

**THE IMPACT OF CONCENTRATED OWNERSHIP ON FIRM
PERFORMANCE IN AN EMERGING MARKET: EVIDENCE FROM
RUSSIA**

Andrei Kuznetsov, Rostislav Kapelyushnikov, Natalya Dyomina

Andrei Kuznetsov is Professor, Lancashire Business School, UK

Contact details: Greenbank Building, Lancashire Business School, University of
Central Lancashire, PRESTON, PR1 2HE, UK.

Tel. 01772 894695. E-mail: akuznetsov@uclan.ac.uk

Rostislav Kapelyushnikov is Chief Researcher, Institute of World Economy and
International Relations, The Russian Academy of Sciences, Moscow.

Natalya Dyomina works at the Russian Economic Barometer, Moscow.

THE IMPACT OF CONCENTRATED OWNERSHIP ON FIRM PERFORMANCE IN AN EMERGING MARKET: EVIDENCE FROM RUSSIA

ABSTRACT

This paper evaluates the impact of ownership concentration on firm performance in a weak institutional environment. Specifically, using new survey evidence, we seek to appraise quantitatively the performance of blockholder controlled firms in Russia and identify within the domain of corporate governance theory factors that may explain such performance. We get evidence of negative association between the size of the dominant owners' shareholding and such performance parameters as investment, capacity utilization and profitability. At the same time, we establish that control structures with multiple large shareholders increase efficiency. The ambiguity of the effects of ownership concentration suggests that country specific factors play an important role.

Keywords: corporate governance; ownership structures; performance; Russia

1. Introduction and Research Focus

The issue of an efficient ownership structure is universally important, but in particular for transition economies in Central and Eastern Europe that face the challenge of achieving accelerated progress in order to narrow the gap with other European economies. In this paper we investigate the situation in Russia, the largest of post-communist countries. There, as in other transition economies, great hopes were originally placed on the ability of mass privatization to create "responsible" owners

and produce a foundation on which economic reconstruction and growth would flourish (Chubais and Vishnevskaya, 1993). In Russia at least these expectations have failed to become a reality. Restructuring in privatized firms has been slow, fixed production assets show a significant rate of wear, innovation activity is low as is the competitiveness of domestic goods. In this context, the inability of new owners to lead the firms forward has been consistently identified as one of the causes of the poor economic performance of Russian companies (Nellis, 1999; Desai and Goldberg, 2000).

Ownership structure may be seen as a part of the problem. Privatization was intended to create wide spread ownership along the lines of the Anglo-Saxon model. Instead, within just a decade a different pattern has emerged. Ownership of Russian firms is characterized by the following three features: (a) it is highly concentrated (blockholder ownership); (b) dominant owners seek direct control over the firm by assuming managerial and board positions; (c) among dominant shareholders insiders prevail. Literature makes a number of predictions regarding the performance of companies as a reflection of their ownership structures and the allocation of control. In conceptual terms, when blockholder ownership is included into equation, the focus of the debate about ownership and control shifts from a two-way conflict between management and shareholders, which has been in the centre of attention ever since the publication of the classical work by Berle and Means, to a three-way conflict between blockholders, managers, and minority investors (Berglöf and von Thadden, 1999). The literature argues that concentrated ownership is likely to reduce the classical owner-manager problem, but at the same time to increase the possibility of

an agency conflict between controlling shareholders and minority shareholders, in particular when legal protection of outside investors is weak and transparency is low (Fama and Jensen, 1983; Shleifer and Vishny, 1997; Burkart et al, 2003).

There is substantial empirical literature on the impact of blockholder ownership on firm efficiency (Morck et al., 2000; Anderson and Reeb, 2003; Burkart et al, 2003; Caselli and Gennaioli, 2003; Bartholomeusz and Tanewski, 2006, Villalonga and Amit, 2006; Balsmeyer, and Czarnitzki, 2010; Bozec et al, 2010). The findings, however, are not conclusive and the spectrum of results is quite wide. Thus, for US firms the analysis by Demsetz and Villalonga (2001) and Holderness (2003) revealed no relationship between ownership structure and performance, whilst Anderson and Reeb (2003) were able to identify noticeable gains from concentrated ownership in the family controlled firms. In Europe Maury (2006), using a sample of 1672 non-financial firms from 13 Western European countries, shows that family control is responsible for 7% higher valuations and 16% higher profitability (return on assets) in relative terms as compared to firms controlled by nonfamily owners. By contrast, Kirchmaier and Grant (2005) maintain that at least for Germany, Spain and France concentrated ownership is not the form of ownership that is associated with best performing companies.

Multiplicity of results, in our opinion, reflects difficulties related to the choice of method and data. Already attributing firms according to the type of control is ridden

with difficulties.¹ Nonetheless, despite the ambiguity of empirical studies, the soundness of major theoretical postulates hardly raises any doubts. There seems to be general agreement that the degree to which interests of blockholder owners are aligned with the interests of minority shareholders, their resolution to maintain control over the firm, the forms in which they seek to extract private benefits of control and their commitment to the firm would depend on the environment in which they operate, in particular institutional settings and capital markets (La Porta et al. 1999; Johnson et al., 2000; Burkart et al, 2003; Bhattacharya and Ravikumar, 2001, Whitley, 2009). Conceptual models normally assign to blockholders the qualities of rational risk-averse economic agents, assuming that they would be interested in maintaining control as long as benefits outweigh costs. Market failings can act as constraints severely limiting strategic options available to blockholders and actually forcing them into a particular mode of operational behaviour.

There is a sizeable body of literature scrutinizing conceptual aspects of corporate governance in Russia (Aukutsionek et al, 1998; Berglöf and von Thadden, 1999; Franklin, 2005; Kuznetsov and Kuznetsova, 2003; Perotti and Gelfer, 2001; Estrin and Poukliakova, 2009; Maury and Liljeblom, 2009), but empirical evidence is conspicuously scarce. In this paper we set out to evaluate the impact of ownership structure on firm performance in a weak institutional environment. Specifically, we seek to appraise quantitatively the performance of blockholder controlled firms in Russia and identify within the domain of corporate governance theory factors that

¹ For example, the estimates of the share of family-controlled firms among the largest American industrial corporations vary from 35 per cent (Anderson and Reeb, 2003) to as high as 60 per cent (Zeitlin, 1974).

may explain such performance. To preview our findings, we get evidence of negative association between the size of the dominant owners' shareholding and such performance parameters as profitability, investment and capacity utilization. These results are in contradiction to a substantial body of literature that has established a positive link between ownership concentration, in particular in the guise of a family firm, and performance. At the same time, in line with Bennedsen and Wolfenzon (2000), we establish that control structures with multiple large shareholders increase efficiency. We think that our findings reflect insecurity of dominant shareholders in Russia in the situation when the legal system offers inadequate protection of legitimate owners, even if they hold majority stakes.

