# UNEMPLOYMENT IN A SYSTEM OF LABOUR-MANAGED FIRMS

## *1. Introduction*

The problem we set out to discuss in this paper is the idea that worker control tends to increase, rather than reduce, unemployment. This idea seems to be prevailing in the published literature and is grounded on four main assumptions (in the paper democratic firm, labour-managed firm and cooperative firm are considered to be synonyms).

The first of these is the argument that the higher capital-labour ratios required for (short-term) equilibrium in labour-managed versus capitalistic firms at equal capital accumulation conditions will result in higher unemployment levels in a system of democratically managed firms (see Ward, 1958 and Vanek, 1970 chapt. 2)[1].

The second is the idea that the supply curve of a producer cooperative operating in conditions of perfect competition has a decreasing slope for in such a situation unemployment may increase, rather than diminish, at each rise in demand. In fact, although many criticisms by several authors have deprived Ward's 'perverse' supply curve theory of much of its former clout (see, among others, Domar, 1966; Sen, 1966; Horvat, 1967; Berman, 1977; Steinherr and Thisse, 1979a and 1979b; Conte, 1980; Sertel, 1982 and 1987; Brewer and Browning, 1982; Miyazaki and Neary, 1983 and Hansmann, 1996, pp. 84-85), the argument that every upsurge in demand in a labour-managed system actually generates fewer jobs than it would in a system of capitalistic firms still is accepted in the economic literature[2].

Thirdly, the assumed higher unemployment levels of a labour-managed economy are traced to a tendency to underinvest which results in diminished job creation. Although the criticism of Furubotn and Pejovich of the labour-managed firm with respect of this

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[1] In a short-term perspective, it is commonly assumed that democratic firms operating in a perfect-competition environment tend to hire fewer workers than capitalistic firms under the same circumstances, In point of fact, there are reasons to believe that the opposite may apply in conditions of uncertainty and when workers look upon democratic firms as entailing greater risks than capitalistic companies (see Muzondo, 1979 and 1980).

[2] Although Weitzman, 1984, strongly recommends profit sharing, he strongly argues against worker participation in firm control on the assumption (suggested by Ward) that insiders tend to discriminate against outsiders.

problem has been even more forcefully confuted than the previous one, the opinion that a system of democratic firms tends to generate structural unemployment is nonetheless still widely shared.

The fourth, even stronger argument is the investment funding issue, i.e. the obstacles that democratic firms are assumed to face when it comes to raising funds (see Drèze, 1989, chapter IV and 1993, pp. 257-62; Bowles and Gintis, 1993; Putterman, 1993; Dow, 1993 and 1998).

To clear this point, we remind of  Meade's well-known contention (see Meade 1972 and 1979) that employment opportunities for those in search of jobs in a labour-managed economy are even more directly linked to the creation of new firms than they are in a capitalistic system. To the extent it is true that rises in aggregate demand, far from generating fresh jobs, may induce existing firms to lay off some of their workers, it is first and foremost by setting up new business firms that a worker-controlled system can create more opportunities for employment. And theorists of the funding difficulties of a labour-managed firm hold these difficulties to be particularly severe at the start-up stage.

For all these reasons, labour management is said to sharpen, rather than help solve the employment issue. But is this position correct? The case of Yugoslavia, where unemployment arose after the collapse of self-management, would rather speak in support of the opposite view (Horvat, 2000, p. 18). Be that as it may, this paper is intended to discuss the complex facets of this issue from a theoretical point of view and in order to analyse the several facets of the problem, we will separately address the following three cases: 1) high-wage unemployment, 2) Keynesian unemployment, and 3) structural unemployment.

The paper is organised as follows: The second section deals with high-wage unemployment, and makes it clear that the greater part of today's unemployment would be inexistent in a system of labour-managed firms since these do not pay wages proper. The third section discusses the assumption that the applicability of (what Keynes termed) the 2nd postulate of classical theory to a labour-managed economy would rule out Keynesian unemployment altogether. Section 4 analyses the obstacles to full employment as theorised by Kalecki for a capitalistic system, while Section 5 dwells on the effects of the absence of a Phillips curve in a system of producer cooperatives. Sections 6 and 7 analyse forms of structural unemployment in a system of democratic firms with the aim of providing evidence that in a system entirely formed of labour-managed firms structural unemployment would not exceed its present level in a capitalistic system. Section 8 sets forth our conclusions.

***2. Classical unemployment***

As is well known, mainstream theorists tend to assume that in capitalistic systems unemployment is mainly caused by high labour costs. From among the best-known theoretical approaches to high-wage unemployment, let us mention the following three:

a) efficiency wage theory;
b) insider-outsider theory;
c) path-dependence theory;

and argue that none of the types of unemployment theorised by these approaches would apply under labour management, a system which by definition incurs no labour costs.

