

Managerial Ownership and Corporate Performance in Slovenian Post-Privatization Period

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Abstract

While Slovenian post-privatization period has been characterized by a decline in the ownership of the non-managerial owners (employees), managers have been increasing their control. Moreover, given that the optimal ownership stake (as stated by the managers) in the year 2002 exceeded their actual share by 10.8 percentage points, we expect the managers to continue consolidating their ownership also in the future. The aim of our paper is to describe the main trends in the ownership of Slovenian corporations in the post-privatization period and to provide an answer to the basic economic question: what is the influence of the ongoing consolidation of managerial ownership on the performance of Slovenian firms. The empirical analysis testing this relationship is based on a panel of 182 Slovenian firms in the period 1995-99 and does not provide relevant evidence on positive effects of the increasing managerial control on the performance of Slovenian firms. If any, positive incentive effect is observed only in the firms with managers' holdings exceeding 10-percent, only with regards to firm financial performance (but not total factor productivity) and only in firms that are not listed on the capital market. Furthermore, the negative effect of the current gap between the optimal and actual managerial ownership seems to prevail over any positive incentive effect arising out of managerial ownership.

Keywords: corporate governance, optimal managerial ownership, ownership and control, corporate performance, ownership gap, incentive effect, entrenchment effect

JEL Classifications: G3, G32

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1. Introduction

The increasing managerial ownership, apart from the reduction in the ownership of State-controlled funds and employees, represent one of the main features that characterize the ownership changes in the Slovenian post-privatization period. Most prominent are the increases in managerial stakes in non-listed firms, in which the transfer of ownership realizes at relatively low prices and mostly remain publicly undisclosed. Moreover, given that Slovenian managers still claim to be unsatisfied with their current ownership stakes (at the end of 2002 the optimal ownership stake of an average Slovenian manager exceeded his actual ownership stake by 10.8 percentage points¹), we expect the observed trends in the evolution of the ownership and control of Slovenian corporations to continue in the same direction also the future. The accumulation of ownership in the hands of managers is further motivated by the relatively low transparency² of the ownership transfers in Slovenia². In any case, it is not the aim of this paper to discuss the fairness of the observed redistribution of the privatized capital, neither to deal with the importance of such redistribution for the preservation of the domestic ownership³, but rather to provide an answer to the basic economic question, namely to determine the impact of the observed increases in the managerial ownership on the performance of Slovenian firms.

We start in the second section with an overview of the managerial ownership as a corporate governance mechanism in the developed market economies. Third section provides further evidence on the role of the managerial and insider ownership in transition economies and especially in Slovenia (section 4). Fifth section states the main hypotheses on the influence of the managerial ownership on firm performance in Slovenia. The main empirical models underlying the analysis of the relation between managerial ownership and firm economic efficiency and financial performance are presented in the sixth section. The last section states the main empirical results and concludes.

¹ See Figure 4.1.

² The lack of transparency still characterizes Slovenian ownership dynamics despite the recently proposed amendments to the Takeovers Act. See the Proposition of the amendments to the takeovers act (July 31st, 2003), currently under the parliamentary discussion (EVA 2003-2111-0051).

³ For more on this issue, see Stiblar (2003).

2. Managerial ownership as a corporate governance mechanism

Blockholdings represent one of the main factors of distinction between the insider (Continental European) and outsider (Anglo-Saxon) systems of corporate governance. While the ownership and control structure of most of the corporations listed in the United Kingdom and in the United States still mostly reflect the typical Berle and Means corporation and the market for corporate control one of the main mechanisms alleviating the conflict of interests between the managers (agents) and owners (principal), large blockholders in the Continental Europe gain control over their agents through concentrating their ownership and voting rights. In any case, blockholders can be found in the outsider governance system as well. For example, half of the firms listed on the New York and NASDAQ Stock Exchanges on average have three shareholders with at least 5 percent ownership blocks. However, on the contrary to the Continental Europe, institutional investors or board members hold most of these blocks. While the former usually stay passive and don't intervene in the firms' decision-making, managers normally hold between 20 and 40 percent of the voting rights and decisively participate in the governance and consequently influence the performance of the firms they own (Becht, 2001; Holderness and Sheehan, 2001). Similarly, for a sample of 4200 USA listed corporations Holderness, Kroszner and Sheehan (1999) report 21 percent average managerial stakes; since 1935 the share of capital held by the managers increased by approximately 8 percentage points. Other empirical studies confirm that, upon the practice of board remunerations with shares and stock options, managerial ownership characterizes most of the USA corporations⁴. Moreover, managerial blockholdings can be found in Europe as well; board members of the firms listed on the London Stock Exchange for example represent the second most important group of blockholders and, as such, on average hold 11 percent of the voting rights, among which about 65 percent is held by chief executives (Goergen and Reeneboog, 2001).⁵

⁴ See for example Denis and Sarin (1999); Mikkelsen and Partch (1989); Mork et al. (1988); McConnell and Servanes (1990).

⁵ The numbers refer to 200 randomly selected non-financial firms with the shares quoted on the Stock Exchange for at least 5 years (established firms).

The influence of managerial ownership⁶ on firms' value is related to the perspective that firms' value depends on the distribution of ownership between managers and other owners, first underlined by the Berle and Means (1932) and Jensen and Meckling (1976). Within this contest and the so-called 'incentive argument', giving managers corporate shares makes them behave like shareholders. In an extreme case (Jensen and Meckling, 1976), we would have a firm with a single owner-manager and the agency costs reduced to the relationship between the owner-manager and its creditors, that is no equity-related agency costs. The outstanding performance of the firms with 100% ownership has been recently confirmed by Mueller, E. and Spitz, A. (2002); they argue that the outstanding performance might not only be due to incentives but also due to other, psychological reasons.⁷ The theory of the entrepreneurship further promotes the idea that managers, which are also blockholders, better perceive new business opportunities; as such, this theory somehow complements the incentive theory since it provides an explanation to the positive effect of the managerial ownership in the firms with relatively dispersed ownership structure. Bull (1989) for example finds that, due to this 'entrepreneur effect', firms perform better after management buy-outs; when they become owners, managers concentrate on the maximization of the cash flows (rather than on the mere maximization of the current profits as before). On the other hand, upon increasing their ownership and voting stakes, managers also gain the opportunity to expropriate some corporate funds on their own behalf and on the expense of the minority shareholders, namely to gain some 'private benefits of control'. According to Barclay and Holderness (1991), private benefits of control are one of the main reasons for the existence of blockholders in the world. If the desire to obtain these benefits overrules the incentive effect, managerial ownership could actually reduce firms' value ('the entrenchment effect'). Excessive managerial ownership can furthermore reduce the probability of a successful takeover and lead to 'positional conflicts'⁸ (Stulz, 1988). Holderness and Sheehan (1988) report firms with majority

⁶ With regard to managerial ownership, literature mostly refers to insider owners. However, given the specifics of the Slovenia privatisation and the substantial share of the non-managerial owners (employees, former employees and their relatives) in the capital of Slovenian firms, we use the term 'insider ownership' when referring to the ownership of all the inside owners, while we use the term 'managerial ownership' when referring exclusively to the shares held by member the managers.

