

**Exploring barriers to Coase: blockholder identity and path-dependency as
determinants of ownership dynamics in the post-privatization period**

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Abstract

The paper provides new, confirming evidence to the generally observed trend of increasing ownership concentration in transition countries. We particularly explore the differences in the ownership dynamics between listed and non-listed firms. We show how in the latter, the interactions among different owners and their desire to over-win the competition of other owners and preserve their rents affect the evolution of ownership in the post-privatization period. In doing this, we provide empirical evidence to the theoretical predictions on the formation of shareholder coalitions and the structure driven path-dependency.

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Key words: ownership dynamics, shareholder coalitions, path-dependency; rents;

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1. Introduction

Plenty of theoretical and empirical studies underline the importance of ownership for firm governance and performance.¹ Consequently, firm founders should have the incentive to create the kind of governance and ownership structure that their customers and capital markets prefer (Easterbrook and Fischel, 1991:4). To put it differently, in its 'optimum', the distribution of the ownership and control rights should reflect firm and industry specific characteristics, to them associated preferences for monitoring and on-job consumption (Demsetz and Lehn, 1985; Demsetz, 1983) and, the institutional environment, in which the firm operates (LaPorta et al., 1998; Roe, 1994). Accordingly, the recognition of this important ownership role was one of the main reasons justifying the privatization of State enterprises in the developed countries and the widespread privatization of firms in transition. With regard to the latter, the designers of the privatization however mostly focused on the accountability, social acceptability and speed of the privatization process rather than on the efficiency of its results. In line with the arguments proposed by Coase² (1960) the general expectation was that, absent

¹ The distribution of ownership among different shareholders shapes their voice in corporate affairs, their motivation to monitor the management, their ability to extract private value and to reduce risk by efficient trading and portfolio diversification (see for instance Demsetz and Lehn, 1985; Shleifer and Vishny, 1997). On the other hand, it influences the incentives of managers to undertake value-enhancing projects (Burkart et al., 1997).

² For the world with no transaction costs Coase claims that 'if rights to perform certain actions can be brought and sold, they will tend to be acquired by those for whom they are most valuable for either production or enjoyment. In this process, rights will be acquired, subdivided, and combined, so as to allow those actions to be carried out which bring about that outcome which has the created value on the market' (p. 12, 1988).

barriers to trade, the ‘optimum’ ownership structure would result from share transfers in the post-privatization period. If this had been the case, post-privatization adjustments should have been slowly directing the ownership concentration towards its optimum levels. So far however, only a few empirical studies analyse the ownership dynamics in transition, and even these mostly tackle the issue of the endogeneity of ownership in the ownership-performance equations. The aim of this paper is to go beyond the existing studies and to present new, confirming evidence to the generally observed trend of increasing ownership concentration in all transition countries.³ The main issue we address is whether other, owner-specific factors, could be driving the ownership concentration beyond the levels, which are optimal from the perspective of firm fundamentals and industry specific characteristics. In this regard, our article provides empirical evidence to theoretical predictions on the formation of shareholder coalitions (e.g. Zwiebel, 1995; Hansmann, 1996; Gomes and Novaes, 2005; Bloch and Hege, 2001) and the structure driven path-dependency (Bebchuk and Roe, 1999). To be more specific, we show how the existing shareholders obstacle the ownership transfers to preserve their rents and how their desire to over-win the competition of other owners in monitoring and rent extraction determines the re-allocation of ownership in the post-privatization period.

We chose to base our empirical study on Slovenia since the characteristics of Slovenian privatization and the current diversity in the ownership structure across firms provides us an experiment-like setting that is well suited for the purpose of our analysis. Our results and their implications should however be of interest to all countries dealing with

³ For and overview see for example, Berglof and Pajuste (2003).

privatisation issues. First, in line with theoretical predictions on the relation between the investor protection and ownership diversity, we find that the evolution of ownership concentration differs between listed and non-listed firms. In non-listed firms, the ownership dynamic mainly reflects the owners' incentive to win over the other owners. The battle for power is taking place between inside and outside owners, and, within the outsiders group, between the owners of different identity. We show that, outside shareholders are more likely to share control when they are homogeneous and when they hold similar stakes. The identity of the existing shareholders further influences their incentive to sell-off the shares to the largest (her) and consequently, her ability to concentrate. We find that rather than by inside owners,⁴ the barriers to ownership change result from the behaviour of the 'big' outside owners, which are protecting the rents gained at the time of privatization. We believe that the latter is in line with the Bebchuk and Roe's (1999) theoretical predictions on the structure-driven path dependency. In listed firms, on the other hand, ownership concentration has taken a slower path and multiple blockholder structures mostly persist. The ability of the largest owner to concentrate in these firms increases with firm financial performance. In our view, good performance and to its related improvements in the value of firm equity in fact influence the non-largest shareholders' readiness to sell their shares to the largest.

⁴ Inside owners include employees (including management), former employees and their relatives. In relation to the choice of privatization model, there have been several discussions against privatization to employees, fearing that employee ownership would persist even when not efficient.

The following section overviews the existing literature and introduces the research question. The third section presents the regression model. We discuss the empirical result in the fourth and conclude in the last section.

