North Central Italy: An Empirical Comparison.* ILR Review, 46: 103-118. https://doi.org/10.1177/001979399204600108
7. Becker, Gary S. 1993. *Human Capital.* 3rd Ed. Chicago, IL: Chicago UP.
8. Ben-Ner, Avner, and Theresa van Hoomissen. 1991. Nonprofit Organizations in the Mixed Economy: A Demand and Supply Analysis. *Annals of Public and Cooperative Economics* 62: 519–50. https://doi.org/10.1111/j.1467-8292.1991.tb01366.x
9. Bens, Daniel A., Venky Nagar, Douglas J. Skinner, M. H. Franco Wong. 2003. Employee Stock Options, EPS Dilution, and Stock Repurchases. *Journal of Accounting and Economics* 36: 51-90. https://doi.org/10.1016/j.jacceco.2003.10.006
10. Benveniste, E. (2024). Buying Out the Means of Production: Wages, Employment and Productivity in Labor-managed Firms. Universitat Pompeu Fabra. Available online: https://www.upf.edu/en/web/econ/internal-applied-lunch-seminar-series (accessed on 08 November 2024)
11. Berle, Adolf A., and Gardiner C. Means. 1932. *The Modern Corporation and Private Property.* New Brunswick, NJ: Transaction.
12. Berman, Katrina V., and Matthew D. Berman. 1989. An Empirical Test of the Theory of the Labour-Managed Firm. *Journal of Comparative Economics* 13: 281-300. https://doi.org/10.1016/0147-5967(89)90005-X
13. Bijman, Jos, and Bart Doorneweert. 2010. Collective Entrepreneurship and the Producer-Owned Co-operative. *Journal of Co-operative Studies* 43: 5-16.

 doi:10.20944/preprints202411.0888.v1

14. Blanchard, Pablo, Gabriel Burdin, and Andrés Dean. 2024. Property Rights, Sick Pay and Effort Supply. Leeds University Business School WP. Avakabke online at SSRN: https://ssrn.com/abstract=4839474 (accessed on 22 October 2024)
15. Blackburn, Robert, Dirk De Clercq, and Jarna Heinonen. 2017. *The SAGE Handbook of Small Business and Entrepreneurship.* Thousand Oaks, CA: Sage.
16. Blasi, Joseph, Douglas Kruse, and Dan Weltmann. 2013. Firm Survival and Performance in Privately Held ESOP Companies. *Advances in the Economic Analysis of Participatory & Labor-Managed Firms* 14: 109-124. https://doi.org/10.1108/S0885-3339(2013)0000014006
17. Bonin, John, Derek C. Jones, and Louis Putterman. 1993. Theoretical and empirical Studies of Producer Cooperatives: Will the Twain Ever Meet? *Journal of Economic Literature* 31: 1290–1320.
18. Bonini, Stefano, and Vincenzo Capizzi. 2019. The Role of Venture Capital in the Emerging Entrepreneurial Finance Ecosystem. Venture Capital. *International Journal of Entrepreneurial Finance* 21: 137-175. https://doi.org/10.1080/13691066.2019.1608697
19. Borzaga, Carlo, Chiara Carini, and Ermanno C. Tortia. 2022. Co-operative enterprise anti-cyclicality and the economic crisis: A comparative analysis of employment dynamics in Italy. *Annals of Public Cooperative Economics* 93: 551-577. https://doi.org/10.1111/apce.12337
20. Bowles, Samuel, and Herbert Gintis. 1993. A Political and Economic Case for the Democratic Enterprise. *Economics and Philosophy* 9: 75–100. https://doi.org/10.1017/S0266267100005125
21. Burdín, Gabriel, and Andrés Dean. 2009. New evidence on wages and employment in worker cooperatives compared with capitalist firms. *Journal of Comparative Economics* 37: 517–533. https://doi.org/10.1016/j.jce.2009.08.001
22. Capizzi, Vincenzo, and Emanuele M. Carluccio. 2016. Competitive Frontiers in Equity Crowdfunding: The Role of Venture Capitalists and Business Angels in the Early-Stage Financing Industry. In *Crowdfunding for SMEs. A European Perspective,* edited by Roberto Bottiglia and Flavio Pichler. London, UK: Palgrave Macmillan, pp. 117-154.
