Efficiency and Transferability of Ownership Rights – A Comparison Between the Capitalist Firm and the Socialist Firm

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The efficiency implications of restrictions on the transferability of the ownership rights of the firm are examined in a comparison between a capitalist firm and a socialist firm of the Yugoslav labour-managed type. It is shown that lack of transferability in the latter case has several effects: (a) self-financing of firm investments through retained earnings becomes unattractive, (b) risky investments are shunned, and (c) the working of the market for corporate control is hampered. As an empirical example of the efficiency implications of restrictions on transferability the producer cooperatives in Swedish forestry and forest-based industries are examined. These producer-cooperatives are very similar to the Yugoslav labour-managed firms with respect to the transferability of ownership rights.

1. Introduction

The literature on property rights holds that efficiency in the use of resources is promoted if such rights are well-defined, exclusive and transferable. The concepts of efficiency and property rights refer to the allocation of resources to their most valuable uses as determined by the preferences of ultimate consumers and the rights to use the resources in certain stipulated ways, respectively. (See e.g., Alchian and Demsetz [1937], pp 17–19, Cheung [1970], p 64 and Posner [1972], pp 10–12.) Exclusivity and transferability are the main characteristics of private property rights. (See Cheung [1978], p 51, Alchian and Allen [1974], p 142 and Pejovich [1971], p 144.) The owner of a private property right has the rights to exclude others from its use, to appropriate the income emanating from its use and to sell it on whatever terms he and the buyer find agreeable. (See Cheung [1978], p 51.) It is principally with respect to transferability that a public property right can be distinguished from a private property right. An inherent characteristic of the former is that it cannot be sold on a market. (See Alchian (1965), p 138.)

In a socialist state the means of production are publicly owned. As soon as the ownership rights to capital can be exchanged against other rights on the market, we have a regime of private ownership of capital – and the capitalistic state. This is so because transferability of property rights implies at least some degree of exclusivity in ownership (Cheung [1978], p 52) and, therefore, the fulfilment of both conditions stated above for a property right to be classified as private. With respect to the exclusivity of a public property nothing definite can be said. The individual citizen may or may not be permitted to use an asset exclusively and/or appropriate its yield. Examples are the Yugoslav firm and the Soviet firm. In the former, members are permitted to use and appropriate the yield from the use of capital goods exclusively, while in the latter they can use the capital good but cannot appropriate the yield. In both cases the quality of capital goods is assumed to remain unchanged, which means that the capital stock must be kept intact in perpetuity (Pejovich [1971], pp 143, 148, 152).

To highlight the significance of transferability as the distinguishing feature, a comparison is made here between the Yugoslav type of socialist firm and the corporation, taken as representative of the capitalist firm. The employee in the Yugoslav labour-managed firm and the shareholder in a corporation are on equal terms in the senses that they both have the ultimate authority in deciding on the uses of the firm's resources and they both have the right to the residual income, i.e. that remaining after all other parties to the firm have received their contractual income. But while the Yugoslav worker cannot transfer his right, equity shares in a corporation can be bought and sold freely on the stock-market at whatever prices the seller and the buyer agree upon. The lack of transferability means, first, that the Yugoslav worker must stay with the firm to have a claim on the firm's income-stream whereas the shareholder in a corporation can obtain a price for his share which reflects the market valuation of the present value of that part of the future profit-stream to which the share gives a right. Furthermore, the Yugoslav worker cannot free himself from participating in management and sharing in profits/losses and become instead an ordinary wage-earner with a contractually agreed income as in a capitalist firm. Thirdly, there is no absentee ownership in the Yugoslav firm, since a person must work in the firm to share in management and profits/losses. Finally, there is a limit to the portion of the profit-stream that can be appropriated by one firm member, unlike the corporation where one individual can be a majority shareholder.

