PRIVATIZATION, OWNERSHIP STRUCTURE AND COMPANY PERFORMANCE: THE CASE OF UKRAINE

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ABSTRACT

This paper assesses the role of privatization in the transition process and analyses the impact of ownership structure on company governance and performance. The paper also considers the impact of institutional factors on company performance. With respect to ownership, the study provides evidence for Ukraine that company performance improves with ownership concentration. An important additional finding is that in Ukraine, concentrated insider-owned firms perform best.

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GLOSSARY

Insiders are shareholders who are also company management or employees.

Insider-concentrated ownership is shareholding by the management of at least 25% of company shares.

Mass privatization is the sale of state-owned enterprises to a large number of investors of a large percentage of shares (more than 25% of each enterprise). In some transition countries, e.g. Ukraine, this was done in exchange for privatization certificates that had previously been distributed free-of-charge to all citizens.

Outsiders are private investors other than company management and employees.

Outsider-concentrated ownership is shareholding by investors other than company management and employees when the stake of at least one of these investors exceeds 25% of company shares.

Ownership concentration is associated with existence of at least one private owner holding more than 25% of company shares.

Privatized company is a company where more than 50% of company shares have been transformed from state to private property.

State-owned company is a company where the state owns at least 50% of company shares.

Chapter 1

INTRODUCTION

The shift from planning to a market economy, with its substantial institutional changes, has received extensive attention both in theoretical and empirical studies. Particular emphasis is placed on the role of privatization in the evolution of a transparent private ownership structure and establishing market institutions. The importance of privatization, often seen as a remedy for successful transition to the market, lies in changes that it brings. Privatization transforms not only the owners but also the goals of the firm, its organisational and financial structures, and its managerial behaviour. Most importantly, it paves the way for a corporate governance system.

The effectiveness of the mechanism of corporate governance determines the ultimate success of privatization in bringing efficiency gains. Failure to establish such a mechanism, added to incomplete market institutions, will yield results different from those expected. That is why analysis of the ownership structure and corporate governance systems that evolve from privatization, and of their impact on company performance, is of great importance both for the insight it gives to existing knowledge and for the policy implications it offers to the transition economies.

The literature on privatization expresses different opinions about its relevance in raising company efficiency and its ability to create effective economic and legal institutions of corporate governance. Despite extensive work on privatization issues there is still limited understanding about how ownership structure and enterprise performance are related. The *link between ownership structure and company performance* remains an open hypothesis. This link is empirically tested in this study. Also there has been little systematic research on corporate governance in most transition economies. But what almost all of

the available empirical studies agree on is that privatized enterprises outperform state-owned ones (Frydman et al. 1997, Meggison et al. 1994, Pohl et al. 1997, Lopez-de-Silane and La Porta 1997, Szyrmer et al. 1998).

Although evidence on positive results of privatization comes from almost all transition economies, Central European and Baltic states demonstrate the highest benefits from privatization while the countries of the CIS show less promising results (Nellis 1999). This gap in privatization effectiveness might be explained by different institutions across transition countries. Those countries that established market institutions, enforced hard budget constraints and secured property rights, like the Czech Republic, Hungary, the Baltic States, all achieved growth. Those that failed to create a competitive market environment, like Ukraine and Russia, have not grown. Thus in the real world there is complementarity between the impacts of privatization and market institutions on company performance. This paper provides indirect evidence of such complementarity.

The widespread belief in the importance of privatization in the transition process envisages a movement of firms closer to efficiency and more productive use of limited resources via changes in the ownership structure (Stiglitz 1999). Private ownership improves efficiency, it is suggested, because of the different incentives which private owners and state employees face: profit maximization versus soft budget constraints. The weak incentives of state employees with respect to cost reduction and quality innovation underlie the basic case for the superiority of private ownership (Shleifer 1998).

But privatization *per se* does not achieve efficiency benefits. To ensure the transformation of incentives, a change in managerial behaviour, and finally better company performance, privatization must create an effective mechanism of corporate governance. This implies establishing a system that will assure owners of capital, i.e. shareholders, of receiving a maximum return on their investment (Shleifer and Vishny 1997). This need for a mechanism

that protects investors from expropriation by managers derives from separation of ownership and control over cash flow rights and the resulting principal-agent problem.

The corporate governance problem, i.e. how shareholders induce managers to maximize returns on their investment, becomes particularly significant the larger the number of owners who hold ownership rights over company assets. Dispersion of ownership emerges when shares are distributed among numerous small shareholders. In that case, company finance and management, or ownership and control, are likely to diverge. If there is an effective mechanism for legal protection of minority ownership rights, the problem of ownership dispersion may not be great. But if such protection is absent, as in most transition economies, ownership dilution is likely to be accompanied by weak and non-transparent corporate governance systems. This poses a dilemma for privatization in transition economies.

The alternative to dispersed shareholding is ownership that is concentrated with a few large investors. In that case, limited managerial ability to expropriate the investors, as well as reduced agency costs, render corporate governance system transparent to the (limited number of large) shareholders. This facilitates the external supply of capital and ultimately improves company performance.

Inherent in every privatization method is a trade-off between achieving social equity and economic efficiency objectives. In the early 1990s, many transition countries adopted mass privatization, including sales to employees, for purposes of equity, as well as to facilitate reforms and ensure their irreversibility.