Empirical analysis of corporate governance in Russia is often made difficult by the culture of secrecy that reigns in companies controlled by local capital. Achieving consistent data for longitudinal studies is particularly complicated. Our empirical study is based on the original statistics generated by regular microeconomic surveys organized by the Russian Economic Barometer (REB), an independent research centre located in Moscow. REB is probably the only regular source of survey data on the evolution of ownership in Russia.² REB's respondents are executive managers of 500 industrial enterprises in almost all regions of Russia. In terms of firm size, sector affiliation and methods of privatization the REB sample is reasonably representative of the whole population of Russian medium- and large-size industrial enterprises. From 1995 every two years REB conducts specialized surveys dedicated to the issues of ownership and corporate governance, effectively covering the period from the

² The Center's analytical bulletin *REB: Market Situation Tests, Estimates, Forecasts* is published four times a year and is available in English.

completion of mass privatization till present. Usually the studies of corporate governance in Russia focus on the so-called “blue chip” firms, a rather small group of super large firms operating in oil extraction and other lucrative industries. By contrast, REB respondents represent the hard core of Russian firms, average in size and every other respect, that enjoy no exclusivity but remain the backbone of the national economy. REB surveys contain rich information on the structural and ownership characteristics and performance of the respondent firms. Importantly, the results of the REB surveys are representative and consistent with other studies for similar periods (Table 1).

The paper is organized as follows: in the next section we review the literature on corporate governance and ownership relevant to our research question and present some stylized facts on corporate ownership in Russia. The subsequent sections outline data and methodology. The last section summarizes the findings and draws conclusions.

2. Background to the study

2.1. Theory

Under the influence of the groundbreaking research by Rafael La Porta and his co-authors (La Porta et al., 1997, 1998, and 1999) for a long time one of the most discussed topics in literature was the impact of legal arrangements on ownership concentration and corporate governance. Recently in what Castaneda (2006) describes as the “second generation” of studies there has been growing recognition that legal framework, important as it is, is only one of the manifestations of a more

inclusive category, which may be characterized as an institutional context (see Shleifer and Wolfenzon, 2002, for detailed literature overview). This approach implies that investors' decisions are shaped by the institutional environment and therefore differ from one economy to another. Institutions are action frameworks (laws, regulations, traditions, routines, customs, etc) which constitute the procedures and practices that facilitate the resolution of economic conflicts and thus offer a solid and cost-effective foundation for market transactions by providing economic actors with universal and explicit rules that allocate responsibility and set up behavioural boundaries (North, 1990). If the mechanisms of conflict resolution are well evolved, the presence of large shareholders may be beneficial for small shareholders and increase returns on investment and the value of the firm. Thus, in principle, firms with large dominating shareholders may achieve closer monitoring of managers' performance because, on the one hand, for such shareholders the cost of monitoring per share is low comparing to small owners whilst, on the other hand, they are more likely to associate their own interests with the interests of the firm they control. Also, when blockholders are unable to dilute their holdings, there are strong incentives to "supervise" in a manner consistent with shareholders' long-term commitments (Burkart et al, 2003).

A weak institutional context can break this concurrence of interests of small shareholders and blockholders. The advantages that domination gives to blockholders will not be balanced any more by means of protection that strong institutions offer to small shareholders, encouraging in dominant owners expropriating behaviour. The way in which benefits of control are extracted offers a good example of the link

between institutional provisions and owners' behaviour. Such benefits come in two forms (Burkart et al, 2003; Kirchmaier and Grant, 2005). One has to do with "amenity potential" of control and refers to non-pecuniary private benefits, like social prestige of running a firm, that does not come at the expense of profits.³ The other is known as "tunnelling" and involves using control to extract material benefits through direct expropriation of outside investors and minority shareholders. This may range from transactions with related parties and transfer prices to outright theft (Johnson et al., 2000) and is possible in a systematic form only if outside investors and minority shareholders do not have adequate legal protection and the rules regarding the transparency and monitoring of business are either feeble or not enforced. In other words, "tunnelling" thrives in economies besieged with institutional failings.

Literature indicates further that in such economies formal income rights become less important for the allocation of value than control (Shleifer and Vishny, 1997; Modigliani and Perotti, 1998). Equally, the market for corporate control becomes less important than internal dealings (Mayer, 1999). Weak institutional context both encourages dominant owners to internalize moral hazard and offers prospects to insulate them from disciplinary sanctions. This is best achieved if dominant shareholders either occupy managerial and board positions themselves or entrust these positions to close associates. At the same time, by internalizing moral hazard, tightly held firms may get a relative performance advantage in economies in which

³ This is not to say that pursuing non-pecuniary private benefits cannot result in value destruction. The receivers of such benefits may place higher premium on retaining them than on securing the expansion and growth of the firm to the detriment of smaller shareholders (Thomsen et al, 2006).

the limitations of institutional settings makes it difficult to arrange transactions on the basis of “generalized trust” rather than “particularized trust,” to use the terms pioneered by Yamigishi and Yamigishi (1994). The relation between institutions and trust is as follows: they create the environment in which participants in a transaction by default have reasonable trust in most people rather than only the people they know personally. This reduces transaction costs in as much as confidence in the ability of institutions to enforce contracts and enforce property rights makes unnecessary meeting the cost of building the specific relationship of trust between individual members of the society, organizations and firms (Uzzi 1997). If, however, institutions perform poorly “particularized trust” grows in importance at the expense of “generalized trust.”

One implication particularly relevant to transition economies is that lack of “generalized trust” pushes most control transactions outside the official exchanges (Berglöf and von Thadden, 1999). This effect is multiplied by the fact that capital markets in such economies are relatively undeveloped. They are small in size, have a liquidity problem and do not offer a great variety of investment opportunities. These constraints severely limit strategic options available to blockholders, especially motives and ability to disinvest (Bhattacharya and Ravikumar, 2001; Caselli and Gennaioli, 2003). First, undeveloped markets make it problematic and costly to pull large investment out of the firm and diversify a portfolio. Second, if the owner wants to transfer some of his wealth from shares into cash, he may find it difficult to sell the stock, provoking him into maintaining the stock and using his position of control to

transfer company assets into cash through transactions with related parties, transfer pricing, excessive salaries, etc, i.e., “tunnelling.”

Summarizing what literature has to say about ownership and control in institutionally weak economies we come up with the following profile. The interests of large owners and small owners are likely to be disentangled. Lack of generalized trust and ineffective provisions for conflict resolution will stimulate blockholders to impose tight control over the firm and get directly involved in management in order to create conditions for realizing the benefits of control (entrenchment). They may not be particularly concerned with the market value of the firm because of the inefficiency of capital markets. Instead they may choose straightforward asset expropriation.