The lack of transferability will influence the efficiency of the economy in three different ways. First, self-financing of investments will be affected by the inability to capitalize the future profit-stream. Secondly, the supply of risk capital will be curtailed as there are no possibilities open to the individual to avoid risk by utilizing portfolio effects, by entering into employment contracts with a guaranteed wage or by in other ways diminishing his part of the responsibility for the conduct of the affairs of the firm. Thirdly, the working of the market for firm control will be hampered both by the lack of information about management efficiency as is supplied in a stock-market and by the fact that an outsider seeking control over the firm cannot capture more than a given part of the increment in the profit-stream which might result from his efficient management.

2. Self-Financing of Investments

The first aspect of efficiency to be considered is the self-financing of investments through retained earnings. The distortions that arise here can all be attributed to the inability to capitalize future profits through the sale of ownership rights. If we apply the efficiency rule that funds are to be retained for investment purposes when the rate of return obtainable on these funds promises to be higher than that obtainable elsewhere in the economy, the capitalist firm, represented by the corporation, shows a propensity towards an excessive degree of self-financing. There are two reasons why this occurs. The first is simply that there may be non-pecuniary effects which, according to the preferences of the owners of the firm, outweigh the pecuniary loss measured by foregoing higher yielding investment opportunities elsewhere. Especially if the owners are active firm-members, non-pecuniary rewards in the form of consumption on-the-job will constitute strong arguments in their utility functions. Secondly, a lack of control due to dispersed and absentee ownership may mean that employed management can use the firm's earnings for discretionary expenses, which may have an investment character. This inclination on the part of employed management will be reinforced if the lack of control means that the managers are not rewarded according to their marginal productivity. (See Alchian and Demsetz [1972].)

Turning to the first of these two reasons it is clear that the excessive degree of self-financing is not a case of inefficiency. The property right holder, i.e. the owner of the firm, is simply using his right in a way that maximizes his utility. In the second case also it may be wrong to talk of inefficiency. Transaction costs in the form of costs to owners of policing and enforcing their exclusive rights to profits may be higher than the incremental yield per share that might result. (See Demsetz [1967], pp 357–9.) This problem will be compensated for and will, to a large extent, be overcome in a corporation by the high degree of transferability and the limited liability characterizing a share. The fact that corporations with dispersed ownership have hitherto met the test of the market and survived suggests that they represent an efficient type of ownership.

A socialist firm of the Yugoslav type represents the opposite case where the above efficiency rule would result in too low a level of self-financing. The absence of the possibility of capitalizing future profits through the sale of ownership rights and the obligation to keep the capital stock of the firm intact in perpetuity create an incentive for the Yugoslav worker to realise profits rather than reinvest them in the firm. Inasmuch as the workers really have the power to decide for themselves through the Workers Council the rate at which profits are to be realised in the form of higher wages, this is an incentive that will be catered to. (See Furubotn & Pejovich [1970], pp 32–33 and Furubotn [1971], p 183.) Besides, the scope for discretionary investment by management is circumscribed since workers can effectively control the management by making on-the-job observations of the way the firm is managed.

It follows that the shorter the time-period workers, on average, expect to stay with the firm, the higher must the rate of return on investments financed by retained earnings be relative to the returns which can be obtained elsewhere by the individual worker. In the Yugoslav economy, where no absentee ownership of the firm is allowed, the alternative open to the individual worker is essentially to put his money in a savings account.[1] If the average expected period of employment in the firm is 10 years and the rate of interest available on a savings account is 10 per cent and given that the capital stock is to remain intact for ever, a self-financed investment must give a return of at least 16 per cent in order to have a chance of being accepted by a majority of the workers. (See Pejovich [1970], pp 150–1.) (16 per cent corresponds to the annuity that has to be paid as instalments of a debt of 1 dollar running for 10 years at an interest rate of 10 %.) The shorter is the time horizon of a majority of the workers in the firm, the higher must be the required rate of return on investments financed through retained earnings compared to the rate of interest on a savings account. If we also take into consideration the possibilities of obtaining external funds, such as bank credits, at an interest rate lower than the required rate of return on self-financed investments, there will be no incentive to finance any investments through retained earnings. (See Furubotn & Pejovich [1973], pp 278–83.)

