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Risk Financing in Labour Managed Economies: The Commitment Problem

by

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Bielefeld and Bonn

1. Introduction

Capitalism has turned out to be a much more robust economic system than most of its socialist and conservative critics in the nineteenth century have forecast. It has, of course, changed substantially: labour relations, the rôle of government, the distribution of income are quite different now from what they were, say, 110 years ago, the publication date of volume I of "Das Kapital". But, inspite of "Mitbestimmung" in Germany, one thing has remained remarkably stable in the Western world: the formal authority of decision making in the firm rests with the "owners", i.e. those persons who provide the risk bearing capital. It is claimed by critics that this arrangement within the factory and the firm prevents working conditions which are in accordance with human needs for involvement, participation, self-esteem, free cooperation among equals, etc.[1]. Traditional economics has three possible answers to this criticism: 1. It is empirically false to say that in present day capitalism these needs cannot be fulfilled. They can be fulfilled and are fulfilled. 2. The critics exaggerate these needs. To the extent that work relations are not in accordance to these needs this is due to a lacking willingness to pay for having these needs fulfilled[2]. 3. This criticism is basically correct and here we encounter an important case of market failure which needs detailed investigation. Which of these answers is correct, is mainly

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[1] There is, of course, a vast literature on this point. See for example *P. Blumberg*, Alienation and Participation: Conclusions, in *J. Vanek* (ed.), Self Management: Economic Liberation of Man, Harmondsworth 1975, pp. 324–338, and other articles in *Vanek* (ed.), op. cit.

[2] *E. G. Dolan*, Alienation, Freedom, and Economic Organization, Journal of Political Economy, Vol. 79 (1971), pp. 1090–1092, explains and critisises this argument.

an empirical question. We do not want to commit ourselves to one of the three answers. But, we do not see any strong reason to exclude answer no. 3 and this is why we want to contribute to the theory of labour managed firms. A system of labour managed firms combines the principle of decentralization via markets with a decision structure, which supposedly is more appropriate for nonauthoritarian, participatory labour relations.

Economists have taken up this topic recently in increasing numbers. One of the topics which has drawn specific attention is the problem of financing labour managed firms. This problem is intrinsically difficult due to its inseparability from the problem of risk and moral hazard. We first proceed to consider in turn four different modes of financing. We then try to discuss the issue from a somewhat more fundamental viewpoint.

2. Mode no. 1: Internal Financing

Vanek has argued convincingly that internal financing will lead to extremely restrictive investment behaviour of a labour managed firm[3]. If a voting member of the firm expects to leave the firm at some date in the future, he is only interested in the benefits of the investment accuring before he leaves. But even if he were not to leave and would live forever he creates an externality to those future colleagues who do not share in the burden of foregoing present consumption (because they arrive after the investment) but who benefit from the investment. Thus, unless the members of the firm remain identical for the whole lifetime of the firm, future benefits are collectively discounted more than corresponding to the personal preferences of the individuals making the decisions. We may call this problem the *"upward bias in time preference of collective decisions"*. It is, of course, a phenomenon encountered in other circumstances, too. Take the case of political decisions on the communal or town level in a system of fiscal federalism. If people are rather mobile they will prefer decisions reflecting high rates of time preference, because they will be affected only as long as they live in the community[4].

The time preference bias has another interesting implication for labour managed firms. It leads to a suboptimal firm size. For one way to avoid investments is not to expand manpower. A firm with a high rate of time

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[3] See *J. Vanek,* The Basic Theory of Financing of Participatory Firms, in: *Vanek* (ed.), op. cit., pp. 448–449, and *A. B. Atkinson,* Worker Management and the Modern Industrial Enterprise, Quarterly Journal of Economics, Vol. 87 (1973), p. 383.

[4] This is different, if they own property in the community, which they sell when they move. The logical consequence would be to restrict voting rights to property owners in towns and other local communities, a system which was widespread in Europe before the introduction of general equal suffrage. For obvious reasons we should not aim for the restoration of such a system. But the historical developments in regard to participation in political decisions might perhaps be indicative of future development of workers participation and labour management.

preference will therefore ceteris paribus be smaller than a firm with a low rate of time preference.