This analysis gives some pointers regarding the likely behavioural pattern of the blockholder in economies like Russia but falls short of answering the question whether or not blockholders would be interested in improving firm performance. In principle, their choice would depend on the strength of commitment that they hold towards their investment. It is not inevitable that institutional inefficiencies should necessarily undermine such commitment. There is a body of literature that points out that supposedly inefficient ownership structures can in fact be efficient in the context of their specific institutional environment (Bebchuk and Roe, 1999; Roe, 2002; Stulz, 2005). Ineffective market mechanisms are likely to be detrimental to the welfare of market-trading shareholders and their willingness to provide financing, but blockholders may be nonetheless sufficiently interested in keeping and increasing their private benefits to become concerned with the long-term growth of the firm. In

fact, research points out that inadequate institutions and failures in financial markets contribute to ownership concentration and the longevity of certain forms of tightly held firms like family firms (Castaneda, 2006; Thomsen et al, 2006).

All in all, if we move from concepts to reality, available theory provides us with quite strong foresight regarding general motives, constraints and choices that affect blockholders exposed to ineffective institutions but is less specific when dealing with the impact of concentrated ownership on firm performance because such impact is very sensitive to actual conditions that exist in a particular institutional environment. This increases the cognitive value of country focused research. In this paper our aim is to contribute to knowledge by evaluating the effects of ownership concentration on the firm's performance in Russia as an example of a large transition economy.

2.2. Some Stylized Facts

In Russia institutional settings provide a vivid case of a business environment which makes control more important than formal income rights because of the weak legal protection of shareholders, underdeveloped capital markets, and the restricted role of institutional investors (Vasilyev, 1999). Throughout the immediate post-privatization period shares did not bring any real benefits to most shareholders as they had low liquidity and dividends were not paid. In addition corporatisation coincided with a period of a profound economic crisis in the country, which had as its most notable manifestations demonetization and barterisation of the economy. Both circumstances had a long lasting impact on corporate governance and set preconditions for blockholder ownership. First, it diluted the strength of monetary signals and

incentives, and hampered the informational content of prices, making it difficult for both shareholders and investors to determine the value of shares or identify the investment potential of individual firms. Open market competition for financial resources was unfeasible and the investment markets were extremely depressed. Second, these circumstances worked as incentives for substituting networking and other informal arrangements for the market. Managers had to rely on successful networking as they sought to compensate the poor performance of formal institutions with arrangements based on personal contacts. The role of networks was controversial. On the one hand, informal relations provided means to create zones of trust within the general environment of distrust, thus reducing transaction costs. On the other hand, in the context of economic crises and weak institutional arrangements, networking often pursued the goal of conspiring against outsiders and avoiding legal control over financial and other transactions, rather than getting better knowledge of business partners and their needs (Radaev, 1998).

Corporate ownership in Russia has been influenced by the bias in the allocation of shares built into the privatization program: originally the majority of equity (51%) was distributed among workers and managers of privatized enterprises. According to the Russian Economic Barometer (REB) data, as late as 2003 insiders remained the largest shareholder group, controlling 47% of all outstanding shares. This does not mean though that the configuration of shareholding had remained unaltered during this period. In reality, it had experienced some sharp and pronounced changes. According to our estimates as much as 15% of shares were changing hands in a typical Russian firm every year between 1995 and 2003 (Table 1). The redistribution

of shares proceeded according to the following pattern: ownership shifted from workers to managers; from insiders to outsiders; from the state to private owners.

Managers have come out as the biggest winners. Their equity stake has increased from less than 10% in 1994 to over 30% at present. According to REB statistics, already by 2003 in an average industrial firm the managers had accumulated more shares than the rest of employees together; by 2007 they controlled 40% of all shares against 14% held by workers. Even these impressive figures, however, are believed to underestimate the degree of concentration of ownership in the hands of managers. The secretive nature of the Russian corporate world makes it very difficult to quantify the structure of ownership. According to expert evaluation based on in-depth empirical studies, senior management is in control of no less than 50% of firms because many shareholders-outsiders are just a façade for managers (Dolgopyatova, 2001; Sizov, 2004). Within the population covered by REB surveys the proportion of firms that have their senior manager as the largest shareholder increased from 24% in 1999 to 39% in 2005. It is also typical that the stake of the largest shareholder tends to grow (currently it is close to 50% of the average authorized capital) (see Table 2). As far as outsiders are concerned, an important feature of the modern ownership structure, from the point of view of corporate governance, is that they are mostly industrial firms and individuals. The share of banks, financial companies, investment funds, etc. remains stable and low at about 10%.

A considerable volume of shares has moved between the people who received their shares as members of working collectives during mass privatization and those who

bought or received their shares from original owners at a later stage. Some of the latter have managed to consolidate their acquisitions into blocks that allowed them to dislodge the old “red director” and step into his place. According to our estimates in 2005 among firms controlled by top managers as a group 44% were controlled by their former “red directors” whilst 56% were controlled by the teams who arrived after privatization. Among firms in which the CEO was the largest shareholder the proportion was 36% and 64%.

In most countries of the world companies with concentrated ownership grew and developed as family firms, often from entrepreneurial origins. In Russia, in which private property of industrial assets has its origins in mass voucher privatization, medium and large firms neither originated with some innovative ideas of the founder-owners, nor could they become a family affair. Nonetheless, the majority of them are tightly held firms: shares are usually concentrated in the hands of 2-7 individuals tied with informal links and common background. Indeed, the owners of such firms usually go back together a long time. Often they knew each other professionally already before the market reforms started, they did their first steps as businessmen together and now own comparable stakes in the firm. This model of ownership may be found in the most successful Russian companies. It also facilitates such important feature of the Russian corporate scene as the deliberate complexity of ownership rights with the aim to conceal the identity of true owners. Often this is a reaction to the poor protection that the legal system offers to legitimate owners. Non-transparency of property rights is artificially maintained by the owners of many

companies as a barrier against possible interference of the state or capture by market raiders (Pappe, 2002).

3. Empirical analysis

To verify ownership concentration effects on investment and performance we carried out a number of formal tests. Our research strategy was as follows. Using the REB survey data for 1999-2003 we constructed an unbalanced panel and experimented with a number of alternative specifications. In order to test the stability of our results we applied several estimation techniques robust to different descriptions of the error structure. In addition to OLS (or logit regressions for models with binary dependant variables) we used random and fixed effects estimation techniques, which allowed us to control for unobserved individual (firm-specific) effects. We employed Hausman test to establish if fixed or random effects specification was preferable. To account for a possible non-linearity of relations between firm's performance and its ownership structure (Morck et al, 1988), we tried various versions of piecewise and polynomial regressions. However, all non-linear specifications turned out to be ineffective so only results for the linear ones are reported in this paper.

The set of variables that were included in our econometric tests is presented in Appendix 1. There are various measures of "firm performance" relevant to our purpose. Most studies appear to focus on net profit, stock market returns, and cash flow. In effect, "performance" is measured by the income generated by the firm and available for distribution among the various claimants to the firm as expressed by various accounting ratios (Clark and Wójcik, 2005). In the Russian context we were

forced to choose other parameters because traditional accounting measures tend to be either unavailable or unreliable as a result of chronic income underreporting, payments in kind and barter transactions. In fact, according to the survey of 1,000 Russian firms, only 10% use GAAP/IAS rules in accounting (Guriev et al, 2003, p.16).

