The Economic Performance of Employee-owned Enterprises in the Baltic Countries

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by associate professor Niels Mygind, CEES, CBS.   1. DRAFT not to be quoted!

1. Introduction.

Employee ownership constitutes an important element in the ownership structure of enterprises in many transition economies. This is also the case for the three Baltic Countries (see Mygind, 1996b). It is a widespread assumption among Western economists that this type of ownership will have an economic efficiency inferior to that of other types of private enterprises (Lipton & Sachs 1990, Hinds 1990, Boycko et al. 1993). Thus, when privatization results in employee-owned enterprises it is assumed only to be a "halfway" privatization which still maintains important elements of the old inefficient system. While this assumption may to a certain extent be true, such conclusions are rooted in theoretical models based on quite narrow assumptions. The empirical foundation is even weaker. The latest example is chapter 8 about "Ownership, governance and restructuring" in the influential "Transition report" from the EBRD. The empirical results are not clear. In fact, part of the results points to better performance of insider owned enterprises compared to outside owned enterprises. In spite of this and in spite of some moderations the chapter concludes (p.137):

"Third, there is some suggestive evidence that effective corporate governance is necessary to deliver "deeper restructuring", and particularly new capital investment. It seems that more such restructuring may have been undertaken by firms with concentrated outside ownership, especially those owned by foreign investors and, to a smaller extent, firms controlled by investment funds or banks".

This is not to criticize the conclusion that foreign-owned enterprises have a higher level of investment. Indeed, this is also confirmed by our study and is one of the least surprising results. However, this conclusion suggests that "deep restructuring" depends on foreign ownership which in most of the economies in transition only can dominate a small share of the economy.

Most of the analyses made of the economic performance for different ownership types in Eastern Europe are based on a limited number of enterprises and a very short and very unstable period. The level of analysis is very simple. The conclusions in the EBRD report are mainly based on the average percent of change for different owner groups of enterprises. In this respect, our data-material are relative large and detailed, and we are able to perform a multi-variable analysis that should bring more reliable results. However, at this point in our analysis, it is still necessary to point out that the results are preliminary. Further analysis is needed and more reliable results can be found as additional annual figures are included in the analysis.

2. Method.

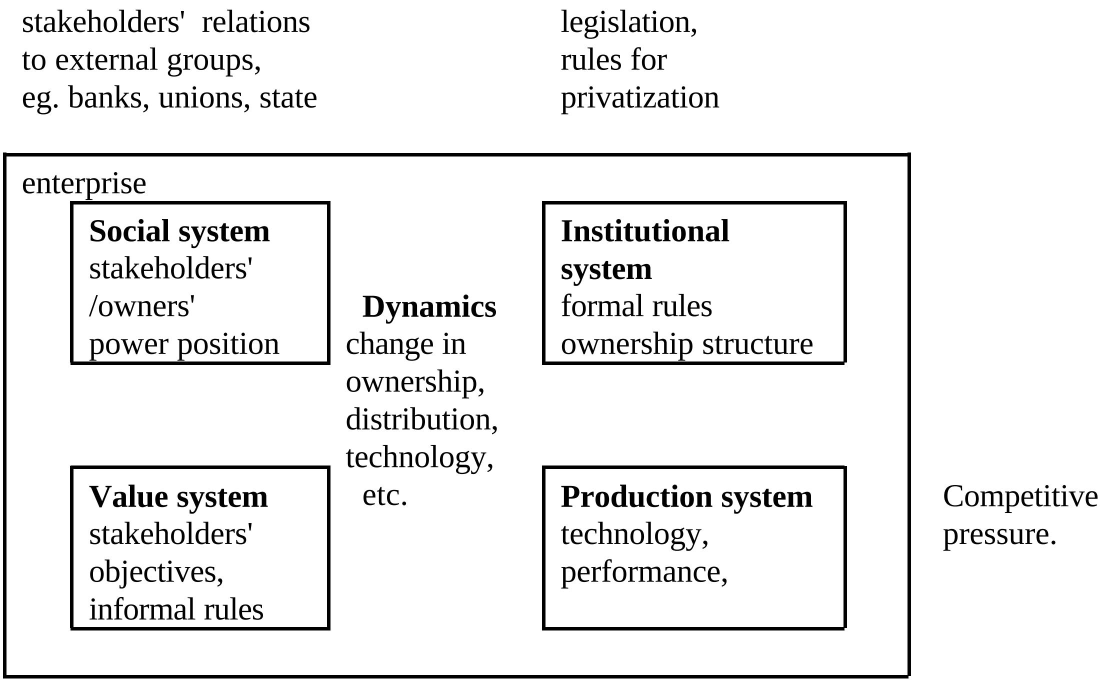
The structure of this paper is illustrated in figure 2. Initially, the focus will be a discussion of the theoretical predictions for the performance of different forms of ownership in the special transitional context. To do this it is necessary to point out the special assumptions not only concerning the specific types of ownership, but also the special institutional framework characterizing transition economies and the specific situation of the production system etc. From these basic assumptions a row of basic problems concerning corporate governance of specific types of ownership can be found and from these problems more specific predictions about the behavior can be given. However, in many cases there will be factors pointing in opposite directions making the theoretical predictions unclear. These predictions or open questions are then confronted with some of our preliminary results of the empirical analysis (Jones & Mygind, 1996 and Uldall, 1996).

Figure 2. Overview over the article.

3. Basic assumptions.

To structure the analysis the framework introduced in Mygind, 1994 will be used. Here, a model with four sub-systems were developed for an analysis at the level of society. However, the model may also provide an overview over the situation at the enterprise-level as illustrated in figure 3.1.

Figure 3.1 Model of an enterprise.



(NB: DUE TO TECHNICAL PROBLEMS THE ARROWS IN THE FIGURE ARE MISSING, SORRY! WE´LL TRY TO UPDATE IT AT A LATER TIME)

Includes different social groups or stakeholders in the *social system* of the enterprise. For the purpose of this analysis managers, other employees (or here just employees) will make up these groups. Managers or employees have a stake in the enterprise because their working conditions and salary are determined by the enterprise. They might also have a stake as owners like outsiders such as the state, domestic capital and foreign capital. Included in the analysis will also be banks as suppliers of capital. However, suppliers and consumers will not be included as stakeholders in the current analysis. The power of the different groups in relation to the enterprise are determined by their ownership rights, their share of the information about the enterprise, and the importance of the resources they supply, eg. management skills or capital, to the enterprise.

Their behavior depends both on their formal role in the enterprise and on their objectives based on the *value system* - the culture of different participants. These objectives are different for the various stakeholders and this makes the behavior of the enterprise dependent on who has the ownership control of the enterprise.

If the individualistic culture is dominant, the main objectives of the employees is employment and wage. The wealth, i.e the profitability of the enterprise, might have some influence on them if they are owners. However, in the special conditions of transition the capital markets are far from perfect and the employees might be imposed to a liquidity constraint so that they have to give higher priority to a minimum level of wages compared to an increase in profits for the enterprise. It can be assumed that for the managers this constraint is not so tough, and when the banking system starts functioning they will often be in a better position to get loans than the rest of the employees. For outside owners it is assumed that profit (wealth) maximization for the enterprises is the only objective.

The *institutional system* shows the formal structure of the enterprise. In this context we will focus at the ownership structure (although connected to this the organization structure in a broader sense could also be included). We will here distinguish between the following ownership types dependent on who is the dominating owner:

Figure 3.2 Different ownership types.

ownership 100% owned by **Distribution**	**SO** State-Owned	**EO** Employee-Owned	**MCEO** Management Controlled Employee Owned	**MO** Management Owned	**MCOO** Management Controlled Outside Owned (diversified)	**OO/FO** Outside Owned Foreign Owned (core-owner)
ownerrights: **control** **surplus** **wealth**	**S M E** (+) + (0) + (0) 0 + 0 0	**(M) = E** (+) + (+) + (+) +	**M E** + (0) (+) + (+) +	**M** + + +	**M O** + (+) 0 + 0 +	**M O** (+) + 0 + 0 +
information	0 + (+)	+ +	+ (+)	+	+ (0)	+ (+)

+ full, (+) some, (0) a little, 0 no,

The figure illustrates the 6 different ownership-types to be analyzed. It is assumed that the formal distribution of especially the ownership right to control can vary from the real distribution of controlling power. This is assumed to be the case in the state owned enterprise in the transition economy. The economy is liberalized giving scope for the management in the state owned enterprise to make decisions about pricing, buying and selling goods etc. At the same time the enterprise is still state owned. The actual possibilities of the managers might be so large that they in fact can recover part of the surplus, marked by (0) for the right to surplus in figure 3.2.

In the employee-owned enterprise the employees are assumed to have de facto control with management. Still, the manager retains his share of the ownership rights as an ordinary employee. In the management controlled employee-owned enterprise the managers have the real control and the control of other employees is limited accordingly (Earle & Estrin, 1995 also use this distinction). The manager also has a share of the right to surplus and wealth, but assuming an equal distribution in a large enterprise his part will be only a fraction of the total.

In the pure form of management ownership the manager simply has all the three ownership rights.

In the outside-owned enterprise with diversified ownership, the manager can also exert a high degree of real control. This is especially the case during the transition with capital markets, accounting and financial information systems in a very preliminary stage. This means that the threat of take-over and external monitoring through the capital-markets will be quite limited. In this situation the power of the manager versus the outside owners will be even stronger than in a similar ownership type in the developed markets in the West.

This picture changes when the outside ownership is concentrated with a core-owner. This is typically the case for foreign ownership also showed in the figure.

In the empirical analysis we cannot directly distinguish between whether the enterprise is management controlled. Still, it is relevant to make the distinction in the theoretical analysis because it has important implications on the behavioral predictions. In the empirical analysis we can then argue that some specific results point in the direction of factual management control.

Closely connected to the real distribution of control is the question about the flow of information to the different groups involved in the enterprise. This is also illustrated in figure 3.2. We assume that there is asymmetric information so that the managers have some essential information about the activities of the enterprise which is costly or impossible for the outsiders to get. In the case of outside core ownership it is assumed that the outside owners use much resources to get information and to monitor management. Thus the core-owner has quite good access to information from the management. The other employees have also access to most of this information, and this is especially considered to be the case in the situation of pure employee ownership with more transparent decision-making and where the employees can change the management if they do not feel they are well enough informed.