If $Y = F(K, N)$ is the production function of the firm and if, in equilibrium, the firm maintains its capital stock through time, then the marginal productivity of capital F_K is just equal to the rate of time preference, ϱ. The firm will adapt employment to the level where output per worker is maximized, i.e. where

$$\frac{\partial \dfrac{F}{N}}{\partial N} = \frac{NF_N - F}{N^2} = 0 \text{ or}$$

where the elasticity of production with respect to labour equals unity:

$$\frac{NF_N}{F} = 1$$

At the equilibrium point substantial economies of scale prevail.

The scale elasticity of output is

$$\frac{F_N \cdot N}{F} + \frac{F_K \cdot K}{F} = 1 + \frac{\varrho K}{F}$$

and hence much above unity. The equilibrium firm size is below the optimum size. Let us call this the *firm size bias of collective decisions*.

3. Mode no. 2: Fixed Interest External Financing

Vanek argues that a labour managed economy needs a banking system which provides external financing in a generous fashion so as to avoid the problem of self financing just discussed[5]. It is true that the time preference bias and the firm size bias could in principle be avoided, if the firm were completely externally financed. Then income of workers would be equal to the residual from value added after subtraction of interest payments. The marginal productivity of capital would be equal to the interest rate (which supposedly can be considered to reflect preferences and opportunities involved in society's intertemporal decisions). The residual income for workers (r = interest rate)

$$w = \frac{F(K, N)}{N} - \frac{rK}{N}$$

is maximized when

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[5] *Vanek* argues that the competitive domination of labour managed firms by privately owned firms can be explained by the fact that labour managed firms were compelled to finance themselves internally, see *Vanek*, op. cit., p. 453.

$$\frac{\partial w}{\partial K} = \frac{F_K}{N} - \frac{r}{N} = 0 \text{ or } F_K = r$$

and

$$\frac{\partial w}{\partial N} = \frac{N F_N - (F - rK)}{N^2} = 0 \text{ or}$$

$$\frac{F - rK}{N} = F_N \text{ or } w = F_N$$

so that the scale elasticity is

$$\frac{F_N N}{F} + \frac{F_K K}{F} = \frac{F - F_K K}{F} + \frac{F_K K}{F} = 1$$

Hence the optimum firm size is attained.

But the problem with fixed interest financing is twofold. If it worked in the manner described, then there would be no risk-sharing between the firm and the rest of the economy. All the risk would have to be borne by the workers of the firm. This is the *risk bearing problem*. It arises to some degree also in capitalism. But in addition the system cannot work that way. The banks must take precaution not to loose money on bad risks and not to be cheated by borrowers. Again similar problems arise in a capitalist environment. Implicitly banks who lend money get involved in the investment decisions of potential and actual borrowers, if they want to distinguish between good and bad risks. This runs against the principle of decentralized decision making. We may thus call this the *incomplete decentralization problem*. In addition, the possibility of bankruptcy causes a *moral hazard problem*. Borrowers may be lacking effort to operate successfully if in risky situations substantial parts of the losses can be got rid off by bankruptcy. This problem may be much more severe for a labour managed firm than for a capitalist firm. Decision makers in the labour managed firm are likely to run away after bad luck has hit the firm: the probability of leaving a firm is correlated with the business condition of the firm. A highly profitable firm will suffer fewer dropouts of decision makers than an unprofitable one. Thus the rationality of decisions in a firm deteriorates as its profitability deteriorates. Therefore lending to a firm of yet unknown future profitability may be much more risky in a labour managed system than in a capitalist system.

Fixed interest external financing is possible wherever the lender obtains a collateral like a mortgage against his loan. Thus equipment which keeps in value even outside of the production process, in which it is now used, can be more easily financed by loans than other investments.

4. Mode no. 3: External Financing by Nonvoting Shares

This mode of financing has been proposed by *Nutzinger* as an answer to the problem posed by fixed interest financing[6]. People providing capital to a labour managed firm receive dividends in proportion to the incomes paid to the workers, or, to generalize the proposal, in proportion to a function of incomes paid to the workers.

The proposal has a certain similarity to share-cropping arrangements which have been used and still are used in many parts of the world. The risk is divided between the worker (or the tenant in the share-cropping case) and the financier (or the land owner in the share-cropping case). Its attractions are the explicit separation of decision making authority and parts of the risk bearing function. But, whenever this separation occurs, certain control schemes are necessary. There is always the danger that decision makers in such a situation work against the interest of risk bearing nondecision makers. On the other hand, under certain circumstances such schemes work quite well. After all, the small shareholder of the large capitalist public company does not participate in the decision making process either. But the evaluation of the performance of the management by the stock market together with certain additional auditing instruments make the separation of ownership and control the predominant and a very effective set-up for running large commercial operations. Very large risks indeed can be absorbed this way.