3.1. Dependent variables.

Capital investment in equipment or technology (INV) has been chosen as a measure of firm performance because it is an important synthetic indicator of restructuring behavior within the firm (Sim, 2001). In the REB surveys it is computed in terms of investment spending in the current year as compared to the level in the previous year. Additional characteristics of investment which are used in some specifications are the share of total investment financed from external sources (EXT) and the index of productive capacity (CAP).

Since many companies in the REB sample are not listed, the use of stock market performance indicators such as ROE (return on equity) or Tobin's Q is not feasible. Instead, we use a broad range of variables that might approximate performance of an individual company. It includes, first, indicator of profit margin (PM); second, a binary variable PROFIT, which equals 1 if the firm declared profits in the previous year, and 0 otherwise; third, capacity utilization rate (UR).

3.2. Independent variables and controls.

We measure ownership concentration as the percentage of shares held by the largest shareholder (CON1). We further make a distinction between different categories of blockholders. REB data includes eleven different categories of owners. We have grouped them into four categories: “insiders” (INS): employees, managers and firms owned by managers; “non-financial outsiders” (NONFIN): individuals and firms not affiliated with the company they own; “financial outsiders” (FIN): banks, investment funds, holding companies and foreign investors; and “the state” (STATE).

To deal with a possibility that a variety of factors can jointly affect performance and ownership variables and thus induce spurious correlation between them we introduced a number of control variables. Firm-size factors are widely acknowledged as driving the performance of the firms (Boubakri, 2005; Wincent, 2005). We therefore introduce the control variable SIZE measured by the total number of employees in the firm. A number of authors suggest that managerial opportunism and entrenchment may be associated with the firm maturity and age (Morck et al., 1988). Accordingly, we establish a control variable AGE measured as the number of years since the firm was founded. We use industry dummies to control for industry effects (the reference category was “other industries”) and dummies for calendar years when particular surveys were conducted. Finally some enterprises may be more seriously affected by the break-up of the centrally-planned economy and disintegration of the former system of production and distribution than others. To control for this systemic factor, we introduced a control variable ORDER that is measured as number of orders the firm received in a particular year as the percentage of the previous year.

3.2.3. Econometric Analysis

The results of formal tests for investment are presented in Table 4. The starting point of the analysis is the OLS regression of investment on ownership of the largest shareholder plus the control variables. Ownership concentration is found to be negatively and significantly associated with investment (at $p \leq 0.01$). As a next step we sought to verify the importance of the shareholder's identity by regressing investment on identities of the largest shareholders (insiders, financial outsiders, and the state; the reference group is "financial outsiders"). Results obtained are less coherent: all regression coefficients are insignificant except the category "insiders." These findings suggest that investment in the Russian companies is negatively related to ownership concentration, but this relationship does not depend on the identities of large blockholders. This conclusion is supported by results of our last test that incorporates both types of ownership variables – concentration equity measures as well as identities of the largest shareholders: the regression coefficients for ownership concentration continue to be negative and significant whilst the identity of blockholders exerts no visible impact on firms' investment behavior.

In terms of the control variables, the regression coefficients for the SIZE are positive and significant. This could be a sign that large firms in the sample have better investment capabilities. The firm's AGE has proved to be insignificant, suggesting that investment activity in new firms is not higher than in old ones. However, there is a strong and significant (at $p \leq 0.01$) positive relationship between investment and the level of orders. It is not unexpected, bearing in mind that the level of orders may be

considered as a proxy for the firm's competitive position and financial health in general. We also introduce industry dummies, but, surprisingly, they are mostly insignificant. This pattern of relationships between the investment and control variables is generally consistent with results reported elsewhere (see, for example, Filatotchev *et al.*, 2001). As far as individual (firm-specific) effects are concerned we see that the random effects specification looks more preferable (see the results of Hausman tests in Table 5 that support this conclusion).

As a next stage, we aimed to verify relationship between ownership concentration and various performance proxies defined earlier. Table 5 reports the main results for this regression analysis (to save space we include in this table only the results for those regressions that incorporate both ownership variables, i.e., ownership concentration and the identity of the largest shareholders).

The regression coefficients for the largest single shareholding are significant and have negative sign for all performance proxies. This suggests that other things being equal the greater the block of shares held by the largest owner the less the capacity utilization, the smaller profit margin and the higher the probability of loss-making. These results are robust to alternative regression measurements as we can see from the columns for random and fixed effects models where we controlled for firm-specific effects.

By contrast, the regression coefficients for identity variables are insignificant for almost all performance proxies. Only in regressions with capacity utilization as a

dependant variable the regression coefficients for INS turn out to be significant (at $p \leq 0.05$) and have negative sign. This implies that enterprises with the largest block of shares belonging to insiders (virtually to managers) tend to have greater spare capacities. SIZE is significant only in the model with fixed effects for capacity utilization while the firm's AGE remain insignificant in all tests. The level of orders is strongly and positively associated with performance, indicating that firms that managed to preserve their traditional trade relationships are generally performing better. And again we have found that in most cases random effects estimators are preferable to fixed effects ones.

As literature suggests that control structures with multiple large shareholders may act differently comparing with firms with just one large owner (Bennedsen and Wolfenzon, 2000), we ran an additional series of cross-section regressions employing the independent variable CON2 to designate the second largest shareholder. We ran this analysis on the basis of the 2003 REB survey, which for the first time made available information on the second largest block of shares. Results of this exercise are provided in Table 6. It shows that the regression coefficients for the largest single shareholding in most specifications are significant and have a negative sign; however regression coefficients for the second largest single shareholding are significant but have a positive sign! Additional regressions for two other investment variables – proportion of investment financed from external sources and the index of capacity utilization – confirm that the first and the second largest stakes exert opposite and statistically significant impact on investment characteristics. Moreover, the variable CON2 have positive regression coefficients in equations for all other performance

proxies (capacity utilization, profit margin and the incidence of profit-making) as dependant variables. In other words, sizable stakes held by the second largest shareholders appear to encourage investments, create better opportunities for external financing, stimulate expansion of existing capacities, raise capacity utilization and provide positive effects on profitability (in the regressions with PROFIT as dependant variable coefficients for the second largest block of shares are positive but insignificant).⁴

Having established an association between multiple ownership and performance, we are nonetheless unable to maintain with certainty that the former is the cause of the latter on the basis of the source data available to us. It may be easily hypothesised that successful firms are more attractive to investors and therefore they are more likely to be controlled by a group of large shareholders. Yet we are inclined to think that, in Russia at least, it is multiple ownership that drives performance for the simple reason that equity emission is used only very rarely as a means to raise new capital. Consequently, the premise that efficient firms are more likely to become owned by a group of significant owners lacks credibility.

4. Discussion and conclusions

This paper analyses the effects of ownership concentration on performance of firms in Russia. Our findings can be summarized in two broad conclusions which are relevant not only for Russian privatized firms but for corporations with concentrated shareholdings operating in economies with poor-functioning institutions in general.