Note, that in our ownership categories we do not distinguish between privatized enterprises and enterprises started from scratch - so called *"de novo"* enterprises. Such a division might be relevant and is used e.g. by EBRD (1995) and Earle et al. (1995). The problem is that de novo enterprises are very difficult to distinguish from privatized enterprises. Nearly all enterprises in fact start up by taking over some of the assets from a former state-owned enterprise and many of the de novo enterprises are, in fact, spin-offs from former state enterprises. It is also a problem to use the legal form of the company to distinguish start-ups because most of the enterprises which by name and legal form looks like de novo enterprises are very often created as a legal entity to lease the assets from a former state-owned enterprise. Real de novo enterprises are concentrated in sectors which were underdeveloped in the command economy, i.e. restaurants, retail trade, import export and liberal services. In our empirical estimates, the effect of ownership will thus be very difficult to distinguish from the effect of branch.

The *production system* in the typical transitional enterprise is under strong pressure to be restructured. In the command economy the system was adjusted to fulfil the directives of the plan. After liberalization, the price structure and the motivation structure changes dramatically. This most often means that the enterprise will have to change both products and production methods to follow the demand and cost signals of the market. To undertake such a restructuring, both management skills and large investments are necessary. Restructuring takes time and for virtually all enterprises as well as the whole economy results in a steep fall in production before the new products and the new markets are developed and production starts to grow again. Except for a few "golden egg" - enterprises, this development means a J-shaped curve for several of the variables measuring economic performance: sales, employment, profit etc. and resources for investments will be a crucial factor for the speed of the "deep restructuring" in most enterprises.

Figure 3.1 also highlights some relations to the surrounding world. Some of these relations in the specific transitional context is showed in figure 3.3. The corporate governance structure is both determined by the ownership structure at the enterprise level and the interaction with the external institutions. These institutions are all in a transitional stage.

The state is changing its role and its takes time to build up the necessary legislation for private contracts, property rights, bankruptcy etc. and it takes even more time to build up a legal framework to control and facilitate the functioning of the system.

For example, in most countries there is still not a functioning registration of ownership rights for land and buildings. This has been delayed by the complex process where the ownership structure from before the socialist take-over is sought to be restituted. Before such a registration system is operational, it will be difficult to develop a property market. It is also difficult to develop the banking system because collateral in property is often necessary to give loans to enterprises.

The pressure from the capital markets is very weak. In a developed economy this takes the form of threats of hostile take-overs and the capital markets provides a benchmark to the benefits of diversified shareholders. This applies pressure on management to make more efficient use of the resources of the enterprise.

In the transition economy, the banking system is not playing its potential role as external monitor of the management. In the initial stage of transition it is because many enterprises have accumulated substantial debts, most of which the banks cannot expect will ever be paid back. In a normal banking system, bank pressure and the threat of bankruptcy would discipline the enterprises.However, in many cases the banks themselves are reluctant to take such measures because it would reveal that the banks had actually accumulated excessive bad debts. Even when this problem has been solved the common picture is that bank loans are very scarce and expensive and only used to a very limited extent by enterprises.

The pressure from competition from other enterprises increases with the progress of liberalization. This pressure often develops into a squeeze for many enterprises because of the steep fall in demand in the initial stages of transition.

In many economies, especially of the North European type, the conditions of employees are effectively supported by unions and state-regulation. This is only to a limited degree the case in most transition economies, Poland and perhaps Russia being possible exceptions. In most other countries, unions have lost much of their legitimacy because of their close links to the former command system.

A well functioning market for managers might discipline these managers to fulfil the interests of the owners. Successful performance of the enterprise could be a strong argument for the manager for increased salary or to get a new job in another enterprise. However, the very "noisy" environment for all enterprises in the economies of transition makes it difficult to evaluate the relation between enterprise performance and quality of management, and the market for management skills are at a very preliminary stage in Eastern Europe, Jones & Kato, 94.

Figure 3.3 Conditions for corporate governance in transitional economies.

STATE
problems with:
legislation
implementation
support information flow
enforce property rights
bankruptcy procedures
subsidies/state loans

Market demand
consumers
low purchasing
power

regulation

Capital market
thin demand
barriers for supply
noisy environment

owners
internal
control managers
employees

Market pressure
other enterprises
foreign
competition

Private banks
relatively weak

weak unions
many unemployed
weak employees

market for managers
not functioning in
very noisy environment

Property market
problems of collateral

In this section it has been shown that the external pressure on the enterprise and on the management is quite different from the situation in a developed market economy. This makes it even more important how the owners can govern the management more directly.

4. Governance problems and other basic problems.

Given these basic assumptions, each ownership structure will have some basic problems - some of them connected to the corporate governance of the enterprise. These problems can be divided into agency-problems, problems when stakeholders have dominating ownership at the expense of a minority owner, problems connected to diversification of risk, problems of adjustment of the production process to the preferences of the participants, problems of adjustment of the ownership-structure through a market for control, and distributional problems. Figure 4.1 provides an overview.

The agency problems arise because of limited and asymmetrical information coupled with opportunism (as defined by Williamson, 1985). In the current analysis it concerns three levels: between the owners and the manager, between banks and the owners of the enterprise and between managers and employees.

The first problem is usually called the "governance problem". This covers the situation when the managers as the agent dominates the first ownership right, the right to control, while the principal, the owners, have the right to surplus and wealth. There is in other words a division between the person who makes the decisions and the individuals who assume the risk. The manager have an interest in making decisions bringing benefits to himself (income, status etc.) and these decisions are not necessarily optimal seen from the point of view of the owners.

This is, in fact, one of the serious problems for state-owned enterprises. It was partly present back in the command system, but is even more serious in the transitional society. It is unclear who takes the responsibility for the state. Formally, the role as owner is assigned to some level in the bureaucracy, but the bureaucrats themselves do not risk their capital although they might risk some promotion in the hierarchy if they do not fulfil their role. However, in the very unpredictable period of transition it is extremely difficult to define what is an acceptable performance for an enterprise. This makes the role of the state bureaucracy very complicated.

The state enterprise will often be put under some hardening of the budget constraint simply because the overall state budget is under stress in the stabilization period. This means that deficits at the enterprise level must be covered by the employees in the form of reduced income. In this way the right to surplus or, more precisely, the risk of loosing income is transferred to the group of employees. In this situation the state-owned enterprise might have some similarities with especially the employee-owned enterprise. This will typically be the management controlled type unless there is a workers council with some rights for decision making.

Figure 4.1 Governance problems and other basic problems.

ownership /problems	**SO**	**EO**	**MCEO**	**MO**	**MCOO**	**OO/FO**

principal-agent owner-manager	--	0	-	+	--	-
bank-owner	0	--	-	0	-	0
manager-employee	--	+	0	--	--	--
stakeholder/ minorityowner	-	--	-	-	-	0
risk-diversification	+	--	--	--	+	+
preferences of managers:	0	0	+	+	+	0
employees:	-	0	-	-	-	-
developing market for ownership	--	-	-	0	+	0
Illyrian behavior	+	0	+	+	+	+
distribution	+	0	0	-	-	--

+ no problem, 0 limited problem, - problem, -- serious problem,

The management controlled outside-owned enterprise might in this respect have many similarities with the state-owned enterprise because lack of efficient capital market institutions provides the diversified outside owner very low influence and a very low level of reliable information about the enterprise. For a small shareholder it is not profitable to use many resources for monitoring while the other shareholders are "free riding". Also, the manager lacks a counterplayer - a real owner. Competition between different groups of managers inside a large enterprise and a well-functioning market for managers might limit this problem. However, as noted earlier this type of market is not very well developed in the societies in transition.

This form of counterplay arises in both the case of a strong external owner and in the case of employee-ownership. In both cases the manager runs the risk of being fired if some opportunistic behavior is recognized by the owners. In the case of an external core-owner the decision-making process among the owners is not a problem but the distance might imply a lack of information. However, when the core owner has a large share in the company it is probably profitable to him to pay the cost for quite intensive monitoring. In the case of employee ownership it might take both time and effort to reach a majority decision to fire the manager. On the other hand, the employees would probably have relatively easy and low cost access to information about the performance and potential of the enterprise.

In the management-owned enterprise this problem disappears.

The relation between the bank as the principal giving a loan to the agent, the owner, is important for the enterprise to finance investment for restructuring. From the point of view of the bank it is important to have a secure collateral, reliable information and predictable behavior of the enterprise. As noted in the basic assumptions, the employee-owned enterprise can be expected to give a higher priority to employment and wage than to profit. Combined with the transitional problem of lack of collateral and low quality of accounting information this increases the agency problems in relation to the bank and is thus a serious problem for the employee-owned enterprise (Nuti, 1995 p. 13). The core of the problem is that the governance is exercised by a factor of production other than capital. Therefore, an external supplier of debt (or equity without control, see later) risk that the main goal is not to maintain and pay the inputs of capital but the inputs of labor (Earle & Estrin, 1995, p. 9).

In the case of management-controlled employee ownership the relation to the banks might be softened somewhat, but still the existence of the governance problem might imply that the banks can have a well grounded fear that the manager will prefer a higher riskprofile for the enterprise than desired by the suppliers of capital. This argument also covers the case of dispersed outside ownership.

In the case of management ownership where the manager himself runs the risk of loosing capital the banks can feel more secure. This is also the situation in the core-owner case. The relation to the state-owned enterprise is also not so problematic from the point of view of the bank if the state guarantees the loans. However, we have also seen hard budget constraints being imposed on state-owned enterprises. In this situation the state-owned enterprise can be compared to the other management controlled cases.

The third principal agent problem concerns the relation between the manager representing the owner and the employees. This is the classical conflict between capital and labor. The workers get a fixed wage and the capital gets the residual surplus of the activities. Given the level of employment and intensity of work, higher wages means lower profits. The employees as the agents have an interest in supplying less effort than the principal has contracted for. Under the assumption of limited and asymmetrical information the solution to this problem is simply that the employees get the right to the residual. The problem disappears with full employee ownership and it is strongly limited in the case of managerial control.

The problem between dominating stakeholders and minority shareholders has recently been stressed by Nuti (1995). The problem arises when a group of stakeholder has the control of the company and when they have an incentive in fulfilling their interests as stakeholders on the expense of their own interests as shareholders but also on the expense of the minority group of shareholders. If, as an example, a large group of employees controls the company they will benefit more by using the residual as payment for their own stakes in the form of an addition to the wage and/or to level of employment than would have prevailed in another system. These extra costs are taken from profits and thus from the income of all shareholders. If their proportion of employees is higher than their proportion of shareholders, or using Nuti's term, if they own less than a "balanced share", they will earn more as stakeholders as they lose as shareholders by such a transaction. Nuti's solution is to claim that each employee with shares must hold a share at least as high as his share in the total wage bill (Nuti, 1995, p. 15).