23. Cheney, George, Iñaki Santa Cruz, Ana M. Peredo, and Elías Nazareno. 2014. Worker Cooperatives as an Organizational Alternative. *Organization* 21: 591-756. https://doi.org/10.1177/1350508414539784
24. Clemente, Jesús, Millán Diaz-Fonsea, Carmen Marcuello, and Marcos Sanso-Navarro. 2012. The Wage Gap Between Cooperative and Capitalist Firms: Evidence from Spain. *Annals of Public and Cooperative Economics* 83: 337-356. https://doi.org/10.1111/j.1467-8292.2012.00466.x
25. Coase, Ronald H. 1937. The Nature of the Firm. *Economica* 4: 386-405.
26. Commons, John R. 1950. *The Economics of Collective Action.* New York, NY: Macmillan.
27. Cook, Michael L., and Brad Plunkett. 2006. Collective Entrepreneurship: An Emerging Phenomenon in Producer-Owned Organisations. *Journal of Agricultural and Applied Economics* 38: 421-428. https://doi.org/10.1017/S1074070800022458
28. Craig, Ben, and John Pencavel 1992. The Behaviour of Worker Cooperatives: The Plywood Companies of Pacific Northwest. *The American Economic Review* 82: 1083-1105.
29. Craig, Ben, and John Pencavel 1993. The Objectives of Worker Cooperatives. *Journal of Comparative Economics* 17: 288-308. https://doi.org/10.1006/jcec.1993.1027
30. Craig, Ben, and John Pencavel 1994. The Empirical Performance of Orthodox Models of the Firm: Conventional Firms and Worker Cooperatives. *Journal of Political Economy* 102: 718-744. https://doi.org/10.1086/261952
31. Delbono, Flavio, and Carlo Reggiani 2013. Cooperative Firms and the Crisis: Evidence from some Italian Mixed Oligopolies. *Annals of Public and Cooperative Economics* 84: 383–397. https://doi.org/10.1111/apce.12020
32. Dow, Gregory K. 1986. Control Rights, Competitive Markets, and the Labor Management Debate. *Journal of Comparative Economics* 10: 48-61.
33. Dow, Gregory K. 2003. Governing the Firm. Workers' Control in Theory and Practice. Cambridge, MA: Cambridge UP.
34. Edwards, Jeremy S. S., and Alfons J. Weichenrieder. 2004. Ownership Concentration and Share Valuation. *German Economic Review* 5: 117-261. https://doi.org/10.1111/j.1465-6485.2004.00100.x
35. Ellerman, David P. 1984. Theory of Legal Structure: Worker Cooperatives. *Journal of Economic Issues* 18: 861–891.

 doi:10.20944/preprints202411.0888.v1

36. Ellerman, David P. 1986. Horizon Problems and Property Rights in Llabor-Managed Firms. *Journal of Comparative Economics* 10: 62–78. https://doi.org/10.1016/0147-5967(86)90119-8
37. Ellerman, David P. 2005. Translatio versus Concessio: Retrieving the Debate about Contracts of Alienation with an Application to Today's Employment Contract. *Politics & Society* 33: 449-480. https://doi.org/10.1177/0032329205278463
38. Ellerman, David P. 2016. Worker cooperatives as based on first principles. *JEOD, Journal of Entrepreneurial and Organizational Diversity*, 5, 20–32. https://doi.org/10.5947/jeod.2016.002
39. Ellerman, David P. 2021. Neo-Abolitionism. Abolishing Human Rentals in Favor of Workplace Democracy. Heidelberg, DE: Springer.