To start with, we sum up the main points of efficiency wage theory as reported in Yellen, 1984, Stiglitz, 1986 and Weiss, 1990. As suggested by these authors, one reason why wages are deliberately kept high is to induce personnel to work hard and with great commitment, for workers who are well paid feel rewarded and – as Akerlof and others put it – tend to remunerate the ‘partial gift’ of a higher pay with the ‘partial gift’ of greater commitment to their tasks. This is termed the *incentive effect* (see, among others, Akerlof, 1982 and 1984 and Burow and Summers, 1996). The second major element of this theory is the *turnover effect*, according to which firms pay high wages in an effort to retain the personnel they have, i.e. to avoid incurring the substantial training and other costs associated with the hiring of new workers (see, among others, Stiglitz, 1974 and 1985; Hall, 1975; Schlicht, 1978 and Salop, 1979). An even more important factor seems to be the *selection effect*, which stems from the firm’s wish to attract, and retain, the best workers available (see, among others, Weiss, 1980 and Malcomson, 1981). These three effects concordantly entail fixing the equilibrium wage above the level at which labour demand would equal labour supply.

Both capitalistic and labour-managed firms tend to avert personnel turnovers and sundry other costs incurred in replacing workers with others and to attract and retain the best labour force available. However, unlike what happens in capitalism a labour-managed firm cannot attain these ends by paying its partners higher wages since these earn, not wages proper, but a predetermined percentage rate of the firm's income. It goes without saying that a labour-managed firm cannot attract given workers by assigning them a greater rate of its income than it has originally agreed to pay that category of workers without automatically reducing the percentage rate assigned to the remaining workforce.

Moreover, while it is true that the discipline effect stemming from the workers' fear to be laid off is certainly an option in democratic firms no less than in capitalistic ones, no discipline effect can be generated by increasing the income levels of the partners of a cooperative and no high-wage unemployment of the type suggested in efficiency wage theory is consequently envisaged in a worker-controlled economy.

As to the insider-outsider approach, it conceives of the labour market as split into two parts, as it is known, and assumes that wage levels are determined by insiders only. As the dominant position of insiders is generally explained with high layoff and hiring costs, the existence of trade unions is not an essential prerequisite for the validity of this theoretical approach. An additional point to be emphasised is that outsiders do not automatically become insiders on first joining a firm. As layoffs are generally governed by the 'last in, first out' rule, it is only those who have been working for the firm for some time that can feel safe from layoff risks when wages begin to rise. And this is why wages will often soar to levels far above those that would guarantee full employment.

The main rationale behind this theoretical approach is that cooperation within the manufacturing process increases in proportion to the team spirit prevailing within the firm. In the opinion of Lindbeck and Snower, this may account for the observation that even in periods of high unemployment workers face little unfair competition from workers prepared to put up with lower pays. The reason why firms seldom deem it expedient to replace existing workers with others ready to accept lower wages, they argue, is the fear that insiders resenting this unfair practice may prove less cooperative with the newcomers. As Lindbeck and Snower put it, outsiders themselves refrain from underbidding on the assumption that they would be harassed by insiders and treated a scabs meaning to 'steal other people's jobs'. In other words, the fact that insiders may fail to cooperative with newcomers may greatly affect the productivity rates of newcomers, and this determines that not only workers, but even firms will assume that wage cuts are not in their best interests (see Lindbeck and Snower, 1982, 1985, 1986a, 1986b, 1988a and 1988b and Lindbeck, 1993). In the opinion of Solow (1990, p. 37), this formidable finding accounts for the greater part of classical unemployment from high wages.

As is well known, one major point of Ward and Vanek's producer cooperative theory is the opposition of insiders to the hiring of more workers for reasons of self-interest, i.e. to avoid cuts on their incomes. At first sight, this would appear to back up the assumption that the insider-outsider approach can be extended to a system of democratic firms as well. In fact, as incomes in a producer cooperative are determined by the market, insiders in these firms can hardly be assumed to step up their incomes to levels that would stand in the way of the entry of more workers.

The point that these reflections are intended to make is that even insider-outsider theorists associate unemployment with high labour costs and that this is in itself enough to rule out that the kind of unemployment they theorise is an option in a system of democratic firms.

Turning to path-dependence theory, one major assumption behind this approach is that the rate of growth in money wages tends to be fixed at exactly that level at which the earnings of the existing workforce can be maximised without entailing layoffs of insiders or new hires. In other words, based on this theory it is assumed that those in employment drive up wages to levels at odds with the creation of new jobs (see Blanchard and Summers, 1986, 1987 and 1988).