2. Literature overview and introduction to the main hypotheses

Why are some firms owned and controlled differently than others? An important group of arguments relies on the country's legal origin and to its associated level of investor protection (LaPorta et al., 1998). Roe (2004) proposes a second theory, claiming that politics and the political willingness in providing for the institutions that facilitate dispersed ownership is more important than the corporate law itself. These claims find confirmation in the wide diversity in ownership concentration across countries.⁵ However, differences exist not only across countries but also across firms. In line with Demsetz (1983) arguments, these differences should reflect the different trade-offs associated with concentrated or dispersed share ownership.⁶ The ownership should concentrate less in larger firms since purchasing the same percentage of ownership in a large company costs the owner more and involves higher risks than doing the same in a smaller firm (Demsetz and Lehn, 1985). The efficient allocation of risk bearing should furthermore imply more dispersed ownership in firms that operate in high-risk environments (Fama, 1980). A risky environment also requires greater flexibility in decision-making, higher managerial discretion, initiative and in turn, a lower

⁵ See for example, Barca and Becht (2001).

⁶ As argued by Demsetz (1983, p. 384), the ownership structure is an endogenous outcome of competitive selection in which various cost advantages and disadvantages balance to arrive at an equilibrium organization of the firm.

concentration of ownership (Burkart et al., 1997). The owners might be less inclined to concentrate in the presence of other disciplining mechanisms such as the pressures from product markets, debt or listing on the stock exchange. In addition, high growth opportunities could signal prospects of going public in the near future and result in a lower concentration of ownership in non-listed firms (Bloch and Hege, 2001). The level of ownership concentration should further reflect the expected increases in firm value due to more effective shareholder control (Demsetz and Lehn, 1985). For instance, owners should concentrate more in the firms with a higher level of intangible assets, since these firms are difficult to monitor and offer more scope for discretionary managerial spending (Ersoy-Bozcuk-and Lasfer, 2000).

Apart from value increases due to more effective monitoring, large blocks provide their owners with the opportunity to extract some benefits at the cost of minority shareholders (i.e. private benefits of control).⁷ The investors' attempt to gain, preserve or capture more of these benefits may largely determine the evolution of ownership structure in the firms, especially in those that do not list on the stock market. In line with Bebchuk and Roe (1999), we consequently think that some efficient ownership changes, i.e. further concentration or dissolution of ownership blocks, do not take place since the players that enjoy rents under the existing structures might have the incentive and power to impede any change. At the same time, the largest shareholder's attempt to clear out the competition of other owners may drive the ownership concentration beyond the levels

⁷ These benefits might take the form of synergies obtainable through mergers, favours conferred by a firm, access to inside information, perquisites of control, utility derived from the power of control (Zwiebel, 1995).

consistent with the maximization of firm value. In ensuring her share of private benefits, a single shareholder can either concentrate her voting power above the point where it becomes unchallengeable by other shareholders or, when the benefits are dividable, form a controlling coalition that can divide these benefits (Zwiebel, 1995, p.162). In the latter case, the decision-making realises through a coalition of multiple shareholders, each of which holds less than a controlling share but at the same time, when taken together, a fraction that is large enough to control the company (Gutierrez and Tribo, 2004). Following the arguments of Hansmann (1996), we would expect the formation of a coalition to be more likely when owners have similar interests and incentives.⁸ Homogeneity of the owners' interests reduces the costs of decision-making and the costs of inefficient decisions (Gomes and Novaes, 2005). Further arguments to support the importance of shareholder identity within a coalition can be found in Bloch and Hege (2001). They show that the shareholder identity influences the strategic interactions within, the formation and the stability of the shareholder coalitions.

In line with the above stated theoretical predictions Demsetz and Lehn (1985) for a sample of US firm show that the ownership structure varies significantly with firm size, instability of profit rate, industry regulation and the amenity potential of firm's output. Pedersen and Thomsen (1999) conduct a similar study on a sample of large European companies. They confirm that ownership concentration decreases with firm size but

⁸ Hansmann (1996, 91) states the following: 'The most striking evidence of the high cost of collective decision-making is the scarcity of employee-owned firms in which there are substantial differences among the employees who participate in the ownership'. In our view, we can easily extend this line of reasoning to other types of investors. For instance, non-financial institutions for are mostly concerned for the value increase of their investments, while government is more likely to pursue many rather contradicting goals.

increases with information asymmetry and uncertainty (noise). National institutions, law and culture also contribute to the cross-country differences in the ownership concentration, but they do not seem to shape the influence of the economic variables within the nations (Pedersen and Thomsen, 1999, p. 376). More recently, Helwege et al. (2005) study the ownership dynamics on a sample of American IPO firms from 1970 and 2001. They discover that firm stock performance plays the most important role in determining the likelihood for equity dispersion by insiders that is, their incentives to sell-off their shares after the IPOs. On the other hand, firm fundamentals (firm size and financial variables reflecting the scope for discretionary spending and risk aversion) importantly determine the changes in the ownership concentration in the UK firms over the 1993-1998, studied by Ersoy-Bozcuk and Lasfer (2000). The latter also show significant interrelations in the dynamics of the ownership shares held by different investor groups (i.e. managers, pressure-resistant institutional investors). With specific regard to transition countries, Grosfeld (2006) looks at the determinants of ownership concentration in Czech Republic and Poland. She evidences an important redistribution of ownership in both countries but finds only a significant impact of the largest owner's identity and firm risk (asset tangibility). Jones and Mygind (1999, 2005) analyse the determinants behind the changes in the identity of the dominant owners in the Baltic States. They show that ownership concentration is more intensive, when accompanied by a change in the identity of the dominant owner, while eventual employee privatizations constitute no real barriers to trade. They observe a rapid decrease in the level of employee ownership, mainly motivated by firm financing needs (capital intensity) and life cycle. In a latter study, Mygind et al. (2006) explore the changes in the ownership of Russian and Slovenian firms. They show that dominant employee

ownership is less likely to persist in firms with higher number of employees and in the firms that have lower labour costs but provide no robust conclusions on the impact of other performance variables. Sprenger (2006) analyses the dynamics of inside ownership in 530 Russian manufacturing firms. He finds out that capital intensity and consequently, firm needs for external financing, as well as the homogeneity⁹ among the employees largely determined the initial level of inside ownership, while firm size influences most of the decrease in the employee shares in the post-privatization period.