40. Ellerman, David P., Tej Gonza, and Gregor Berkopec. 2022a. European Employee Stock Ownership Plan (ESOP): the Main Structural Features and Pilot Implementation in Slovenia. *SN Business Economics* 2: 186. https://doi.org/10.1007/s43546-022-00363-7
41. Ellerman, David P., Tej Gonza, and Gregor Berkopec. 2022b. European ESOP: The main structural features and pilot implementation in Slovenia. Inštitut za ekonomsko demokracijo. Ljubljana, SI. Available online: https://mfgren.org/wp-content/uploads/2022/07/ellerman-piece-on-esops-060722.pdf (accessed on 22 October 2024)
42. Farsio, Farzad, Amanda Geary, and Justin Moser. 2004. The Relationship Between Dividends and Earnings. *Journal for Economic Educators* 4: 1-5.
43. Friedman, Milton. 1970. The Social Responsibility of Business Is to Increase Its Profits. The New York Times. Online: https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html (accessed 22 October 2024)
44. Furubotn, Eirik G. 1976. The Long-Run analysis of the Labor-Managed Firm: an Alternative Iinterpretation. *The American Economic Review* 66: 104–123.
45. Furubotn, Eirik G. and Svetozar Pejovich. 1970. Property Rights and the Behavior of the Firm in Socialist State: The Example of Yugoslavia. *Zeitschrift für Nationalökonomie* 30: 431–454. https://doi.org/10.1007/BF01289247
46. Galor, Zvi. 2015. Equity in Service at Cost: The Case of the Classic Moshav. *Journal of Co-operative Studies* 48: 28–37.
47. Galor, Zvi, and Michael Sofer. 2019. The Reserve Fund: Is it a Necessary Anchor for a Successful Cooperative? *Journal of Co-operative Organization and Management* 7, 100089. https://doi.org/10.1016/j.jcom.2019.100089
48. Handy, Jim. 2022. Apostles of Inequality: Rural Poverty, and the Economist, 1760–1860. Toronto, ON: University of Toronto Press.
49. Hansmann, Henry. 1988. Ownership of the Firm. *Journal of Law, Economics and Organization* 4: 267-304.
50. Hansmann, Henry. 1996. *The Ownership of the Enterprise.* Harvard, MA: Harvard UP.
51. Hardin, Garret. 1968. The tragedy of the commons. *Science*, 162, 1243–1248. https://doi.org/10.1126/science.162.3859.1243
52. Hill, Charles W.L., and Scott A. Snell. 2017. Effects of Ownership Structure and Control on Corporate Productivity. *Academy of Management Journal* 32: 25-46. https://doi.org/10.5465/256418
53. Jamadar, Yasmin, Hossain Mohammad Reyad, Md. Kausar Alam, Oli Ahad Thakur, and Syed A. Mamun. 2024. Why Do Companies Share Buybacks? Evidence from the UK. *Risks* 12: 159. https://doi.org/10.3390/risks12100159
54. Jeng, Leslie A., Andrew Metrick, and Richard Zeckhauser. 2003. Estimating the Returns to Insider Trading: A Performance-Evaluation Perspective. *The Review of Economics and Statistics* 85: 453–471. https://doi.org/10.1162/003465303765299936
55. Jensen, Michael C., and Meckling, William H. 1976. Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure. *Journal of Financial Economics* 3: 305-360. https://doi.org/10.1016/0304-405X(76)90026-X
56. Jensen, Michael C., and Meckling, William H. 1979. Rights and Production Functions: An Application to Labor-Managed Firms and Codetermination. *The Journal of Business* 52: 469-506. https://doi.org/10.1086/296060
57. Jensen, Michael C., and Clifford W. Smith. 1985. Stockholder, Manager, and Creditor Interests: Applications of Agency Theory. In *Recent Advances in Corporate Finance*, edited by Edward I. Altman and Marti G. Subrahmanyam. Homewood, IL: Irwin.

58. Jones, Derek C., and Jan Svejnar. 1985. Participation, Profit Sharing, Worker Ownership and Efficiency in Italian Producer Cooperatives. *Economica* 52: 449-465. https://doi.org/10.2307/2553878
59. Keynes, John M. 1936. The General Theory of Employment, Interest and Money. London, UK: Macmillan.
60. Kiyosaki, Robert T. 2017. Rich Dad Poor Dad: What the Rich Teach Their Kids About Money That the Poor and Middle Class Do Not! 2nd edition. New York, NY: Plata Publishing.