When shareholders are dispersed, monitoring of managers is a public good and hence is under-supplied (Stiglitz 1999). As a result, all owners have little control over managers, who may pursue goals different from profit-maximization. This is likely eventually to impair company performance. The

problem is compounded in transition economies. Whereas countries with developed financial markets can rely on them to allocate assets to the most productive owners, the financial market infrastructure in all transition economies was primitive at the time of privatization, and could not efficiently allocate resources (Hashi 1997).

Privatization involving direct sales of large share blocks to inside and outside investors leads to ownership concentration. In the early years of transition this approach was seen as socially undesirable and politically infeasible. In short, political rather than economic factors primarily determined privatization methods (Boycko et al. 1994, Paskhaver 1999). But recently, transition countries are beginning to acknowledge the advantages of sales to large, so-called "strategic" investors. In fact there is evidence for both market and transition economies of the beneficial impact of concentrated ownership on company performance. But for transition economies, where legal protection of minority shareholder rights is weak, market institutions relatively undeveloped and contract enforcement poor, ownership concentration may be the only way to ensure that owners of capital can appropriate a return on their investment. In other words, concentrated shareholding might provide the best basis for an effective corporate governance system in transition economies, at least until such time as a legal framework that protects minority rights and prohibits investors against managerial expropriation is established.

Historically, the association between ownership structure and company performance became a matter of concern when it was apparent that shareholders had become dissociated from management. The classic research is Berle and Means (1932) that demonstrated a negative impact of diffused ownership structures on company performance. Since then, some researchers have cast doubt on this thesis, suggesting that there is no significant relationship between ownership structure and company performance (Demsetz and Kehn 1985, Demsetz 1983). These writers claim that even when ownership structure is dispersed, effective monitoring is possible due to

publically-available analysts' reports on firms. However, most evidence has borne out the Berle-Means view. Most studies confirm improvement in company performance with more concentrated shareholder ownership, and attribute it to better monitoring by managers (Mork et al. 1988, Shleifer and Vishny 1986, Megginson et al. 1994).

The evidence from *transition* economies also shows that ownership concentration improves company performance (Marcincin and Wijnbergen 1995). Findings for transition economies suggest that concentrated ownership is positively related to the *probability of restructuring*. This happens because owners push restructuring if they are satisfied with the company's governance. Only then they are willing to supply capital to pursue new investment projects. A positive impact of concentrated shareholding on the probability of restructuring, and thence company performance and market valuation, is found in most studies on transition economies (Djankov and Claessens 1999, Pohl et al. 1997, Barberis et al. 1996, Earle 1999, Earle and Estrin 1996).

While most researchers agree that ownership concentration is positively associated with company performance, opinion on whether an *insider* owner is more efficient rather than an *outsider* remains an open question. The empirical studies on this issue produce ambiguous results. Some studies find no significant difference between the performance of insider- and outsider-owned firms (Earle et al. 1996, Djankov and Pohl 1998). Other researchers find that insider-owned firms perform better (Estrin and Rosevear 1998), whereas still others find the opposite (Frydman et al. 1997, Barberis et al. 1997).

This disparity in results may be related to the time framework in which the analysis is conducted. The effects from outsider privatization might require a longer period to become apparent (Havrylyshin and McGettigan 1999). Also, significant differences between the performance of manager- and employee-owned firms may bear on these results. Lumping these ownership types

together may lead to a downward bias of findings on insider-ownership effectiveness (Frydman et al. 1999).

This paper assesses the impact of ownership structure on the preformance of Ukrainian companies. We find evidence for Ukraine that company performance improves with ownership concentration. We also find that in Ukraine, concentrated *insider-owned* firms perform best. A likely explanation for this result is the role of institutions. In a system with powerful informal norms, serious information asymmetry and pervasive non-transparency, concentrated ownership by insiders may be a profit-maximizing privatization strategy.

The reminder of this paper is organized as follows. Section 2 presents the theory of corporate governance. Section 3 describes our data on Ukrainian enterprises and offers specifications for estimation. Section 4 discusses the results. Section 5 concludes.

Chapter 2

THEORY

There is no disagreement that the final goal of the transition to market is improvement in companies' efficiency. Privatization of state-owned property, i.e. its transfer to private hands, is supposed to build the basis of a market economy by introducing transparency of ownership. The profit-maximizing behaviour of private owners should then lead to growth in efficiency. However, privatizing state property while necessary is not sufficient: what is also needed is an institutional framework that will enforce the rules necessary for a competitive market economy to function.

The ultimate success of privatization depends to a large extent on the corporate governance system that evolves. An efficient corporate governance mechanism, we suggest, follows from resolving the principal-agent problem. In the theory of corporate governance this problem arises from the separation of ownership and control over cash flow rights (Shleifer and Vishny 1997).

There are two approaches to corporate governance that are designed to help suppliers of finance (the principals) protect themselves against expropriation by managers (agents). The first is *investors' legal protection*, and the second is *concentration of ownership*. In the first approach suppliers of finance have legally protected power over their investment and are thus able to enforce their returns. In the second approach *large* shareholders obtain power over their investment by matching control rights with cash flow rights (Shleifer and Vishny 1997). Hence large investors are able to reduce agency costs, ensure better company performance and, ultimately, obtain better returns on their investments.