⁴ We omit the discussion of effects of control variables which are similar to results obtained for panel estimates.

First, our findings denote that there may be a negative impact of ownership concentration on firm performance. In doing so our results conform with the theoretical model by Castaneda (2006) which suggests that, when minority-shareholders are not well-protected, the markets are not very liquid, share prices do not convey the needed information to improve efficiency in allocation, and legal and political institutions that protect the rights of all stakeholders are weak, ownership concentration will result in controlling owners choosing low-risk, low-productive projects if they feel that their position is threatened. Similar view is expressed by Desai and Goldberg (2000, see also Grosfeld, 2009) who argue that the problem of corporate governance in countries like Russia is not limited to protecting minority shareholders or other financiers. Rather it is the problem of insufficient incentives that owner-managers have to restructure firms and maximize their value over the long run. Desai and Goldberg (2000) relate this to two aspects of Russian reality. To begin with, firm performance reflects the insecurity of dominant shareholders as they feel threatened by the general instability and uncertainty regarding property rights, inheritance rights, contract law, judicial protection, personal safety, etc.⁵ Next, the undeveloped state of Russian capital markets makes it difficult for owners to realize value accumulated in shares. In fact, Pappe (2005) maintains that the only legal way of doing this is by trading the shares of Russian firms on international stock markets.

⁵ The Russian legal system offers inadequate protection of legitimate owners, even if they hold majority stakes. In the West hostile takeovers are feasible when shares of the target company are widely available and easily purchased. In Russia hostile takeovers rely on the abuse of the rights of shareholders and the exploitation of legalistic hitches and corruption in the judicial system. One of the common tricks is to obtain a judicial decision that bans the current owners of the firm to use their right to vote in the shareholders general meeting or take a position on the board of directors. Another ploy is to make the court requisite the registry of shareholders, the only legal proof of ownership, and then replace it with an alternative registry with a different composition of shareholders (Sizov, 2004). One notorious incident involved Krasnoyarsk Aluminium, which deleted from its share register a 20 percent stake held by the British Trans World Group, effectively wiping out its holding (Mileusnic, 1996).

This, of course is out of reach for the absolute majority of Russian companies. As a consequence of these objective constraints, controlling owners are more likely to be engaged in “tunnelling” and asset stripping rather than increasing long term value of the firm.

The second broad conclusion is that in a certain institutional environment a coalition of several significant owners might have a favorable impact on the performance of the firm. We have obtained positive empirical evidence that coalitions can provide a governance mechanism that would minimize combined costs associated with both managerial and majority shareholder opportunism. Our result finds support in literature. Bennedsen and Wolfenzon (2000) argue that the coalition of owners internalizes the costs of its actions, resulting in fewer costly private benefits it extracts. Similarly, Brunello et al (2003) obtain results that multiple non-CEO controlling shareholders are a governance mechanism that provides a substitute for outside members on boards of directors in lowering agency costs. Our own interpretation of our empirical findings is similar. In Russia it is very difficult for shareholders excluded from the narrow circle of owners who actually run the firm to exert any influence. However, the members of such a circle are likely to be in a position to organize effective monitoring and control both over firm’s managers and over each other. A more balanced configuration of property rights might contribute to maximization of corporate wealth. Unfortunately, our current knowledge of coalitions between significant shareholders in Russian firms (their formation, stability and roles allocation within the coalition) is still very limited. Further research is needed to

provide informed advice to both Russian policy-makers and foreign investors willing to invest in the Russian corporate sector.

In this paper we have identified two tendencies in the Russian corporate sector. Both are related to the same cause. The poor state of the institutional framework puts a pressure on large shareholders to keep increasing their stake. As a result their control over the firm increases. However, the same institutional inadequacies make this category of shareholders feel insecure about the future of their investment. This undermines their commitment to the firm they own/control and encourages to tunnel wealth out of companies. Evidently, these are the signs of an unhealthy situation that endangers the long-term restructuring and growth of the Russian economy.

Bibliography

Anderson, R.C., and Reeb, D.M. (2003.) Founding-family ownership and firm performance: evidence from the S&P 500. *Journal of Finance* 58: 1301– 1328.

Aukutsionek, S., Filatochev, I., Kapelyushnikov, R., Zhukov, V. (1998.) Dominant shareholders, restructuring, and performance of privatized companies in Russia: An analysis and some policy implications. *Communist Economies and Economic Transformation* 10(4): 495-517.

Balsmeyer, B., and Czarnitzki, D. (2010.) Ownership concentration, institutional development and firm performance in Central and Eastern Europe. ZEW Discussion Paper No. 10-096.

Bartholomeusz, S., and Tanewski, G.A. (2006.) The relationship between family firms and corporate governance. *Journal of Small Business Management* 44(2): 245– 267.

Boubakri, N., Cosset, J.-C., and Guedhami, O. (2005.) Postprivatization corporate governance: The role of ownership structure and investor protection. *Journal of Financial Economics* 76(2): 369-399.

Bebchuk, L.A., and Roe, M.J. (1999.) A theory of path dependence in corporate ownership and governance. *Stanford Law Review*, 52(1): 127–170.

Bennedsen, M., and Wolfenzon, D. (2000.) The balance of power in closely held corporations. *Journal of Financial Economics* 58(1-2): 113–139.

Berglöf, E., and von Thadden, E.-L. (1999.) The changing corporate governance paradigm: implications for transition and developing countries. Mimeo.

Bhattacharya, U., and Ravikumar, B. (2001.) Capital markets and the evolution of family businesses. *Journal of Business* 74(2): 187-220.

- Blasi, J., Kroumova, M., and Kruse, D. (1997.) *Kremlin Capitalism. Privatizing the Russian Economy*. Cornell University Press: Ithaca, NY.
- Bozec, R., Dia, M., and Bozec, Y. (2010.) Governance-performance relationship: a re-examination using technical efficiency measures. *British Journal of Management* 21(3): 684-700.
- Brunello, G., Graziano, C., and Parigi, B.M. (2003.) CEO turnover in insider-dominated boards: The Italian case. *Journal of Banking & Finance* 27(6): 1027–1051.
- Burkart, M., Panunzi, F., and Shleifer, A. (2003.) Family firms. *Journal of Finance* 58(5): 2167- 2202.
- Caselli, F., and Gennaioli, N. (2003.) Dynastic Management. CEPR Discussion Paper No. 3767.
- Castaneda, G. (2006.) Economic growth and concentrated ownership in stock markets. *Journal of Economic Behavior & Organization* 59(2): 249-286.
- Claessens, S., Djankov, S., and Lang, L.H.P. (2000.) The separation of ownership and control in East Asian corporations. *Journal of Financial Economics* 58(1-2): 81–112.
- Clark, G.L., and Wójcik, D. (2005.) Financial valuation of the German model: the negative relationship between ownership concentration and stock market returns. *Economic Geography* 81(1): 11-29.
- Demsetz, H., and Villalonga, B. (2001.) Ownership structure and corporate performance. *Journal of Corporate Finance* 7(3): 209–233.
- Dolgopyatova, T. (2000.) Otnosheniya sobstvennosti i modeli korporativnogo kontriiya v rossiiskoi promyshlennosti. The Higher School of Economics Discussion Paper 3, Moscow.