If the earlier described governance problem is taken to its extreme it can be interpreted as a special case of the stakeholder-shareholder problem. Assume that the manager has full control, but no ownership. Then he can simply transfer the residual to a rise in his own salary. However, in most cases even when the position of shareholders is quite weak they decide the salary of the manager

In the case where the manager owns the majority of shares and there is a considerable minority shareholding, he might in principle have an interest in transferring values to his own personal property or another enterprise owned completely by himself. In some types of wild privatizations, managers have transferred the values of the state owned enterprise to another company owned by themselves.

For the core outside-owned enterprise there might also be special stakeholder interests for the majority shareholder. For instance, the majority owner may be a company supplying essential inputs to the enterprise in question. By transfer pricing, the surplus of the enterprise can be acquired by the majority owner at the expense of the minority group. (Nuti 1995 p. 12 indicates that this problem is solved by the possibility of mergers; but why should this happen if the majority owner has an interest in exploiting the minority?). Therefore, all ownership forms may have a stakeholder-shareholder problem. However, it can be considered to be most serious in the case of employee-ownership.

When managers and other employees own their company they have concentrated a considerable risk. If the company fails they will not only lose their shares but also their jobs, or as expressed by Meade (1972):*"While property owners can spread their risks by putting small bits of their property into a large number of concerns,* *a worker cannot put small bits of his effort into a large number of different jobs. This presumably is a main reason why we find risk-bearing capital hiring labour rather than risk-bearing labour hiring capital"*. Such a concentration of risk implies a high risk-premium and point in the direction of lower investment for insider ownership. In the three other cases, the owners can diversify their risk over many different enterprises. This means a lower risk premium and thus, *ceteris paribus*, higher investment.

However, especially in the case of the manager-owned enterprise there is a factor pointing in the other direction - a factor which is not included in the traditional economic analysis. The manager reaches a higher degree of satisfaction on his preferences if he himself makes the decisions concerning his workplace. He is willing to pay a price for this in the form of higher effort and also typically in accepting a higher degree of risk on his invested capital. In many cases the manager-owned enterprise will accept a lower return on the investment compared to other enterprises even if the risk is higher.

For the remaining three types of ownership, the scope for the manager activities are more narrow. However, the managers usually have the possibility of finding a job in another enterprise if he is not satisfied with his conditions. Therefore, this is not marked as an important problem on the figure.

A similar argument can be used for the employee-owned enterprise. Here it can be connected to what could be coined “internal efficiency” (Mygind 1993). The idea is that the activity inside the enterprise should be adjusted to the preferences of the participants. Given the restrictions of the outside market, the employees shall be able to adjust their working conditions and the related income to their own preferences. Again, this might result in increased effort and/or accept of lower remuneration. However, there is a problem of defining the preferences for a group of employees, especially if the group is very heterogenous. The solution preferred by the majority might be different from the one preferred by minority groups. This might cause conflicts (see the discussion below) and mean that internal efficiency is impossible to achieve. Therefore, there is still a problem even in the employee-owned enterprise.

The privatization process includes a high degree of random events. The initial distribution is given by the earlier system, and during the early stage of transition with high inflation and many changes in relative incomes some people get rich quickly while the majority have steeply falling real incomes. Different forms of privatization favors different groups and the resulting distribution of ownership rights can be far from how that which a well functioning market would determine. Therefore, it is important that the resulting ownership structure can continue an adjustment process in the long run. To secure such an adjustment there must be a market for ownership.

The discussed ownership structures do not all to the same extent facilitate such a development. Continued state ownership does definitely not support such a development; but these enterprises can still be privatized, and this opens up for an adjustment in the future. The three insider-owned structures have some disadvantages in this respect. In the case of management ownership, no adjustment will take place as long as the owner do not want any changes and the enterprise is not declared bankrupt. This could mean many years with sub-optimal economic performance. In the case of employee ownership limitations in the possibility of trading employee-shares might also create barriers for developing a market for control. If the insiders have a large majority, outsiders might be discouraged in buying shares because of the risk connected to the earlier discussed stakeholder-shareholder problem. Hence, a majority takeover is a more likely scenario. The question is, however, if the employees are interested in selling their shares unless the company is in financial trouble. Without a functioning market for the shares owned by employees it might also be difficult for an outsider to buy enough shares from the insiders.

Trading shares is no problem in the diversified outside-owned cases. In the core-owner case, the owner can postpone an adjustment of the ownership structure, and also here the minority owner can stay away because of fear of the stakeholder-shareholder problem. If the core owner owns shares in a higher proportion than his stakes there is no problem. At the same time minority shareholders can free-ride on the monitoring effort conducted by the core owner.

Employee ownership in the transitional economies is nearly always "individual" ownership (Mygind, 1986). This means that the individual employee can sell his share when leaving the enterprise and will experience a capital gain if the enterprise has been successful. In most of the literature about employee ownership it is assumed that there is "collective" type ownership. The control rights and right to surplus are connected to each employee, but they cannot withdraw their capital when they leave the company. Assuming that the employees pursue the objective of maximizing their income (wage), then the theoretical predictions about the collectively employee owned enterprise (Ward 1958, Domar 1966 and Vanek 1970) shows an inefficient adjustment of supply in the short run and an inefficient adjustment of investment in the long run.

These prediction do not cover the case of individual ownership. In this case the objective of maximizing the average income can be transformed to an objective of maximizing profits and the difference in behavior between the employee owned enterprise and the outside owned "twin" disappears. (Mygind 1986 and Sertel 1982). However, this conclusion is based on the following conclusions which is not completely fulfilled: Individual ownership, perfect capital market, the employees are not risk averse and full employment. employees.

Because of the lack of a well functioning capital market and/or because of restrictions in the tradeability of employee shares, lack of transparency, problems with registration of ownership etc., it might be difficult for an employee to sell his share and get a capital gain. In this respect, the situation looks more like the collective type of ownership.

We assume that the ownership is distributed so that an employee receives the same amount whether the surplus is paid as an addition to the wage or an increase in profits. The assumption of indifference, however, also build on the condition that the accumulated profit can be used as a collateral for a loan to the employee in a perfect capital market. However, as already mentioned, capital markets remain imperfect during transition. Therefore, the employee will not be indifferent and the typical liquidity squeeze in the depressed transitional economy means a preference for cash for most of the employees. Furthermore, the employees might be genuinely averse to risk, i.e. not wanting to accumulate wealth in their enterprise. Again, this points in the direction of elements of "Illyrian" behavior even for the individually-owned enterprise, see the discussion about investment in section 5.

The distributional consequences of different ownership structures are also summarized in figure 4.1. Continued state ownership fits to an objective of equality because, at least formally, the state can decide about the wage for different groups in the state owned enterprises. Similarly, with state ownership, the distribution of wealth is quite equal. Employee-ownership provides a broader group of share-owners in the population compared to the situation with only management and outside ownership. However, a more equal distribution of share ownership can also be the result of the broad population investing their shares in investment fund which then invest in the companies. This situation make a more equal distribution for outside core ownership compared to employee ownership.

The six different ownership structures have been treated as quite pure forms. However, often more than one group will be owners. In most cases, one of these groups will be dominating, i.e. the actual control is in their hands. Nevertheless, other groups can have a considerable part of the ownership rights to surplus and wealth. The problem of employee-dominated ownership with outsiders as minority owners have already been discussed in relation to the stakeholder-shareholder issue. Here we shall instead focus on the issue of insiders holding a minority share of the ownership. This is relevant for the case of state ownership and especially for the outside-owned cases.

Management minority shares could be an essential instrument for aligning the incentives of managers to the preferences of the majority owners. This is exactly the case for the widely used systems with stock options and similar incentive systems for managers in the West. In this way the principal-agent problem between managers and owners can be partly solved. In the same way the manager-employee problem can be limited by minority shareholdings of the broad group of employees. This type of non-controlling interest by employees in their own enterprises can encourage the motivation of employees resulting in improved productivity, better labor relations, more flexible workforce etc.(Nuti, 1995,p.13). This is why the diffusion of employee ownership and other types of financial participation in the form of profit sharing is encouraged in the European Union (Uvalic, 1991).

5. Ownership and economic performance.

Now the analysis may proceed from the basic problems of each ownership form to predictions about the economic behavior. The main elements in this analysis are illustrated in figure 5.1. The background elements are showed to the left and the elements to measure in the empirical analysis are showed to the right.

Fig 5.1 Overview over factors behind ownership and economic performance.

Privatization method

Starting conditions
size, branch, market conditions
economic performance
quality and value of assets, debt,

adjustment of ownership
market for control

ownership type

ECONOMIC PERFORMANCE

motivation of employees
X-efficiency, flexibility
agency-problems
mutual monitoring/free rider

restructuring
dependent on:
quality of management
objectives, risk aversion
access to capital

finance
bank loans
internal (from profits)
internal capital emissions
external capital emissions

sales	cost

employ-
ment

productivity
value added per factor input

wage WxL	profit	inter-est	tax

Investment

profitability

Capital-structure	total assets equity debt/total assets bankloans/debt

The privatization methods together with the initial conditions for each enterprise determines the specific ownership type after privatization. This then determines which of the six mentioned ownership structures will be chosen including the cases where one of the forms are dominating with other owners holding minority shares. For the cases with employee-ownership, we will in general assume that the individual type where the employees can sell their shares at the market price when they leave the enterprise. This need not be the case, however, insofar as limited tradeability and diversions from the market price can change the ownership type more in the direction of collective ownership, thus making the Illyrian theoretical predictions relevant. Adjustment of the ownership structure might later change the ownership type. This must be included in the analysis. Also, the possibility of adjustment itself includes predictions about the behavior especially concerning the capital structure and the possibility of access to capital, see later.

The ownership structure has implications for the main elements of the economic behavior - the motivation of employees and the ability to restructure. The access to finance can be included under the ability to restructure although it is illustrated separately in figure 5.1. The motivation of the employees is important for how the human resources, human capital, can be used by different ownership types. In figure

5.1 this is illustrated by the arrow from the motivation box to the economic performance measure for productivity. The restructuring ability determines how successful production can be changed and marketed so that sales start to increase again. It also includes the ability to minimize costs and adjust employment. This can be seen in the effects on productivity. Access to finance is an important element determining the potential for investment in the enterprise.

The arrow from the starting conditions to the box of economic performance must also be noted. Good economic performance can both be explained by favorable starting conditions and by the economic behavior connected to the specific ownership type. In the empirical analysis it will be essential to try to separate these elements. However, it turns out to be very difficult because the economic measures for the value of the enterprise in the early stages of transition were of a very low quality. This is because the price system had not started to operate appropriately. The estimated value of the enterprise played a big role in the privatization process to fix the price for the take-over. Often a nominal historically based price with some indexation was used to determine what the new owners should pay. This price would very often have no relation to the real earning potential of the assets. Instead, the measured economic performance after liberalization of prices, i.e. different measures for productivity and profitability might be the most appropriate measures for whether the enterprise was initially a "golden or rotten egg".