If the method of farming the land has a substantial impact upon the value of the land, share-cropping is not viable except for the case that the tenant can be tied down to the land for a long period of time. Similarly provision of risk bearing capital can only work in a labour managed environment, if the decision makers accept certain limits of their authority[7]. Nonvoting shareholders must have some access to the books of the firm. The firm cannot be allowed to pay out to the workers more than is really earned. Otherwise, rather than operating some productive activity, it could take the money provided by the nonvoting shareholders, distri-

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[6] *H. G. Nutzinger,* Die Stellung des Betriebes in der sozialistischen Wirtschaft, Frankfurt und New York 1974, pp. 285–287.

[7] They cannot be allowed, for instance, to determine the capital intensity freely for a given amount of capital. Else it will pay to reduce employment and increase the capital intensity continuously, since this will increase labour productivity and per capita earnings. Capital productivity, however, will be reduced thereby, and this will reduce the income of the shareholders if it is tied to the sum of the incomes the workers receive. This difficulty arises from the fact that the target of the workers is *per capita* income, whereas the shareholders will be interested in *total* income. This remains true if the market valuation of shares is taken into account: In contrast to the shareholders, the workers will always be interested in per-capita targets like the present value of the firm per head – a point which ought to be added to *Nutzinger*'s argument, see *Nutzinger,* op. cit., p. 286.

This difficulty can be remedied, however, if the income of the shares is tied directly to the target the workers pursue: If e.g. the income of one share equals the income of an average worker, this conflict of interests disappears.

bute it according to the formula agreed upon, and dissolve itself. Rules that prevent this are easily devised, but some external auditing for the benefit of the nonvoting shareholders is necessary.

But in addition, it remains, of course, true that the particular moral hazard problem of labour managed firms remains. The potential non-voting shareholder must be afraid to give money to a firm which has less than average profitability. For he must be afraid that people are thinking of leaving this firm and that therefore their decisions are very short-sighted. Should he invest his money under such conditions in this firm? If at all then only by asking for much higher share in income paid out, which in itself increases the incentive of workers to leave the firm. On the other hand profitable firms with a low rate of outward labour mobility will, of course, have an easy time finding additional financing by issuing nonvoting shares.

5. Mode no. 4: Leasing

Leasing of equipment is well known in capitalist economies. Leasing with a fixed rental payment per year has the advantage over purchasing that it is the supplier's rather than the user's credit potential which is used. To the extent that the supplier is considered a better risk by the banks the net effect of leasing on investment activity in the economy is positive. Moreover, leasing could be combined with risk sharing of the lessor, if the lessor would agree to receive payment in proportion to some function of income payments to the workers[8]. Leasing thus can serve an auxiliary function to external financing, but it is obviously limited to the financing of capital embodied in pieces of equipment, whose properties lend themselves to leasing.

In industries which are characterized by very capital intensive pro-duction methods leasing might play a particular rôle. The total equipment might be owned by a single external financier (the government?) con-tracting it out to a labour managed firm on a risk sharing basis. The financier here is much more involved in the decision process since any decision involving a change of equipment has to be taken jointly with him. Thus in this case leasing would be a form of external financing which limits the decision making autonomy of the worker managed firm sub-stantially.

It should be noted that the actual Yugoslav system has characteristics of some similarity to the leasing system.

6. The Commitment Mechanism in Capitalism

In this second part of the paper we want to discuss what we think is the common denominator of the different problems encountered in financing labour managed firms. We call it the commitment problem.

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[8] To avoid the difficulty mentioned in the foregoing footnote, the income could be tied to average per capita income, however.

Decision makers of an organisation only tend to make rational decisions for their organisation, if they are personally committed to share the consequences of these decisions. An organisation can only hope to get risk-sharing support from outside, if these potential outside supporters believe that good decisions are being taken within the organisation. They will therefore insist to see what the specific commitment mechanism for the organisation's decision makers is. We therefore have to discuss the commitment mechanisms in labour managed economies.