Apart from complementing the existing analyses on the economic determinants of ownership concentration, our study provides first direct evidence to the theoretical predictions on the large owners' interactions and their impact on ownership dynamics. The case of Slovenia provides the perfect ground for the analysis since the Slovenian privatization model exogenously assigned few blockholders of similar size to both listed and non-listed firms. Privatization Law (1992) in fact required the distribution of 20 percent of each firm's capital to two State controlled funds (10 percent to the Pension Fund and 10 percent to the Restitution Fund), 20 percent to several Privatization Investment Funds and 20 percent to inside owners in exchange of their vouchers. The firms only had the discretion on the allocation of the remaining 40 percent of their capital. They could either sell it to the inside owners (inside buy-out) or to the public, which subsequently implied the listing on the Stock Exchange. The listing decision

⁹In line with Aghion and Blanchard (1998), the author's assumption is that the level of inside ownership should be higher in the firms with homogeneous workers since in this case the employee owners are more prone to collude, making the sale to outsiders less likely. While Sprenger (2006) confirms the positive relation between the initial level of employee ownership and unionization (as a proxy for homogeneity of employee interests), he observed no such effect concerning the post-privatization ownership changes.

mainly depended on firm size with significant levels of inside ownership resulting mostly in the small firms. The introduction of inside ownership makes the Slovenian case even more interesting since (given the relatively high ownership share) the employees can potentially constitute a strong inside coalition to support firm management against outside owners. As shown by Pagano and Volpin (2002), if the private benefits of control are high and management owns small equity stakes,¹⁰ the managers and employees might act as natural allies and ‘protect’ each other’s interests at the cost of non-controlling shareholders. Namely, the managers might use the support of the inside owners to participate in the control game and challenge the power of the largest owner (Zwiebel, 1995) or rely on them to prevent that ownership and control transfers into the hands of outside owners (Bechuk and Roe, 1999; Pagano and Volpin, 2002). At any rate, the ownership concentration today quite differs across firms despite the mandatory division of capital in several blocks in privatization process.¹¹ The specifics of Slovenian privatization, substantial dynamics of the ownership in the post-privatization period, the differences in the current allocation of votes across different

¹⁰ At the end of privatisation, Slovenian managers (within the group of inside owners) on average held between 4 and 7 percent of the capital in non-listed firms and around 1.45 percent in listed firms (Simoneti and Gregoric, 2004).

¹¹ For instance, about 21% of the firms in our sample are owned by only one blockholder, which in 95 percent of the cases also holds the majority of the voting rights (mean largest block size = 85.61 percent, data refer to the end of 2004). On the other hand, 19.6 percent of firms have both the largest majority owner and additional relevant but non-controlling blocks. The percentage of such firms has been increasing over time, from a mere 8 percent in 1999. Half of the firms remain with multiple non-controlling blocks, that is with two or more blockholders and none of them holding the majority of ownership rights. The percentage of such firms has decreased from 73 percent since 1999.

shareholders and precise yearly data on the owners' shareholdings and identity provide us with rather unique database that serves well the main aim of our analysis. We in fact search for new explanations regarding the stability of multiple share blocks in some firms and the dissolution of multiple blocks in others. In this regard we expect that, apart from economic variables, the relation between the size and identity of the different owners impacts the incentives and ability of the largest owners to concentrate. This should be particularly the case in non-listed firms, where the trading with shares is less transparent and the extraction of private benefits by the blockholders much easier than in listed firms. We expect the largest shareholders to concentrate more in the firms where the contestability of her control is higher, namely in the firms with relevant inside ownership and/or other blockholders, particularly when the interests of these other shareholders diverge from those of the largest.

3. Empirical analysis of the determinants of the ownership structure

The econometric analysis relies on a complete data set of non-financial firms with dematerialised securities and related ownership changes recorded by the Central Securities Clearing Corporation (CSCC) over the years 1999-2004. We obtained yearly ownership data from the record of the CSCC, while the Agency of the Republic of Slovenia for Public Legal Records and Related Services provided us with firm financial data. The descriptive statistics of the size of the three largest blocks for a balanced sample of 421 non-listed and 75 listed firms at the end of 2000¹² and the end of 2004 are presented in Table 1. As evidenced in the table, there are substantial differences in the

¹² For the sake of obtaining a larger sample size, Table 1 reports the year 2000 as the initial year. In fact, about 90 firms in our sample entered the CSCC register only during the year 2000.

ownership dynamics between listed and non-listed firms. In non-listed firms, the share of the largest owner increased by nearly 12 percentage points across the four-year period. On the other hand, half of the listed firms remain widely held (median = 24.84) and their ownership structure substantially reflects the chosen privatization model.