Instead of such measures, reference to the privatization process as described in Mygind(1996b) will be utilized. The determining element is here the order and the conditions given for different potential ownership groups for selection of the enterprises to be privatized. This is in fact the basic determinants used in figure 5.2. Selection by insiders gives these types of ownership an initial advantage indicated by "+". Especially, it should be remembered that managers with superior knowledge will try to select the best for himself if this is possible. The leftovers in this process will then later be sold perhaps through vouchers to outsiders, indicated by "-". Even in this situation an external core owner, including foreigners, can only be expected to be interested if they evaluate the object to be a potential profitable investment - indicated by "0" in the figure.

The starting conditions can also be considered to be negative for the insiders if they are effectively closed out in the first stage of privatization and enterprises are mainly sold for cash from the highest bidder as was the case in Hungary and East Germany. In these case, outside core owners had the best position to select the "cream of the crop" of assets. If there were no external buyers, insiders could buy the “leftovers” at a lower price often as an alternative to a close down. However, to the extent that managers had the possibility they might take over the best of these and only include the rest of the employees if necessary for getting enough capital. Therefore, management ownership is indicated by 0.

In both cases it is assumed that the state-owned enterprises are leftovers from the privatization indicating quite bad starting conditions for our analysis of economic performance. However, there might be cases where enterprises considered to be of strategical importance for the country are kept under state ownership. Such cases could include "golden eggs" but in the overall quantitative picture they are considered not to be of importance.

The motivation of employees are considered to be closely related to the earlier discussed basic problems - the agency problem between manager and employee (the capital/labour conflict) and the question concerning the adjustment of the production process to the preferences of the employees. In these respects it is considered that employee-ownership has a strong advantage marked by "++" on figure 5.2. The management controlled employee-owned enterprise has a "+" because the employees still get the surplus, but the production process cannot be expected to be planned according to their preferences to the same extent as in the former case.

In the theoretical literature, however, the conclusions are not so clear. Some authors including Alchian and Demsetz (1972) argue that this type of ownership lacks an owner to monitor the efforts of the employees. The incentives for each employee will be low especially in large enterprises where his return of an extra effort only will be 1/N with N as the number of employees. In this case, there will be a tendency of free-riding on the efforts of other employees. However, the employees' direct interest in the performance of the enterprise gives a strong incentive for mutual monitoring. Most empirical results point in the direction that employee owned enterprise, e.g. in Mondragon (Thomas and Logan, 1982), can cut down on the number of middle level monitors because of this mutual monitoring. Against the efficiency of employee ownership Hansmann (1988) has argued that for a heterogenous group of employees it will be difficult and involves conflicts to reach decisions about the management of the enterprise. This indicates that the internal efficiency might not be so high for some of the minority groups among the employees. However, it can not be expected to be lower than in the other types of ownership where decisions concerning working conditions etc. are taken by a manager which cannot be elected or dismissed by the employees. On the other hand, the efficiency of the decision-making process might be quite low and time-consuming if attempts are made to try to include all workers.

The literature on the empirical evidence from the West concerning motivation of employees and indicators of productivity in employee-owned firms shows reductions in working days lost through strikes, reduced labor turnover, increased employee commitment to the firm etc. (Kruse & Weitzman, 1990, Bartlett et al. 1991, Bonin, Jones & Putterman (1993).

The question about motivation of the employee is closely connected to the ability of the enterprise to implement the necessary restructuring. As described in section 3 nearly all enterprises, except newly established green field enterprises, would have to change both the composition of output and production methods to find the profitable activities measured by the market determined prices. Restructuring can according to EBRD (1995, ch.8) be divided into 1) reactive restructuring with adjustment to the steep fall in demand 2) pro-active restructuring - building up new market especially in foreign countries, and 3) deep restructuring - changing the production process through new investments. Since it is impossible to distinguish between the first two types, the short term restructuring for adjustment of sales and employment and long term restructuring or deep restructuring for investments will only be utilized here.

It is also very problematic to use averages for a given year for declines in employment and use this as an indicator for the necessary restructuring since included enterprises might be at different levels in their restructuring process - different points on the U-shaped curve for sales and employment.

The main questions concerning restructuring in enterprises with different types of ownership are 1) Do they have an efficient management system which can find and implement the best solutions seen from the point of view of the owners. 2) Do the objectives of the owners support this restructuring? 3) Does the enterprise have access to the necessary capital for deep restructuring? These questions are included in figure 5.1. In figure 5.2 the answers for the different types of ownership are spread on different measures: Quality of management, employment and wage, and finance.

The quality of management is very difficult to predict on a theoretical level. One questions concerns whether there is a mechanism to dismiss unqualified managers. This mechanism is expected to be quite weak in the cases where managers are in control of the enterprise. These are the cases with the earlier described governance problems and the case of managerial ownership. Only in the case of employee ownership and outside core ownership can there be expected to be an effective counterplayer towards management.

The quality of management also concerns the decision-making process inside the enterprise. If this process is dominated by conflicts between different groups of employees as suggested by Hansmann (1988), there will be a low quality of management, marked by "-" in figure 5.2. If, on the other hand, the decision-making process is organized to balance the interests of different groups and they support the strategy of the enterprise, there will be a high quality of management. If the employees feel that the goals of the enterprise are in accordance with their interests of long-term employment relations etc. they will be more motivated to join the restructuring efforts and to put their accumulated experience and firm-specific knowledge to good use . This type of relationship is most likely to develop when the control of the company is not dominated by the manager.

When the broad group of employees controls management, their qualification for doing this is important. The question is if there are groups among the employees which have enough qualifications to hire management with solid qualifications. It shall also be noted that the low tradeability of employee-owned shares makes the external monitoring over the capital market even smaller in the employee-owned enterprise than in the other privately owned types.

Figure 5.2. Economic performance under different ownership structures.

	SO	**EO**	**MCEO**	**MO**	**MCOO**	**OO/FO**
starting conditions selection by insiders selection by outsiders	 - -	 + -	 + -	 ++ 0	 - +	 0 ++
employee motivation	-	++	+	-	-	-
quality of management shifting management	- -	+- +	0- -	+0 -	+- -	+ +
sales (develop markets)	 -	 +	 +	 +	 +	 ++
adjusting employment **incl. unemployment cost**	0 +	- ++	0 0	+ -	+ -	++ --
productivity	-	?	+	+	0	++
wage flexibility	0	++	+	0	-	-

profitability	-	+0	+	+	-	+
finance						
internal from profits	-	+0	+	+	-	0
internal emissions	-	+	+0	+0	+0	+0
from banks	-	-	0	+	+	+
external min. emissions	-*	--	-	-	+	+
external maj. emissions	+ priv.	-	-	-	+	+
investment						
objectives	-	0	+	+	+	++
access to capital	-	-	-	0	+	++

++ very high, + high, 0 neutral, - low, -- very low.

Because of the governance problem the quality of management in the state-owned enterprise is generally considered to be low. In the case of management ownership it depends critically on the specific manager taking over the enterprise, but there might be a tendency to a selection bias in a positive direction since the managers who understand the new opportunities in the market economy are also be the ones most likely to try to take over their own enterprise. This bias will probably not rescue the outside-owned enterprise - therefore the more negative evaluation for this type of ownership. In the case of the outside core-owner we expect the possibility of selecting well qualified managers for the position.

Good or bad management and the motivation and flexibility of the workforce will show up in the ability of the enterprise to restructure the combination of outputs and get a positive development in sales. Thus, the level of sales per employee and the increase in sales can be considered a measure of the success of this type of restructuring. However, one qualification is in order. In the early stage of transition, unbundling of unprofitable activities and thus a fall in sales might be necessary for many enterprises. This may not be possible before the enterprise have been privatized.

In figure 5.2 it is assumed that state-owned enterprises will show the worst performance concerning sales. Especially foreign-owned companies, which often look to exploit the cheap labor costs for export or to develop the local market, are expected to show the best performance of increasing sales. Note that the employee-owned enterprise is not considered to have negative supply behavior in this area. We only to a limited degree expect to find "Illyrian" behavior because, as earlier explained, the ownership type has more individual than collective characteristics.

An important part of restructuring is to cut away some of labor hoarded as hidden unemployment in many enterprises in the former command system. It also includes taking away those parts of production which are not profitable. The risk of unemployment and loss of firm specific human capital are included in the objective function of the employees. Therefore, they will internalize this into the costs of dismissing employees from the enterprise, and this will make the employee-owned enterprise less willing to cut production and dismiss employees and restructuring will almost inevitably be delayed. In the state-owned enterprise there will be some political pressure and in the management-controlled employee-owned enterprise the managers will probably also be under some pressure from employees not to cut employment - therefore "0" for these cases. In the other cases it is assumed that employment will be adjusted without much resistance from the employees because they are in general in a weak position. Most radical restructuring on the employment level will probably be the foreign-owned enterprises.

However, the adjustment of employment can also be viewed from another perspective in a situation of high unemployment. Especially in certain areas with a single firm dominating the local economy considerable lay-offs would be disastrous. Although the reluctance of employees to dismiss their colleagues will postpone or change the path of restructuring of the enterprise, it need not be taken as a negative element in the economic behavior of employee ownership. On the contrary, internalization of the costs of unemployment can for the whole society be taken as a positive element. This is shown in figure 5.2 as the opposite tendency of the line for restructuring employment.

A high level of productivity is a key element of the economic performance of the enterprise because it includes many of the earlier mentioned variables.
As shown in figure 5.1 the results for productivity includes: the motivation of employees and the quality of management are behind restructuring efforts and the development in sales and cost minimization. This determines the value added of the enterprise. Including again the effort of the employees and the level of employment we get productivity - here both labor-productivity and total factor productivity are considered.

If the employee-owned enterprise retains higher employment than the other ownership forms it will have negative consequences for productivity. This type of ownership had, on the other hand, a high score on employee motivation. The employees can also be expected to be interested in minimization of costs other than labor cost and also in increasing sales. Therefore, the result depends on the relative strength of opposing forces, indicated by "?" on figure 5.2.

The state-owned enterprise is expected to show quite negative results on productivity as a result of the both negative developments in the elements behind value added and in employment. The remaining forms are expected to do fine with some moderation for the diversified outside ownership where the results for the quality of management counts in a negative direction. The outside core-owned enterprise, especially if this covers foreign ownership, is expected through high investment, new technology and new management methods to show a high level and growth in productivity. It is assumed that the return on investment is so high that capital productivity and total factor productivity increases.