It is this second approach to corporate governance that underlies the hypothesis motivating our research: a positive relationship between ownership concentration and company performance. The reasoning underlying this approach is that diffused ownership leads to low incentives for small shareholders to control and influence managers and greater incentives for them to shirk and free-ride on others. Controlling cash flows is thus confounded by externalities. The cost of shirking by an individual owner, which takes the form of inefficient management monitoring and worse company performance, is borne by all shareholders. The benefit derived by that owner from shirking is entirely captured by him. The divergence between benefits and costs from shirking for each shareholder is larger the more widely-owned is the company.

Hence, the possibility of neglecting the ownership tasks and failing to control managers is greater for a company owned by a large number of small shareholders (Demsetz and Lehn 1985). As a result of individual shirking all owners jointly have little control over managerial performance and cannot properly evaluate it. Facing few constraints, managers may pursue goals different from those of their principals, the profit-seeking shareholders. Moreover, diffuse ownership is usually associated with less transparent corporate structure (Shleifer and Vishny 1997). In that case, investors cannot freely observe their cash flows and thus have little incentive to provide additional finance. All this ultimately has a negative impact on company performance and its market value.

The externalities of management monitoring and consequent inefficiency are much lower the more concentrated company ownership is. In that case, benefits and costs of shirking are borne by the same owner or shared among a few large shareholders proportionally to their stake. This gives large investors great incentives to control managers and not to shirk. Benefits from economies of scale in monitoring costs create further incentives and resources for large owners to effectively monitor managers. And over and above these

incentives, large shareholders enjoy power over managers. Thus management's ability to act in its own interest and benefit at the expense of shareholders is significantly limited.

In transition countries, where legal frameworks for protection of minority shareholders are undeveloped, ownership concentration becomes the only way that owners of capital can assure themselves of getting a return on their investment (Shleifer and Vishny 1997). This, together with low transparency, may help to explain tendency toward ownership concentration.

Concentrated ownership is also more efficient, and thus more likely to exist, when the company environment is unstable. Managerial behaviour is much more difficult to observe under environmental uncertainty. It is not obvious how to isolate the effect of management on company performance from that of its environment – for example, an unpredictably business-unfriendly system, or market fluctuations. This kind of imperfect information raises monitoring costs to levels that only pay for large investors. Hence, under uncertainty concentrated ownership is more efficient in ensuring a maximum return on owners' investment (Demsetz and Lehn 1985).

Despite these disadvantages of diluted ownership, it is nevertheless widespread in the real world (Bearle and Means 1932). This implies certain features that make concentrated ownership less attractive for investors. These include excessive risk that is borne by large non-diversified investors; the potential expropriation of large investors by other investors through take-overs; and the significant transaction and information costs associated with the maintenance of corporate control (Demsetz and Lehn 1985, Shleifer and Vishny 1997).

The argument that concentrated owners bear excessive risk runs as follows. To maintain concentrated ownership in case of large capital needs, owners will have to supply more finance into a single company. If investors are risk averse, they will demand compensation for additional risk. This will increase capital costs and discourage owners from maintain concentrated ownership. Hence it is claimed that the larger a company (a proxy for larger capital requirements), the more diffused should be its optimal ownership structure (Demsetz and Lehn 1985). But those who dispute this claim point to the prevalence of concentrated ownership in the real world. This suggests that the costs associated with poor diversification by large shareholders are lower than the benefits from tight control and reduced agency costs (Shleifer and Vishny 1997).

The potential for takeover poses a more serious problem associated with concentrated ownership. This potential arises if there is a divergence in interests or opportunities between large investors. The ability to expropriate other investors is particularly likely for investors whose power to control is high relative to their cash flow rights. This may arise in case of unequal voting rights, where some investors have preferential positions relative to others, amounting to control through a pyramid structure. Such investors are then able to discriminate among shareholders and redistribute rents to themselves (Grossman and Hart 1988, Shleifer and Summers 1988). For example, shareholders may benefit at the expense of the firm's other creditors by taking excessive risks and transferring all potential costs to such creditors. At the same time, preferentially-placed shareholders may expropriate other owners by postponing good investment projects because they would have to incur costs for the projects while benefits would be shared among all owners (Myers 1977).

In our judgement, as well as that of many writers, the above mentioned costs associated with concentrated ownership are generally lower than the benefits that accrue from tighter control over cash flows and from reduced agency costs. It is in the interest of the typical profit-maximizing owner to favour a more concentrated ownership structure. Real-world evidence confirms this theoretical argument for efficiency of ownership concentration. A number of empirical studies document the prevalence of concentrated ownership even among large corporations (Shleifer and Vishny 1986, Demsetz 1983, Demsetz and Kehn 1985). These modern empirical studies contrast with the classic Berle and Means (1932) claim that in most cases ownership is (or was) diluted among small owners and that managers were not constrained in their self-dealing activities.

To summarize: the theory of corporate governance suggests on balance that concentrated ownership ensures better company performance than dispersed ownership. This gap is particularly large in countries with weak legal protection of minority shareholders' rights, and with low transparency in the environment in which companies operate. Ukraine is an excellent example of such a country.