Table 1 about here

At the same time, we observe only a moderate change in the average size of the second and third largest block across time. However, a deeper analysis of the distribution of non-largest blocks across different firms discovers some important differences also in terms of the non-largest blocks' size (see Table 2). For instance, six years from the conclusion of privatization (2004)¹³ more than half of the non-listed firms have a blockholder, holding at least 50 percent of capital. In nearly 40 percent of these firms, this largest owner (while concentrating) has driven out the other blockholders (i.e. $c_2 < 5$ percent), while in 30 percent of the firms, the additional blocks remain of above average size (i.e. the second largest block is higher than its average across firms, which is 14.76 percent). On the other hand, the two main shareholders coexist and hold stakes of relatively similar size in about 29 percent of non-listed firms. To put it differently, in 61.64 percent of non-listed firms with no majority owner (which represent 46.59 percent of all non-listed firms) the second largest block exceeds its average size. The picture is quite different for listed firms. Less than 25 percent are majority owned and in 45 percent of the cases, the majority owner is not followed by any other block (i.e. there is no other owner holding more than 5 percent of ownership). Quite surprisingly, the division of control among few non-controlling owners still characterises nearly half of

¹³ Slovenian Agency for Restructuring and Privatization gave its last approval of the privatization program on October 30, 1998.

the firms listed on the Stock exchange. That is, in 61.9 percent of all listed firms with no majority owner (which represent 75.9 percent of all listed firms), the second largest block exceeds its average size (12.99 percent).¹⁴

Table 2 about here

In order to detect the factors explaining the observed differences, we estimate the following regression model (basic model):

$$\begin{aligned} \Delta C_{1it} = & \beta_1 C_{23it-1} + \beta_2 (C_{23})_{it-1} \times HOM_{123it-1} + \beta_3 D_{EXit-1} + \beta_4 MINORITIES_{it-1} \\ & + \beta_5 MINORITIES_{it-1} \times D_{EXit-1} + \beta_6 D_{EMPit-1} + \beta_7 MINORITIES_{it-1} \times D_{EMPit-1} \\ & + \beta_8 D_{Mit-1} + \beta_9 RISK_{it-1} + \beta_{10} GROWHOP_{it-1} + \beta_{12} LEVERAGE_{it-1} \\ & + \beta_{13} ROA_{it-1} + \beta_{14} TANG_{it-1} + \theta_t + c_i + u_{it} \end{aligned}$$

The choice of the explanatory variables relies on the existing empirical studies and selected theoretical models as explained in the literature review above. We capture firm and industry-specific characteristics by several variables. We first account for the disciplining role of the product markets competition by constructing the variable D_{EX} as an export dummy indicating whether a firm is an exporter or not.¹⁵ As for the competition effect, the scope for managerial spending and consequently, the benefits achievable through shareholder monitoring should be lower in the firms with relatively high level of tangible assets ($TANG$). The opposite may be true in financially distressed firms or poorly performing firms, where a certain level of ownership concentration is a

¹⁴ We calculate the average size of the second largest block separately for listed and non-listed firms in our sample.

¹⁵ Alternatively, we measure the strength of market competition by the single firm's market share in the total industry shares. The impact of the variable turned out not significant (results not reported).

precondition for undertaking the necessary restructuring. In our regressions, firm performance is measured by the return on assets (*ROA*). We also construct the variable *LEVERAGE* as the ratio between a single firms' indebtedness (capital-to-debt) and the median industry indebtedness. We expect the ownership concentration to be lower in firms that are more indebted since debt represents a complementary disciplining mechanism.¹⁶ Moreover, the owners of these firms should be more concerned regarding price discounts at future equity issues or listing on the Stock Exchange. The latter effect is further captured by growth potential, measured by the median industry firm sales' growth (*GROWTHP*). Finally, the ownership concentration should be on average lower in riskier and larger firms. We measure firm risk (*RISK*) as the ratio of the standard deviation of sales for a given firm and the standard deviation of sales of the median firm in the industry. We calculate the standard deviation through a four-year rolling window for the years 1995-2004.

Previous empirical studies (see section 2) regress the level of ownership concentration to a number of above stated firm-specific variables. We estimated comparable regression models (results not reported). Consistent with theoretical predictions, we confirm a significant negative impact of asset tangibility on the level of ownership concentration in listed firms. We also find a higher ownership concentration in those listed firms that have been performing better in the past (in the terms of *ROA*) and in the firms that have been

¹⁶ Unfortunately, we dispose with no data on inside governance mechanisms, such as managerial compensation or board structures. In our view however, this is not a strong limitation of our study since the Slovenian legislation until recently imposed large limitations on the compositions of the boards and on managerial remuneration schemes. This left the owners with little room for adjusting the functioning of these mechanisms to the firm (Slapnicar et al., 2005).

reducing the level of employment. The explanation to the latter effect can be that the reduction in the employment is in fact a signal of a better alignment of interests between firm managers and owners (resulting in a lower need of the owners to concentrate). It potentially indicates that in these firms the managers have been adopting some restructuring strategies and thus acting in the interest of the owners rather than the employees (as it was the case in the past). We find no significant effect for any of the stated variables in the sample of non-listed firms.