The special consideration of the cost of unemployment and the loss of firm specific human capital does not necessarily mean a fall in the profitability of the employee-owned enterprise. This is the case if the employees accept lower wages as a trade-off for higher employment. Thus, reluctance in cutting down employment might be balanced by higher wage-flexibility (Nuti, 1995, p. 14 and Earle & Estrin, 1995, p.12). Such a trade-off is most likely when employees have control of the company and when they get the residual, i.e in the employee owned enterprise and to a lesser degree in the case with management control. In other cases a more traditional wage-earner attitude is expected.

A high level of factor productivity means that there is a large "cake" to divide among the input factors. If the distribution between profit and wage is given, a high factor productivity will result in a high gross return on total assets. Depending on the capital-structure, the total profit will be divided between the equity capital and debt capital and thus determine the net return on the equity capital. Both measures will be used in the empirical analysis.

Access to capital is important for the deep restructuring of the enterprise. First, there is the possibility of getting capital from internally generated resources, i.e. from the net profit. It depends on the profitability and the owner's decision whether to pay dividends or not. Therefore, in figure 5.2, the signs follows the signs for profitability except for foreign owned-enterprises. The assumption is that the external owner at some point will take out profit from the enterprise in the form of dividends as payment for the initial and often large capital contribution. For the employee-owned enterprise it depends to a high degree on the profit level which as discussed earlier could vary. It also depends on the preferences of the employees. A relatively high risk aversion, preference for paid-out income, and the element of collective ownership draws in the direction of low internal accumulation of profit. On the other hand, the employees will also have an interest in securing their jobs and this might make it necessary to inject additional money into the enterprise. In this way, reducing the risk of lay-off and loss of firm specific human capital may mean that the employees actually invest extra money into the enterprise (see Earle & Estrin, 1995, p 50).

This argument can be taken a step further as an argument for mobilizing capital contributions from the personal savings of the employees. Such "internal emissions" are most likely when the employees have control and, thus, a better guarantee for attempts to maintaining employment. Similarly for the other private ownership forms, owners may attempt to attract additional capital from employees both to increase capital, but also to improve the incentives for the employees.

As discussed earlier, loans from banks can be expected to be more difficult for employee-owned enterprises to get compared to other private ownership types. The bank can estimate an extra risk because of a low net worth (if this is the case) and because of a fear that the employees will follow objectives like increased wage and stable employment as opposed to wealth maximization, see section 3.

Extra capital to the employee-owned enterprise in the form of capital emissions sold to external owners will probably to a high degree depend on whether this is a minority or majority shareholding for sale. A minority shareholder can be confronted with the previously discussed situation where employee stakeholder interest dominates their interests as shareholders, thereby implying a negative return to shares and extra high returns to labour. The risk of such behavior may effectively close this path to external capital for employee-owned enterprises. The problem to a certain extent also concerns the management-controlled case and management ownership. For outside-owned enterprises there should be no problem in getting extra capital in this way. An emission of shares implying that an external owner takes over the majority of shares is in principle possible in all cases - implying privatization for a state-owned enterprise. However, it is not likely that this will happen for a employee-owned enterprise unless an outsider can make a very good offer to the inside owners or the company is in a serious financial crisis and desperately needs extra capital.

As emphasized previously, investment is the crucial element for long run or deep restructuring. Investments are necessary to adjust the production process to the world market prices and to use the human resources in an efficient way. The following elements are important for the level of investment: the ownership structure (specifically in relation to the degree of collective ownership), the objectives and degree of risk aversion of the owners, the quality of management, the profitability of the enterprise and thus of the future investments and the access to external capital.

As earlier noted, we assume that the ownership is of the individual type although with some element of collective ownership because of the limited tradeability of employee shares. The more difficult it is for the employees to sell their shares and get a capital gain as compensation for accumulated capital and improvements in the performance of the enterprise the more pronounced will the socalled "horizon" problem be. This problem was first raised by Furubotn & Pejovich (1970) and Vanek (1971) and concerns the situation when the majority of employees expect to leave the enterprise before a given investment has been fully depreciated. They will only include the returns of the investment within this time horizon. Therefore, only investments with relatively high returns or short time horizon will be made in the collectively-owned enterprise. This means underinvestment compared to the traditionally owned twin. Even if we have full individual ownership, higher risk aversion of the employees combined with the risk concentration in insider-owned enterprises points in the direction of lower investment. This might to a certain degree be counterbalanced by the motive of cutting the risk of lay-offs through higher investments. In figure 5.2 we predict that the combined effect of the specific ownership-structure and the objectives of the employees will be a tendency, albeit moderate, in the direction of relatively low investment. The main factor for this type of ownership will probably be the limited access to external capital.

For the management-controlled employee-owned enterprise, the risk aversion problem will disappear, but the financing problem will continue to be important. For the remaining private forms both objectives and access to capital point in the direction of high investments. This is especially the case for foreign-owned enterprises. State-owned enterprises are at the other end of the specter. To the extent that they are waiting for privatization, managers may want to delay investments. This is particularly the case if the manager himself has plans to take over the enterprise since such investments might imply a higher privatization price. Access to capital is also expected to be limited unless the state considers the specific enterprise to be of strategical importance. In this case state loans or guarantees might mean very good access to external capital - not showed at the figure.

Figure 5.2 does not include the cases where managers or the other employees own a minority share. This is because the predictions for these cases are quite straight forward. As described in the earlier section, this type of ownership means that the basic problems concerning agency will be reduced. The motivation of managers and other employees will increase and it could at the same time mean an extra source for internal supply of capital. Therefore, this type of financial participation is expected to improve the economic performance for nearly all the economic variables mentioned in figure 5.2. Minority shareholdings by managers and other employees

will be analyzed in the following empirical sections.
(a section on empirical results from countries in transition included here?)

6. Empirical analysis

6.1 Introduction and overview

This section presents a short summary of some of the preliminary results of the study of economic performance of groups of enterprises with different ownership structures. After a short introduction to the data sets used for the analysis of economic performance a short description of the special starting conditions for different groups is warranted. These starting conditions in combination with the ownership structure determine the economic results. The restructuring of production has immediate effects on the growth in sales and on the adjustment of employment which will be analyzed in the following sections. The degree of efficiency in using the resources will be analyzed in the following section on productivity. Given the level of productivity, the wage level, analyzed in the next section, determines the surplus and the profitability of the enterprise. Retained profits and external finance are important for the possibility of deep restructuring in the form of investments. This is discussed in the following sections.

Note, however, that the analysis is still not finished and that the results presented here are only preliminary. The final analysis will be presented in a number of articles by Jones and Mygind. These articles will include a more detailed and more reliable analysis than can be presented at this early stage of the research.

The data sets used for the analysis of the economic performance of employee owned enterprises compared to other ownership types are as follows:

Estonia: A stratified random sample of 414 enterprises was surveyed about the distribution of ownership in January 1995. This data set was supplemented with 227 state owned enterprises and 25 foreign owned enterprises. This means that there in total are 666 enterprises in the data set. For these enterprises we have financial data for 1993 and 1994, and for a subset also specified information on wage-levels and investment levels and sources for finance in 1994.

Latvia: We have a total data set of 5 585 enterprises including summary information on ownership group distributed on state, municipality, insiders, foreign and domestic outsiders. This data set also includes information on employment and wage levels. A sub-set of the large data set of 685 enterprises with 20 or more employees includes a broad range of financial variables from 1994.

Lithuania: 357 large manufacturing enterprises included in the data base at the statistical department were surveyed about the distribution of ownership in July 1994 and again in July 1995. In the second round, 127 enterprises from construction and trade were included. For these enterprises, we have financial data for some variables dating back to 1992, but with the best coverage for 1994.

Figure 6.1.1 and 6.1.2 gives an overview over some of the main results for different ownergroups in Estonia and Lithuania. The results will be commented in the following sections.

Figure 6.1.1 Economic variables for ownership groups in Estonia - averages

Owner groups Variable	**State**	**MinEO**	**MinMO**	**EO**	**MO**	**OO**	**FO**	**ALL**
assets/employee								
1993 1000 EEK	97 214	48 36	73 24	40 62	35 76	168 52	457 77	136 541
1994 1000 EEK	119 211	73 43	100 27	46 78	48 79	245 81	401 81	151 600
employment growth 93-94 %	-14.7 211	-11.6 44	9.4 27	0.7 78	14.8 79	-6.0 83	40.8 82	1.2 604
Average wage								
1993 1000 EEK	14.0 214	14.4 37	15.7 24	11.6 62	10.9 77	15.8 54	25.3 78	15.1 546
1994 1000 EEK	21.0 211	21.0 44	21.8 27	16.8 78	15.7 79	24.9 84	34.4 82	22.2 605
Return on assets								
1993 %	6.8 192	11.7 31	22.3 20	18.6 53	17.5 66	13.3 49	5.0 50	11.2 461
1994 %	0.4 213	13.5 43	17.3 27	19.0 76	21.6 78	9.7 81	8.4 81	9.4 599
Finance 1994 %								
debt / assets	65	42	61	61	66	47	64	60
bankloans/ debt	15	31	36	35	29	28	28	25
debt / employee	69	31	62	15	31	115	236	85
bankloans /L	11	10	22	5	9	31	65	21
	212-14	43	27	78	77-79	81	82	600-604

small numbers are the number of enterprises

6.2 Starting conditions

The institutional framework described in section 4 reveals that some of the early starters in both Estonia and Latvia might have been in a rather favorable position. It can be expected that insiders have taken over some of the best performing enterprises in the first rounds of privatization. This might also have happened to a certain extent in Lithuania. But unlike the two Northern countries, legislation gradually improved the positions of employees in Lithuania. Here, outsiders had in fact the best opportunities in the early stage of privatization.

Some of the privatized firms will formally appear as newly established enterprises. This was the case for most of the enterprises taken over by leasing in Estonia and Latvia. In the Estonian sample, the bulk of privatizations took place in 1993 and 1994, while most of the "direct established" enterprises started in 1991-1992. This was the period when leasing and different forms of spin-offs were the most common types of privatization. A new company was established as the legal entity, and this entity then leased the assets of the state-owned company. In other cases, a group of insiders - often the managers - by special contracts were able to transfer values from state-owned enterprises to newly established private companies under their control. Both cases are in fact privatization processes, but in the statistical information these enterprises will be counted as de novo companies. This causes important statistical problems and we will therefore not present results distinguishing between privatized and de novo enterprises.