The favourable reception of this and the previous two theoretical approaches (along with others that have not been mentioned in this article) is ultimately responsible for the widespread opinion, in economic thought, that the greater part of today's unemployment is to be traced to high wages.

A preliminary conclusion possible at this stage is that a democratic firm system would offer the far from negligible advantage of doing away with all the unemployment which based on these theories is assumed to stem from high labour costs.

### *3. Keynesian unemployment*

Distinguishing between 'cooperative economies' and 'entrepreneur economies', in the 1933 version of what was later to develop into *The General Theory* Keynes argued that the former were governed by Say's law and were not subject to fluctuations in aggregate demand. This would appear to justify the assumption that involuntary unemployment is typical of a market economy founded on hired labour. In the opinion of Keynes, in a cooperative economy "the factors of production are rewarded by dividing up in agreed proportions the actual output of their cooperative effort" (Keynes, 1933, p.77), and when this happens, the second postulate of classical theory will apply and the number of hours worked tends to equate the marginal productivity of labour with its marginal disutility level (Keynes, 1933, pp. 77 and 101).

This belief in the validity of the law of markets in a cooperative economy induced Keynes to argue that "the distinction between a co-operative economy and an entrepreneur economy bears some relation to a pregnant observation made by Karl Marx" which runs that "the nature of production in the actual world is not, as economists seem often to suppose, a case of C-M-C', that is, of exchanging commodities (or effort) for money in order to obtain another commodity or effort", but an instance of M-C-M', i.e. a situation in which money is exchanged for commodities in order to obtain more money (1933, p. 81). Keynes categorisation of a cooperative economy as an instance of C-M-C' sheds added light on his belief that overproduction crises were closely associated with capitalistic economies and were impossible cooperative economies.

In fact, Keynes likened the system he had termed a 'cooperative economy' to a 'natural economy'; but although he failed to expatiate on this subject and his reflections on this point are, admittedly, all but easy to interpret, it seems clear that his definition of a cooperative economy does not appreciably depart from what today is termed a system of production cooperatives or labour-managed firms.

Coming to Keynes's train of reasoning in 1933, it is worth emphasising that it is shared by more than one author (see, *inter alia*, Rotheim, 1981 and D'Acunto, 2000) and that Rotheim went to far as to contend that the greater part of the criticisms against *The General Theory* would never have been raised if Keynes had opted for the publication of its 1933 version (Rotheim, 1981, p. 571). For our part, there can be little doubt that fluctuations in aggregate demand are possible both in worker-controlled and in capitalistic economies since the investment function of a democratic firm (of the LMF type) does not substantially differ from that of a capitalistic firm. Nonetheless, no Keynesian unemployment will normally arise in a system of democratic firms due to the applicability of the 2nd postulate of classical theory.

The 2nd postulate of classical theory applies to a system of democratic firms because workers who are free to organise their firm at their will tend to work exactly that number of hours at which their satisfaction is maximised, i.e. at which the income generated by the last hour of work equates the marginal disutility entailed in the effort required by the last hour of work (as stated by this postulate).

However, as the 2nd postulate of classical theory is fully applicable to a labour-managed firm only if workers are found to have the same preferences, its application is restricted to workers with average preferences and, as such, representative of all the firm's partners. This begs the question: what if the preferences of partners diverge? In this case, the firm will have the option of leaving individual workers free to work the amount of hours that best suits their respective needs, or passing a majority resolution to impose a fixed working day on the whole of the workforce. In the former case, the firm will face obvious difficulties; above all, if expectations of individual workers concerning the responses of the other partners are of the Cournot type (i.e. if they think that their own choices will hardly influence those of their fellow-workers), the firm's equilibrium and efficiency levels are likely to be seriously undermined. As pointed out by Berman, 1977, in this case those partners who are paid in proportion to the hours worked will not deem it in their interests to work until the marginal disutility of their labour equals the marginal utility of their product (see Berman, 1977). Hence, the most reasonable conclusion seems to be that firms will opt for an equal working day for the whole workforce (although this determines that the 2nd postulate will only apply to partners representative of the average preferences of the workforce as a whole).[3]

In the light of these reflections, we will now ask ourselves what would happen in a democratic firm system that is subject to the 2nd postulate (with the above limitations) but not to Say's law. How would a cooperative firm respond to a fall in aggregate demand?