Inefficiency in the Yugoslav system appears in the form of an excessive degree of consumption. The inability to capitalize the profits from internally financed investments and the availibility of external funds for investments, obtainable at a relatively low cost, combine to encourage the realisation of profits. To a large extent the interest on a savings account is the yardstick against which the desirability of future relative to present consumption is judged, although there do exist higher yielding investment opportunities in the economy. It may be added that a high level of private consumption and a high demand for bank credits for investment purposes tend to create inflationary pressures which, in turn, make future consumption even more disadvantagous.

Another efficiency aspect to be considered in the context of self-financing is that the labour market tends to be rigid to an extent that is inconsistent with the allocation of labour to its most valuable uses i.e. where marginal productivity is at its highest. (See Furubotn & Pejovich [1973], pp 284–85.) If a worker has participated in the financing of investments through retained earnings he will take the loss of future yields from these investments into account when contemplating a change of occupation. The wage offered by another firm must be high enough to cover both the value of his marginal productivity in his present occupation and the income stream in the form of a share in future profits that he will loose. At the same time workers who have been sacrificing income for the financing of investments will be reluctant to let new workers enter and share in the yields from these investments. Marginal productivity considerations are ignored as a result of both the inability to capitalize future profits through sale of ownership rights and the absence of employment contracts with a guaranteed wage.

Justification for the rule that the firm's capital stock must be held intact may also be found in the inability to capitalize future profits. Without this qualification on the exclusive use of the firm's capital by the workers it could be expected that the workers would be motivated to consume the capital during their period of employment. Annual income might be raised during a shorter period of time through depletion of the capital stock, for example, by not undertaking replacement investment and by refusing to hire new workers, who might have a longer time horizon and who will constitute further claims on income.

3. Risk Bearing Effects

The risk to be considered in this section is primarily that due to demand and supply fluctuations which are outside the control of the firm i.e. risk factors of an exogenous character. The possibilities offered by a high degree of transferability of ownership rights for avoiding risk associated with inefficient management will be dealt with in the following section. Two types of transferability restrictions are of interest here, namely the lack of an opportunity for the worker to enter into an employment contract with a guaranteed wage and the prohibition of absentee ownership. These two transferability restrictions will result in risky business activities being shunned for three different reasons. First, the cost of acquiring risk capital will be raised. Secondly, there will be no-one guaranteeing the wages of the workers. Thirdly, the worker cannot take advantage of portfolio effects in investments and cannot cater to differences in his preferences with regard to the types of business activities that he prefers because of the type of work offered and the business activities that he prefers for reasons of risk.

Few persons would be willing to lend at a fairly low fixed interest rate to a business promising high profits if successful and heavy losses if unsuccessful, where the probability of failure is high. The rate of interest charged on loans to such business activities will instead be high to compensate for the risk that the loans will never be repaid. (See Posner [1972], pp 1976–178.) To secure investment funds on more favourable terms it will be necessary to let the persons providing the funds share in the profits generated from successful operation and it may also be necessary to allow them some management control. This is exactly how the corporate firm proceeds when acquiring capital for the financing of risky activities. In a labour-managed firm of the Yugoslav type the right to share in the residual and the control of management are reserved for the workers of the firm. The only way open to the workers of a labour-managed firm to finance investments, besides providing the funds themselves from their own savings or from the profits of the firm, is to raise debts on the capital market (in principle, this is equivalent to bank loans).