Figure 5.1.2 Average results for ownership groups in Lithuania.

main owner insider %	State 0-5	State 5-25	State 25-50	Employ. 50-	Manager 50-	Outsider 0-5	Outsider 5-25	Outsider 25-50	Foreign	total
assets/L										
1993 ult.	6895 40	16946 25	42541 22	12915 51	11431 43	9134 25	9909 89	14379 70	23203 7	13615 372
1994 ult.	21082 42	51894 26	60785 24	25271 61	25673 53	28513 34	22177 94	27473 78	35528 7	28786 416
sales growth										
1993-94 %	53 28	50 25	42 22	51 51	65 43	34 25	46 89	45 70	201 7	52 372
L-growth										
1992-93 %	-12 35	-11 20	-17 15	-10 37	-13 17	-18 23	-16 76	-10 49	-15 7	-13 279
1993-94 %	-8 37	-7 24	-9 21	-9 47	-13 25	-14 25	-16 84	-11 63	-9 7	-12 331
1994-95 %	-3 40	-14 25	-9 22	-4 51	6 43	-19 25	-17 89	-9 70	-8 7	-9 372
1995-95.7%	-4 41	-5 26	-9 24	-2 61	-3 52	-13 34	-6 90	-2 78	-6 7	-5 413
1992-95.7%	-22 36	-32 20	-40 15	-24 37	-38 18	-55 23	-45 76	-27 49	-29 7	-36 281
Labor-productivity										
1993 Litas	3776 36	5698 20	5567 16	6219 38	6392 23	4309 22	4586 83	5508 56	6629 7	5158 301
1994 Litas	5703 40	7723 23	9051 21	11470 47	8853 39	5696 23	6598 83	6749 69	8326 7	8014 352
average wage										
1992 Litas	64 36	63 22	68 15	72 42	65 19	81 23	65 83	70 52	74 7	68 299
1993 Litas	2040 37	2128 24	2651 21	2371 47	2651 25	2085 23	1956 84	2349 63	2649 7	2232 331
1994 Litas	3801 40	4214 25	5168 22	5021 51	5145 43	3545 25	3796 89	4347 70	5178 7	4342 372
dividends/L										
1994 %	4 40	119 25	156 21	136 48	45 43	10 25	81 88	115 66	108 7	84 363
profitmargin										
1992 %	15 37	26 24	22 21	22 47	21 25	24 23	26 84	24 63	25 7	23 331
1993 %	10 40	18 27	14 22	15 55	1 45	11 26	13 98	17 75	16 7	14 395
1994 %	-1 42	4 26	4 24	10 61	4 53	1 34	-3 91	8 78	8 7	3 416

return on assets 94 %	10 42	3 26	9 24	18 61	8 53	0 34	1 91	12 78	0 7	8 416
debt/assets										
1993 ult%	49 42	53 26	44 24	51 61	55 53	46 33	47 91	51 78	26 7	49 415
1994 ult%	30 42	27 26	24 24	33 61	36 53	38 34	38 91	32 78	37 7	34 416
bankloans/ debt										
1993 ult%	28 41	23 26	27 24	17 61	20 53	20 33	23 91	24 76	28 7	23 412
1994 ult%	28 41	30 26	34 24	17 61	21 53	28 34	28 91	30 76	36 7	26 414
investment per L 1994	494 40	1473 25	1497 22	964 51	826 43	1590 25	1186 89	1156 70	1950 7	1113 372

small numbers are the number of enterprises

It is difficult to uncover the initial position of the enterprise because often we do not have any data about the performance prior to privatization. Furthermore, such data originate in a period when the economic changes were very fast, e.g. change in currency, calculations methods, very high inflation etc. - all factors which make the economic data less reliable. However, a few indicators are worth mentioning:

In Estonia, we have relatively few observations with information about profitability before privatization, and we do not have any significant results indicating that insiders took over the most profitable companies. The relation between choice of ownership and the size of the company in terms of the number of employees is also rather weak. There is no tendency for employee ownership to be more frequent in smaller than in larger enterprises. As noted before, only management ownership is significantly negatively related to the number of employees. For worker ownership there is some indication of the opposite tendency.

There is a strong tendency that the degree of employee ownership increases with lower capital per employee. In the one half of the enterprises with the lowest capital per employee, managers own 24%, other employees 31%, other Estonians 31%, the state 3% and foreigners 10%. In the 10% of enterprises with the highest capital per employee foreigners own 61% and insiders only 0,2%. The low capital per employee was especially typical for the early stages of privatization. Combined with legislative support, this is the background for a high proportion of employee ownership in enterprises privatized in 1990 and 1991.

The capital intensity was lowest for majority insider ownership and somewhat higher for minority insider ownership, but still lower than for the remaining categories of state and outside ownership. Foreign owned enterprises had the highest capital intensity. The observations for capital intensity covers also the years after privatization. But since this variable takes years to change, we assume that the tendency also covers the time before privatization. The main explanation behind the tendency is probably that the employees have had the financial possibilities to take over less capital intensive enterprises. Another explanation could be that the value of the assets were deliberately made quite low especially in cases in which insiders took over their company. As earlier explained this was included in the legislation in the early stage of small privatization in Estonia, and this might also have been the case in some of the early large privatizations. Since most measures for capital intensity are made later, this explanation assumes that the assets still are entered into the balance sheet with a low nominal value, and this need not be the case.

In Latvia, we cannot distinguish between management ownership and broad employee ownership. As earlier mentioned, Latvia has a very high incidence of insider ownership, especially for small enterprises. We do not have information about the profitability before 1994, but there might have been a tendency for a selection of the best part of enterprises by insiders. For capital intensity, like in Estonia, the tendency is quite clear. Enterprises with majority foreign ownership have the highest value of assets per employee, but state enterprises also have a high capital intensity. This can be explained by the postponed privatization of large capital intensive enterprises in Latvia. For state and foreign-owned enterprises only 12% and 9% had total assess lower than 1 000 Lats, but 34% and 35% had assets per employee higher than 5 000 Lats. For the remaining enterprises, owned by insiders and domestic outsiders, 29-35% were in the lower end and only 12-17% in the higher end of capital intensity. In a multi-variate analysis combining the effect of different branches state and foreign-owned companies also have significantly higher capital intensity.

In Lithuania, management ownership had a higher incidence in small enterprises, but employee ownership were also quite frequent in large enterprises. There does not seem to be a selection bias according to profitability. Figures for profit margin from 1992 which, for most enterprises, was before privatization show that insider ownership, measured in July 1995, had a profit margin below the average, see figure 5.1.2. The relation to capital intensity is not as clear as in Estonia and Latvia. The group with the highest assets per employee is state-dominated ownership with insider ownership between 25%-50%. The insider-dominated groups hover around the average despite the fact that there is a tendency for lower capital intensity combined with lower size. In Lithuania, high capital intensity has not blocked take overs by employees. The main explanation is the voucher privatization method for large enterprises combined with the preferential price offered to employees before the public offering of their enterprise.

6.3 Performance after privatization - growth in sales.

We only have quantitative evidence from Lithuania for the increase in sales from 1993-94. The average increase for the 372 enterprises was 52% which, in fact, indicates a fall measured in fixed prices since average inflation over the period was 70%. As seen from figure 6.1.2 , foreign companies were performing the best, but since only seven enterprises were included in this category this is not particularly strong evidence. Management-dominated enterprises do well and their employee-dominated counterparts perform around average. State-owned enterprises are close to average, but with large variations among different groups. Outside-owned enterprises perform poorer than the average.

6.4 Adjustment of employment.

Estonia: In the analysis we distinguished between reductions and increases in the labor force. In a multi-variate analysis including independent variables of sales, wages, investment, ownership and control variables it was found that state-owned enterprises were significantly more reluctant to reduce the labor force. In a model excluding wages the same was the case for majority employee-owned enterprises. When wages were included in the model, falling wages substituted the adjustment of employment and the effect from the ownership variable changed to be insignificant. A preliminary conclusion could be that employee-owned enterprises to a certain extent used wages as a buffer instead of reducing employment. The results for management dominated ownership are not significant. For the upward adjustment of employment the results show a tendency to increase employment relatively more in majority employee-owned enterprises. This contradicts theory but might be explained by enterprises taking back some of the employees which had been laid off in an earlier round. The same tendency is seen for management dominated ownership although this is not surprising seen from a theoretical point of view.

The average change in employment from 1993 to 1994 show that state-owned, outside-owned and minority employee-owned enterprises had falling, majority employee-owned enterprises had stable employment, enterprises with management ownership had a 9-13% increase and foreign-owned had a 40% increase in employment.

Latvia: At given levels of sales and wages the multi-variate analysis shows lower employment in insider-owned enterprises than in state-owned enterprises. This means that up to 1994 the insider-owned companies have cut down employment more than the state-owned enterprises.

Lithuania: The multi-variate analysis shows higher levels of employment for given levels of value added and wages. When the employment for an earlier period is included as an independent variable the results show that employee-dominated enterprises have more sluggish adjustment of the labor force than is the case for state-owned enterprises (Jones & Mygind, 1996a).

This tendency can also be seen for the simple averages shown in figure 5.1.1. The fall in employment each year from 1992 to July 1995 and for the whole period is smaller for employee-dominated ownership and around the average for management-dominated ownership. The outsider group has generally steeper fall in employment, however, with a tendency for reduced falls when the degree of insider ownership increases. This tendency is not found for state-owned enterprises which in most cases have smaller falls than the average.

6.5 Productivity.

We have some evidence for all three countries for which preliminary results for the production function analysis are reported in Jones & Mygind (1996a).

Estonia: In a Cobb-Douglas production function model including a vector of the earlier mentioned ownership structures and a vector including control measures such as branch and location it is found that state-owned companies have lower and foreign and minority insider owned-enterprises higher factor productivity than the omitted category of outside ownership. In another estimation, a higher degree of employee and management ownership turns out to give higher productivity.

Latvia: A Cobb Douglas estimation based on net turnover shows that foreign and insider ownership has a significantly higher level of sales with given inputs of capital and labor compared to state-owned enterprises.