⁷ For example, a manager as a sole owner might feel more involved with the company and hence perform better; there might be some reverse causality, namely the manager being willing to keep 100% share only in the better performing companies, while they might want to share the responsibility in the poorer performing firms, etc.

⁸ Managers trying to protect their job position even when they are inefficient. Shultz (1988) further finds that in the firms with majority managerial ownership, the probability of a hostile takeover equals 0.

managerial ownership pay higher compensation to their managers than firms where the majority of the shares are in the ownership of outside owners.

Upon the influence of the stated effects, empirical studies mostly evidence a non-monotonic relationship between managerial ownership and firms' performance. Mork, Shleifer and Vishny (1988) find that firm performance (measured with the Tobin Q) rises as the managerial ownership increases up to 5%, falls up to the 25% level and then slightly rises again.⁹ McConnell and Servaes for 1173 (1976) and 1093 (1986) firms listed on the NYSE and AMEX find a similar relation (even when controlling for the firms' size, industry and outliers); the performance rises up to 37% of the shares, decreases between 37 and 50%, while afterwards the relation becomes less clear. Similarly, Hubbard and Palia (1999) also report a quadratic form of the relation between ownership and performance with the maximum at 58%, while for a sample of smaller firms in Germany, Mueller and Spitz (2002) report a positive effect of managerial ownership up to an 80 percent level.

Again, other authors (e.g., Demsetz and Lehn, 1985) argue that there is no relationship between managerial ownership and firm value since the ownership structure is an endogenous outcome of competitive selection in which various cost advantages and disadvantages are balanced to arrive at an equilibrium organization of the firm. Moreover, managers' ownership is not exogenous, but rather an endogenous variable determined by different variables reflecting the business environment, firm characteristics, differences in the managerial contracting environment and, most importantly, the firm performance itself (Demsetz and Lehn, 1985; Cho, 1987). Empirical studies based on a framework of simultaneous equations, which take into account the endogeneity of the managerial ownership (Agrawal and Knoeber, 1996; Hubbard and Palia, 1999; Mueller and Spitz, 2002) find no strong support to the assumption that managerial ownership positively effects firm performance.

3. Managers and insider ownership in transition economies

⁹ The authors perform a piecewise linear regression and control for factors that might jointly influence board ownership and firm value (R&D expenditures, advertising expenditures, debt to asset ratio, replacement cost of assets, industry effect).

Privatization in the majority of the Central and Eastern European (CEE) countries creates a new group of owners, the inside owners. Insider distribution and employee buy-outs have in fact represented the main privatization method in 12 out of 22 CEE countries and the second most important privatization method in other 4 countries (EBRD, 1998). Slovenian Privatization Law (1992) introduces the internal distribution and buy out as one of the methods of ownership transformation; at the conclusion of privatization, inside owners (managers, employees, former employees and their relatives) in fact gained the majority stake in 802 firms (61.3 percent of firms in the process of ownership transformation) employing 45.7 percent of employees and (only) 22.9 percent of all the capital.

At any rate, insider ownership in Slovenia and in other transition countries (see Wright, 2002; Kalmi, 2001¹⁰) has been declining, partly to the benefit of increased managerial ownership. According to Wright et al. (2002), the persistence of employee ownership is mainly determined by employees feeling like owners and consequently, by the ways through which insider ownership has been obtained; non-owners interests and hence lower efficiency of inside ownership are most evident in the firms where shares were distributed to the employees for free and in the firms with complete absence of any outside shareholder control. For Russian firms for example, Wright et al. (2002) observe a non significant effect of inside ownership on firm restructuring and on the reduction of the excess employment, while the latter is being preserved in the firms with relatively higher managerial ownership; the reluctance of managers to dismiss employees in firms under their control is, according to the authors, the reflection of the managers' effort to gain support from the employees and hence preserve and further strengthen their privileged position (private benefits of control). Firms with higher managerial ownership are further characterized by lower managerial turnover and lower efficiency with respect to the firms with prevalent insider or outsider ownership. The inefficiency of managerial ownership in Russian firms, corruption, political motives and incentives to expropriate private benefits of control have been reported as related to managerial ownership also by other studies (e.g. Boycko et al., 1994 and 1996).

¹⁰ Kalmi (2001) for example, finds the main reasons for the decline of the employee ownership in the degeneration (while the inside owners retired, there is no scheme for the inclusion of newly employed people in the firm ownership) rather than in the mere transfer of the employee ownership to the managers at low and non-transparent prices; the access of new employees to the firms' capital is mostly hampered by the current owners, especially when the employees consider their shares as an employment guarantee (Kalmi, 2001).

On the other hand, an alternative group of theoretical models sees the insider ownership as an obvious transitory phase, which takes into account political limitations and hence ensures the acceptability and success of privatizations on a long term (Dewatripont and Roland, 1995). For the examples of Bulgaria, Hungary, Slovakia and Slovenia Walsh and Whelan (2001) show that political limitations, arising out of the firms' position on the markets (that is the orientation towards Western or Eastern markets) mostly influenced the choice between the State, insider and outsider ownership in privatization. The authors claim that, rather than a political distortion leading to firm inefficiency, these decisions were guided by the search for publicly acceptable solutions, leading towards long-term success. On the other hand, the often cited study by Frydman et al. (1999)¹¹ reports strong positive effects of privatization on firm performance only in the outsider-dominated firms, while no such effect is reported for the firms in the inside ownership. The study further finds that the impact of a given privatization method varies according to the chosen measure of firm performance¹² and confirms the endogeneity of the firm ownership structure. The latter fact has been observed also in Slovenia; empirical research confirms that insiders have ended up owning better performing firms (Smith et al., 1997; Simoneti et al., 2003a).