61. Koller, Tim, Marc Goedhart, and David Wessels. 2020. *Valuation: Measuring and Managing the Value of Companies.* 7th Ed. New York, NY: Wiley.
62. Kremer M. (1997), Why Are Worker Cooperatives So Rare, WP 6118, Cambridge, MA: NBER. Available online: https://www.nber.org/system/files/working_papers/w6118/w6118.pdf (accessed on 24 October 2024)
63. Kruse, Douglas. 2022. Does Employee Ownership Improve Performance? *IZA World of Labor* 311v2: 1-14. https://doi.org/10.15185/izawol.311.v2
64. Kumbhakar, Subal C., and Amy E. Dunbar. 1993. The Elusive ESOP-Productivity Link. Evidence from U.S. Firm-Level Data. *Journal of Public Economics* 52: 273-283. https://doi.org/10.1016/0047-2727(93)90024-N
65. Lal, Deepak. 1999. The Political Economy Of Poverty, Equity, And Growth: A Comparative Study. New York, NY: Oxford UP.
66. Larrain, Borja, and Francisco Urzúa I, F (2013). Controlling Shareholders and Market Timing in Share Issuance. *Journal of Financial Economics* 109: 661-681. https://doi.org/10.1016/j.jfineco.2013.03.013
67. Lind, E. Allan, Carole T. Kulik, Maureen Ambrose, Maria V. de Vera Park, 1993. Individual and Corporate Dispute Resolution: Using Procedural Fairness as a Decision Heuristic. *Administrative Science Quarterly* 38: 224-251. https://doi.org/10.2307/2393412
68. Lind, E. Allan, and Kees van den Bos. 2002. When Fairness Works: Toward a General Theory of Uncertainty Management. *Research in Organizational Behavior* 24: 181-223.
69. Lintner, John. 1962. Dividends, Earnings, Leverage, Stock Prices and the Supply of Capital to Corporations. *Review of Economics and Statistics* 44: 243-269. https://doi.org/10.2307/1927792
70. Locke, John. 1980 (1690). *Second Treatise on Government.* Indianapolis, IN: Hackett.
71. Lomuscio, Marco. 2024. Going collective: Worker Takeovers, Entrepreneurship, and Collective Actions. *Scandinavian Journal of Management* 40: 101368. https://doi.org/10.1016/j.scaman.2024.101368
72. Lund, Dorothy S. 2019. Nonvoting Shares and Efficient Corporate Governance. *Stanford Law Review* 71: 687-745.
73. Marcuello, Carmen. 2023. Employee Ownership in Spain: Worker Cooperatives and Sociedades Laborales. *Journal of Participation and Employee Ownership* 6: 149-165. https://doi.org/10.1108/JPEO-10-2022-0023
74. Mazzini, Giuseppe. 2011 (1860). *Doveri dell'Uomo.* Rome, IT: Editori Riuniti.
75. Meade, James E. 1972. The Theory of Labour-Managed Firms and of Profit Sharing. *Economic Journal* 82: 402-428. https://doi.org/10.2307/2229945
76. Meade, James E. 1986. Alternative Systems of Business Organisation and Workers' Remuneration. London, UK: Allen and Unwin.
77. Meade, James E. 1989. *Agathotopia: The Economics of Partnership.* Aberdeen, UK: Aberdeen UP.
78. Milanovic, Branko. 2016. Global Inequality: A New Approach for the Age of Globalization. Cambridge, MA: Bellknap.
79. Miyazaki, Hajime, Hugh M. Neary. 1983. The Illyrian Firm Revisited. *Bell Journal of Economics* 14: 259–270. https://doi.org/10.2307/3003552