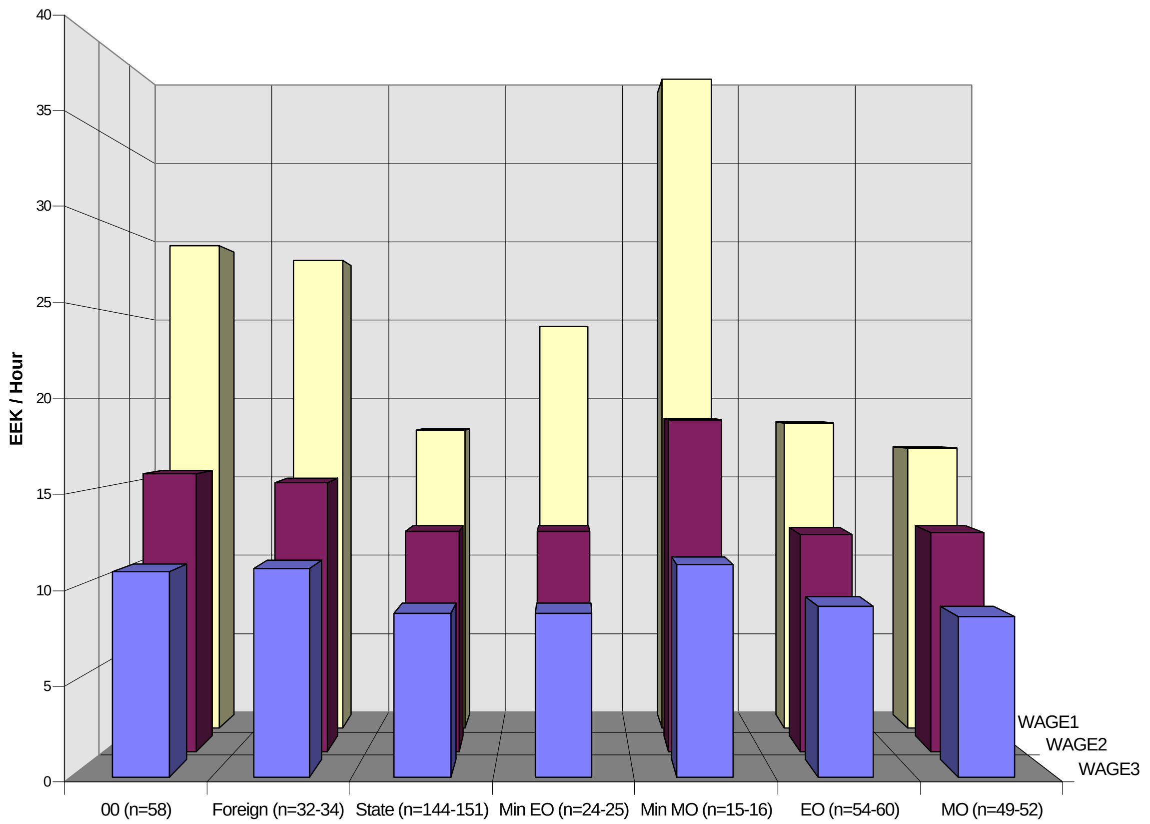
Lithuania: The preliminary results based on the ownership variables from 1994 show significantly lower factor productivity for management-dominated enterprises, and also for employee-owned, although not significantly. On the other hand, it is also shown that a higher participation rate of managers in ownership improves productivity.

For Lithuania we have also some averages for labor productivity based on the July 1995 ownership distribution which for different reasons are expected to be more reliable. The results for 1993 and 1994 are shown in figure 6.1.2. Especially the group with dominating employee ownership has high labor productivity, but also management ownership shows above average results. Furthermore, there is a clear tendency for higher productivity when the degree of insider ownership increases both in the group for state-dominated and outside-dominated ownership.

6.6 Wage-level.

Estonia: For Estonia we have detailed data-material about wages for 404 of the enterprises in our data set. This is based on information about wages for different occupational groups on October 1994. The results are shown in figure 6.6 for three groups: 1) managers, 2) specialists and skilled workers, and 3) unskilled workers. The numbers are weighted so that different proportions of gender do not affect the results. Wage-levels for all three occupational groups are relatively low in state-owned enterprises and in enterprises with majority insider ownership. For enterprises with minority insider ownership, wages for workers and professionals are also quite low, but here managers are higher. The highest wage level is found in enterprises with minority management ownership. Note that this was also the group with the highest factor productivity. There might be special factors influencing this group of enterprises. Domestic and foreign outside ownership have also relatively high wage-levels.

Figure 6.6 Average hourly wages for three occupational groups in Estonia



In a multi-variate analysis controlling for branches and location the described tendency is confirmed with wages for managers and unskilled workers significantly lower in majority insider owned enterprises.

Lithuania: The results for the average wage-level in different ownership groups in 1992-1994 are shown in figure 6.1.2. The results for 1992 and 1993 do not show any clear tendencies except that foreign enterprises have the highest wage-level. This is also the case for 1994, but here the insider dominated companies also have a relatively high average wage level. There are clear tendencies both in the state-owned and outside-owned enterprises indicating that a higher share owned by employees means higher wages. There is no clear variation related to size, but considerable variation between branches. Especially construction, but also trade, have quite high average wages. In construction, with the highest wage level around 50% above the total average, employee-owned companies are still 20% and management dominated companies still 15% above the average for the branch. In trade the general tendency is somewhat broken with insider dominated groups 4-20% below the average for the branch. We have not yet made a multi-variate analysis on these relations.

For Lithuania, we also have variables showing dividends per employee. In case of employee-dominated ownership this is another way of paying out income to employees. Figure 6.1.2 includes results for dividends per employee in 1993 and 1994. On average, for all enterprises, dividends made up only 5.5% of wages in 1993 and 2% in 1994. For employee-dominated enterprises, they made up 7% and 3% in the two years. There is a clear tendency for higher dividends for enterprises with dominating employee ownership or with minority insider ownership. This need not indicate employees interest in taking out cash from the company. It might be explained by employees using dividends for buying some of the remaining state-owned shares. Worthwhile noting is the high level for dividends in foreign- owned enterprises in 1993. This indicates an early repatriation of profit.

6.7 Profitability

If the employees pay out excessive wages the results will be low profitability of the employee-owned company. We have results from all three countries:

Estonia: The preliminary results on return on total assets are based on a multivariate model with controls for branch and location. For the 1993 data this model show lower return in state owned enterprises, but no significant variation for the other ownership types. For 1994 again state owned enterprises have lower return, but here all enterprises with insider ownership have significantly higher return than the omitted category with outside ownership, and the two categories with management ownership have the highest return on assets. The simple averages show the same tendency. It is noteworthy that foreign ownership has a relatively low return on assets, which might be explained by high capital intensity which has not yet paid off.

Latvia: The preliminary results in a multi-variate model controlled for branch, number of employee, total assets and capital intensity indicate that both insider and outside domestic ownership have significantly higher returns than state ownership, and the highest return on assets is found in the category of 50-99% inside ownership. Surprisingly, foreign ownership does not reveal results significantly different from state-owned enterprises. The results of a simple distribution of return on assets on different owner categories is shown in figure 6.7.

It is seen from the figure that insider-owned enterprises have a more favorable distribution than other types. State-owned enterprises are the worst performers.

Figure 6.7 Return on assets distributed on type of ownership:

Majority owned by: /return on assets	**State**	**Foreign**	**Insider 50-99,9%**	**Insider 100%**	**Outside**	**total**
number of enterprises	121	55	59	288	159	682
- -10%	35%	29%	25%	25%	31%	29%
-10% - 0%	28%	31%	20%	15%	16%	19%
0% - 10%	22%	16%	24%	23%	31%	24%
10% - 25%	12%	16%	12%	18%	11%	15%
25% -	3%	7%	19%	19%	13%	13%
total	100%	100%	100%	100%	100%	100%

Lithuania: We have not yet made any econometric analysis on the Lithuanian data, but we have averages both for profit-margin and return on total assets. Profit margin is defined as operating surplus (not including financial revenues and cost) as a percentage of turnover. The profit margin does not seem to vary much from the total average for the insider-dominated enterprises in 1992 and 1993, see figure 6.1.2. This indicates that there is no selection bias according to profitability. In 1994, the employee owned enterprises seem to do significantly better than the other enterprises. This is also the case for outside dominated enterprises with a high stake of employee ownership. The general fall in profit margin from 1992 to 1994 is probably mainly explained by the depressed economy, but it might also be because of changed statistical definitions. Return on assets is based on profits including financial revenue and costs. For this measure of profitability employee- owned enterprises are doing quite well in 1994 in relation to all other owner groups. Also, state-owned and outside-owned enterprises with high inside ownership is doing better than average. Management owned enterprises are around average and the rest below.

6.8 Finance

The external loan capital supplied to an enterprise can be measured by the ratio of debt to assets. However, an increase in this factor cannot only be explained by an inflow of external capital for investment. The debt might be short term supplier credits created because the enterprise has not been able to pay its obligations. Thus, we both have to look at the debt asset ratio and the specific type of debt. This includes an investigation of bank loans in percentage of total loans.

Estonia: The most direct information about finance for investment has been collected in Estonia. The statistical department made a survey about investment and the companies also were asked to specify the relative contributions from six sources: internally generated funds, domestic private capital, finance from banks, foreign capital, state funds and "other sources". Figure 5.8 present simple unweighted averages for the relative contribution from these sources for 1994 for 256 enterprises which were also included in the ownership sample.

Figure 6.8 Financial sources for investment in Estonia 1994.

Owner group Source of finance	State	MinEO	MinMO	EO	MO	OO	Foreign	**ALL**
Internal	86%	88%	62%	72%	76%	84%	64%	80%
Private	1%	4%	23%	8%	11%	2%	6%	5%
Bank	2%	6%	15%	12%	9%	10%	15%	7%
Foreign	1%	0%	0%	7%	0%	3%	8%	3%
State	7%	0%	0%	0%	5%	0%	7%	4%
Total	100%	100%	100%	100%	100%	100%	100%	100%
N enterprises	104	23	13	29	19	42	26	256

The figure shows that the vast majority of funds for investment, around 80%, were generated internally. Note, that the figure shows averages and is not typical for individual enterprises. In fact, 71% of all enterprises relied completely on internal funds. Another 10% financed their investments fully with funds from just one of the other sources. Only around 20% of the companies used mixed forms of financial sources. It seems that companies with insider ownership use at least as much private and bank capital as do the domestically outside owned companies. Thus, from these results there is no indication that access to external finance for investments were especially difficult for insider owned companies.

Looking at the total capital structure of the different groups of enterprises using accounting data, see figure 6.1.1, we find that the debt asset ratio for majority insider owned enterprises (61%-66%) is higher than for externally-owned enterprises (47%). This is also the case for foreign and for state-owned enterprises. However, minority employee-owned enterprises make an exemption with only 42%. The average amount of bank loans as a percentage of total loans is generally higher for both majority and minority insider-owned companies (29%-36%) compared to the total average of 25%. State-owned companies has significantly lower bank loans with only 15% and outside domestic and foreign enterprises have both 28% bank loans out of total debt. Again, it seems that the theoretical prediction of problems for insiders in getting bank loans has not been correct. However, if we change the measures to loans-per-employee, the insider-owned enterprises appear with less loans. This change is caused by the low capital intensity for insider ownership. In fact, the majority insider-owned and minority employee-owned enterprises have much less debt and bank loans than the average for the whole group, see figure 6.1.1.