In a system not subject to Says's law but whose national income is determined in Keynesian terms, each fall in aggregate demand will reduce the equilibrium value of the aggregate hours worked. Provided layoff resolutions are adopted at meetings or, in other words, in the best interests of the workforce, in such a system it is difficult to think that workers will consent to the dismissal of their fellow-partners. Indeed, as a lay-off resolution passed by the majority of the partners of a labour-managed firm would trigger tensions and mutual mistrust within the team and interfere with regular work processes, it is far more probable that the meeting would not authorise any layoffs for fear of undermining the climate of solidarity within the firm (see Vanek, 1972, pp. 144-155; Neuberger and James, 1973 and Berman, 1997, p. 130).[4] Thus there are reasons to assume that a democratic firm will sooner opt for a shorter working week than dismiss any of its workers. No involuntary unemployment will ensue in this case; on the contrary, those already in employment will preserve their jobs, though all of them will be working fewer hours.

When Meade, (1980, pp. 93-96), Steinherr and Thiesse (1979a e 1979b) and Brewer and Browning (1982) investigated the implications of layoff resolutions in cooperative firms, they took it for granted that the length of the working day would be fixed by law; but although they did not tackle the team solidarity issue, they concluded that the workers of a democratic firm would generally not find it convenient to authorise any layoffs. In particular, Brewer and Browning suggested that candidates for layoffs would have to be designated by drawing lots and that the magnitude likely to be maximised in

[3] For a more detailed analysis of this point, see Jossa and Cuomo, 1997, pp. 193-202.

[4] In the opinion of Ward (see Ward, 1958), implied, though widely accepted rules require that no majority resolutions should undermine the solidarity feelings linking worker to worker. This contention was countered by Robinson (1967). As a matter of fact in ex-Yugoslavia both hiring and layoff criteria were generally fixed by workers' councils.

the workers' layoff resolution was, not the average income of those expected to be employed in the firm at the end of the process, but the average income of the partners on payroll at the time of the vote. In their opinion, if those at risk of layoff had material prospects of getting jobs elsewhere or could safely rely on state subsidies, the magnitude that the voting partners were likely to maximise upon passing a layoff resolution was the firm's (post-layoff) income plus the prospective incomes of those laid off. As demonstrated by Brewer and Browning (but is also intuitively obvious) in such a case, if all the workers have equal prospects of getting jobs outside the firm,[5] a layoff resolution would only be adopted when the marginal productivity of work in the labour-managed firm comes short of the income level estimated for those facing layoff .

A simpler, but probably even more interesting case is that in which workers facing layoff are thought to have no prospects of earning incomes in future. Based on the above-mentioned rule, no layoffs will be deemed expedient in this case so long as the marginal productivity of work is more than nil. In other words, in the case under review the labour-managed firm will pass a layoff resolution only when the resulting lower employment level would not result in a drop in the firm's aggregate output; and, as there are reasons to believe that the marginal productivity of labour will remain positive even in a recessionary phase, in such a situation the workers will not resolve to lay off any of their fellow-partners.

The rationale behind this conclusion is a simple and intuitive one: if the partners of a labour-managed firm face the same layoff risks and have reasons to assume that those dismissed will be unable to earn incomes outside the firm, they will quite naturally think it in their interests to maximise the expected average income level of all voters.

As pointed out above, the most interesting hypothesis is a variable working week whose length would be left to the decision of the individual partners based on their respective needs. In such a case, as we have argued, in periods of slack demand the workers of a democratic firm opt for a reduced working week for all of them, rather than lay off their fellow-partners.[6]

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[5] This is especially the case when the only prospect offered to workers outside the firm is an unemployment subsidy paid by the government.

[6] The idea that in periods of slack demand labour-managed firms will rather shorten the working week than reduce employment levels was first set forth in Berman, 1977 and is consistent with the remark that

The reflections developed so far concordantly suggest the conclusion that no involuntary Keynesian unemployment can exist in a system of democratic firms[7].

## *4. Kaleck's approach to full employment*

Coming back to efficiency-wage and discipline-effect theory, its authors might have drawn it from a 1943 article by Kalecki which is often rated as "deservedly famous" (see, *inter alia*, Salvati, 1981), but which they hardly ever take the trouble of quoting. This article, which Caffé (1979, p. 14)[8] has described as "acute and revealing", will be discussed in a separate section because it includes a cogent argument in support of the employment-boosting potential of a labour-managed system. Kalecki sets out from the fact that industrialists, though welcoming wider markets for their goods, often oppose demand-boosting public spending policies launched to further employment because they are inimical to public policies. To account for this apparent contradiction, Kalecki traces the resistance of industrialists to employment-boosting spending policies to three main causes: a) an aversion to public intervention into the economy in general; b) a strong dislike of measures purposely aimed to regulate employments levels and the labour market; c) the social and political changes associated with long periods of full employment. Let us emphasise right from now that none of these oppositions to public policies would apply in a cooperative system, for as soon as the government is no longer felt to be the expression of the capitalistic class, the workers of democratic firms operating in a class-conflict free context would not only deem it in their interests not to oppose public intervention in the economy, but would even welcome any such intervention provided it is aimed to further full employment.