The contributions of our paper in relation to these studies are several. The first novelty lies in the specification of the dependent variable. In order to account for the ‘inertia’ in the ownership concentration, we define the dependent variable as the first difference of the percentage share of the largest shareholder in firm i in time t , i.e. the change in variable C_i between periods t and $t-1$. In some models, we relate the change in the variable C_i to the size of the largest block at the end of 1999. This should control for the initial conditions that is, for the level of concentration at the conclusion of the privatization process. Second, we account for the institutional environment and to its related differences in the division of ownership and rents among owners by performing separate regression analyses for listed and non-listed firms.¹⁷ Third and differently from

¹⁷ Theoretical arguments predict that ownership evolves differently in listed than in closely held (non-listed) firms. For instance, shareholders are more likely to share power in non-listed firms since in these firms, the stability of shareholder coalitions is higher, trading is less transparent and the existing owners can place obstacles to share transfers (see for instance, articles 236-240 I Slovenian Company Law-1). Pagano and Roe (1998) provide further arguments for the complementarities of listing and multiple blockholder structures. Having many large blocks in listed firms is less optimal also because it reduces stock liquidity (Bolton and Von Thadden, 1998).

other studies, we include additional, owner-related variables. To our knowledge, this is first direct empirical evidence on the main owners' interactions and consequent changes in the ownership concentration. We proxy the contestability of the largest owner's control and consequently, her incentive for overpowering the other owners by the size of the blocks held by the two other largest owners (C_{23}). We expect that, the bigger the size of other owners, the more motivated is the largest owner to concentrate her share in order to outweigh the other two, who can join and control the actions of the largest. This may however not be the case when these owners and the largest one have the same or similar interests (i.e., they are homogenous). To account for the homogeneity of the main owners, we multiply the variable C_{23} with a dummy HOM_{123} . The dummy is assigned the value 1 in cases where the three largest owners belong to the same owner group (identity).¹⁸ Alternatively, we construct the variable $C_{OPPOSITION}$ by aggregating only the shares of those owners between the second, third and fourth largest owner, whose identity is not equal to the identity of the main owner.¹⁹ These owners themselves may be forming coalitions against the largest owner. We consequently construct the variable H_{234} , to which we assign value 1 if at least two among the three owners in the opposition are of the same identity. We multiply this dummy and the size of the shares in the ownership of the opposition ($C_{OPPOSITION} \times H_{234}$). With the same aim, we construct the variable C_{FREEOP} , which is the difference between the size of the opposition ($C_{OPPOSITION}$) and the size of the potential two or three-owner coalitions within the

¹⁸ The classification of the owners by their identity is as follows: individuals, foreigner, state, industrial companies, banks, insurance companies, state funds, privatization investment funds.

¹⁹ The variable is constructed as follows: $C_{OPPOSITION} = \sum_j (1 - HOM_{1j})C_j$ where $j = 2,3,4$ and HOM_{1j} is a dummy indicating the homogeneity in the identity of the first owner and the j -th owner.

oppositions' shares ($C_{OPCOALITION}^{20}$). In addition, we construct the dummy D_M (*majority dummy*) indicating whether the share of the first owner in period t-1 is greater than 50 percent of the average votes cast at the shareholders' assembly, which we estimate at 72.5 percent.²¹ As argued by Zwiebel (1995), there is a threshold size, beyond which the other investors cannot challenge the largest one, leaving the latter with no motivation to concentrate further. Finally, we control for the percentage of shares owned by individuals (*MINORITIES*). We constructed this variable as the residual variable from the sum of the total shares held by entities other than individuals (foreigners excluded). In non-listed firms, this variable (*MINORITIES*) largely captures the size of the shares held by employees, former employees and their relatives and consequently, the potential for insider-outsider battle for power. We measure the likelihood of the employee and management collusion with the dummies for the reduction of employment (D_{EMP}) and the product market competition (D_{EX}). The idea behind is the following. We expect that the employees are less likely to support managers when the latter have been reducing employment and hence, employee share in total rents. Moreover, the scope for rent creation and division is probably lower in the firms that face foreign competition (exporters). The descriptive statistics for the variables used in the regression models are presented in Table 3.

Table 3 about here

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²⁰ $C_{OPCOALITION} = \text{HOM}_{24}(C_2+C_4) + \text{HOM}_{34}(C_3+C_4) + \text{H}_{23}(C_2+C_3) + \text{H}_{234}(C_2+C_3+C_4)$, where C_j is the share of the shareholder j , HOM_{ij} indicates the homogeneity of the i -th and j -th owner, while HOM_{234} labels three owner coalitions.

In order to analyse the growth in the ownership concentration we rely on the panel-data estimation technique, which allows us to exploit both the cross-section and the time dimension of the data. We treat the unobserved firm-specific effects as fixed since the Hausman test (Hausman, 1978) confirms the assumption that they are not orthogonal to the independent variables and thus rejects the choice of the random-effects specification of the models. Since the estimated model is static and all the regressors enter the equation lagged by one period there is no endogeneity problem. Taking these features into account we use the within estimator as appropriate (Wooldridge, 2002). We present the estimation results in Tables 4 and 5.