Chapter 3

DATA AND MODEL

In this section we describe our data set. We then discuss specification of the variables employed to analyze the relationship between company performance and ownership concentration. Finally, we present an empirical model of ownership concentration impact on company performance.

3.1 **Data Description**

This research uses data obtained by the Harvard Institute of International Development (HIID) from the Ukrainian Committee on Securities and Stock Exchange. The sample consists of 190 open joint stock companies from six sectors of the Ukrainian economy: construction, machinery, metallurgy, food industry, transport and trade and services. To avoid the problems inherent in privatization of the largest industrial enterprises and monopolies, in particular, those from energy, oil and gas sectors, such enterprises are not included in the sample. Appendix 1 presents the sample distribution by the type of ownership structure and sector.

The companies represent all types of ownership created in the process of privatization in Ukraine. The sample also includes enterprises where the state is a dominant owner (i.e. the state stake exceeds 50%). As the goal of the analysis is to compare the performance of privatized companies with concentrated ownership versus those with deconcentrated ownership, the sample does not include new private enterprises (so-called *de novo* firms).

As detailed below, the data on ownership structure and company performance are difficult to gather. Moreover, their quality is very likely to affect results of the analysis adversely. The low transparency of all Ukrainian companies, the

significant proportion of their activity in the shadow economy, and closed accounting data all limit choice in the sample selection. The instability and distortions of the transformation process are also reflected in our data. Appendix 2, which displays some of the raw data, indicates vast and hard-to-explain variation in performance across companies. These drawbacks of the data should be taken into consideration when assessing analysing our estimated results.

Also, the sample exhibits a certain selection bias, as the enterprises considered are only open joint stock companies. Closed joint stock companies are not incorporated into the analysis, as at this stage such data are not available to the public. Nevertheless, I think that the sample may reasonably be expected to provide meaningful results, albeit only indicative. Firstly, the mentioned distortions are likely to be smoothed by the law of large numbers. Secondly, most other researchers working with transition-economy data have faced similar problems. Despite this, they were able to produce useful results and reveal certain trends.

3.2 **Definitions of Variables**

The question asked is whether ownership concentration leads to better company performance. We do not try to measure the degree of ownership concentration, but instead use a dummy variable, which simply distinguishes on a 0,1 basis between concentrated and diluted forms of ownership. An appropriate measure should reflect interactions between large shareholders of different companies. These kinds of data are not available.

The definition of ownership adopted in this analysis relies on voting rather than cash flow rights. The issue here is that the largest shareholders may have control over a company in excess of their cash flow rights (Shleifer and Vishny 1986). Hence, in practice, if other owners have marginal and dispersed shares, a blocking stake of 25% + 1 shares may provide its holder with

significant control over a company. This idea motivates the definition of concentration used in this paper that associates ownership concentration with the existence of at least one private owner holding over 25% of company shares.

All companies are classified into three subcategories. The first distinction is between state-owned and privately-owned companies. A company is referred as a state-owned enterprise if at least 50% of its shares, i.e. the controlling stake, belongs to the state. Otherwise, it is considered a private company. As a benchmark for this selection, the 50% stake is chosen because it gives its shareholder effective control over a firm. No decision can be taken without an agreement of this shareholder. A dummy variable PRIV is used to represent this subcategory.

The second subdivision distinguishes between private companies with respect to their ownership concentration. Here companies are divided into those that are widely held, i.e. companies with a diluted ownership structure, and those with relatively few large owners, i.e. those with a concentrated ownership structure. The benchmark to decide whether an owner is sufficiently large to create ownership concentration is a 25% + 1 stake. The motivation behind this choice is explained above. The dummy variable CONCTR (privatized company with concentrated shareholding) identifies this subcategory. It allows us to measure an additional effect for private companies from having a concentrated ownership structure.

A final subdivision is made in order to distinguish between insider and outsider largest shareholders. The dummy INS CONCTR (privatized, with concentrated shareholding by insiders) defines this subcategory. It gives an additional impact for privatized companies with concentrated ownership from having an insider as the largest shareholder.

To study the impact of ownership type on company performance, we relate ownership concentration to one performance indicator, labour productivity, which is measured by its annualized rate of growth. Labour productivity is defined as a ratio of production output, measured in constant prices of 1998, to the nominal number of employees. The choice of labour productivity as a performance indicator was based on the following arguments. Firstly, official accounting data give a significantly distorted picture of company activity. Widely spread tax avoidance through demonetization (barter operations), shadow activity, and dumping sales to branch (so-called managerial pocket enterprises) leads to constant understatement of profit and sales data in the official statistics. Hence, these indicators are likely to produce misleading results. Secondly, labour productivity is a good proxy for company efficiency, as it shows how effectively production resources, here labour, are used. Finally, the use of an annualized rate of growth of labour productivity should incorporate and smooth any disturbances of the transformation period. Hence, the performance indicator used can be reasonably expected to reflect the effects of a change in ownership.