In greater detail, Kalecki's comments on the arguments against public spending in *a* and *b* are as follows. To a large extent – Kalecki argued – employment levels in a *laissez-faire* system are positively related to trust, since economic crises are often

in Italy and elsewhere "cooperatives arose with the aim of controlling cases of excess labour supply and apportioning available work opportunities among the working population in such a way as to guarantee employment to everybody" (Becchio, 2001, p. 146).

[7] It is argued by some that the retention of the excess workforce in periods of crisis may add to the risks taken by external providers of funds (Zafiris, 1986, p. 44).

[8] Both this and the previous quote have been drawn from Morley-Fletcher, 1986, p. XIII.

caused by lack of confidence in future development of the economy and concomitant falls in private investment. As a result, capitalists are indirectly able to exercise powerful control over government policies: any moves that may interfere with this feeling of confidence should be carefully avoided for fear of depressing the economy (Kalecki, 1943, p. 166). And it is possible to add that one major effect of the close link between confidence and employment is to refrain workers and their unions from stepping up their demands on the assumption that risks of strikes may alarm entrepreneurs and that these may respond to excessive rises in labour costs by cutting investment resources. Kalecki's conclusion was that a generalised belief in the power of the government to boost employment at its will would deprive industrialists of their control over government policies (for in periods of faltering confidence the government could easily restore a climate of trust by means of boosts in public spending).

Kalecki's argument with regard to point ***c*** is even more forceful. Assuming that the government could effectively handle the opposition of the industrial class, he argued, "the social and political changes likely to be triggered by the maintenance of full employment would promptly fuel fresh protests from the business world" (Kalecki, 1943, p. 168). Consistently with this rationale, modern efficiency wage theorists have made it clear that no discipline effect will result from layoff risks in conditions of full employment, since workers losing their jobs would easily find employment elsewhere. Moreover, in long-term full employment conditions trade unions would gain in power, workers would look to the future with greater confidence and the working class and its union representatives would step up their demands.

In Kalecki's opinion (*ibid*.), brisk demand in markets, the prerequisite for full employment, undoubtedly adds to profits, but as industrial operators value order in the workplace even higher than rewarding bottomline results, at least in the short term they will put up with slack demand and lesser profits so long as this will enable them to secure control and trim down demand for higher wages.

To the extent Kalecki's line of reasoning is correct, the added strength the working class is thought to gain in periods of boom goes to confute the Marxian argument that the revolutionary thrust of the working class is inversely related to levels of prosperity. Hence it is not surprising that Kalecki's arguments have been described "as a direct refutation of Marx's argument that thriving trade and industrial activities weaken the confrontational spirit of workers" (Morley-Fletcher, 1986, p. XIV).

### *5. Unemployment and the Phillips Curve*

The argument that a system of cooperatives is likely to ensure full employment may receive confirmation from the debate on the Phillips curve.

As is well known, one of the generally accepted macroeconomic principles is the idea that exists an inverse relation between wage rate increases and unemployment levels, a decreasing short-period Phillips curve (see Mankiw, 2001). There is less agreement concerning the long-period Phillips curve, because Tobin, 1972 and others continue to hold its slope to be decreasing, instead of vertical, even in the long run.

As a rule, a decreasing Phillips curve entails that unemployment and inflation are two antithetical ills and that there is no way of reducing one without accelerating the latter. And as inflation is generally held to be a danger, it has long been customary to shape monetary policies geared towards controlling inflation even at the cost of driving up unemployment. As a result, it is possible to argue that unemployment is often the effect of economic policies which push up unemployment for the sake of inhibiting inflation.

Today, there is widespread agreement that a vertical long-period Phillips curve identifies an equilibrium income level at which inflation and deflation are both ruled out. However, while monetarists hold that this level is the NRU, a natural rate of unemployment almost concordantly assumed to be voluntary (i.e. caused by search for jobs), most Keynesians tend to argue that this equilibrium income level is a NAIRU ("*non-accelerating inflation rate of unemployment*"), at which unemployment is, for the most part, involuntary.