Table 4 and 5 about here

4. Discussion

The results of our empirical analysis support some important theoretical arguments about the shareholder interactions and their impact on the flexibility and dynamics of the ownership structure. First, we show that the redistribution of ownership in non-listed firms moves accordingly with the theoretical predictions by Zwiebel (1995). The owners have been sorting their holdings in the way that drives out any competition from other owners. The battle for power takes place between the largest outside owners and between the outside and inside owners. In fact, the higher the size of the additional (non-largest) blocks within the firm, the stronger is the incentive of the largest shareholder to concentrate. On average, by one standard deviation (12.76 percentage

²¹ In order to obtain this data we followed participation at the shareholders' general meeting in 35 selected Slovenian firms in July 2001.

points) bigger size of the two additional blocks (C_{23}) leads to 7.02-percentage point higher increase in the size of the largest block (see Model 1 in Table 4). This effect is significant and robust across different specification of the dependent or independent variables. In congruence with theoretical predictions on the likelihood of control sharing (Gomes and Novaes, 2005; Hansmann, 1996), the intensity of the competition between the largest blockholders is lower when these shareholders are of the same identity. The impact of the variable $HOM_{123} \times C_{234}$ is in fact negative and (weakly) significant. In other words, when homogeneous the two largest shareholders probably join and form coalitions in monitoring and sharing private benefits of control, particularly when they hold similar shares. The dummy H_{123} , which has a positive sign, indeed indicates the impact of the shareholders' homogeneity at low share of the additional blocks (C_{23}). The negative effect outweighs the positive one as the C_{23} approaches 30 percent (4.44/0.14).²² Thus, when small and of the same identity, other blockholders most likely facilitate the concentration of the largest blockholder by selling off their blocks.

The conclusion that the redistribution of ownership may depend on the willingness of the existing owners to sell also arises from the negative and significant impact of the variable $C_{OPPOSITION} \times H_{234}$. Namely, the increase in the ownership of the largest blockholder (given the size of the opposition blocks) is on average lower when at least two of the opposing shareholders are of the same identity. This conclusion is confirmed also by the positive impact of the variable C_{FREEOP} (results not reported). The homogeneity of their interests thus most likely enables each of the non-largest

²²The results are significant at 10 percent level (Model 1, Table 4). Significance increases when we control for the initial level of ownership concentration (see Model 2, Table 4).

blockholders to increase her ‘relative’ power by forming coalitions in the control game against the largest one. Consequently, it increases her private benefits, the share in the corporate rents and consequently, the incentive to ‘stay’. The effect gains significance when we define the dependent variable as the increase in the total share of the largest and to her homogenous blockholders among the four²³ largest blocks ($C_{LARGESTCOALITION}$, see model 4, Table 5). With this variable, we control for the fact that other smaller blockholders may be more willing to sell their shares to the largest, when homogeneous. Thus, we would observe an increase in the largest share notwithstanding the behaviour of the opposition.²⁴ However, this is not the case when we consider the total share $C_{LARGESTCOALITION}$, which strongly depends on the willingness of the other owners to sell-off their shares. In our view, all of the above stated results are congruent with the Bebchuk and Roe (1999) hypothesis on the structure-driven path-dependency. Our results imply that multiple blockholder structures persist since the blockholders (other than the largest) can participate in the division of rents. At least for the case of non-listed firms, we show that their possibility to participate in rent sharing also depends on their ability to collude against other owners, which in turn depends on the homogeneity of their interests. At the same time, the competition for control takes place between the inside owners and the outsiders. Contrary to the initial fears on the persistence of

²³ The average size of the fourth largest block in our sample amounts at 5 percent, while the average size of the fifth largest block slightly exceeds 3 percent. Given that the law requires 5 percent ownership threshold for most of minority actions and that for some firms we do not dispose with data on the fifth largest block (since we only dispose with data for blocks higher than 1 percent), we focus on the first four largest owners only.

²⁴For instance, a mutual fund may be willing to sell his share to another mutual fund or investment company in exchange for a block in another firm.

employee ownership, the latter does not represent an obstacle to ownership concentration. The positive and significant impact of the share of minorities on the increase in the largest stake in non-listed firms indicates that the outside owners have been trying to overcome the insiders' coalition by concentrating their own shares. Most importantly, it indicates that they have been able to concentrate. This effect seems to be significantly smaller in firms experiencing a reduction in employment and in exporting firms. In these firms in fact, the employees are less likely to vote in support of management (since they enjoy lower rents), which probably reduces the contestability of the outsiders' control and consequently, their incentive to concentrate.

We observe no such effect in listed firms, where *MINORITIES* also and prevalently include the shares held by outside minority investors, which have higher incentives and ability to monitor the management. Also and contrary to non-listed firms, owners' homogeneity has no role in the evolution of ownership in the firms that list on the Stock Exchange. The competition between the largest and other blockholders drives the ownership concentration but the effect is not robust. We however observe a positive and significant effect of firm financial performance. Contrary to our initial hypothesis, we find that better firm performance in the past leads to on average higher increase in the largest block. We could again relate this finding to owners' exit incentives, namely their motivation to sell their shares to the largest owner. As argued by Jones and Mygind (2005), higher performance increases the value of the equity and consequently the incentives of the inside owners (employees) to sell their shares (p. 256). This is in line with the window of opportunity theories that predict that insiders sell when they get a good price and the market for the stock is good (Helwege et al., 2005). We believe that

in the case of ownership dynamics in transition, a similar argument applies also to other outside owners and their exit incentives.