- Dolgopyatova, T. (2001.) Modeli korporativnogo kontroliya na rossiiskikh predpriyatiach. *Mir Rossii*, 10(3): 12-24.
- Earle, J.S., Estrin, S., and Leschenko, L.L. (1996.) Ownership structures, patterns of control, and firm behavior in Russia. In *Firm Restructuring and Economic Policy in Russia* (Commander S., Fan, Q., and M.Shaffer, eds.). Washington, DC: The World Bank, EDI.
- Estrin, S., and Wright, M. (1999.) Corporate governance in the former Soviet Union: An overview. *Journal of Comparative Economics* 27(3): 398–421.
- Holderness, C. G. (2003.) A Survey of blockholders and corporate control. *Economic Policy Review* 9(1): 51-63.
- Faccio, M., and Lang L. H. P. (2002.) The ultimate ownership of Western European Corporations. *Journal of Financial Economics* 65(3): 365-395.
- Fama, E., and Jensen, M.C. (1983.) Separation of ownership and control. *Journal of Law and Economics* 26(2): 301– 325.
- Filatovchev, I., Stephan, J., and Jindra, B. (2008.) Ownership structure, strategic control and export-intensity of foreign-invested firms in transition economies. *Journal of International Business Studies* 39(7): 1133-1148.
- Filatovchev, I., Buck, T., and Zhukov, V., (2000.) Downsizing in privatized firms in Russia, Ukraine and Belarus. *Academy of Management Journal* 43(3): 286–304.
- Filatovchev, I., Kapelyushnikov, R., Dyomina, N., and Aukutsionek, S., (2001.) The effects of ownership concentration on investment and performance in privatized firms in Russia. *Managerial and Decision Economics* 22(6): 299-313.
- Franklin, A. (2005.) Corporate governance in emerging economies. *Oxford Review of Economic Policy* 21(2): 164-177.

- Grosfeld, I. (2009.) Large shareholders and firm value. *Economic Systems* 33(3): 259-277.
- Guriev, S., Lazareva, O., Rachinsky, A., and Tsukhlo, S. (2003.) Corporate Governance in Russian Industry. CEFIR Working Paper, Moscow.
- Johnson, S., La Porta, R., Lopez-de-Silanes, F., and Shleifer, A. (2000.) Tunneling. *American Economic Review Papers and Proceedings* 90(2): 22-27.
- Kirchmaier, T, and Grant, J. (2005.) Corporate ownership structure and performance in Europe. *European Management Review* 2(3): 231–245.
- Kuznetsov, A., and Kuznetsova, O. (2003.) Corporate governance: Does the concept work in transition countries? *Journal for East European Management Studies* 8(3): 244-262.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. (1997.) Legal determinants of external finance. *Journal of Finance* 52(3): 1131-1150.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. (1998.) Law and finance. *Journal of Political Economy* 106(6): 1113-1155.
- La Porta, R., Lopez-de-Silanes, F., and Shleifer, A. (1999.) Corporate ownership around the world. *Journal of Finance* 54(2): 471-517.
- Maury, B. (2006.) Family ownership and firm performance: Empirical evidence from Western European corporations. *Journal of Corporate Finance* 12(2): 321– 341.
- Maury, B., and Liljeblom, E. (2009.) Oligarchs, political regime change, and firm valuation. *Economics of Transition* 17(3): 411-438.
- Mayer, C. (1999.) Corporate governance, competition and performance. Economic Department working paper No. 164. OECD, Paris.
- Mileusnic, N. (1996.) The great boardroom revolution. *Moscow Times*, July 16.

- Modigliani, F., and Perotti, E. (1997.) Protection of minority interest and the development of security markets. *Managerial and Decision Economics* 18(7-8): 519-528.
- Morck, R., Shleifer, A., and Vishny, R. (1988.) Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics* 20(3): 293-316.
- Morck, R.K., Stangeland, D.A., and Yeung, B. (2000.) Inherited wealth, corporate control, and economic growth. The Canadian disease? In *Concentrated Corporate Ownership* (Morck, R.K., Ed.). Chicago: University of Chicago Press, pp. 319–369.
- North, D.C., 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- Pappe, Ya. (2002.) Rossiiskii krupnyi biznes kak ekonomicheskii fenomen: spetsificheskie cherty modeli ego organizatsii. *Problemy prognozirovaniya* (2): 83-97.
- Perotti E.C., and Gelfer, S. (2001.) Red barons or robber barons? Governance and investment in Russian financial-industrial groups. *European Economic Review* 45(9): 1601-1617.
- Roe, M. (2002.) Can culture ever constrain the economic model of corporate law? Harvard Law School Research Paper No.36.
- Sim, K.L. (2001.) An empirical examination of successive incremental improvement techniques and investment in manufacturing technology. *International Journal of Operations & Production Management* 21(3): 373-399.
- Sizov Y. (2004.) Novyi vitok korporativnykh konfliktov. *Aksionernoie obshestvo: voprosy korporativnogo upravleniia*, November 2004. Available at <http://www.sovetnik.orc.ru/texts/sizov.htm>

- Shleifer, A., and Vishny, R. (1997.) A survey of corporate governance. *Journal of Finance* 52(2): 737–783.
- Shleifer, A., and Wolfenzon, D. (2002.) Investor protection and equity markets. *Journal of Financial Economics* 66(1): 3–27.
- Stulz, R. (2005.) The limits of financial globalization. *The Journal of Finance* 60(4): 1595-1638.
- Thomsen, S., Pedersen, T., and Kvist, H.K. (2006.) Blockholder ownership: Effects on firm value in market and control based governance systems. *Journal of Corporate Finance* 12(2): 246-269.
- Uzzi, B. (1997.) Social structure and competition in interfirm networks: The paradox of embeddedness. *Administration Science Quarterly*, 42: 35-67.
- Vasilyev, D. (1999.) Corporate governance in Russia: Are there any chances of improvement? Paper presented at the OECD Conference on Corporate Governance, Moscow, June 1-2 1999. Mimeo.
- Villalonga, B., and Amit, R. (2006.) How do family ownership, control and management affect firm value? *Journal of Financial Economics* 80(2): 385-417.
- Wincent, J. (2005.) Does size matter? A study of firm behavior and outcomes in strategic SME networks. *Journal of Small Business and Enterprise Development* 12(3): 437- 453.
- Whitley, R.. (2009.) US capitalism: a tarnished model? *Academy of Management Perspective* 23(): 11-22.
- Zeitlin, M. (1974.) Corporate ownership and control: the large corporation and the capitalist class. *American Journal of Sociology* 79: 1073-1119.
- Yamigichi, T., and Yamigichi, M. (1994.) Trust and commitment in the United States and Japan. *Motivation and Emotion*, 18: 129-166.