4. Managerial and insider ownership in the Slovenian post-privatization period

Slovenian managers and employees have in most cases fully exploited the opportunities to buy firm shares through buy outs and obtained substantial capital stakes, especially in smaller firms; in larger firms relevant representation was further obtained by institutional investors (State-controlled Pension fund and Restitution fund, Privatization Investment Funds-PIFs) and outside minority investors. With regards to the importance of insider versus outsider distribution of shares and the rules of the secondary share transactions, we mostly refer to two different groups of firms:

- Public (listed) firms whose shares are listed on the Stock Exchange since they were partly distributed to the public. There are currently about 140 listed firms

¹¹ The study refers to Poland, Hungary and Czech Republic.

¹² For example, while outside ownership has a strong positive effect on firm productivity, it does not seem to exert a strong influence on cost reduction.

in Slovenia; these firms are subject to detailed regulation regarding transparency and minority investors' protection;

- Non-public (unlisted) firms whose shares are not listed on the Stock Exchange and which did not opt for the public sale of shares while privatizing. We further divide these firms into firms with the insiders gaining majority share (insider firms) and firms with insiders gaining less than majority share (outsider firms). While inside owners control the decision-making in the insider firms, they do not have such power in the outsider firms but normally retain enough strength to oppose the most important decisions (sale of the firm to strategic investors, listing on the Stock Exchange, etc.). In the latter, inside owners mostly have the willingness but lack financial funds to buy out the outside owners (the Funds), while the latter stay passive in the governance or, when active, are largely opposed by the insiders.

Table 4.1: Ownership structure at time of completed privatization

(N=183)

Group of owners	All companies	Listed	Internal	External
State	7,75%	6,78%	2,02%	11,92%
Restitution and Pension fund	21,60%	20,49%	21,28%	22,19%
PIFs (privatization funds)	19,38%	17,65%	14,88%	22,99%
ALL Funds	40,98%	38,14%	36,17%	45,18%
Internal owners - managers	3,86%	1,40%	4,98%	3,95%
Internal owners – current employees	29,23%	21,88%	38,08%	25,80%
Internal owners – former employees	11,05%	7,48%	14,60%	9,89%
ALL Internal	44,14%	30,77%	57,66%	39,65%
Financial investors - domestic	4,80%	22,37%	0,63%	1,61%
Financial investors – foreign	0,03%	0,08%	0,00%	0,02%
ALL Financial	4,83%	22,45%	0,63%	1,64%
Strategic investors – domestic	2,00%	1,86%	3,55%	1,01%
Strategic investors – foreign	0,30%	0,00%	0,00%	0,60%
ALL Strategic	2,30%	1,86%	3,55%	1,61%
TOTAL (all groups)	100,00%	100,00%	100,00%	100,00%

Source: Survey MEOR & CEEP- 2000

The ownership structure at the end of privatization and the arising characteristics of the Slovenian privatization are shown in Table 4.1, namely¹³:

1. The percentage of capital in the hands of strategic owners is rather limited (2.3 percent in all firms);

¹³ The data refer to the study by Simoneti et al. (2001).

2. Foreign owners have been somehow excluded from privatization process (0.33 percent share in all firms);
3. The State and State-controlled funds on average obtained 30 percent of firm capital (7.75 percent held directly by the State, 21.6 percent indirectly through State-controlled funds). The State keeps playing a rather important role in the governance of Slovenian firms and, through the State-controlled funds, in some firms remains the largest shareholder;
4. Outside minority investors, which gained ownership upon the public sale of shares, represent a relevant investor group only in a small number of firms listed on the Stock Exchange;
5. The two main investor groups (inside owners and institutional outside owners) ended up with similar capital stakes; inside owners prevail in the insider firms, while State-controlled funds and PIFs in the outsider firms;
6. Institutional investors are not homogeneous group since there are large differences between State-controlled funds and privately managed Privatization Investment Funds;
7. Insider owners include employees (they on average gained 29.23 percent of firms' capital), former employees (11.05 percent) and management (3.86 percent). This group of owners was rather homogeneous, at least at the beginning privatization. We don't expect the group to be stable over time; former employees are most likely about to exit, while managers are probably going to increase their control power, especially in the firms where their interests do not coincide with the interests of the employees.

4.1 Ownership dynamics in the post-privatization period

Figures in Table 4.2 evidence the intensity of the decline in the number of shareholders in listed and unlisted firms in the period 1999-2001. Most prominent in the first year after privatization is the decline in the number of shareholders (inside owners included) in listed companies; the transfer of shares in these firms was in fact rather easy and transparent. Shareholders in unlisted firms were more active in selling their shares in the years after 1999; the decline in the number of shareholders in these firms was mostly due to the sale of shares by the employees on non-transparent (black) markets.

Table 4.2: The dynamics in the number of shareholders in the years after privatization

	(non-weighted averages)							
	At time of completed privatization		1999		2000		2001	
Unlisted	100%	481	75%	360	64%	308	55%	265
-internal	100%	470	71%	333	59%	276	51%	241
-external	100%	492	79%	387	69%	340	59%	288
Listed	100%	7.497	61%	4.576	54%	4.085	49%	3.653
Total	100%	2.820	63%	1.765	56%	1.567	49%	1.394

Source: KDD and Privatization Agency

There have been changes going on also in the ownership structure of the privatized firms (see Table 4.3). The employees' ownership has been declining in the listed firms (-6.78 percent)¹⁴, while inside owners in the outsider firms have been increasing their stakes (+10.22 percent), aiming to reach the majority. In insider firms, insiders mostly keep holding majority stakes.