5. Conclusion

Facilitated by the inefficiencies in the institutional environment some of the main players in Slovenian privatization strongly affect also the post-privatization ownership changes. The path-dependency of the ownership structure is reflected in the choice of the privatization model,²⁵ in the power competition between the largest outside owners in non-listed firms and in the persistence²⁶ of multiple blocks in listed firms. All these aspects certainly call for further improvements of the judiciary, legislation and regulation. However, the latter are themselves influenced by the main players in Slovenian privatization, the very same that obstacle the ownership from reaching the equilibrium. For example, the backlogs in the judicial system started to accumulate around 1995, at the time of the first privatization wave.²⁷ Although the legal

²⁵ The privatization model as such introduces the mandatory division of power between the shareholders and the constituencies that were involved in the decision-making prior to transition, namely workers, managers and the government.

²⁶ It must be noted that, holding the total size of all blocks fixed, multiple blocks could be more efficient than a single blockholder since they could increase price informativeness and in turn, discipline the management through exit. This potentially rationalizes the existence of multiple blocks (rather than one big owner) in listed firms. For more, see Edmans and Manso (2007).

²⁷ Court inefficiencies still represent one of the main limitations to the functioning of the legal environment in Slovenia. Due to the lengthy trials, Slovenia had to pay, up until July 2006, approximately EURO 500.000,00 in damages to Slovenian entities. For instance, it takes at least 60 days to start a limited liability company. Also, in 2004, commercial courts, (excluding bankruptcy cases and compulsory settlement cases), solved only 51 % of the cases filed in a certain year. In a period between one to three years, they

inefficiencies in the investor protection might have been initially harming the main shareholders, forcing them to concentrate in order to increase their power over the management, the same players today obstacle the improvements in the judiciary. The inefficiencies in fact now facilitate their extraction of rents. This is again in line with the path-dependency arguments (Bebchuk and Roe, 1999). Indeed, we have been so far not able to detect any relevant lobbying from the side of the main shareholders for the improvement of the corporate legislation, even though some important deficiencies are in place. For example, there is no default rule on the company goal, no fiduciary duties of large towards small shareholders, no explicit limitations on to fund-connected individuals sitting on corporate boards. All these deficiencies in our view facilitate the status quo of the current corporate governance in Slovenia.

solved 28.4% of the cases, and the rest of the cases had to wait (or are still waiting) more then three years to be solved. The worst situation is at the enforcement courts, since cases at the enforcement courts represent 59 % of all the cases that are treated as backlogged cases.

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Table 1: Percentage shares of the three (C1, C2 and C3) largest blocks in 421 unlisted and 75 listed firms (balanced sample) in the year 2000 and 2004

	2000	2004	2000	2004	2000	2004
Unlisted	C1	C1	C2	C2	C3	C3
Mean	38.84	52.64	15.49	14.54	8.76	7.70
(Sd)	(20.65)	(27.19)	(8.83)	(10.18)	(5.34)	(6.29)
Median	33.35	50.61	13.46	13.72	9.18	6.85
Min	4.43	5.72	1.00	1.00	1.00	1.00
Max	99.99	99.93	49.99	48.39	31.87	31.87
N	422	422	422	422	422	422
Listed	C1	C1	C2	C2	C3	C3
Mean	24.17	35.59	12.83	12.99	8.50	8.46
(Sd)	(14.14)	(24.64)	(4.91)	(6.36)	(3.95)	(4.69)
Median	21.30	24.84	11.72	12.89	9.27	9.71
Min	6.98	12.28	1.00	1.00	1.00	1.00
Max	85.86	97.84	29.65	41.32	23.47	19.75
N	75	75	75	75	75	75

Table 2: Percentage of firms by the size of the largest ownership blocks (c1 and c2)

	<i>% of firms (2004)</i>		<i>Percentage of non-listed firms (2004)</i>		<i>Percentage of listed firms (2004)</i>	
	non-listed	listed	c2 > 14.76	c2 < 5.00	c2 > 12.99	c2 < 5.00
c1 > 50	53.41	24.10	33.64	39.58	15.00	45.00
c1 < 50	46.59	75.90	61.64	2.59	61.90	0.00

Table 3: Descriptive statistics for the regression variables

	Mean (sd)	Median	Mean (sd)	Median
C₁ (in %)	46.03 (24.64)	42.48	29.82 (18.94)	24.87
C₂₃ (in %)	23.47 (13.36)	22.68	22.34(8.24)	22.38
C_{OPPOSITION} (in %)	9.83 (13.32)	0.00	9.93 (10.95)	6.22
C_{LARGESTCOALITION} (in %)	55.02(25.51)	51.76	39.81(19.02)	34.65
MINORITIES (in %)	32.51 (28.34)	26.19	29.77(18.53)	26.79
LEVERAGE	1.67(3.64)	0.98	4.00 (12.90)	1.22
SALES (in 000 1992 SIT)	12964 (28654)	4536	45774 (119 545)	12715
GROWTHOP (in %)	9.82(61.21)	4.84	13.66 (67.01)	5.29
RISK	2.85(8.69)	0.98	8.85 (26.35)	1.90
TANG	0.50(0.22)	0.51	0.46 (0.22)	0.50
ROA (in %)	0.72 (8.18)	1.26	2.49 (5.94)	2.61

Table 4: Dependent variable: increase in the size of the largest block in % points²⁸