Since we are concerned with the financing of labour managed firms we concentrate on the intertemporal dimension of decisions. Let us look at the commitment mechanisms available to capitalist firms. The shareholders, who form the ultimate decision body in the enterprise, do not have to remain shareholders in order to make appropriate investment decisions. This is so, because they are interested in the long run profitability of the firm, even if they sell the shares tomorrow. They obtain a higher price for their shares if the profitability prospects of the firm are better. The true commitment mechanism is not the immobility of the shareholder's person. It is the commitment of the shareholder's capital to the company, the inability to get this capital back before the other shareholders get their's back. Similarly the owner of a house in a community is interested in the long run rationality of community decisions even if it is likely that he will move out shortly. It is his immovable property by which he is committed to the community. Thus commitment is possible without personal immobility by the institution of transferable property rights.

A different commitment mechanism is used in capitalism for top management of large companies. The decision makers of these firms 1. get paid in a way which makes them interested in maximizing actual profits and future profitability prospects of the firm (profit related bonuses, stock options etc.), 2. are part of a job market whose main performance criterion again is present value of profits of the companies (or divisions of companies) which they run, and 3. derive their social prestige and self-esteem again from successes measured by similar criteria. Now, it is important to realize that profit here is an indirect criterion: it is not consumption of shareholders. It is a balance sheet concept and at any given time there can be differences of opinion about the profitability of the firm in question. Here lies a substantial source of error and it is not true, therefore, that top management is committed to the maximization of expected long run profitability of the company. There will be a bias towards those components of long run profitability which are more easily reflected in short run signals of long run profitability, such as operating profit of the current year (this bias may be partly or completely compensated or over-compensated by the tax laws). There will also be a bias against risky activities, because by the very nature of performance measurement under imcomplete information, managers cannot spread the risks of decision for which they are responsible[9]. One important

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[9] The members of labour managed firms face a similar problem. Due to

ingredient of the commitment mechanism when authority is delegated to appointed managers is the prospect or expectation of a long term of office. The manager only then will reckon that his performance will be evaluated not only by short-term results. It must be a mistake (or a sign that authority has not been delegated) if the board changes top management too frequently.

7. Tradeable Job Rights as Answer to the Commitment Problem

Applying these ideas to a system of labour managed firms we arrive at a scheme which in itself probably is not very attractive to socialist advocates of labour managed firms: the separability or transferability of job rights. Before we describe this system, let us stress that we do not think this to be a realistic scheme, partly for reasons given later, partly for reasons not discussed in this paper. We discuss the scheme simply to discover the logical structure of the commitment problem with which we are concerned.

Jobs in such a system would be bought by workers from other workers or from firms expanding the number of jobs. Assuming that the labour force is homogeneous in terms of skills and other characteristics important for cooperation in the firm, a free trade in jobs of any given firm could take place. These tradable job rights are the precise analogue of tradable shares in a capitalist environment. They combine maximum personal mobility with a solution to the commitment problem. Holders of job rights will make decisions in accordance with the long run interest of the firm, because they want to maximize the present market value of their tradable job rights.

We mentioned earlier that profitability differences of firms tend to become accentuated due to the negative correlation of outward mobility and profitability. This problem no longer arises here (except in extreme cases of near bankruptcy). Job rights of less profitable firms will have a lower market value. Indeed, the market values of job rights of different firms reflect the different propensities to move from one firm to the other, and in equilibrium the representative buyer of a job right is indifferent between an expensive one and a cheap one. Given these circumstances the specific labour management induced bias of the financiers towards profitable firms disappears. Those biases that may still remain are to be explained along similar lines on those that may exist under capitalism.

8. Immobility as a Commitment Mechanism

Apart from obvious problems of equity (which could partly be mended by appropriate modifications) the system is not feasible, because job

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the "risky shift" phenomenon, however, which arises in group decisions, risk aversion of the labour managed firm might be smaller; see *P. R. Hofstätter*, Gruppendynamik, 2nd ed., Hamburg 1957, pp. 123–127.

rights are of a nature different from dividend shares in large capitalist companies. Job rights are obviously also job obligations. There is no such thing as absentee job ownership (except in certain latter day capitalist systems where up to a point you are protected legally or de facto from dismissal even if you don't care to show up at work). These job obligations require cooperation with others and these others need to protect their interests by participating in the decision about membership in the firm. A labour managed firm, even a large one, is thus closer in nature to a business partnership than to its larger younger cousin, the public joint stock company. But a property right, which only can be sold with the consent of a large group of people, implies incomplete separability of person and property right. True, it is in the interest of all partners, i.e. of all holders of such property rights, to make transferability comparatively easy. But there are obvious conflicts of interest, e.g. between old workers (who are interested in a maximum present market value of the property right) and young (who want to maintain control over the selection of colleagues with whom they may have to work for decades). Limitations of transferability are therefore to be expected and they will have the consequence of reducing mobility between firms. There will exist a premium of staying where you are, even if job rights can in principle pass from one person to another.