Table 1. Ownership structure of enterprises in Russia, various samples (average shareholdings, %)

	World Bank	J. Blasi <i>et al</i>			Nottingham University		Institute for Economy in Transition (IET)			Higher School of Economics		Bureau of Economic Analysis	
	1994	1994	1995	1996	1994	1996	1994	1995	1996	1995	1998	1994	2000
Insiders, total	69	65	55	58	66	57	62	56	56	51	40	68	53
<i>Managers</i>	<i>21</i>	<i>25</i>	<i>16</i>	<i>18</i>	<i>22</i>	<i>12</i>	<i>9</i>	<i>13</i>	<i>16</i>	<i>8</i>	<i>9</i>	<i>23</i>	<i>18</i>
<i>Workers</i>	<i>48</i>	<i>40</i>	<i>39</i>	<i>40</i>	<i>44</i>	<i>43</i>	<i>53</i>	<i>43</i>	<i>40</i>	<i>42</i>	<i>31</i>	<i>55</i>	<i>35</i>
Outsiders, total	20	22	33	32	22	36	21	33	34	40	52	20	42
<i>Non-financial outsiders</i>	<i>-</i>	<i>-</i>	<i>24</i>	<i>21</i>	<i>17</i>	<i>24</i>	<i>10</i>	<i>14</i>	<i>9</i>	<i>17</i>	<i>35</i>	<i>18</i>	<i>34</i>
Private individuals	-	-	9	6	6	11	10	11	9	5	19	10	19
Other enterprises	-	-	15	15	11	13	-	3	-	12	14	8	15
<i>Financial outsiders</i>	<i>-</i>	<i>-</i>	<i>9</i>	<i>11</i>	<i>22</i>	<i>12</i>	<i>11</i>	<i>19</i>	<i>25</i>	<i>12</i>	<i>17</i>	<i>2</i>	<i>8</i>
State	11	13	13	9	12	9	17	11	10	10	8	12	6

Sources: Blasi *et al.* (1997), Aukutsionek *et al.* (1998), Estrin and Wright (1999), Dolgopyatova (2000) and Filatotchev *et al.*

(2000).

Table 2. Ownership allocation within Russian firms based on REB survey results

	1995	1997	1999	2001	2003	2005	2007 (forecast)
INSIDERS, total	54.8	52.1	46.2	48.2	46.2	46.6	54.0
<i>Managers</i>	<i>11.2</i>	<i>15.1</i>	<i>14.7</i>	<i>21.0</i>	<i>25.6</i>	<i>31.5</i>	<i>40.0</i>
<i>Employees</i>	<i>43.6</i>	<i>37.0</i>	<i>31.5</i>	<i>27.2</i>	<i>21.0</i>	<i>15.1</i>	<i>14.0</i>
OUTSIDERS, total	35.2	38.8	42.4	39.7	44.8	41.0	40.1
<i>Non-financial outsiders, total</i>	<i>25.9</i>	<i>28.5</i>	<i>32.0</i>	<i>32.4</i>	<i>35.6</i>	<i>33.5</i>	<i>29.3</i>
Individual Investors	10.9	13.9	18.5	21.1	20.1	18.0	15.0
Other firms	15.0	14.6	13.5	11.3	15.5	15.5	14.3
<i>Financial outsiders, total</i>	<i>9.3</i>	<i>10.3</i>	<i>10.4</i>	<i>7.3</i>	<i>9.2</i>	<i>7.5</i>	<i>9.8</i>
THE STATE	9.1	7.4	7.1	7.9	4.3	7.3	4.1
OTHER SHAREHOLDERS	0.9	1.7	4.3	4.2	4.9	5.2	2.8
TOTAL	100	100	100	100	100	100	100
Number of firms	136	135	156	154	104	108	71

Table 3 Ownership concentration within Russian firms based on REB survey results

	1999	2001	2003
The proportion of firms in which the largest shareholder holds	%	%	%
fewer than 10% of shares	21	16	9
10-25% of shares	28	33	35
25-50% of shares	26	26	30
more than 50% of shares	25	25	26
Total	100	100	100
Average stake of the largest shareholder	32.9	34.5	37.2
Average stake of the second largest shareholder	-	-	17.2

Table 4. The impact of ownership on investment activities of the firm based on REB survey results, 1999-2003 (panel data)

	1			2			3		
	OLS	RE	FE	OLS	RE	FE	OLS	RE	FE
<i>Ownership variables:</i>									
CON1	-0.520 (3.83)**	-0.505 (2.90)**	-0.407 (1.23)				-0.54 (3.09)**	-0.52 (2.82)**	-0.31 (0.90)
INS				5.44 (0.58)	2.04 (0.21)	-15.13 (1.11)	0.53 (0.06)	-0.47 (0.05)	-11.88 (0.84)
FIN				3.94 (0.33)	-0.54 (0.04)	-20.66 (1.16)	3.54 (0.31)	-0.49 (0.04)	-20.81 (1.17)
STATE				-3.85 (0.28)	-4.97 (0.34)	-12.03 (0.51)	7.43 (0.53)	5.86 (0.40)	-7.53 (0.31)
<i>Controls:</i>									
ORDER	0.390 (3.06)**	0.377 (2.98)**	0.279 (1.25)	0.35 (2.67)**	0.34 (2.39)**	0.26 (1.14)	0.39 (3.01)**	0.37 (2.71)**	0.28 (1.19)
SIZE	8.840 (2.46)*	8.922 (2.18)*	24.550 (1.10)	8.81 (2.11)*	8.97 (1.91)⁺	20.43 (0.89)	8.08 (1.99)*	8.38 (1.86)⁺	21.03 (0.92)
AGE	0.092 (1.15)	0.104 (0.87)		0.12 (1.04)	0.13 (1.02)		0.07 (0.62)	0.09 (0.69)	
2001	10.725 (1.21)	10.204 (1.22)	9.060 (1.02)	8.50 (0.91)	8.07 (0.95)	7.46 (0.84)	10.98 (1.20)	10.31 (1.22)	8.34 (0.94)

2003	12.897 (1.36)	11.890 (0.99)	9.255 (0.82)	5.36 (0.51)	4.11 (0.42)	2.24 (0.21)	11.74 (1.13)	10.22 (1.04)	5.20 (0.46)
Industries	y	y		Y	y		y	y	
Constant	-	-	-	-282.59	-303.97	-87.98	-167.91	-196.87	-84.43
	210.262 (1.35)	232.616 (0.98)	110.427 (0.88)	(1.23)	(1.17)	(0.68)	(0.74)	(0.79)	(0.65)
No. of obs	155	155	155	157	157	157	157	157	157
Hausman test		1.1			5.7			4.2	
R2	0.24	0.24	0.14	0.18	0.18	0.07	0.23	0.23	0.11

Notes: absolute value of t-statistics in parentheses.