At the same time labour productivity, as it is defined here, has its shortcomings. Firstly, the best way to calculate it would be on the basis of value added rather than company production output. In this case intermediate and capital inputs, as well as taxes, would not affect the value of labour productivity. Unfortunately, the available data do not allow to use this approach. Moreover, the issue of arrears and non-payments for final products and their impact on labour productivity cannot be addressed on the basis of these data.

Secondly, this definition is based on nominal rather than *effective* employees. In transition economies it is of particular importance to take into account widely spread involuntary under-employment. Unpaid leave and shortened working days distort the actual picture of labour use. Then nominal employment may overstate effective, or actual, employment and hence underestimate labour

productivity. Given the vast variation of unpaid leave by industries and ownership types, it is advisable to adjust nominal employment to these distortions. At this stage of the analysis these kinds of data are not available.

Another argument that is often put forward against production output per employee is that output may overestimate sales. We do not support this view. Whereas "production for a warehouse" rather than for a customer was common Soviet times and in the early 1990s, it is no longer. Since the onset of transition, with its ownership transformation and market orientation, the situation has changed considerably. Few private and even state enterprises can afford to produce goods that nobody wants to buy. If a company has no funds to modernize its production facilities and train employees' skills to be able to compete with imports, it in most cases stops producing. This is confirmed by the data on involuntary under-employment, e.g. unpaid leave, in the Ukrainian economy in 1994-1998 (Appendix 3). Hence, we argue that the use of production output is a relatively good indicator of company performance.

Table 1 gives a summary of all variables used in this research. Summary statistics for these variables are presented in Table 2.

TABLE 1 Description of Variables

Dependent Variable	
LPGrowth (LP – labour productivity)	Annualised rate of growth of labour productivity (LP)[1] measured as a rate that satisfies $LP_T/LP_t = (1 + LPGrowth)^{(T-t)}$, where T is 1998 for all companies; t is the year of privatization for companies privatized before 1996; otherwise, it is 1995[2].
Independent Variables	
LPInitial (LP – labour productivity)	Labour productivity measured as a ratio of production output to nominal employees[3]. Output measured in constant prices of 1998, in UAH 1,000s. Reported for the year of privatization for companies privatized before 1996; otherwise for 1995. Unit of measurement is UAH 1,000s per employee.
PRIV (Privatization)	One if a company is privatized by 1998; zero otherwise.
CONCTR (Concentration)	One if a company is privatized and at least one shareholder owns more than 25% of company stock; zero otherwise.
INS CONCTR (Insider concentration)	One if a company is privatized, and at least one company owner holds more than 25% of company stock and this owner represents company management (i.e. insider); zero otherwise.
Softness	A proxy for soft budget constraints defined as a) a ratio of company budget areas to its tax liabilities; b) a ratio of company liquid assets to its accounts payable. Unit of measurement is UAH 1,000s.

[1] Example: LPGrowth equal to 0.09 means a 9% growth in labour productivity per year during the estimated period.

[2] The best way to compare performance of each company of certain ownership type is to match the annualized period within each category. However, there are no time series data necessary to conduct such separate comparisons. Hence, 1995 is chosen as a benchmark year as it gives a period large enough to assess the impact of ownership transformation.

[3] By nominal employees I mean actual number of company employees not adjusted to involuntary under-employment (unpaid leave, shorted working hours, etc.)

TABLE 2

Summary Statistics of Variables for 190 Companies in Sample

Variable	Mean	Standard Deviation	Minimum	Maximum
LPGrowth	0.36	1.39	-0.95	10.51
LPInitial	24.42	36.32	0.002	191.63
PRIV	0.87	0.33	0	1
CONCTR	0.23	0.42	0	1
INS CONCTR	0.07	0.25	0	1

3.3 Model. Statistical Analysis

The empirical part of this research tests the hypothesis that concentrated ownership positively affects company performance. Also, within a concentrated ownership structure a distinction is made between outsider and insider owners. We test the hypothesis by evaluating the impact of ownership structure on the growth of labour productivity. In doing so, we control for other factors that may affect this performance indicator. In particular, we control for the impact of *soft budget constraints* (softness) that in transition economies like Ukraine may largely influence company performance. Also we control for industry specificity by including sector dummies.

To examine the impact of ownership structure on company performance we hypothesize the following ordinary least square (OLS) regression model:

$$LPGrowth_i = á_0 + â_0 LPInitial_i + â_1 PRIV_i + â_2 CONCTR_i + â_3\ INSCONCTR_i + u_i \quad (1)$$

where all the variables used are those specified in Table 1. OLS estimates of company performance indicators are shown in Table 3.

In the initial specification of equation (1) to control for the possible impact of other than ownership factors, we included a proxy for soft budget constraints, softness, and sector dummies. In the view that this inclusion had no

statistically significant effect on either the sign or the magnitude of the explanatory variables coefficients we do not report them in our model specification[4].

The reported model has the problem of multicollinearity. Its impact on regression results should be taken into consideration while analysing the meaning of coefficients. To address this drawback of our model we run individual regressions for every subset of companies by ownership type. These results are presented in Appendix 4. They confirm the findings of the main model demonstrating that at this stage of transition insider-concentrated companies show the best performance. Also these results provide evidence of better performance of private companies with concentrated ownership. Finally, firms with diluted private ownership are found to perform worse than state-owned companies. This confirms the hypothesis that what matters is the way the state property is privatized rather than privatization *per se*. Appendix 5 dispalys correlation estimates for variables in the model (1).