Table 4.3: The changes in the ownership structure since the conclusion of privatization to the end of 1999 (in percentage points)

Group of owners	All companies	Listed	Internal	External
State	-4,69	-3,98	-1,47	-7,09
Restitution and pension fund	-9,02	-6,49	-9,16	-9,78
PIFs (privatization funds)	-2,13	1,37	-0,31	-4,54
ALL Funds	-11,15	-5,13	-9,47	-14,32
Internal owners - managers	5,17	1,45	4,09	7,16
Internal owners – current employees	-2,19	-6,54	-4,52	0,85
Internal owners – former employees	0,35	-1,69	-1,39	2,21
ALL Internal	3,33	-6,78	-1,82	10,22
Financial investors - domestic	3,73	1,71	3,92	4,29
Financial investors – foreign	0,15	0,06	0,30	0,09
ALL Financial	3,88	1,77	4,22	4,38
Strategic investors – domestic	7,90	13,68	8,01	5,85
Strategic investors – foreign	0,72	0,44	0,52	0,96
ALL Strategic	8,62	14,12	8,53	6,81

Source: Survey MEOR & CEEP- 2000

¹⁴ In these firms, it is very difficult for the employees to gain the majority share. Moreover, they can sell their share at transparent prices and on the organized capital market.

Most evident within the group of inside owners is the increase of the managerial ownership (+5.17 percent), while employee ownership has been decreasing (-2.19 percent). The largest is the increase of managerial ownership in the outsider firms (+7.16 percent) and insider firms (+4.19 percent), while this trend is much slower in the listed firms (+1.45 percent).

4.2 The desired ownership structure from the managerial perspective

The estimation of the desired (optimal) ownership structure is made upon the answers of Slovenian managers to our questionnaires about the optimal ownership structure of their firms. Since the managers have been mostly guiding the ongoing changes in the control of Slovenia corporations, we expect the actual ownership structure to approach the desired level in the future years.

Table 4.4: The ownership structure for privatized Slovenian firms: the actual ownership structure at the conclusion of privatization, at the end of 1999 and the desired ownership structure (N=183)

Group of owners	At time of completed privatization	End of 1999	Optimal	End of 1999 vs. Privatization	Optimal vs. Privatization	Optimal vs. End of 1999
State	7,75%	3,06%	1,55%	-4,69	-6,20	-1,51
Restitution and Pension fund	21,60%	12,58%	4,86%	-9,02	-16,73	-7,72
PIFs (privatization funds)	19,38%	17,25%	6,44%	-2,13	-12,94	-10,81
ALL Funds	40,98%	29,84%	11,31%	-11,15	-29,67	-18,53
Internal owners – managers	3,86%	9,03%	21,80%	5,17	17,94	12,77
Internal owners – current employees	29,23%	27,04%	29,48%	-2,19	0,25	2,44
Internal owners – former employees	11,05%	11,40%	4,80%	0,35	-6,25	-6,60
ALL Internal	44,14%	47,47%	56,08%	3,33	11,93	8,61
Financial investors – domestic	4,80%	8,53%	7,31%	3,73	2,51	-1,22
Financial investors – foreign	0,03%	0,18%	0,61%	0,15	0,59	0,43
ALL Financial	4,83%	8,71%	7,93%	3,88	3,10	-0,78
Strategic investors – domestic	2,00%	9,90%	16,92%	7,90	14,92	7,03
Strategic investors – foreign	0,30%	1,02%	6,21%	0,72	5,91	5,19
ALL Strategic	2,30%	10,92%	23,14%	8,62	20,84	12,22
TOTAL	100,00%	100,00%	100,00%			

Source: Survey MEOR & CEEP - 2000

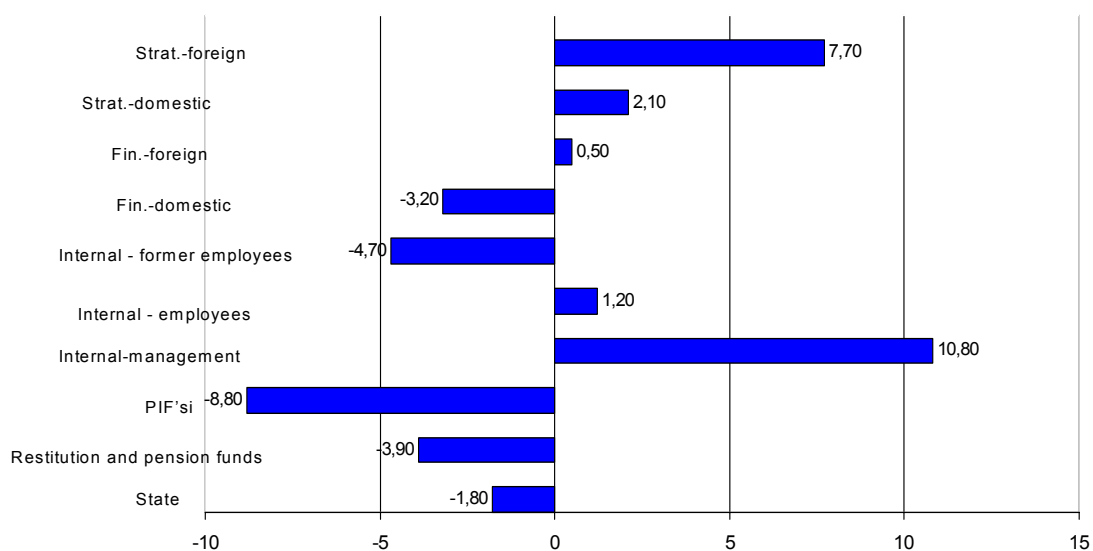
The analysis of the trends up to 1999 and of the desired ownership structure (see Table 4.4.) leads to the following conclusions:

1. The main trends that have been characterizing the first years after privatization (to the end of 1999) are expected to continue also in the future: the ownership share of Funds will decline, mostly on behalf of an increase in the ownership of strategic investors (up to 23.4 percent) and managers (up to the stated 21.8 percent);
2. The PIFs will accompany the State-controlled funds (whose share decline most in the in the first period) in exiting the firms in the second period;
3. While former employees kept their average stake in the first period (up to 1999), they are expected to sell their shares in the future (the expected decrease of their share is from 11.4 percent to 4.8 percent);
4. Foreigners will appear among the strategic investors in the second period (after 1999); their share in the capital of privatized firms is expected to increase from 1.02 percent to 6.21 percent.