*+ significant at 10% level; * significant at 5% level; ** significant at 1% level*

Table 5 The impact of ownership on the firm's performance based on REB survey results, 1999-2003 (panel data)

	UR			PROFIT MARGIN			PROFIT		
	OLS	RE	FE	OLS	RE	FE	Logit	Logit RE	Conditional logit
<i>Ownership variables:</i>									
CON1	-0.19 (2.32)*	-0.20 (2.44)**	-0.21 (1.92) ⁺	-0.08 (0.88)	-0.18 (2.42)**	-0.26 (2.78)**	-0.02 (2.06)*	-0.03 (2.04)*	-0.09 (1.95)*
INS	-5.22 (1.25)	-7.70 (2.02)*	-8.60 (1.96)*	-2.00 (0.51)	-0.22 (0.07)	2.60 (0.71)	0.60 (1.36)	0.51 (0.81)	-0.49 (0.40)
FIN	-0.81 (0.15)	0.73 (0.15)	5.08 (0.90)	0.08 (0.01)	0.86 (0.12)	-0.82 (0.09)	0.27 (0.47)	-0.36 (0.42)	-0.96 (0.59)
STATE	1.95 (0.30)	1.29 (0.20)	-1.62 (0.20)	-0.59 (0.06)	1.95 (0.27)	3.25 (0.41)	-0.37 (0.55)	-0.01 (0.01)	39.08 (0.00)
<i>Controls:</i>									
ORDER	0.57 (9.86)**	0.52 (8.86)**	0.41 (5.53)**	0.12 (1.51)	0.15 (1.87) ⁺	0.18 (1.61)	0.02 (3.46)**	0.03 (2.86)**	0.05 (1.66) ⁺
SIZE	0.01 (0.01)	2.17 (0.94)	28.47 (3.86)**	1.45 (0.57)	0.51 (0.16)	-6.78 (0.88)	0.11 (0.56)	0.23 (0.73)	1.64 (0.68)
AGE	-0.09 (1.70) ⁺	-0.10 (1.49)		0.01 (0.07)	0.00 (0.03)		0.197 (0.09)	0.25 (0.62)	0.30 (0.59)
2001	4.00 (0.98)	2.57 (0.88)	1.62 (0.57)				0.13 (0.29)	0.24 (0.45)	0.83 (1.00)
2003	6.84 (1.46)	3.29 (0.93)	3.03 (0.84)	0.46 (0.14)	-0.83 (0.36)	-0.57 (0.21)	-0.28 (0.58)	-0.41 (0.66)	0.72 (0.75)
Industries	yes	yes	Yes	yes	yes	yes	yes	yes	yes

Constant	202.93 (1.95)*	217.15 (1.65)⁺	-122.67 (2.97)**	-24.19 (0.14)	-10.73 (0.04)	36.28 (0.82)	-3.23 (0.29)	-1.21 (0.07)	
No. of obs	169	169	169	54	54	54	163	163	65
<i>Ownership variables:</i>									
Hausman test		27.2**			5.5				
R2 (Pseudo R2 for Logit)	0.48	0.46	0.19	0.14	0.11	0.01	0.14	0.17	0.40

Notes: absolute value of t-statistics in parentheses.

*⁺ significant at 10% level; * significant at 5% level; ** significant at 1% level*

Table 6. Ownership concentration effects on the firm's performance and investment, 2003 (cross-section analysis)

	UR		INV		EXT		CAP		PROFIT MARGIN		PROFIT	
<i>Ownership variables:</i>												
CON1	-0.22 (1.80) ⁺	-0.27 (2.19)*	-0.29 (1.45)	-0.36 (1.84) ⁺	-0.22 (0.84)	-0.45 (1.70) ⁺	-0.08 (1.40)	-0.11 (1.86) ⁺	0.00 (0.03)	-0.01 (0.16)	-0.025 (1.94) ⁺	-0.026 (1.85) ⁺
CON2		0.52 (1.65) ⁺		1.11 (1.39)		1.08 (1.76) ⁺		0.33 (2.10)*		0.10 (0.81)		0.008 (0.28)
<i>Controls:</i>												
ORDER	0.48 (4.55)**	0.45 (4.26)**	3.29 (0.34)	4.48 (0.48)	0.22 (0.92)	0.19 (0.80)	0.11 (2.32)*	0.09 (2.06)*	-0.01 (0.31)	-0.02 (0.52)	0.020 (1.87) ⁺	0.016 (1.62)
SIZE	-0.28 (0.10)	-0.16 (0.06)	6.60 (1.33)	6.63 (1.46)	7.24 (1.74) ⁺	9.08 (2.15)*	-0.10 (0.07)	-0.05 (0.04)	1.19 (1.51)	1.24 (1.55)	0.324 (1.24)	0.353 (1.36)
AGE	-0.23 (1.68) ⁺	-0.27 (1.99) ⁺	0.21 (1.08)	0.15 (0.67)	-0.10 (0.36)	-0.18 (0.63)	-0.08 (1.26)	-0.10 (1.67) ⁺	0.03 (0.69)	0.03 (0.62)	0.008 (0.60)	0.008 (0.58)
Industry	y	y	y	y	y	y	y	y	y	y	y	y
Constant	483.53 (1.82) ⁺	563.58 (2.11)*	-408.89 (0.99)	-303.87 (0.66)	206.41 (0.37)	338.35 (0.60)	250.68 (1.92) ⁺	294.65 (2.33)*	-69.36 (0.71)	-60.11 (0.65)	-16.972 (0.63)	-16.080 (0.58)
No. of obs.	66	66	65	65	46	46	63	63	58	58	75	66
R2 (Pseudo R2 for Logit)	0.37	0.40	0.17	0.22	0.30	0.35	0.18	0.25	0.03	0.08	0.18	0.19

Notes: Absolute value of t(z)-statistics in parentheses

*⁺ significant at 10% level; * significant at 5% level; ** significant at 1% level*

APPENDIX 1

LIST OF VARIABLES

A. DEPENDENT VARIABLES

PERFORMANCE INDICATORS:

PM – profit margin, %

PROFIT – financial outcome in the previous year ("profit-making" enterprises versus "loss-making" enterprises, a binary variable)

UR – capacity utilization rate, %

INVESTMENT INDICATORS:

INV – investment in fixed assets as % of the previous year

EXT – proportion of investment financed from external sources, %

CAP – index of production capacities as % of the previous year

B. INDEPENDENT VARIABLES:

CON1 – percentage of equity held by the first largest shareholder

CON2 - percentage of equity held by the second largest shareholder

INS – dummy variable for holding the largest single block of shares by insiders

FIN – dummy variable for holding the largest single block of shares by financial outsiders

STATE – dummy variable for holding the largest single block of shares by state

C. CONTROLS:

ORDER – order-book level (as % of the previous year)

SIZE – number of employees

AGE – calendar year of the enterprise foundation

Dummies for the survey dates

Industry dummies