TABLE 3

OLS Estimates of Company Performance

		Dependent Variable Annualized Rate of Growth of Labour Productivity (LP)
Intercept	$\acute{a}_0$	**0.76*** (0.28)
LPInitial	$\hat{a}_0$	**-0.01*** (0.003)
PRIV	$\hat{a}_1$	-0.45 (0.29)
CONCTR	$\hat{a}_2$	**0.59*** (0.23)
INSCONCTR	$\hat{a}_3$	**1.27*** (0.38)
Number of observations		190
R Square		0.17
F		9.51

Note: *p≤0.05, **p≤0.10; Standard errors are in parentheses. Statically significant coefficients are boldfaced.

[4] The estimation results of the initial specification, which incorporates soft budget constraints into the model and sector dummies, are available upon request.

We interpret the meaning of the coefficients in the equation (1) as follows. The average effect that initial performance has on the rate of labour productivity growth in the subsequent periods, is given by $\hat{a}_0$. The impact of privatization is measured by $\hat{a}_1$, which gives an average difference between state-owned and privatized companies in terms of the performance indicator used. For private companies $\hat{a}_2$ shows an additional effect of having a concentrated ownership structure. Finally, for private companies with concentrated ownership, $\hat{a}_3$ captures an average additional effect that an insider as the largest shareholder has on company performance.

Chapter 4

DISCUSSION OF RESULTS

All variables take the expected signs and the estimated coefficients, except for that of privatization, are statistically significant at 95% confidence level. Moreover, to test for structural differences, we ran the separate correlation equations for each of the following groups: all companies, state-owned companies, companies with a diluted ownership structure, those with a concentrated ownership structure, those with an outsider-concentrated ownership structure and, finally, those with a concentrated ownership controlling for insider-owners' impact. The OLS estimates for these regressions are reported in Appendix 4. They all confirm the results obtained from the estimation of the main regression (1): a) concentrated ownership leads to better company performance, and b) companies with insider-concentrated ownership outperform all others. This analysis also provides justification for pooling companies together in the sample.

The initial level of labour productivity, although very low in the value[5], has a statistically significant effect on its subsequent rate of growth. The sign of the estimated coefficient is invariably negative. The rapid downward changes in the macroeconomic conditions and an overall decline in the Ukrainian economy may explain this. Collapse of the old system, breakdown of the relations with partners from FSU republics and other impediments inherent in the transition process negatively affected companies of all ownership types and industries.

Privatization is not found to have a significant impact on company performance. It also has an insignificant effect in the separate regression that

[5] Given the mean value of the initial level of labour productivity (24.42 UAH 1000-s per employee) and its coefficient equal to –0.01, this variable has a marginal impact on the dependent variable.

estimates the difference between the performance of privatized and state-owned companies. OLS regression estimates for this test are shown in Appendix 6. These results may demonstrate that what is important for company performance is post-privatization ownership structures and corporate governance systems, rather than privatization *per se*.

The significant positive coefficient on the ownership concentration variable confirms our hypothesis that there is a positive relationship between concentrated private ownership and company performance. This Ukrainian evidence is consistent with much of the standard theory of corporate governance. Specifically, this study finds that on average companies with concentrated ownership structure outperform widely-held ones by 0.59 times, in terms of growth in labour productivity. This finding provides a strong argument against ownership dilution.

Finally, what may be the most important finding of this study is that the best company performance is associated with concentrated shareholding by insiders. The estimated coefficient on insider-concentrated ownership shows invariably a significant positive impact of such ownership structure on company performance. On average, concentrated ownership by company management improves company performance, i.e. the rate of growth of labour productivity, by 1.27 times.

Also, the data were controlled for a potential selection bias. The analysis of the initial performance indicators does not support the view that managers obtained better enterprises. At the same the analysis of data on employment reveals that companies with concentrated ownership showed lower rates of labour shrinkage as compared to those with diluted ownership. This finding controls for the impact of employment change on labour productivity. Appendix 7 gives supporting data for these claims.

Given the low predictive power of our model and large data instability we suggest using its results primarily as *indicative of certain tendencies* (improvement in

company performance with ownership concentration) rather than to predict performance of a individual firms. The model is rather rough. Yet, at this stage further refinements make little sense unless better data are made available.

Our findings are different from those for developed market economies. Studies on developed economies find that concentrated shareholding by *outsiders* has highest positive impact on company performance and market valuation (Shleifer and Vishny 1997). What makes this difference? A likely expanation for the relatively favorable impact of insiders in transition economies is the role of institutions and formal and informal norms. This role is particularly unique and important in Ukraine and other CIS countries.

Despite rapid changes in the Ukrainian economy since the onset of the transition, the country still has only a semi-market economy. It lacks institutions vital for a mature market economy to function and still has powerful institutions that prohibit normal operations of a market economy. Informal networks and norms dominate. Widely advertised market reforms and economy transformation have not removed these institutions, which have been inherited from the bureaucracy of Soviet era. People who manage the country, the economy, and the enterprises follow implicit, informal rules, which are not consistent with a transparent competitive market. Otherwise, they would be out of the system. These informal norms are what make the whole system extremely non-transparent for outsiders, those who either do not know or do not want to follow the non-market rules.