There is a major insatiability associated with the actual ownership at the end of privatization. The actual share obtained by managers (3.86 percent) is highly below the desired average level (21.8 percent); with regards to the latter, the reported desired (or optimal) level of managerial ownership varied among different firm groups (14.47 percent in listed firms, 20.54 percent in insider firms and 25.14 percent in outsider firms). At the end of 1999, the difference between the actual and desired level of managerial ownership remains high (14.3 percent for outsider firms, 11.48 percent for the insider firms, 11.62 percent for listed firms!); the large insatiability of Slovenian managers with the current ownership structure is further confirmed by our latest survey (end of 2002). As evidenced in Figure 4.1, Slovenian managers want their own stakes and the stakes of strategic investors to be higher (by 10.83 percentage points for managers, 7.7 percentage points for strategic investors), while the Funds (State-controlled funds and PIFs) are expected to further decrease their participation in the firms' capital and control. Figure 4.1 clearly shows that Slovenian managers intend to increase their control power by increasing their own ownership stakes rather than by simply relying on the support by other insider owners. The managers' support of the inside distribution and buy-out as privatization methods might have been guided by the fact that managers perceived the insider

(employee) ownership as a transitional phase, resulting in pure managerial ownership in the years after privatization. Given that most of the stated changes have been going on in the unlisted firms, transparency of share transfers is crucial for the shares to be transferred at 'fair' prices and for the efficiency of managerial ownership and its impact on firm performance in the future.

Figure 4.1: Privatized firms: The desired ownership changes as reported by managers at the end of 2001 (in percentage points)



5. Managerial ownership and firm performance in Slovenia: main hypotheses

The observed increases in managerial ownership bring about the question of the impact on these changes on firm performance in Slovenia in the 1995-1999 period. The increasing ownership blocks could on one hand provide new incentives for managers and align their interests with those of the other owners, but could also create the opportunities to expropriate private benefits of control. Prasnikar and Gregoric (2002) for example find that, at the conclusion of privatization, firms with stronger managers promoted better the

internationalization of their activities, were most successful in exploiting market niches, developing new products and paid greater importance for financial goals; managers successfully balanced the interests of different interest groups, while their power increased with the share of inside owners. Given the strong insider support to managers and the relatively limited power of outside blockholders (Gregoric, 2003), the managers' incentives are in fact crucial for the performance of Slovenian managers. Hence, we begin with some main hypotheses on the effects of the managerial ownership as suggested by the literature:

H1: Managerial ownership on average has a positive impact on firm performance.

H2: The relationship between managerial ownership and firm performance is non-monotonic since at high managerial ownership stakes the entrenchment effect prevails over the incentive effect.

H3: The ownership thresholds, at which positive or negative effects prevail, are largely determined by the institutional framework. We expect these effects in Slovenia to vary between the firms with dispersed managerial ownership (below 10 percent); firms with minority managerial ownership (managers holding above 10 percent and consequently, some basic minority legal rights as provided by the law); firms with managers holding the power of veto (namely with shares above 25 percent, a share that can block the most important firm decisions) and firms with managers holding the majority of voting rights (above 50 percent).

However, given the special characteristics of Slovenian mass privatization, the effects of managerial ownership have to be analyzed also with regards to the optimal (desired) level of ownership - the one aligning the ownership of each of the different stakeholder groups with their importance for the firm success and the one balancing the positive and negative effects of ownership. Here we assume the optimal (desired) ownership structure to be different from the ownership structure resulting from privatization; there was neither time nor political willingness to search for the 'optimal' owners during privatization. As a consequence, firms ended up with bigger or smaller differences between the actual and desired (optimal) ownership structure, namely with the so-called 'ownership gap'. The estimated average 'ownership gap' and hence, the estimated frustration with the actual ownership for 182 firms in our sample is reported in Figure 4.1. The same figure could be drawn for any singular firm in our sample, with larger deviations from the optimal structure

leading to higher managerial frustration (insatiability) and hence worse firm performance.¹⁵ Given the ‘management control bias’ in Slovenian firms after privatization we expect the frustration with managerial ownership to be most important with regards to its impact on firm performance¹⁶. Hence, we can draw the following hypotheses:

H4: The optimal ownership structure, which ensures high firms’ performance, is endogenous and determined (among other things) by the initial firm performance, firm size, industry, investment risk, sales’ variability, institutional and economic framework in which the firm operates.

H5: Slovenian mass privatization created a gap between the optimal and the actual ownership structure (ownership gap), which negatively influences firm performance. The larger is the ownership gap (and hence, the frustration with ownership) the worse is firm performance.

The latter hypothesis implicitly means that an increase of managerial ownership up to the optimal share should have a positive impact on firm performance (incentive effect prevails), while negative effects (entrenchment) would prevail when managerial ownership increases beyond the optimal share.

H6: Given that the initial managerial share was relatively low, while the initial employee share was rather high (in comparison with the optimal share), we expect to observe a positive relationship between ownership and performance for the former and a negative relationship for the latter.

H7: The opportunities for gaining private benefits of control are larger for managers than for other owner groups. Hence, we expect the managerial frustration with the actual ownership structure to have more prominent negative effects on firm performance.

Given the above mentioned characteristics (see chapter 4.1) of share transfers in listed and unlisted firms, the reasons for management buying shares are expected to be quite different. In listed firms, with limited under-pricing, management is willing to increase its stake only in the case of expected positive incentive effects on firm performance. In

¹⁵ Here we use a simple quantitative measure of the gap as the average difference between the optimal and actual ownership stake in percentage points for the different owner groups. For the 10 groups evidenced in Figure 4.1, this difference varies between 0 and 20 percent.

unlisted firms, with substantial under-pricing, management can realize capital gains even if there are no positive effects on firm performance.

H8: Since the managers of listed firms have been buying shares at market prices and in a transparent way, the positive relationship between managerial ownership and firm performance should be stronger than in unlisted firms, where transfers of shares are often motivated by under-pricing and speculative reasons.

While successfully acquiring shares in their firms, managers in this transition period are not willing to damage the long-term firm performance and economic efficiency. This however might not be true with regards to the firm financial performance since these results are short-term and have to be shared with the owners that are about to exit the firm. By lowering firms' financial results, managers also lower the price of shares they acquire. Absent outside financing, managers might actually effectively expropriate corporate funds in order to finance share acquisitions (e.g. debt financing of the acquisition of firm own shares; cross-ownership arrangements; cross-financing of management share increases among related firms, etc.). The stated negative effects on firm financial performance realize ex ante, namely prior to the actual increase of managerial ownership. Hence,

H9: Managerial insatiability (frustration) with ownership share has a negative impact on short-term, financial performance of the firms, while no such effects are expected with regards to firm long term economic efficiency.