The Phillips curve with a NAIRU reflects social conflicts between capital and labour and has been elucidated by Rowthorn, 1977 and Carlin and Soskice, 1990, among others. It rests on the assumption that the 'equilibrium' income at which prices neither increase nor diminish is the unemployment level at which wage-driven price increases make up for productivity-driven price drops. From this perspective, equilibrium unemployment is involuntary because the bargaining power of unions increases at each rise in employment and wages are driven up beyond levels that would be compatible with labour productivity rates of growth. In such a situation the full employment hypothesis becomes unrealistic because the deflationary policies that the government would have to launch in order to reduce the rises in wages and prices resulting from the added power of organised workers would promptly generate unemployment.

From what has been said so far it follows that one major advantage of a system of cooperatives is to rule out the Phillips curve altogether. In the absence of wages, any rise in incomes would reduce unemployment without driving up monetary wages and prices in their wake. And in a conflict-free context the government could shape expansionist monetary and fiscal measures and employment-boosting policies without igniting those social conflicts which trigger inflation.

In short, in the light of Phillips curve theory Kalecki's 1943 argument can be re-formulated in line with the idea that Keynesian expansionist policies can be used to secure full employment in a system of cooperatives because rises in income in such a system do not generate levels of social conflict at which inflation must necessarily accelerate (and do not oblige the government to put in place deflationary policies).

In even more general terms, it is possible to argue that full employment would be the rule in a cooperative system. Given the absence of a Philips curve, it would no longer be necessary to put up with rises in unemployment for the sake of reducing inflation, for unemployment and inflation would cease being antithetical ills and governments would always be free to launch full employment policies.

## *6. Structural unemployment and the obstacles to capital accumulation in the democratic firm*

The reflections developed in the previous section have provided evidence that structural unemployment is the only possible type of unemployment in a system of democratic firms. This begs the question: would structural unemployment exceed the present level? As mentioned in the opening section, there is widespread agreement that structural unemployment in a system of democratic firms would soar far above its present levels in capitalistic systems for two reasons: a) the assumed tendency of democratic firms to underinvest; and b) the difficulties democratic firms are held to face in raising investment funds.

Based on the abundant literature on the underinvestment issue (Furubotn and Pejovich, 1970a, 1970b, 1972 and 1973; Furubotn, 1971, 1976 and 1980; Vanek, 1970, pp. 296-303, 1971a, 1971b and 1975), today it seems correct to argue that firms of the LMF type do not underinvest (see Jensen and Meckling, 1979; Jossa, 1988 and Jossa and Casavola, 1993).

The difficulties faced by democratic firms in raising investment funds have been investigated in less detail. Two main arguments acquire relevance in this regard. Firstly, it is argued, non-capitalist borrowers such as the partners of democratic firms offer insufficient assurance to prospective financers; secondly, it is a fact that the labour-managed firm can neither issue equities nor freely self-finance itself (without being becoming like a capitalistic firm), and there is ample evidence that financers are all the more willing to provide loans, the more the borrowing firm funds its investments out of its own resources (for those prepared to risk their own capital resources are obviously confident in the success of their business projects).

Although this objection has doubtless solid grounds, to attenuate its weight it is possible to argue that a self-managed firm can raise investment funds by issuing bonds in exchange of retained earnings and allotting them to its partners. In line with a celebrated distinction proposed by Vanek, self-financing firms are termed WMFs if they fund their investments out of their retained earnings and don't distribute separately labour incomes and capital incomes are classed as LMFs if they issue bonds for raising investment funds. As mentioned above, the underinvestment hypothesis applies to WMF-type firms only, but the debate on Vanek's WML/LMF distinction has made it clear that a self-managed firm does not become a WMF solely because it funds its investments by retained earnings with the contemporary issuing of bonds underwritten by its partners.

Neither is there any need for the firm's bonds to be entirely purchased by the partners at their free will, for nothing can prevent a firm from passing a majority resolution providing for the allotment of part of its earnings to the partners in the form of bonds. And this is a self-financing method which will neither change the firm from an LMF into a WMF nor generate underinvestment.

An additional way to tackle funding difficulties is to issue non-voting equities or variable-income bonds, as suggested by numerous authors (see, among others, Nutzinger, 1975, p. 181; Drèze, 1976, pp. 433-35; Vanek, 1977, pp. 226-28; Mc Cain, 1977, p. 365; Jay, 1980; Thomas, 1990, pp. 176 ss.; Thomas and Defourny, 1990; Major, 1996 and Waldman and Smith, 1999). Voting equities only are incompatible with self-management, since the voting rights they vest in shareholders are quite naturally at odds with the principle that power to run the firm's business must be vested in workers on an exclusive basis.