This, due to the prohibition of absentee ownership, places the labour-managed firm in a dilemma. The workers may not be able to raise the necessary capital themselves or may be reluctant to place a major part of their savings in a risky business activity. Added to this is the impossibility of capitalizing future profits. But reliance on debt financing of investments will sooner or later increase the fixed costs of interest and amortization dramatically. Bankers will claim compensation in the form of a higher rate of interest and faster amortization, the greater the risk. The banks in Yugoslavia are also labour-managed firms and as such have an interest in not loosing money on the loans they are issuing. Risky business will tend to be shunned and where banks do become involved in financing risky business they will also demand some control over firm management.

The second reason is that the wages of the worker cannot be guaranteed. It is then especially disadvantageous for a worker to be employed in a risky capital-intensive industry. The restrictions on transferability of interest in this context are the prohibition of absentee ownership and the lack of an opportunity on the part of the workers to enter into employment contracts with guaranteed wages. Since the worker cannot give up or sell his right to participate in the control of the firm and to share in the residual, it follows that he cannot escape the responsibilities associated with ownership of the firm. He must accept the obligation to bear losses as well as the opportunity to share in profits. Moreover, the effects of failure on the worker's income cannot be cushioned by having the losses spread over a larger number of absentee owners and by having special agreements on how absentee owners absorb losses (or share in profits). An example of a special agreement of this kind can be found in the use of ordinary shares and preferred ordinary shares in a corporation. Another comparison can be made with respect to the degree of responsibility for losses. In the capitalist corporation the shareholder has limited liability in that he is only responsible for losses up to an amount equal to the value of his shareholding.

In the Yugoslav system the liability of the workers is limited only through a bankruptcy law that declares a firm bankrupt if it cannot pay a certain minimum wage after the other contracting parties including the State, the banks and other suppliers of inputs to the firm have received their contractual share. (See Ward [1958], pp 568–569.) When this point is reached, the workers will find themselves unemployed unless the creditors agree to having the debts reduced. Therafter, the firm can be restored. It is clear that the risk facing the worker is considerable and inescapable. This must have an impact on the type of business investment preferred by labour-managed firms. Ideally, a labour-managed firm should operate under conditions of stable and easily forecast demand and supply. Given stochastic demand and supply conditions, there should preferably be a positive covariance between demand and supply. To the extent that these conditions are not fulfilled the worker's income will be subject to more or less severe fluctuations. Assuming he is risk-averse, the worker will wish to avoid this situation. To maintain stable consumption over time, he will be forced under such circumstances to keep reserves in the form of, for example, extra capital in a savings account. The worker will be particularly susceptible to uncoordinated fluctuations in demand and supply if the industry in which he is employed is capital-intensive.

The third reason is that individuals cannot separate risk-bearing from employment and, thereby, take advantage of portfolio effects in investments. The tying of risk-bearing to employment is a result of the restrictions on transferability imposed by having no absentee ownership and by the inability to enter into an employment contract with a guaranteed wage. The only risky investment a worker in Yugoslavia is permitted to undertake, apart from investment in human capital, private investments of the kind mentioned below and the choice of occupation, is to let his part of earnings be retained in the firm where he is employed, an investment opportunity which for reasons already discussed is rather unfavourable to the worker. There is no opportunity open to the worker to realise his part of the profits and reinvest the money in industries whose risk patterns he prefers either because he considers the risk of failure to be low or because there is a negative covariance between fluctuations in profit levels. Instead, the opportunity set for risky investments is, in practice, restricted to one point corresponding to the firm in which the person in question is employed. This lack of any opportunity to separate risk-bearing from employment makes it impossible for a worker employed in a risky line of business to take advantage of portfolio effects in ownership and diversify away the risk associated with the enterprise in which he is employed. This contrasts with the capitalist economy where there are no restrictions on absentee ownership of the corporation and where shares in a large number of different types of companies can be bought freely on the stock market.