The way in which the commitment problem will be solved in the labour managed market economy therefore is by a sufficient de facto immobility of labour between firms. The sources of this immobility can be quite different. It is only important that workers in their decisions reckon with this immobility and that outside financiers reckon with the fact that workers reckon with this immobility.

There can be too much or too little mobility from the point of view of national collective decisions. In the absence of transferable job rights or dividend rights the discounting bias factor going into the voting decision of individual firm members is given by the product of two factors: one being the probability of still being a member of the firm and the other being the person's share of work and benefits then divided by the corresponding share now. If the person expects to be with the firm then with probability close to one and if on the other hand he or she expects the number of workers to be shrinking through time, then the discounting bias factor is greater than unity, i.e. the person opts for a lower discounting rate for the firm than corresponds to his personal preferences. This case is, of course, an unlikely case. Indeed, obviously the average discounting bias factor in a firm can never be greater than unity, if expectation about personally leaving the firm and expectation about the size of the firm's membership are consistent.

Let us therefore concentrate on the problem of sufficient immobility. We define the subjective mobility expectation rate (or simply the mobility rate), ϱ, to be the negative value of the percentage rate of change of the discounting bias factor with a unit change of the future date to which it refers. In other words if $\pi(\tau)$ is the subjective probability of still being

with the firm at future date τ and if $\sigma(\tau)$ is the expected size of the membership of the firm at future date τ, then

$$\varrho(\tau) = -\frac{d \log \pi(\tau)}{d\tau} + \frac{d \log \sigma(\tau)}{d\tau}$$

Many interesting voting problems can (and should) be discussed using these concepts. Let us for this paper concentrate on the very simplified case that people are "Markovian" in the sense that they consider $\varrho(\tau)$ to be a constant independent of τ. In a Markovian labour managed economy, which has a constant labour force, the parameter ϱ, if consistent with observed behaviour, simply reflects actual mobility behaviour in the sense that within a small interval $\varDelta\tau$, $1000 \cdot \varrho\varDelta\tau$ out of 1000 people will have left their firm. Thus there is a close connection between the concept we use and easily observable phenomena of actual mobility behaviour.

9. The Demand for Mobility as a Function of Mobility Costs

We now have to investigate demand for mobility and supply of mobility. By demand for mobility we mean a person's wish to change jobs, by supply of mobility we mean job offerings of firms to people in the labour market outside the own firm. There exists, as is well known, potentially substantial mobility or moving costs in any kind of economic system. The costs are shared by the employee, his former and his new employer. The costs may comprise literal moving costs, but this is frequently a minor part of all the costs. The acquisition of specific knowledge and skill, the risks involved for employers and employees etc. are also part of these costs. The topic has drawn much attention from economists in recent years, and one kind of costs specifically stressed by economists has been search costs for new jobs or for new employees. Whatever the costs are, and whoever bears these costs the mobility of the labour force will fall as these costs rise.

In a stationary steady state of a labour managed economy it is appropriate to say that the rate of supply of additional vacant jobs in any given period is just equal to the rate at which these vacancies are created by people leaving their jobs. Since people by the constitution of the system cannot be fired, the number of quits by employees (including retirement at retirement age or due to ill health) determines the mobility rate. Whoever bears the cost, the quits will be lower when the mobility costs are higher: even if the direct cost is borne by the former employer or the new employer this will be the case, because they will devise incentives not to move in accordance to the moving costs they have to bear.