H10: In the transition period (while approaching the optimal structure), firm financial performance can be better explained by the planned increases in managerial ownership (which has a negative impact) than the actual increases in managerial ownership (which create incentives and hence positively effect firm financial performance).

¹⁶Managerial frustration is measured with the difference between the optimal and actual managerial ownership stake, in percentage points (varying between 0 and 100 percent for firms in our sample).

6. Empirical model and data

The hypotheses on managerial ownership are tested upon a sample of 182 firms in the period 1995-99. Detailed description of the firms in the sample is provided in Simoneti et al. (2001). Hypotheses on economic efficiency are tested with the Total Factor Productivity Model (TFP model) with the estimations of the marginal production function constructed by regressing the 5-year cumulative changes in the employment of labor and capital on 5-year cumulative increase in the sales, while adding variables reflecting managerial ownership and controlling for industry. We hence try to detect whether the changes in output, which are not due to changes in capital or labor, can be attributed to managerial ownership.

The analysis of financial performance in the period 1995-1999 is based on the EBITDA/SALES ratio in 1999, regressed on initial financial performance, industry dummies and selected ownership variables. The EBITDA (an approximation of firm operational cash flow) is a better measure of firm financial performance (than, for example, profit) since it is most reliable and allows little accounting discretion. Similarly, the total sales value seems to be a more reliable measure than the value of firms' capital or total assets. The initial firm performance is included in order to correct for the initial difference in firm performance. The main question is hence, whether ownership characteristics, besides the initial performance levels and industry differences, contribute anything to explaining the differences in firm performance at the end of 1999.

Table 6.1: Description of the variables used in TFP model and financial model

Δ sales	Change in output expressed as the difference of logarithms of sales for 1999 and 1995. In analysing economic efficiency in TFP model, the marginal production function was estimated on differences of logarithms (the estimated coefficients thus represent growth rates for 5 years period).
Δ labor	Change in employed labor in the period 1995- 99.
Δ capital	Change in employed capital in the period 1995 – 99.
$Y = \text{EBITDA} / \text{SALES}$	Financial performance in the final year (1999) expressed as the ratio of operational cash flow (EBIT plus depreciation of assets) to sales (in %).
Y_0	Initial financial performance at the time of privatization (1995).
m1	Initial managerial ownership in privatization (in %).
m2	Final managerial ownership in 1999 (in %).
n1	Initial internal ownership (managers, employees, former employees) in privatization (in %).
n2	Final internal ownership in 1999 (in %).
$(m1)^2, (m2)^2, (n1)^2, (n2)^2$	Squares of the ownership shares, included to test for non-linearity between performance and ownership of managers and internal owners.
L, I, E	Dummies for listed companies (L = 1), internal unlisted companies (N = 1) and external unlisted companies (E = 1).
lamp1, lamp2, lamp3	Correction factors to eliminate initial differences in performance across ownership groups of companies: L, I, E (so called Mills' ratios).
P1, P2, P3, P4	Dummies for the level of legal protection of managers as shareholders: P1: $m \leq 10\%$, small shareholders P2: $10\% \leq m < 25\%$, minority shareholders without veto power P3: $25\% \leq m < 50\%$, minority shareholders with veto power P4: $50\% \leq m$, majority shareholders

Table 6.2: Description of the ownership gap variables for all group of owners, for managers and for internal owners in the period 1995-99

GAP1	Initial ownership gap in privatization, expressed as the average absolute difference between desired and actual ownership share for all 10 group of owners (in %).
GAP2	Final ownership gap in 1999, expressed as the average absolute difference between desired and actual ownership share for all 10 group of owners (in %).
GAP3	Change in ownership gap 1995-99, expressed as the difference between GAP1 and GAP2 (in %).
mGAP1	Initial managerial ownership gap expressed as the difference between desired and actual ownership share for managers in 1995 (in %).
mGAP2	Final managerial ownership gap, expressed as the difference between desired and actual ownership share for managers in 1999 (in %).
mGAP3	Change in managerial ownership gap 1995-99, expressed as the difference between mGAP1 and mGAP2 (in %).
nGAP1	Initial internal ownership gap (managers, employees, former employees) expressed as the difference between desired and actual ownership share for internal owners in 1995 (in %).
nGAP2	Final internal ownership gap, expressed as the difference between desired and actual ownership share for internal owners in 1999 (in %).
nGAP3	Change in internal ownership gap 1995-99, expressed as the difference between nGAP1 and nGAP2 (in %).

The description of the variables used in the empirical analysis are provided in Tables 6.1 and 6.2. Before testing the two models (TFP and financial performance) in our sample of 182 firms we tested the same 5-year cumulative models on a larger sample of firms. The results for the basic model (column 1) and for the models including dummies for privatization methods (column 2) are presented in Table 6.3. The significant negative sign for insider and outsider privatized firms confirm that, on average, listed firms perform better (both with regards to economic efficiency and financial performance), while correcting for initial firm performance (endogeneity of the selection of privatization method). Similar results with respect to privatization methods in Slovenia were obtained by Simoneti et al (2003a) using annual data for the same period, which is confirming the validity of both models, also when applied to 5-year data. In order to test the stated hypotheses on managerial ownership, we proceed by replacing the privatization dummies with other ownership variables on our sample of 182 firms.