4. The Market for Firm Control

The last aspect of transferability to be discussed is the possibility of obtaining ownership of a major portion of the firm through purchase of ownership rights. The type of efficiency relevant here is the extent to which control of productive resources rests with those persons best able to use resources in the most efficient ways. It has been argued that control of the firm can be considered as a valuable asset (Manne [1965]). By analogy with other assets, efficiency is equated with the most valuable allocation of control. An index of the degree of efficiency is the amount of profit that controlling individuals are able to produce for the firm. Profits may either be absorbed by the controlling management in the form of discretionary expenses or be distributed among the owners of the firm, who may indeed be the top management of the firm. In a corporate economy changes in control over the firm can occur in three ways; through proxy rights, direct purchase of shares and mergers. The first and the third methods have counterparts in an economy with labour-managed firms. It is the second method i.e. outright purchase of shares in the stock markets, which distinguishes between the two economic systems.

In a corporate economy the stock market serves as a mechanism providing signals about management efficiency. A decrease in management efficiency tends to be reflected in a fall in the prices of the company's shares. The more the prices of the shares fall, the easier and cheaper it is to take over control of the firm. The stock market also acts in other ways as a vehicle for the dissemination of information about managerial efficiency. There are journals and brokers specializing in stock market affairs and as far as there is competition between stock exchange institutions, the survival of a stock exchange will be dependent on how well it succeeds in providing information about managerial efficiency.

The absence of a counterpart to the stock market as a provider of information does not, however, necessarily imply severe inefficiency. Before a signal is transmitted in the form of a fall in the price of the company's stock, information on managerial inefficiency is often already available to other firms. (See Manne [1965], p 119.) As a result of their more or less daily contact, customers and suppliers can form judgements about managerial efficiency and competitors can draw inferences from their knowledge of industry characteristics. In their roles as suppliers, customers and competitors, labour-managed firms in a socialist economy can obtain information about managerial efficiency in the same ways. The workers in a firm can make inferences about managerial efficiency by comparing their income with the income of workers employed by other labour managed firms in the industry. Problems will arise, however, if one firm considers that another firm could be run more efficiently but the majority of workers in the second firm cannot be persuaded about the desirability of a merger on the grounds of efficiency. We have in this case a problem of signalling parallel to that in the labour market when workers try to find a job with wage conditions corresponding to their perceptions of their marginal productivities. In some cases the cost if signalling will simply be too high to permit the workers to obtain suitable employment. (See Spence [1974].) In the same way the cost of signalling might be too high for a potentially profitable merger to take place. In that case the transferability of ownership rights makes it possible for a corporation to take over control. The interested corporation simply buys a controlling part of the other company's stock. In the socialist economy high information costs of the type described here constitute an insurmountable barrier as outright purchase of ownership rights is forbidden.

If we consider the negotiation of a merger in the socialist economy it can be concluded that the lack of transferability again creates problems. Problems arise because there is nothing to negotiate about. The post-merger residual [2] in the combined firm is shared on a pro rata basis. This contrasts with the situation in the capitalist economy where the corporations themselves can decide on the rate at which the shares of the acquiring and the acquired firm are to be exchanged. In a socialist economy of the Yugoslav type the condition for a merger to take place is that the residual per worker must be higher in both the acquiring and the acquired firm, since no worker will vote for a merger that lowers his income. This conditions implies that the two following inequalities must be fulfilled for a merger to take place:

$$\frac{y_2^1 + y_1^1}{n_1 + n_2} > \frac{y_1^0}{n_1}$$

$$\frac{y_1^1 + y_2^1}{n_1 + n_2} > \frac{y_2^0}{n_2}.$$

where:

y_1^0 = residual in the acquiring firm. Pre-merger situation

y_1^1 = " " " " " . Post-merger situation

y_2^0 = " " " acquired " . Pre-merger situation

y_2^1 = " " " " " . Post-merger situation

n_1 = number of workers in the acquiring firm

n_2 = " " " " " acquired "

It follows that the difference in residual per worker between two firms must not be greater than the increase in residual per worker resulting from the increase in efficiency after the merger. We can then predict that mergers will be most likely to take place between firms within the same industry or between firms in industries that do not differ too much with respect to residual per worker. To the extent that vertically-related transactions partners, i.e. firms being suppliers or customers, have widely different profit levels per worker these firms can be excluded as merging partners despite their informationally advantageous position.