This non-transparency further deepens asymmetric information between owners of capital and managers. In a transparent system outsiders may monitor managers. If the outsiders have enough power, i.e. voting rights and concentrated ownership, they can dismiss managers. But if the management is a primary shareholder, it will not dismiss itself even if this would significantly improve company performance. This feature of insider ownership explains

why concentrated shareholding by outsiders does perform better in market economies. But in a system like Ukraine's, outsiders, even with controlling shares, often cannot dismiss ineffective management. By doing so they would risk breaking off all connections to the political and economic elite that a current manager has. Given the role that informal norms and personal connections with top authorities and other companies play in the system, owners stand to incur high costs by dismissing managers.

Hence at this stage in the transition economy concentrated insider ownership seems to outperform other forms of ownership. The possible explanations for the findings of our research may be insecure property rights and weak legal protection of investors, lack of strong market institutions, non-transparency of the economy and major asymmetric information in the system. Concentrated insider ownership may be a profit-maximizing solution under such an institutional environment.

Chapter 5

CONCLUSIONS

The results of this study present an argument for concentrated ownership. The main message that this paper brings is that the structure of company ownership is related to company performance. With this respect the statistically significant positive relationship is found between concentrated shareholding and company performance in Ukraine. These findings confirm the corporate governance theory that predicts better performance of companies held by large shareholders due to effectiveness of a corporate governance system.

The analysis of the ownership structure and corporate governance systems that evolve from privatization, and their impact on company performance is of great importance both for the insight it gives to the existing theory and for the policy implications it offers to the transition countries. Given the weak legal protection of investors' rights, undeveloped market institutions, and primitive financial market infrastructure, which are usually typical for the transition economies, concentrated ownership seems to ensure the highest benefit for investors in such institutional environment. Only when the proper legal framework is developed, companies with dispersed ownership might show promising results. Hence, the policy advice here is "do not dilute when privatizing". For Ukraine the suggested turn towards large, so-called strategic investors is of particular importance given the magnitude of still non-privatized property.

An important contribution of this paper is to demonstrate that concentrated insider-owned firms show the best performance. This may be a profit-maximizing response of owners to a system with prevailing powerful informal norms and institutions, where personal relations are important, and with

serious information asymmetry and non-transparency. The strong performance of insider-owned firms seems to confirm that Ukraine is still a non-market economy. The results of this paper present a picture of dominance by the type of ownership that is widely believed to be inefficient, which seems to indicate that “something is wrong with this system”.

The success of insiders may be reasonably explained by the following arguments. Firstly, it may be an interim state, specific to a period of the transition from a personalized socialist bureaucracy to an impersonal market system. Then it should not cause significant concerns and may be considered as an inevitable stage in transition. Alternatively, it may indicate a much worse situation that would require vigorous political efforts to reform it. In the latter case insiders’ power impairs the activities of outsider owners and calls for policies establish market institutions and introduce transparency into the system more rapidly.

This study, while establishing the relationship between ownership structure and company performance, still leaves a number of open questions and possible directions for further research in this field. Firstly, it is advisable to try to generate more reliable data for future analysis. Secondly, alternative measures of company performance should be considered. Thirdly, it is important to understand how ownership concentration has been forming, i.e. why some companies were concentrated whether others left diluted. In this respect the hypothesis of dependence of ownership concentration on company performance – “reverse causation” should be tested. Also, the analysis of how company performance and ownership structure are interrelated should further disaggregate owners into different categories such as investment funds, foreign and domestic, etc. Finally, additional analysis is necessary to address the role of institutions in evolving ownership structures after privatization.

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APPENDICES

Appendix 1 Sample Description

Sector \ Ownership Structure	State-owned	Private		Total
		Diluted shareholding	Concentrated shareholding	
Construction	3	15	9	27
Machinery	5	31	9	45
Metallurgy	9	13	6	28
Food industry	2	33	9	44
Transport	1	8	3	12
Trade and services	4	22	8	34
Total	*24*	*122*	*44*	*190*

Source: Own calculation

Appendix 2 Raw Data Example (initial year is 1995)

Company	Production output		Employment		Labour productivity LP		Rate of growth of labour productivity Rate = (LP1998/LP1995 deflated)^(1/3)-1
	1998, UAH 1000s	1995, in real terms of 1998, UAH 1000s	1998	1995	1998, UAH 1000s per employee	1995, in real terms of 1998, UAH 1000s per employee	
Dniprodzerzhinsky house-building plant	1462	394.5	434	651	3.369	0.606	0.772
Kirovogradvodbud	111.4	6697.1	41	136	2.717	49.243	-0.619
House-building complex#3	30948.8	30263.5	1642	1754	18.848	17.254	0.030
Rogan meat processing plant	9940.5	84230.2	450	565	22.090	149.085	-0.471
Chernigovsky radio appliance plant	40064	29208.6	5923	8062	6.764	3.623	0.231
Paper-ruberoid complex	45771	81948.9	1305	1206	35.074	67.951	-0.198
Kievsky holod complex#2	6855.1	252.6	339	299	20.222	0.845	1.881
Dobropolsky bread plant	3680	475.6	163	163	22.577	2.918	0.978
Smilyansky machinery plant	9719	5874.1	1341	2871	7.248	2.046	0.524