Debt asset ratio has also been investigated in a multi-variate analysis with capital intensity and return on assets in the preceding periods as explanatory variables and branch and location as control variables. This analysis confirms that insider ownership, except the minority employee ownership type, has significantly higher debt ratios than the omitted category of external ownership. Bank loans as a percentage of total debt is significantly higher for all insider ownership types. However, these results does not take into account the fact that debt and bank loans still might be relatively low per employee in insider-owned enterprises because the capital labor ratio is quite low.

Latvia: A multi-variate analysis with similar specifications as the one used in Estonia shows that the debt ratio for insider-owned enterprises is significantly higher than for the state-owned enterprises. The proportion of bank loans to total debt seems to have a relatively weak connection to insider ownership. However, in another model it is shown that bank loans is significantly lower the more insiders own. A comparison of the frequency of different debt levels distributed on the five ownership groups show the same tendency. 58% of the state-owned and 61% of the outside-owned enterprises have a debt ratio below 50%. For foreign and insider ownership the number is 34-41%. Only 7% of the state-owned and 8% of the outside-owned enterprises have a debt ratio higher than 100%. For foreign ownership it is 24% and for insider ownership it is 14-19%. The frequency distribution on bank loans as a proportion of total loans show that insider ownership lies in the low end together with state owned-enterprises. Considering that insider-owned enterprises had significantly lower capital intensity the result is that bank loans per employee are quite low in insider owned enterprises.

For Lithuania, debt has been divided in long and short term debt. As seen from figure 6.1.2, the long term debt is generally very low for all enterprises. Insiders hover around the average, but there is large variation among the enterprises. Short term debt as a proportion of total assets is for all enterprises on average 49% at the start of 1994 but falls to 34% at the end of 1994. Here again there is no tendency distinguishing insider ownership from the rest. Financial liabilities - mainly bank loans - in proportion to total debt are lower for insider-dominated enterprises especially for employee ownership. This confirms the tendency that insider-owned enterprises have more problems to get bank loans than other enterprises.

6.9 Investment

As predicted in theory and as confirmed in the preceding section, employee-owned enterprises have special problems in getting external finance. Furthermore, they might have a higher preference for short-term increases in income. They might be more risk averse and at the same time they concentrate risk in their own enterprise. As pointed out in section 5, the result may be lower investment and thus lower capability of restructuring the enterprise.

Estonia: Data from the special investment survey is considered to be the most reliable, but as a measure for gross investment we have also used the change in fixed assets plus depreciation. A multi-variate analysis with total assets and number of employees as explanatory variables and with control for branch and location shows that foreign owned enterprises clearly have the highest investment level. For 1993, it was more than four times larger than for the domestic outside- owned enterprises of comparable size. For 1993, the picture is also clear for majority inside owned enterprises with investment levels around double as high as the average domestic outside owned enterprise. For 1994, it seems that the measuring stick, the domestic outside-owned enterprises, increases their investment level. Therefore, the results are not so clear. Still foreign-owned enterprises have relatively high investment levels, for state owned enterprises the investment level is significantly lower. For the different groups of insider ownership, however, no significant results are found.

Latvia: A preliminary multi-variate analysis similar to the model used in Estonia shows at the 10% significant level that insider-owned enterprises and foreign- owned enterprises have higher investment than comparable state-owned enterprises. For domestic outside-owned enterprises the parameter is also positive in relation to state ownership, but not significant.

Lithuania: We have results for investments in 1994 measured both in relation to total assets and measured per employee, see figure 6.1.2. Both measures show that insider-owned enterprises have slightly lower investment levels. Foreign and outside-owned enterprises with low inside ownership have higher levels. Measured per employee, state-owned enterprises with insider ownership also have high levels of investment. There is a clear tendency for higher investment in enterprises with a higher number of employees. Average investment per employee in enterprises with 20-99 employees was in 1994 586 Litas, in enterprises with more than 500 employees it was 1 782 Litas. This explains some of the low results for especially management-dominated ownership with many small enterprises. But the general picture is that insider ownership in Lithuania seems to be affected by lack of external finance to a higher degree than it is the case for other types of ownership.

6.10 Overview over economic performance

To get an overview over the general tendencies it is necessary to understand the relation between the different variables. Figure 6.10 provides an overview over the preliminary results. It is difficult to produce clear-cut generalizations in some fields because of differences between countries and specific types of ownership structures. In Latvia, we have not been able to distinguish between employee and management ownership. However, from the earlier described institutional background, from difficulties in finding employee-owned enterprises for case studies and from some of the characteristics of the enterprises, we assume that the bulk of the Latvian insider-dominated enterprises are in fact owned or at least dominated by the management group.

Concerning the starting conditions we found that management dominated enterprises tended to be relatively small. This was not the case for broader employee ownership. For both types, in Estonia as well as Latvia, there was a tendency for low capital intensity. This was not the case in Lithuania probably because of the favorable conditions for employees to take over both large and capital intensive enterprises.

Although the institutional background should indicate that especially in Estonia and Latvia the initial profit potential should be higher in insider-owned enterprises, our data cannot confirm such a tendency for any of the three countries.

Figure 6.10 Economic performance of employee ownership compared to other types, preliminary results.

	Estonia	**Latvia**	**Lithuania**
Preconditions capital intensity size profitability	 EO low, MO low EO average, MO low no difference	 IO lower IO smaller no information	 EO, MO = outside MO smaller, no difference
growth in sales			MO higher EO average
change in employment	EO less reductions EO and MO higher increases	more reductions in IO	EO less reductions MO average
productivity	MinIO higher factor productivity EO and MO average	IO higher factor productivity than state owned	Mo low factor productivity, EO, MO, minIO high laborproductivity
wage level	EO and MO lower MinMO higher		EO and MO higher MinIO higher
profitability	EO and MO higher	IO higher	EO & Min EO higher, MO average
finance debt/assets bankloans/debt bankloans/employee	 EO and MO higher EO and MO higher EO and MO lower	 IO higher IO lower IO lower	 no difference EO and MO lower EO and MO lower
investment	EO and MO average	IO higher than state	EO and MO lower

Insider ownership, IO, is divided in employee ownership, EO, and management ownership MO, OO = outside ownership, MinIO = minority IO, MinMO = minority MO, MinEO = minority EO.

The success of restructuring can be measured on the ability of the enterprises to turn around the initial fall in sales to new growth. At the current stage of our analysis we have only empirical data from Lithuania on growth in sales from 1993 to 1994. The results show that management ownership have a higher increase and employee ownership the same increase as the average for all enterprises.

For Lithuania there is some parallel to the development in employment in the same period, although especially employee-owned enterprises following the theoretical predictions seem to be more sluggish in their downward adjustment of the labor force. For reductions of the labor force this is also confirmed by the results from Estonia, and the relatively high reductions in Latvia confirms the prediction that management-dominated enterprises tend to have steeper downward adjustment of the labor force. Surprising is the steeper increase of the labor force in the majority employee-owned enterprises compared to other Estonian enterprises with increasing employment.

The slower reduction in the labor force could result in lower productivity in employee-owned enterprises. This is, however, not confirmed by the data. The factor productivity for employee-owned enterprises is around average in Estonia, and for Lithuania the results are not significant. Management ownership is also around average in Estonia, it is higher for Latvia, but surprisingly lower for Lithuania. These differences are difficult to explain at the current stage of our research. However, for Lithuania the results on labor productivity show a high level for both employee and management-dominated ownership and also for minority insider ownership. This indicate that the positive effect from employee motivation and alignment of interests seem to play the decisive role for the level of productivity. These effect are stronger than the negative effect from the more sluggish reduction of the labor force.

The results on wage-levels do not show the same pattern between these countries. In Estonia, the downward flexibility of wages seem to characterize employee- owned enterprises. In connection with the sluggish downward adjustment of employment, employee ownership means that lower wages are traded off for job security. In Lithuania, the wage-level is higher for both employee and management ownership and this is also the case for other ownership types with a considerable minority of employee shares.

However, it seems that labor productivity in the Lithuanian cases have been high enough to give room for these relatively high wages. Wages have not been excessive, thus eroding the profitability of the enterprises. In fact, profitability measured as operating profits on turnover and by net profits on total assets show a relatively high level for employee-owned enterprises in Lithuania. For enterprises with a considerable employee minority share profitability is also on a relatively high level, and for management ownership it is around the average for all enterprises. For Estonia, both employee and management owned enterprises have above average profitability and this is also the case for insider-owned enterprises in Latvia. It is worth noting that profitability of insider-owned enterprises are higher than domestic outside-owned enterprises and more remarkable also higher than for foreign-owned enterprises.

The analysis of the financial structure of different groups of enterprises show that the debt to total asset is higher for insider-owned enterprises both in Estonia and Latvia and around average in Lithuania. For this group of enterprises, the value of bank loans measured in relation to total debt is also relatively high in Estonia, but in the other countries they are relatively low. When taking into consideration the low capital intensity the picture also changes for Estonia, and for all three countries the general result is that the value of bank loans per employee is relatively low for all groups with insider ownership. These enterprises will have to rely on internally generated capital for investment. In fact, the evidence from Estonia shows that for all enterprises in general 80% of the investments are financed internally.

The results for investment point, in the case of Estonia, in the direction that both employee-owned and management-owned enterprises have an around average investment level. This is also the case in Latvia for the insider-dominated enterprises. However, for Lithuania our preliminary results point in the direction of lower investment both for management and employee-dominated enterprises. An explanation behind the Lithuanian results might either be the lack of external finance or lower willingness to invest. Further analysis of the data shall try to go deeper into these questions.

7. Conclusion (to be extended)

The analysis of economic performance have still only preliminary results. However, in spite of some variation in the results we can conclude that there is no indication that employee ownership means worse economic performance than for comparable enterprises in the private sector. There is also no evidence for the often cited conclusion that insider take-over is only “a half way privatization” including many of the defects from the former system. Employee owned enterprises might be a little more sluggish in the downward adjustment of employment, but productivity and profitability seems often to be better than for most other enterprises. This indicates that production have been restructured at least as much as in other enterprises, and products and production methods have been adjusted to meet the new conditions both on the cost and revenue side. Deep restructuring in the form of investment is around the average, but here especially employee owned enterprises might meet a problem of lack of finance from banks.

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