Another aspect to be considered is that the incentive to undertake a merger is also dependent on how much of the increase in efficiency the new controlling management can appropriate. There are, in principle, three different ways through which the increment in efficiency can be appropriated, i.e. through a higher salary, through an increased opportunity set for discretionary spending and by capturing a larger or smaller part of the increment in the profit-stream of the merged firm through outright purchase of ownership rights. The first two ways will probably not differ to any great extent between the two property rights systems. In as much as information about managerial efficiency is spread throughout the economy, efficient managers can be compensated through higher salaries. Appropriation through discretionary expenses is also dependent on how well information about managerial efficiency is disseminated in the economy, but the influence operates in the opposite direction since the size of the opportunity set is dependent on the lack of outside control of managerial efficiency.

The third way of benefiting from increased efficiency is only open to managers in a corporate system. By purchasing shares the controlling management can directly appropriate a larger portion of the increment in the profit-stream attributable to increased efficiency. By having this option managers are not reduced to realizing the benefits of increased efficiency in the form of discretionary expenses if the labour markets fails to reward them appropriately through higher salaries. Thus, the incentive to take over control for efficiency reasons will be enhanced in a corporate economy. If the first two means of appropriating the value of control cannot be relied upon, an individual always has the choice of increasing his share in the ownership of a firm and, thereby, appropriating the profits from an increase in efficiency. This is not possible in a labour-managed system where the purchase of ownership rights is prohibited.

5. The Effects of Restrictions on the Transferability of Ownership Rights – the Case of the Swedish Forestry and Forestry-based Industries

As an empirical illustration of the effects of restrictions on the transferability of ownership rights we have chosen the Swedish forestry and forest-based industries. Within this sector of the Swedish economy there are two types of firms (a) corporations and (b) producer cooperatives. The producer cooperatives exhibit great similarity to the labour-managed firms of the Yugoslav type with respect to the transferability of ownership rights. By making comparisons within the same industry and country it is possible to isolate the effects of restrictions on transferability in a way that is not possible when comparing a socialist and a capitalist state with their differences in economic and institutional conditions.

The Swedish producer cooperatives in the forest industry can be regarded as an analogue to the labour-managed firm where the firm's suppliers instead of the workers have the right to the residual and exercise ultimate control. (See Ståhl [1979], p 43.) The share of the residual that a supplier in the producer cooperative can appropriate stands in direct proportion to how much wood he has delivered relative to other owner-suppliers.[3] In principle, control consists of one vote per member-supplier in the election of the board of directors. By law (see Moberg [1966]) no-one other than owners of forests can obtain ownership rights in a producer cooperative in the forest industry. Furthermore, ownership is open to any supplier of wood in the region who wishes to join the producer-cooperative. Finally, unless otherwise decided by a majority of the owners, a supplier-owner has no right to receive more than the amount of the membership fee in the producer-cooperative when terminating his membership.

Drawing a comparison with the Yugoslav firm we find, first, that the supplier-owner has practically no possibility of capitilizing future profits of the cooperative through sale of his ownership right. The prospective buyer of an ownership right must be the owner of a forest within the same region and as such he will have the option of obtaining the ownership right at no higher cost than the nominal membership fee. Unlike the Yugoslav worker, however, the supplier-owner has the right to pass his ownership right on to future generations or to his friends, provided that they are also owners of forests. In contrast to the worker-owner in the Yugoslav economy, the supplier of wood in the Swedish economy can enter into a guaranteed contract of delivery with a corporation. As in the Yugoslav firm, there is no absentee ownership since shares in the residual depend on the amount of wood delivered and no-one other than owners of forest can be members of the cooperative. Finally, there will also be in practice a limit to the portion of the residual that can be appropriated by any one supplier, the limit being set by the number of suppliers all of whom in the region are eligible for membership.