80. Morrison, Roy. 1989. *We Build the Road As We Travel.* Gabriola, BC: New Society.
81. Navarra, C. 2011. Profit reinvestment in Italian worker co-operatives as a contribution to a common good: An empirical analysis on workers' perception and motivation. *Advances in the Economic Analysis of Participatory and Labor-Managed Firms* 12: 199–229. https://doi.org/10.1108/S0885-3339(2011)0000012012
82. Navarra, C. (2016). Employment stabilization inside firms: an empirical investigation on worker cooperatives. *Annals of Public and Cooperative Economics* 87: 563–585. https://doi.org/10.1111/apce.12124
83. Navarra, Cecilia and Ermanno C. Tortia. 2014. Employer Moral Hazard, Wage Rigidity, and Worker Cooperatives: A Theoretical Appraisal. *Journal Economic Issues* 48: 707–726. https://doi.org/10.2753/JEI0021-3624480306
84. Olson, Mancur. 1965. The Logic of Collective Action: Public Goods and the Theory of Groups. Cambridge, MA: Harvard UP.

85. Ostrom, Elinor. 1990. Governing the Commons. The Evolution of Institutions for Collective Action. Cambridge, MA: Cambridge UP.
86. Pejovich, Svetozar. 1990. The Economics of Property Rights. Towards a Theory of Comparative Systems. Heidelberg, DE: Springer.
87. Pencavel, J. (2001). Worker Participation: Lessons from Worker Co-ops of the Pacific Northwest. Thousand Oaks, CA: Sage.
88. Pencavel, John, Luigi Pistaferri, and Fabiano Schivardi. 2006. Wages, Employment, and Capital in Capitalist and Worker-Owned Firms. *ILR Review* 60: 23-44. https://doi.org/10.1177/001979390606000102
89. Pérotin, Virginie. 2013. Worker Cooperatives: Good, Sustainable Jobs in the Community. *JEOD, Journal of Entrepreneurial and Organizational Diversity* 2: 34-47. https://doi.org/10.5947/jeod.2013.009
90. Piketty, Thomas. 2013. *Le Capital au XXie Siècle.* Paris, FR: Le Soleil.
91. Prendergast, Canice. 1999. The Provision of Incentives in Firms. *Journal of Economic Literature* 37: 7-63.
92. Putterman, Louis 1988. The Firm as Association versus the Firm as Commodity. Efficiency, Rights and Ownership. *Economics and Philosophy* 4: 243–266. https://doi.org/10.1017/S0266267100001073
93. Rawls, John. 1971. *A Theory of Justice.* Cambridge, MA: Harvard UP.
94. Rawls, John. 1985. Justice as Fairness: Political not Metaphysical. *Philosophy and Public Affairs* 14: 223–251.
95. Rawls, John. 2001. *Justice as Fairness: A Restatement.* Cambridge, MA: Belknap.
96. Reuten, G. 2021. The Employment Performance of the Mondragon Worker Cooperatives 1983-2019. Euricse WP 118/21. Available online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3992304# (accessed on 08 November 2024)
97. Rosen, Corey. 2023. Employee Ownership in the USA: Lessons to Consider in Creating More Inclusive Capitalism. *Journal of Participation and Employee Ownership* 6, 215-229. https://doi.org/10.1108/JPEO-11-2022-0029
98. Salaman, Graeme, and John Storey. 2016. *A Better Way of Doing Business? Lessons from The John Lewis Partnership.* Oxford, UK: Oxford University Press.
99. Sandmo, Agnar. 2015. The Principal Problem in Political Economy: Income Distribution in the History of Economic Thought. In *Handbook of Income Distribution*, edited by Anthony B. Atkinson, and François Bourguignon. Amsterdam, NL: North Holland, vol. 2, pp. 3-65. https://doi.org/10.1016/B978-0-444-59428-0.00002-3
100. Sattinger, Michael. 1993. Assignment Models of the Distribution of Earnings. *Journal of Economic Literature* 31: 831-880.