Let us then stipulate a functional relation $\varrho(c)$ between the mobility rate and the total moving cost per case, c, such that $\varrho'(c) < 0$. Let us observe here that at the equilibrium firm size the moving costs are not affected by the firm decision and distribution mechanism. There exists

an incentive to reduce manpower below the optimum firm size level, as discussed above. Thus at the optimum firm size level a private cost or benefit of mobility exists, which has no social counterpart. But this is why the optimum firm size is not the equilibrium firm size. At the equilibrium firm size the labour managed firm has just as much an incentive to replace people who quit as does the capitalist firm. Therefore in equilibrium, given the moving costs independent of the firm decision structure, the number of quits in both systems will be the same (other things being equal). If the commitment mechanism in the labour managed system requires lower mobility of labour than in the capitalist system, this will have to be accomplished by higher mobility costs.

10. Unemployment as an Immobility Factor

Let us now observe that search costs – a large part of mobility costs – are related to the unemployment rate. If unemployment is very low and many jobs are vacant, search costs are quite high for firms; as unemployment rises and the number of vacant jobs declines, search costs go down for firms and go up for workers. There exists probably a certain unemployment situation such that the sum of these search costs is a minimum. We may call this the efficient unemployment rate. It is likely that a labour managed economy which has a problem of an insufficient commitment mechanism, will exhibit an equilibrium rate of unemployment which is above the efficient unemployment rate. Thus a mechanism by which to reduce mobility to appropriate levels is to increase unemployment. Let u be the unemployment rate. Then we assume there exists a functional relation $c(u)$, such that $c'(u) < 0$ for very small u and $c'(u) > 0$ for sufficiently large u.

But why should unemployment be the correcting mechanism? The reason is the inherent aggravation of differences between profitable and unprofitable firms which an insufficient commitment mechanism implies. Remember that we argued: outward mobility of labour is negatively correlated with the firms' profitability. Unprofitable firms thus suffer most from the insufficient commitment mechanism. They deteriorate and at last collapse. Their members are unemployed – from a certain point onward they may prefer to be unemployed. To establish new firms is difficult because the risks for the financiers are high. Therefore, the insufficient commitment mechanism leads to higher unemployment. Thus we stipulate a functional relation $u(\varrho)$ with $u'(\varrho) > 0$.

The system of equations

$$\varrho = \varrho(c)$$
$$c = c(u)$$
$$u = u(\varrho)$$

has a fixed point, if $u(\varrho(c(u_0))) > u_0$ for sufficiently small u_0 and $u(\varrho(c(u_0))) < u_0$ for sufficiently large u_0, an assumption which we can easily justify economically.

If $\bar{u}$ is the efficient rate of unemployment we can define the commitment mechanism as insufficient, whenever $u\left(\varrho\left(c\left(\bar{u}\right)\right)\right) > \bar{u}$, so that the equilibrium unemployment rate is higher than the efficient one. A second equilibrium with $u < \bar{u}$ is conceivable, but it is not of any practical interest, since it is dynamically unstable. Whether the equilibrium $u > \bar{u}$ is dynamically stable depends on the particular dynamics of the system which we do not want to consider here.

By a comparative static analysis we can easily see that a shift of the moving cost function in the upward direction will reduce the commitment problem. Indeed, let

$$c\left(u\right) = f\left(u\right) + \alpha$$

where α is some shift parameter. Differentiating the equilibrium with respect to α leads to

$$\frac{d\varrho}{d\alpha} = \varrho'\left(c\right)\frac{dc}{d\alpha}$$

$$\frac{dc}{d\alpha} = f'\left(u\right)\frac{du}{d\alpha} + 1$$

$$\frac{du}{d\alpha} = u'\left(\varrho\right)\frac{d\varrho}{d\alpha}$$

It can easily be seen that $\dfrac{d\varrho}{d\alpha} < 0$ and $\dfrac{du}{d\alpha} < 0$: Since $u'\left(\varrho\right) > 0$ (due to the third equation) both inequalities hold or neither hold. But if neither holds then according to the second equation (because in-equilibrium $f'\left(u\right) > 0$) $\dfrac{dc}{d\alpha} > 0$ and thus because of the first equation and $\varrho'\left(c\right) < 0$ we have $\dfrac{d\varrho}{d\alpha} < 0$, a contradiction.

11. Other Immobility Mechanisms

Therefore, whenever mobility costs are high for reasons which are independent from the commitment problem then an automatic commitment mechanism is provided for a labour managed economy. From this point of view it would be interesting to investigate carefully the discernible historical development of mobility costs. It would also be interesting to make a more detailed study of the precise quantitative relation between any given mobility level and the rationality of intertemporal decision making in a democratic production team. Outcome of these studies might support or refute a conjecture that labour managed organizations have greater potential in the future than they had in the past.