Non-voting equities are also fully consistent with Drèze's approach to the investment funding difficulties discussed in this paper, i.e. with his proposal that firms should enter into 'financing agreements' which would transfer part of the risks from the firm's partners to its financers. Based on Kalecki's 'increasing risk' principle, the risks taken by providers of funds increase in proportion to the part of the investment that is funded with loan capital (see Kalecki, 1937), so that risks of failure will be maximised in self-managed firms which fund their investments solely with loan capital.

In this connection, Dréze drew attention to the basic idea behind 'implicit contract theory'. As is well known, in capitalistic firms it is the rule for workers (who are less prepared to share risks with capitalists) to enter into implicit contracts whereby they tacitly accept lower wages in exchange for the employer's commitment to abstain from wage cuts in periods of crisis, i.e. in exchange for his acceptance of all the risks associated with business crises. Setting out from the existence of implicit contracts in capitalism, Dréze argued that just as workers in capitalistic systems deem it in their interests to self-insure themselves against income fluctuation risks by renouncing part of their earnings, so the workers of a labour-managed economy could find it expedient to change their variable incomes into fixed incomes by entering into financing contracts that shift business risks onto capitalistic providers of funds.[9]

[9] In Drèze's words, a 'paradoxical' or 'surprising' finding was that a self-managed firms could indifferently enter into a financing agreement fixing the dividends owed to providers of funds under given circumstances or into a labour contract specifying the work loads and wage rates of individual workers in the same situations (Drèze, 1989, pp. 92-93, and 1993, p. 260). In conditions of perfect information,

On closer analysis, however, the most forceful argument that goes to confute, if not altogether reverse, the assumption that investment funding difficulties are maximised in a labour-managed economy is associated with the reversal of the capital-labour relationship in labour-managed firms.

As is well known, whereas in a capitalistic economy it is ‘capital’ that hires labour, pays it a fixed income and appropriates the ‘residual’, in a democratic firm of the LMF type it is the workers that borrow capital, pay a fixed interest rate thereon and appropriate the ‘residual’. As a result,

- in capitalistic systems, it is workers that take precedence over shareholders, in terms that they cash their wages during the production process and shareholders are only remunerated out of the residual, where any;
- in a labour-managed economy, it is loan capital providers that take precedence over workers, in terms that they are remunerated prior to workers and the latter are only paid after them, i.e. out of the residual.

Accordingly, providers of loan capital are better protected in a labour-managed system versus a capitalistic system[10]; and with everything else assumed to be constant and unchanged, this single fact would suffice, in itself, to diminish the risks of loans to self-managed firms and make them appear more convenient than loans to capitalistic firms.

In our opinion, the long-ingrained idea that labour-managed firms face greater investment funding difficulties than capitalistic firms is first and foremost due to the understatement of this weighty argument in the published literature.

### *7. On second-level cooperatives*

A common business risk hedging method today is portfolio diversification; and the issuance of equities is one of the means of attaining this end. However, a similar risk

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either contract could be entered into on terms that would vouchsafe the same result, but in the event of an unanticipated business crisis the risks the actuals-versus-budget shortfall would be charged to the account of financers in one case, and to the account of workers in the other.

[10] “The residually remunerated resource suppliers can be thought of as ‘insuring’ the suppliers of contractually paid resources for some of their risks” (Zafiris, 1986, p. 37).

diversification system could also be devised for a labour-managed system despite the ban on the issuance of equities.

Financers in a capitalistic system tend to diversify their investment portfolios by underwriting securities issued by several firms facing different levels of risk. Conversely, in a system of democratic firms the worker living on the residual income of his firm appears to be indissolubly tied to the latter since he/she cannot work for more than one firm at the same time. In point of fact, to enable the partners of a democratic firm to participate in the lives of several firms it would be possible to devise a very simple institutional mechanism providing for the formation of 'second level' or 'holding' cooperative firms whose members are not individual workers, but cooperative firms themselves.

The second-level cooperative's workforce would be composed of personnel seconded to it from the affiliate cooperatives. Part of the earnings of this second-level cooperative would be distributed based on the quantity and specialization of the workforce thus seconded; the remaining income would be distributed to the affiliate cooperatives themselves. And this method would help partition aggregate risks among all of them.

The second-level cooperative's capital resources would be raised in accordance with the procedures in adopted in the first-level cooperative, but in the resulting pyramid of firms the second-level cooperative's financing problems would be eased since the firm would be in a position to rely on direct financing by its affiliates and/or on security lodged by them. A second-level cooperative negotiating a financing agreement would be doing so on behalf of the whole group and the business diversification thus achieved would reduce both the group's aggregate risk profile and the risks taken by the financers of the second-level cooperative's individual business projects.