Of the different consequences of lack of transferability discussed in the paper it is only those of inflation, inefficiency in the labour market and a lack of portfolio opportunities that are not relevant here. Table 3 shows that the producer-cooperatives have relied primarily on capital from external sources to finance investment. Furthermore, it can be seen that the funds provided to the cooperatives have not been used for long-term investment purposes to the same extent as in the corporations. With no absentee ownership[4] the producer-cooperatives are confined to debt-financing of investments, unless the supplier-owners are willing to supply the necessary funds from their own pockets or the profit-level is high enough to permit financing through retained earnings. From Table 2 it can be seen that the cooperative firms have not been successful in attracting investment funds from their supplier-owners. Besides the inability to capitalize future profits, the lack of own capital (the low solidity) can be attributed also to the fact that forestry and forest-based industries represent a risky line of business. The degree of export orientation makes the business very sensitive to changes in trade conditions. Moreover capital intensity has been increasing steadily. (See e.g. SIND 1976:1, pp 140–170.) The reliance on external financing has meant that the producer-cooperatives have been very adversely affected by the rapid decrease in demand from its peak in 1974. (See Table 1.) The increase in fixed costs consequent upon debt financing has shown itself in heavy losses during 1977 and 1978. Losses of the same magnitude cannot be found in the corporations operating in the same industries.

6. Summary

The main feature distinguishing a socialist state from a capitalist state is the absence of transferability of the ownership rights of the firm. The trademark of socialism is the public ownership of the means of production. The purpose of this paper has been to examine the efficiency implications of having no transferability of ownership rights. A comparison has been made between the socialist firm, represented by the Yugoslav labour-managed firm, and the capitalist corporation. While the shares of a corporation can be bought and sold freely on a stock-market, the ownership rights of a Yugoslav labour-managed firm are tied to employment.

The lack of transferability in the Yugoslav system shows itself in several ways: (a) the future profits of the firm cannot be capitalized, (b) the worker cannot free himself from the responsibility of bearing losses as well as sharing in profits (i.e. he cannot enter into an employment contract with a guaranteed wage), (c) no-one other than the workers has the right to share in the residual and exercise ultimate control over the management of the firm (i.e. there is no absentee ownership), and (d) the firm's residual is divided on a pro rata basis among the workers.

The inability to capitalize future profits has a negative effect on the degree of self-financing of firm investment and makes the labour-market rigid. The low degree of self-financing tends to give rises to inflationary pressures in the economy. The lack of an opportunity for the worker to enter into an employment contract with a guaranteed wage and the prohibition of absentee ownership result in risky investments being shunned. There is no way in which the consequences for the worker of adverse business conditions can be cushioned. A worker is especially susceptible to changes in business conditions if he is employed in a capital intensive industry. Finally, we find that the working of the market for firm control is hampered because of the lack of an opportunity to appropriate the profits from more efficient management by acquiring the right to a major portion of the firm's profit-stream.

The Swedish forestry and forest-based industries provide empirical illustration of the theoretical propositions of the paper. In the Swedish forest industry we can find two types of firms, corporations and producer-cooperatives. The producer-cooperatives show great similarities to the Yugoslav labour-managed firms with respect to the transferability of ownership rights. The principle difference is that private ownership of means of production is not forbidden in the Swedish economy and, therefore, a forestry-producer can always enter into a guaranteed delivery contract with a corporation. Empirical evidence for the producer-cooperatives is consistent with our arguments that (a) in comparison with the corporations financing through debts is prevalent, (b) the degree of self-financing of investments through retained earnings is lower and (c) the residual fluctuates widely in response to changes in business conditions.

Footnotes

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1 According to Furubotn and Pejovich (1973, p 279) the investment alternatives open to the Yugoslav workers "are restricted to monetary assets, human capital and some very limited types of physical assets such as small shops, restaurants, taxi businesses, jewelry etc, where the right of ownership does not necessarily and obviously violate the principle of exclusive public ownership of capital goods."