If greater mobility costs improve the decision process in a labour managed market economy, then the device of artificially raising mobility costs is available as a substitute for greater unemployment. At least two

possibilities come to mind. The government could impose a mobility tax. For reasons which we do not want to discuss in detail we believe that the social psychology of labour managed economies makes it difficult to impose such a tax. Another more likely development is that income shares of workers become an increasing function of the time they belong to the firm (firm specific seniority premium) and this even beyond the point which could be explained by corresponding productivity differences. If outside financing is important, the rating of a firm and of its decision mechanism in the capital market will depend on the firm specific seniority premium. Thus pressure is exerted to develop these artificial mobility costs. They are certainly a good remedy for unemployment: it now becomes lucrative to hire new workers who get an income below their expected contribution to the joint surplus.

In the context which we discuss a fair comparison between capitalist and labour managed market economies must notice that psychic mobility costs may differ substantially in the two systems. A worker doing a job simply for the money he earns may not care whether to work for his present or for some other employer. A worker who is part of a well functioning labour managed firm may consider if he wants to leave a community to which he is strongly attached. The price, for which he is prepared to leave may be high. Thus his immobility may be high precisely because his firm has attractive properties which a capitalist firm does not provide. Thus the commitment mechanism in a labour managed firm may be a degree of firm patriotism which an employee of a capitalist firm is unlikely to develop. Whether participatory democracy as an organization and decision principle is able to develop a high degree of moral commitment to be used as a sufficient commitment mechanism, this is an unsettled question. But it is plausible that those tend to answer it in the affirmative, who believe that the capitalist organization principle is deficient in meeting common human needs for self-realization and participation and responsibility.

12. Conclusion

We believe it would be a mistaken approach trying to prove the superiority of one of the two systems over the other on purely theoretical grounds. Both systems have drawbacks and strong points if compared with the other. What is important and fruitful is a clear definition of the deep seated structural characteristics of the systems so that a fair comparison becomes possible. The commitment principle for decision makers seems to be important if good decisions are to be made. Capitalism makes the commitment principle compatible with high mobility of workers and owners by easily transferable membership rights (tradable shares) and by the exclusion from decisions of those whose membership cannot be made easily transferable (the workers). A labour managed market economy makes the commitment principle compatible with labour management by reducing mobility. Is this a trade-off between worker autonomy and individual freedom?

Summary

Labour managed firms face some serious problems with regard to the provision of capital, especially of risk-bearing capital. These difficulties are discussed in the first part of the paper. Subsequently it is argued that these problems are rooted in the fact that the workers are insufficiently committed to the long run well-being of the labour managed firm, i.e. in the lacking of a sufficient commitment mechanism. An interchange of the rôles which capital and labour play under capitalism would require tradable job rights, an arrangement which is not feasible. It is concluded therefrom that any workable labour managed economy needs a special commitment mechanism. A high rate of unemployment might serve for this purpose, or, more attractively, a reduction of labour mobility through appropriate incentives like seniority-dependent remuneration schemes.

Zusammenfassung

Die Arbeiterselbstverwaltung von Betrieben trifft auf einige ernste Probleme bei der Kapitalbeschaffung, insbesondere bei der Beschaffung von Risikokapital. Diese Schwierigkeiten werden im ersten Teil der Arbeit erläutert. Sie scheinen ihre Ursache darin zu haben, daß die Interessen der Arbeiter in zu geringem Ausmaß an das langfristige Wohl der Unternehmung gebunden sind. Eine Vertauschung der Rollen, die Kapital und Arbeit im Kapitalismus spielen, würde erfordern, daß Arbeitsplätze von den Arbeitern erworben und verkauft werden können, ein Arrangement, das aus anderen Gründen nicht sinnvoll getroffen werden kann. Es wird deshalb gefolgert, daß jedes arbeitsfähige System der Arbeiterselbstverwaltung eines speziellen Mechanismus bedarf, der die Interessen der Arbeiter an das langfristige Unternehmensinteresse bindet. Eine hohe Arbeitslosigkeit könnte diesen Zweck erfüllen oder aber, was wünschenswerter erscheint, eine hohe Immobilität der Arbeit, wie sie etwa durch eine Entlohnung erreicht werden könnte, die an die Dauer der Betriebszugehörigkeit geknüpft ist.