Thanks to these second-level cooperatives, first-level LMF firms wishing to venture into high-risk business projects and/or boost their activities through capital-intensive productions otherwise beyond their reach would benefit from a protection mechanism analogous with the portfolio diversification method adopted by capitalistic entrepreneurs.[11]

Due to the risk diversification potential inherent in its approx. 71,000 member group structure, the Mondragon complex of cooperatives in Spain has never experienced any financing problems and has always had access to financial resources far in excess of its needs. The substantial funds managed by the group bank, the Caja Laboral Popular, have at all times been more than enough to meet the financing requirements of the whole complex. A 1994 report by the Caja provides evidence that no fewer than 16 concerns of the current size of the existing group could have been financed out of the resources it had available (see Lutz, 1997, pp. 1413-14).

### *8. Conclusion*

In Marshall's words, a system of labour-managed firms offers two main advantages: "the production of fine human beings" (Marshall, 1889, p. 228) and a more effective use of the working capabilities of most members of the working population. The cooperative movement – Marshall wrote – "sets itself to develop the spontaneous energies of the individual while training him to collective action by the aid of collective resources and for the attainment of collective ends" (*ibidem*, p. 227); and as the character of a human being "has been moulded by his everyday work, and the material resources which he thereby procures, more than by any other influence, unless it be that of his religious ideals" (see Marshall, 1890, p. 1), this may act as a great character-forming stimulant to the working partners. Another basic advantage of cooperation emphasised by Marshall is the use of all those work capabilities that capitalism tends to waste. In a cooperative firm – he wrote – a worker produces, not for the benefit of another, but for his own, and this mobilises a huge potential for accurate and high-quality work that capitalism tends to stifle. "In the world's history there has been one waste product, so much more important than all others that it has a right to be called THE WASTE PRODUCT. It is the higher abilities of many of the working classes" (see Marshall, 1889, p. 229; *upper case in the original*).

[11] This idea, which is based on the experience of the Spanish Mondragon group, was first suggested to me by Gaetano Cuomo.

In point of fact, before we support the view that democratically managed firms can make the most of human abilities we would have to provide material evidence that a system of labour-managed firm is actually in a position to provide jobs to all those seeking employment and ensure full employment much more effectively than a capitalistic firm system can do. Marshall failed to provide any such evidence in the belief that the market vouchsafes full employment by its very nature. In the meantime, though, Keynesian theory has shown that this optimistic attitude is unrealistic and contemporary theory of producer cooperatives has generated the widespread belief that democratic firms offer fewer employment opportunities than their ‘capitalistic ‘twins’.

Hence, we have tried to offer the evidence that Marshall failed to provide by examining three possible types of involuntary unemployment:

a) high-wage unemployment;

b) Keynesian unemployment;

c) structural unemployment;

Our conclusions can be summed up as follows. The first of the above three types of unemployment does not apply to a system of democratic firms by definition; neither does Keynesian unemployment in consequence of the validity of the 2$^{nd}$ postulate of classical theory in a labour-managed economy. As far as structural unemployment is concerned, our reflections would suggest that it would not exceed its present levels in capitalistic economies. In point of fact, there is no denying that a system of self-managed firms will employ fewer workers than a system of capitalistic firms in analogous capital accumulation conditions, and it is also true that this additional source of structural unemployment might *prima facie* appear to be as serious an issue as the funding difficulties discussed in the previous sections of this paper. However, these objections can be countered by emphasising that higher capital/labour ratios are required for short-term equilibrium only (see Vanek, 1970, pp. 27-34 and Drèze, 1985) and that production coefficients are now for the most part fixed and are likely to be all the more so in future; but it is especially thanks to the refutation of the investment funding difficulties hypothesis that we feel in a position to deny that structural unemployment would be higher in a labour-managed system.

The above reflections suggest a general, though fairly obvious conclusion which we nevertheless wish to set forth at this stage. To the extent it is true that employment is a primary goal to be steadily and consistently pursued, and provided our approach in this paper has been correct, it seems barely possible to argue that a capitalistic system as near as possible to the perfect-competition ideal is to be prioritised over worker control. In point of fact, the perfect-competition ideal is far from being realised either in a capitalistic economy or in a worker-controlled system; but provided it is true that a higher employment level is a goal to be pursued by any means, a system capable of attaining this end in the real-case scenario of today's world should take precedence despite the higher *per capita* incomes vouchsafed by capitalism (see, *inter alia*, Dahl, 1989, pp. 330-31).

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