2 The term residual is used to take into account the fact that in a socialist economy different wage levels for different industries can be considered as normal because of differences in factors such as investment in human capital and working conditions.

3 The residual will be reflected in the prices for wood that the cooperative is charging its members and in a possible refund in proportion to the quantity of wood delivered if business turn out to be better than expected.

4 It is, however, to be noted that the problem of no absentee ownership in producer-cooperatives has to a large extent been solved by having affiliated companies that are run in a corporate form (see SOU 1979:11, pp 28–29 and 34).

Appendix: *Financial Data for the Swedish Forest Industry. The tables cover the 18 largest forest companies.*

Table 1. Profitability

Profitability 1973–1977, all 18 companies, million *kronor*

	1973	1974	1975	1976	1977
Sales	17.500	25.100	23.900	26.300	28.300
Gross profit = profit before depreciation	3.400	7.000	4.300	3.300	1.500
Net profit = profit after depreciation and financial items	1.800	5.400	2.500	1.00	–1.600
Gross profit (%)[1]	19,4	27,9	18,0	12,5	5,3
Net profit (%)[1]	10,3	21,5	10,5	3,8	–5,7

Profitability 1973–1978, producer cooperatives, million kronor

	1973	1974	1975	1976	1977	1978
Sales	3.116	3.890	3.674	4.407	4.976	5.394
Gross profit	469	898	567	455	–165	–89
Net profit	191	624	254	17	–755	–799
Gross profit (%)[1]	15,1	23,1	15,4	10,3	–3,3	–1,6
Net profit (%)[1]	6,1	16,0	6,9	0,4	–15,2	–14,8

[1] In percentage of sales

Source: Regeringens proposition 1978/79:207.

Table 2. Financial structure

Financial structure, all 18 companies

	Million kronor			In percentage terms		
	1972	1974	1977	1972	1974	1977
Short term debts	4.500	6.800	10.400	20	22	22
Long term debts	9.100	9.700	19.000	41	31	41
Net yet due tax debt	2.200	4.900	4.800	10	16	10
Own capital[1]	6.200	10.000	12.400	28	32	27
Total	22.00	31.400	46.600	100	100	100
Financial structure, producer cooperatives						
Short term debts	828	1.073	2.049	29	27	29
Long term debts	1.774	1.803	4.044	62	45	57
Not yet due tax debt	35	444	369	1	11	5
Own capital[1]	204	714	663	7	18	9
Total	2.841	4.034	7.125	100	100	100

[1] Percentage own capital = solidity

Source: Regeringens proposition 1978/79:207

Table 3. Financial analysis

Financial analysis, all 18 companies	Annual average Million kronor			In percentage terms		
	1973–1974	1975–1977	1973–1977	1973–1974	1975–1977	1973–1977
Funds provided:						
Retained earnings	4.200	1.800	2.700	93	34	55
New issues of shares for cash	100	300	200	2	6	4
Increase of long term debts	200	3.200	2.000	4	60	41
Total funds provided	4.500	5.300	4.900	100	100	100
Funds used:						
Investment in fixed capital etc	2.300	3.900	3.200	51	74	65
Investment in financial assets	300	700	500	7	13	10
Increase of working capital	1.900	700	1.200	42	13	24
Total funds used	4.500	5.300	4.900	100	100	100
Financial analysis, producer cooperatives						
Funds provided:						
Retained earnings	545	95	275	92	14	43
New issue	33	4	16	6	1	2
Increase of long term debts	12	581	354	2	85	55
Total funds provided	590	680	645	100	100	100
Funds used:						
Investment in fixed capital etc	277	440	375	47	65	58
Investment in financial assets	87	180	143	15	26	22
Increase of working capital	226	60	127	38	9	20
Total funds used	590	680	645	100	100	100

Source: Regeringens proposition 1978/79:207.

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