Table 6.3: Estimation of the basic 5-years cumulative models on a large sample, before the inclusion of the managerial (internal) ownership variables

	TFP Model		Financial Model	
	(1)	(2)	(1)	(2)
Δ capital	0,39 (7,741)***	0,409 (8,20)***		
Δ labor	0,75 (18,579)***	0,74 (18,178)***		
Y_0			0,590 (9,183)***	0,638 (9,268)***
I		-0,597 (-2,379)**		-20,702 (-2,266)**
E		-0,711 (-0,2533)**		-11,185 (-1,085)
Sector dummies	YES	YES	YES	YES
Correction for selection		YES		YES
Constant	YES	YES	YES	YES
Adj R ²	0,6285	0,6410	0,2340	0,269
F-stat	28,48	24,89	5,96	6,10
No. of observation	407	389	407	389

t-statistics in parentheses; ***, ** and * indicate statistical significance of coefficients at 1, 5 and 10 per cent respectively

7. Managerial ownership and firm performance. Empirical results

The main results of the models testing the relationship between managerial (inside) ownership and firm performance are summarized in Table 7.1. The following conclusions can be drawn:

1. Managerial ownership has a significant positive effect on firm financial performance, while no such effect is observed for economic efficiency or total factor productivity growth. The hypothesis H1 hence holds true only for financial performance, which is mostly short-term oriented and a less important indicator of long-term firm performance;
2. The effect of managerial ownership on firm financial performance is positive for unlisted firms, while this relation is not significant for firms listed on the Stock Exchange. Hence, managerial ownership in Slovenia does not seem to result as the alternative mechanisms of agency problem solving in firms with dispersed ownership (which is mostly the case for listed firms). One of the possible explanations is that the pressures of other outside owners in listed firms by themselves ensure good financial performance, while in the unlisted

firms performance improves only with a higher managerial stake. The observed positive effect in unlisted firms somehow contradicts the H8 that managers in unlisted firms acquire shares (on the black market) only out of speculative reasons but not out of economic reasons;

3. The positive effect of managerial ownership is confirmed only for stakes exceeding 10 percent (consistently with H3 that institutional reasons determine the thresholds at which incentive or entrenchment effects prevail). The incentives for good financial performance for managers holding below 10 percent of shares are probably too small to outweigh the private benefits of control that can be, given the relatively passive outside owners, gained irrespective of their ownership shares;
4. The finding stated under 3 confirms the nonlinear relationship between managerial ownership and firm performance (partially consistent with H2). On the contrary to the developed market economies, where managerial ownership first has a positive effect and the entrenchment effect prevails above a given share of managerial ownership, we observe an U-shape relationship for Slovenia. The estimated coefficients (-2.7 for m_2 and 0.084 for $(m_2)^2$) indicate that the function reaches its minimum at 16 percent ownership, at which incentive effects (positive effects) prevail over entrenchment effects (see Figure 7.1). Hence, the standard explanation on managerial ownership as one of the mechanisms reducing the agency problem does not seem to fit in the Slovenian story. Here, we must bear in mind that due to passive outside owners (funds), the Slovenian managers already enjoyed substantial power at the conclusion of the privatization, despite the relatively limited ownership shares. Hence, the private benefits of control that accrued to the managers are not directly linked to their ownership stakes but rather to the passivity of other owners. Hence, managers start behaving like real owners (and consequently are concerned about firm financial performance) only when they reach a determinate ownership share; it's only at this point that their share is high enough for the incentive effect to prevail over the entrenchment effect;

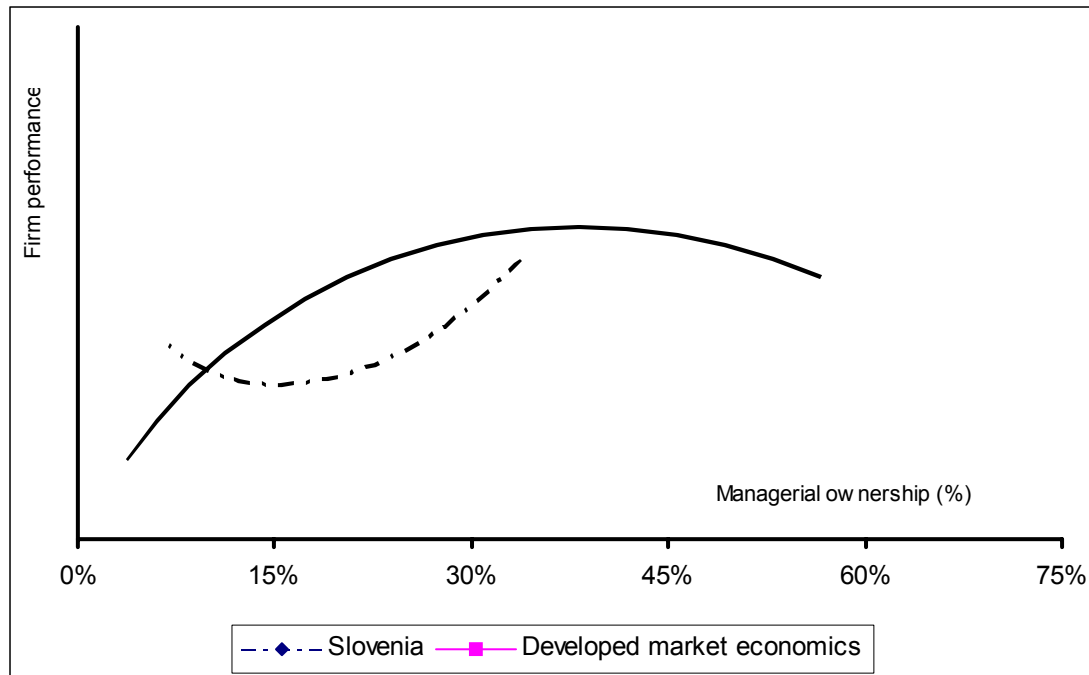
Table 7.1: Significance of managerial and internal ownership variables in TFP models and financial models, 1995-99

(n=180)

	TFP Model	Financial Model
Management Ownership		
m1		
m2		(+)*
Δm		
Listed (J=1); m2		
Non-listed (J=0); m2		(+)**
[0%-10%] (P1=1); m2		
[10%-25%] (P2=1); m2		(+)*
[25%-50%] (P3=1); m2		
[50%-100%] (P4=1); m2		
m1, (m1) ²		
m2, (m2) ²		(-)** , (+)***
Internal Ownership		
n1		
n2		
Δn		
Listed (J=1); n2		(-)*
Non-listed (J=0); n2		
[0%-10%] (P1=1); n2	(-)***	
[10%-25%] (P2=1); n2		
[25%-50%] (P3=1); n2		
[50%-100%] (P4=1); n2		
n1, (n1) ²		
n2, (n2) ²		

***, ** and * indicate statistical significance of coefficients at 1, 5 and 10 per cent respectively

Figure 7.1: Non-linear relationship between firm performance and managerial ownership:
Slovenia and developed market economies compared