101. Schaller, Walter E. (1998). Rawls, the Difference Principle, and Economic Inequality. *Pacific Philosophical Quarterly* 79 (4), 368–391. https://doi.org/10.1111/1468-0114.00069
102. Schultz, Theodore W. 1961. Investment in Human Capital. *The American Economic Review* 51: 1-17.
103. Screpanti, Ernesto 2001. *The Fundamental Institutions of Capitalism*. Abingdon, UK: Routledge.
104. Screpanti, Ernesto 2017. Karl Marx on Wage Labor: From Natural Abstraction to Formal Subsumption. *Rethinking Marxism* 29: 511-537. https://doi.org/10.1080/08935696.2017.1417086
105. Simon, Herbert A. 1951. A Formal Theory of the Employment Relationship. *Econometrica* 19: 293-305.
106. Skinner, Douglas S., and Eugene Soltes. 2009. What Do Dividends Tell us About Earnings Quality? *Review of Accounting Studies*, 16: 1–28. https://doi.org/10.1007/s11142-009-9113-8
107. Song, Ok-Rial 2002. Hidden Social Costs of Open Market Share Repurchase. *Journal of Corporate Law* 27: 425-477.
108. Sraffa, Piero. 1960. Production of Commodities by Means of Commodities. Prelude to a Critique of Economic Theory. Cambridge, UK: Cambridge UP.
109. Storey, John, Imanol Basterretxea, and Graeme Salaman 2014. Managing and Resisting 'Degeneration' in Employee-Owned Businesses: A Comparative Study of Two Large Retailers in Spain and the United Kingdom. *Organization* 21: 626-644. https://doi.org/10.1177/1350508414537624
110. Stuart Mill, John. 1871. Principles of Political Economy with Some of their Applications to Social Philosophy. London, UK: Longmans.
111. Uvalic, Milica. 2010. Investment and Property Rights in Yugoslavia. The Long Transition to a Market Economy. Cambridge, UK: Cambridge UP.
112. Tortia, Ermanno C. 2007. Self-Financing in Labor-Managed Firms: Individual Capital Accounts and Bonds. In *Cooperative Firms in Global Markets*, Edited by Sonja Novkovic, and Vania Sena Vol. 10. Bingley, UK: Emerald, pp. 233–261. https://doi.org/10.1016/S0885-3339(06)10009-5

113. Tortia, Ermanno C. 2021. Capital as Common-Pool Resource: Horizon Problem, Financial Sustainability and Reserves in Worker Cooperatives. *Journal of Co-operative Organization and Management*, 9: 100137. https://doi.org/10.1016/j.jcom.2021.100137
114. Tortia, Ermanno C. 2022. Employment Protection Regimes and Dismissal of Members in Worker Cooperatives. *Scandinavian Journal of Management* 38: 101213. https://doi.org/10.1016/j.scaman.2022.101213
115. Tortia, Ermanno C. 2024a. Stakeholders Self-Organization and Adaptive Governance in Social Enterprises. *Systems Research and Behavioral Science, early view.* https://doi.org/10.1002/sres.3005
116. Tortia, Ermanno C. 2024b. The Great Reset as a Realistic Utopia. A Critical Stance from Critical Realism and Complex Systems Theory. *Systems*, 12: 304. https://doi.org/10.3390/systems12080304
117. Vanek, Jaroslav. 1970. The General Theory of Labour Managed Market Economies. Ithaca, NY: Cornell UP.
118. Vanek, Jaroslav. 1977. *The Labor-managed Economy: Essays.* Ithaca, NY: Cornell UP.
119. Ward, Benjamin. 1958. The Firm in Illyria: Market Syndicalism. *The American Economic Review* 48: 566-589.
120. Whyte, William F., and Kathleen K. Whyte. 1988. Making Mondragon. The Growth and Dynamics of the Worker Cooperative Complex. Ithaca, NY: Cornell UP.
121. Zevi, Alberto. 1982. The Performance of Italian Producer Cooperatives. In *Participatory and Self-Managed Firms*, edited by Derek C. Jones, and Svejnar, John. Lexington, MA: Lexington Books, pp. 239-251.
122. Zevi, Alberto. 2005. Il Finanziamento delle Cooperative. In *Verso una Nuova Teoria Economica della Cooperazione*, edited by Enea Mazzoli, and Stefano Zamagni. Bologna, IT: Il Mulino, pp. 293-332.