	MODEL 1: ΔC_1			MODEL 2: $\Delta C_1/C_{1(1999)}$	
	all firms	non-listed	listed	non-listed	listed
C₂₃	0.51*** (0.04)	0.55*** (0.04)	0.12 (0.15)	0.02*** (0.004)	0.03*** (0.009)
C₂₃ x HOM₁₂₃	-0.15* (0.09)	-0.14* (0.08)	-0.28 (0.32)	-0.05*** (0.009)	-0.015 0.02
HOM₁₂₃	4.87* (2.61)	4.44* (2.77)	13.89 (8.95)	1.81*** (0.28)	0.70 (0.56)
MINORITIES	0.16*** (0.03)	0.18*** (0.03)	-0.03 (0.12)	0.01*** (0.003)	0.003 (0.008)
MINORITIES x D_{EX}	-0.06* (0.03)	-0.07** (.03)	0.24* (0.15)	-0.006** (0.003)	0.027*** (0.009)
MINORITIES x D_{EMP}	-0.06*** (0.02)	-0.08*** (0.02)	0.10 (0.09)	-0.009*** (0.002)	0.001 (0.005)
D_{EX}	2.13 (1.63)	2.91* (1.70)	-7.88 (6.32)	0.24 (0.17)	-0.85** (0.39)
D_{EMP}	2.85*** (0.95)	3.77*** (1.03)	-4.10 (2.90)	0.23** (0.10)	-0.09 (0.18)
ROA	0.11** (0.05)	0.07 (0.05)	0.30** (0.14)	0.002 (0.005)	0.017** (0.009)
LEVERAGE	0.11 (0.12)	0.38 (0.23)	-0.01 (0.12)	0.03 (0.02)	0.007 (0.0075)
Ln(SALES)	0.06 (0.77)	0.62 (0.90)	-1.57 (1.68)	-0.02 (0.09)	-0.122 (0.12)
RISK	-0.004 (0.04)	0.007 (0.07)	-0.004 (0.04)	-0.002 (0.007)	0.0001 (0.002)
TANG	-3.22 (4.46)	-2.49 (4.77)	-3.86 (13.44)	-2.49 (4.77)	-0.53 (0.83)
GROWTHOP	-0.004 (0.005)	-0.003 (0.005)	-0.02* (0.01)	0.0002 (0.0005)	-0.002* (0.001)
D_M	-14.89 (0.97)	-15.20 (1.06)	-13.94*** (2.49)		
Constant	-8.73 (6.78)	-14.94** (7.83)	18.66 (15.65)	-0.63 (0.79)	0.74 (1.09)
Haus χ^2 (prob)[#]	484.8 (0.00)	472.34 (0.00)	62.68 (0.00)	24.22 (0.11)	44.74 (0.00)
No. of Observs.	2629	2244	388	2240	385

²⁸ See notes to Table 5.

Table 5: Rent-extraction and barriers to trade

	MODEL 3: ΔC_1		MODEL 4: $\Delta C_{\text{LARGESTCOALITION}}$	
	non-listed	listed	non-listed	listed
C_{OPPOSITION}	0.31*** (0.05)	0.03 (0.12)	0.72*** (0.05)	0.52*** (0.14)
C_{OPPOSITION} x HOM₂₃₄	-0.11* (0.05)	-0.12 (0.16)	-0.20*** (0.06)	0.08 (0.17)
HOM₂₃₄	-0.28 (1.56)	1.71 (3.78)	4.53*** (1.53)	-2.59 (4.04)
MINORITIES	0.15*** (0.03)	-0.03 (0.12)	0.19*** (0.03)	-0.10 (0.13)
MINORITIES x D_{EX}	-0.09** (0.04)	0.23 (0.14)	-0.04 (0.03)	0.33** (0.16)
MINORITIES x D_{EMP}	-0.07*** (0.02)	-0.10 (0.08)	-0.06*** (0.02)	0.13 (0.09)
D_{EX}	3.53** (1.76)	-7.29 (6.26)	1.65 (1.73)	-9.25 (6.75)
D_{EMP}	2.81*** (1.10)	-4.87* (2.88)	2.66*** (1.07)	-3.04 (3.06)
ROA	0.07 (0.06)	0.25* (0.14)	0.01 (0.05)	0.29** (0.15)
LEVERAGE	0.39* (0.24)	-0.04 (0.12)	0.17 (0.23)	-0.04 (0.14)
Ln (SALES)	0.10 (0.93)	-1.52 (1.67)	0.93 (0.91)	-0.72 (1.79)
RISK	0.03 (0.07)	-0.003 (0.04)	-0.11* (0.07)	-0.002 (0.04)
TANG	-3.85 (4.93)	-0.10 (13.49)	-5.74 (4.84)	5.21 (14.42)
GROWTHOP	-0.004 (0.005)	-0.01 (0.014)	-0.0002 (0.005)	-0.01 (0.01)
D_M	-16.57 (1.09)	-15.07*** (2.37)	-10.63*** (1.09)	-7.49*** (2.32)
Constant	-1.31 (7.98)	-14.94** (7.83)	-19.28** (7.86)	2.71 (16.26)
Haus χ^2 (prob)[#]	314.83 (0.00)	65.21 (0.00)	492.71 (0.00)	63.39 (0.00)
No. of Observs.	2244	2244	2240	385

Notes to tables:

Year dummies included in all models.

#Hausman specification test for, under the null hypothesis the random and fixed effect estimators do not differ;

*The *, **, **** indicate significance at the 10%, 5% and 1% levels.*

In model 4 the majority refers to the majority held by the coalition of the largest and to him homogenous owners.