5. Less clear is the influence of the inside ownership on firm financial performance; when significant, the relation is even negative. This finding is consistent with H6: given the relatively large share of the employees (with respect to their optimal share) at the conclusion of privatization, insider ownership is expected to have a negative effect on firm performance;
6. When below 25 percent, inside ownership has a negative and significant impact on firm economic efficiency (TFP). With a minority stakes, inside owners have no substantial power in corporate decision making (eg. the right of veto) and hence find it more difficult to identify with the firm;
7. The negative influence of inside ownership is significant for listed companies, while no such effect is observed for unlisted firms. This is consistent with the finding under point 6 since inside ownership tends to be lower in listed firms. Hence, private benefits prevail in case of inside owners even with higher investor protection in the listed firms. In fact, inside owners share substantial decision-making power in Slovenian firms regardless their actual ownership share; hence, with minority stakes, employees have low motivation to behave like owners and end up exploiting their ownership in order to consolidate their position in the firm decision-making.

In order to take into account the distribution of power between different stakeholders and the discrepancy between the actual and optimal ownership structure, we perform further regressions with ownership gaps as explanatory variables. The results for both models are presented in Table 7.2 and can be summarized as follows:

1. Ownership gap has no significant effect on economic efficiency (TFP growth), while the effect on financial performance is negative and statistically significant, consistent with H5;
2. Managerial frustration has stronger negative effects on financial performance than the frustration of inside owners and the overall ownership frustration. The coefficients corresponding to the initial and final difference between optimal and actual managerial ownership are negative and highly significant. This is consistent with H7; the opportunities for expropriating private benefits of control for unsatisfied managers are the highest due to the initial ‘manager control bias’, which rather than from the managerial ownership arises from the passivity of other, outside owners;
3. We further confirm H9; while managerial frustration exerts negative effect on a short-term, managers seem to behave rationally and do not jeopardize firm long-term performance (TFP growth);
4. Two main tendencies can be observed when comparing Table 7.1 and Table 7.2: i) the actual managerial share is positively related to firm financial performance (see row corresponding to m2 in Table 7.1) and ii) the planned increase in managerial ownership has a negative effect on firm financial performance (see row corresponding to mGAP1 and mGAP2 in Table 7.2). In fact, our H10 predicts that negative effect prevails during the transition towards the optimal managerial share. The hypothesis is confirmed by the results presented in Table 7.3, which includes the actual managerial ownership share (column 1), the planned increase in the managerial ownership (column 2) and both (column 3) as explanatory variables. When including both variables, the negative effect linked to the planned increases in managerial ownership (mGAP2) outweighs the positive incentive effect associated with the actual managerial ownership shares (m2);

5. A more detailed analysis (see columns 4 and 5 in the Table 7.3) evidences that negative effect prevails only when managers hold less than 10 percent of firm capital, while the positive effect prevails in the firms with managers holding more than 10 percent. Hence, the ownership ambitions of managers with minority stakes are so high that this leads to lower financial performance. The latter could be only fake (in order to influence the value of the firm shares) or real (as a consequence of direct or indirect financing of share acquisitions out of corporate funds).

Table 7.2: Significance of ownership gap variables in TFP models and financial models, 1995-99

	TFP Model	Financial Model
All Group of Owners		
GAP1 – initial gap		(-)*
GAP2 – final gap		(-)**
Managers		
mGAP1 – initial gap		(-)***
mGAP2 – final gap		(-)***
Internal Owners		
nGAP1 – initial gap		
nGAP2 – final gap		(-)*

Table 7.3: Financial models with actual managerial ownership (m2) and/or planned increase in managerial ownership (mGAP2) as explanatory variables

	(1)	(2)	(3)	(4) m<10%	(5) m ≥10%
Y₀	0,476 (4,227)***	0,655 (3,998)***	0,551 (5,076)***	0,560 (4,386)***	0,614 (1,818)*
m2	0,171 (1,709)*		0,0586 (0,593)	0,287 (0,795)	0,701 (2,414)**
mGAP2		-0,377 (-4,223)***	-0,188 (-3,707)***	-0,263 (-4,098)***	0,0375 (0,519)
Cons.	4,24 (1,272)	8,402 (1,617)	6,941 (2,138)**	7,663 (2,074)*	-11,925 (-1,365)
Sector Dummies	Yes	Yes	Yes	Yes	Yes
Adj R2	0,1996	0,3181	0,2816	0,2857	0,4964
F stat	2,78	2,73	3,65	3,20	2,66
No. of observation	151	150	150	122	28

t-statistics in parentheses; ***, ** and * indicate statistical significance of coefficients at 1, 5 and 10 per cent respectively

8. Conclusions

The empirical analysis on managerial ownership and firm performance in Slovenian post-privatization period does not provide any support to the conclusion that managerial ownership positively influences long term economic efficiency of Slovenian firms (measured as the total factor productivity growth). The percentage of the firm capital in the hands of managers however has some positive impact on firm financial performance; the later is anyway outweighed by the negative effect associated with the planned increases in managerial ownership, especially in the firms where managerial frustration with the ownership structure is still rather high. Poorer financial performance might have no real foundations and can be simply lead by the managerial efforts to reduce the value of firm shares; however, it is real when it results out of the managers' expropriation of corporate funds for financing their share acquisitions.

The first empirical results indicate that we can expect managerial ownership to have a positive effect (and hence create incentives) on firm financial performance, in particular in the unlisted firms and in the firms with managers holding more than 10 percent of capital. We find the main reasons for the nonlinear relationship between managerial ownership and firm performance in the initial management control bias, associated with the passivity of other owners rather than with the managerial ownership stakes. While this initial power provides the managers with large possibilities to extract private benefits of control, the incentive effect seems to prevail only when the managerial share exceeds the 10 percent threshold. On the other hand, the nontransparent increase in the managerial ownership in unlisted firms fortunately seems to have no negative effect on economic efficiency and hence long-term performance of Slovenian firms¹⁷.

¹⁷ Further estimations and corrections for the endogeneity of managerial ownership (FEM and REM, SYS-GMM, annual data with figures for 2000 and 2001) are necessary in order to provide stronger support to our results. These are certainly issues of our further research.

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