Source: HIID, ETAP State Property Fund of Ukraine, own calculation

Appendix 3 Involuntary Under-Employment[6]

% to the total number of workers in the sector

Sector \ Year	1994	1995	1996	1997	1998
Construction	31.6	30	41.9	43.8	45.9
Machinery	44.7	39.9	45.8	37.5	44.1
Metallurgy	25.7	15.9	16.6	20.4	21.9
Food industry	35.7	36	41	40.4	44.7
Transport	29	21.9	40.3	22.4	22.6
Trade and services	16.8	9.6	10.5	10.4	12.4

Source: Ministry of Statistics of Ukraine

Appendix 4

OLS Estimates of Structural Regressions

Dependent variable: Annualized Rate of Growth of Labour Productivity (LP)

Variable	All companies	State-owned companies	Privatized companies with ownership structure			
			Diluted	Concentrated	Outsider concentrated	Insider concentrated
Intercept	**0.62*** (0.12)	**0.75*** (0.27)	**0.38*** (0.08)	**1.21*** (0.39)	**0.70*** (0.31)	2.72 (1.45)
LPInitial (slope)	**-0.01*** (0.003)	**-0.01*** (0.005)	**-0.01***(0.003)	**-0.01**** (0.008)	-0.01 (0.005)	-0.05 (0.07)
Number of observations	190	24	122	44	37	7
R square	0.07	0.17	0.16	0.07	0.07	0.21

Note: *p≤0.05, **p≤0.10; Standard errors are in parentheses. Statistically significant coefficients are boldfaced.

[6] Workers that were on unpaid leave or on a partial salary leave

Appendix 5

Correlation Estimates

		Annualized rate of labour productivity	Labour productivity in real terms of 1998	Private in 1998	Concentrated ownership	Insider concentrated ownership	Softness
LPGrowth	Annualized rate of labour productivity growth	1					
LPInitial	Labor productivity in real terms of 1998	-0.275	1				
PRIV	Private in 1998	-0.007	-0.134	1			
CONCTR	Concentrated ownership	0.187	0.032	0.209	1		
INSCONCTR	Insider concentrated ownership	0.282	-0.114	0.103	0.197	1	
Softness	Softness	-0.034	-0.052	-0.038	0.044	-0.029	1

Source: Own calculation based on the data sample

Appendix 6

OLS Estimates of Privatization Effectiveness

Dependent variable: Annualized Rate of Growth of Labour Productivity (LP)

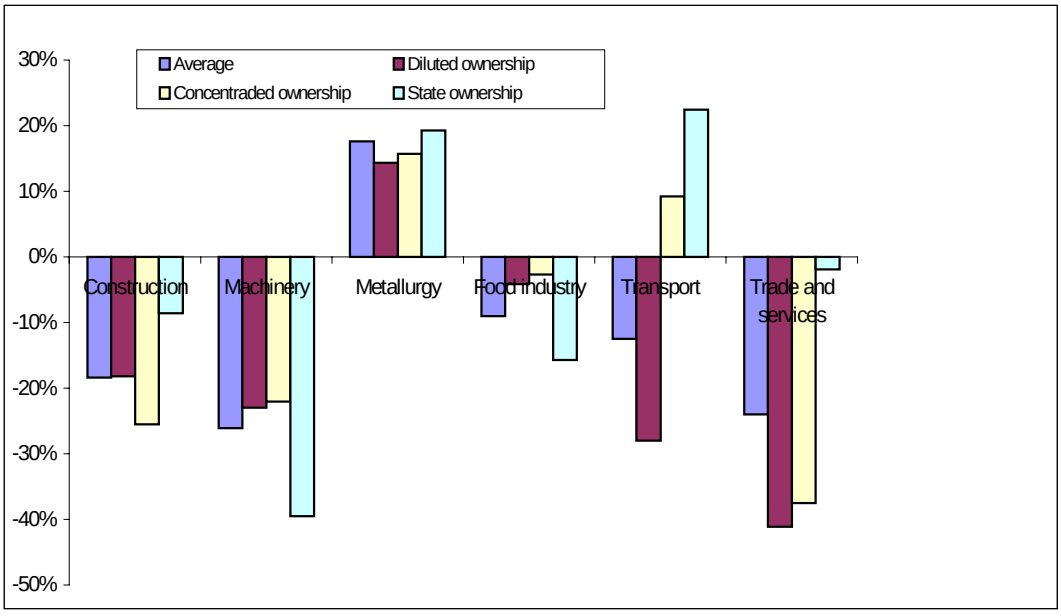
Variable	
Intercept	**0.79*** (0.29)
LPInitial	**-0.01*** (0.003)
Privatization	-0.18 (0.29)
Number of observations	190
R square	0.08

Note: *p≤0.05, **p≤0.10; Standard errors are in parentheses. Statistically significant coefficients are boldfaced.

Appendix 7

Analysis of Employment

Figure 1. Employment Change by Ownership and Sector in 1995-1998, %



Source: Calculation based on the sample