MAGYAR TUDOMÁNYOS AKADÉMIA
KÖZGAZDASÁGTUDOMÁNYI INTÉZET

KTEI IE

INSTITUTE OF ECONOMICS
HUNGARIAN ACADEMY OF SCIENCES

MŰHELYTANULMÁNYOK **DISCUSSION PAPERS**

MT**-DP – 2009/26**

Political Objectives and Privatization Decisions

Selection of Firms into Privatization or Long-Term State Ownership in Romania

ÁDÁM SZENTPÉTERI - ÁLMOS TELEGDY

INSTITUTE OF ECONOMICS, HUNGARIAN ACADEMY OF SCIENCES
BUDAPEST, 2009

Discussion papers
MT-DP – 2009/26

Institute of Economics, Hungarian Academy of Sciences

Political Objectives and Privatization Decisions
Selection of Firms into Privatization or Long-Term State Ownership in Romania

Author:

Ádám Szentpéteri
assistant lecturer
Central European University
Eötvös Loránd University
E-mail: adam.szentpeteri@creditime.hu

Álmos Telegdy
senior research fellow
Institute of Economics of the Hungarian Academy of Sciences
E-mail: telegdy@econ.core.hu

November 2009

ISBN 978 963 9796 85 0

ISSN 1785 377X

Political Objectives and Privatization Decisions

Selection of Firms into Privatization or

Long-Term State Ownership in Romania

Ádám Szentpéteri-Álmos Telegdy

Abstract

With the help of a peculiar institutional feature of early Romanian privatization, when a group of firms was explicitly banned to become private, we test which factors contributed to the selection of firms into long-term state ownership. We find that politicians sheltered large and inefficient firms from privatization, which paid low wages and had high overdue payments. These results are consistent with minimization of employment losses, even if efficiency enhancement of privatization or revenue maximization had to be sacrificed. We hypothesize that this behavior was induced by the unfavorable economic conditions in Romania which brought about large employment losses during the first several years of economic transition.

Keywords: privatization, government objectives, Romania

JEL: L33, P26

Acknowledgement:

We thank John Earle for useful comments, Ruxandra Visan for data cleaning and the Global Development Network for financial support. The usual disclaimers apply.

Hosszú távú állami tulajdon vagy magánosítás?

Vállalatok politikai szelekciója Romániában

Szentpéteri Ádám – Telegdy Álmos

Összefoglaló

A romániai állami vállalatok egy részét a privatizáció kezdete előtt az állami döntéshozók kivonták a privatizálható vállalatok köréből. Azt vizsgáljuk, hogy milyen vállalati ismérvek alapján tartották e vállalatokat hosszú távon is állami tulajdonban. Elemzésünk szerint a politikusok leginkább a nagy méretű, rossz hatékonysággal működő vállalatokat sorolták ebben a csoportba. Ezek alacsony béreket fizettek és sok esetben komoly elmaradásaik voltak tartozásaik, valamint adóik kifizetésében. Eredményeink arra engednek következtetni, hogy a politikusok elsősorban a munkahelyek elvesztését próbálták korlátozni még akkor is, ha ennek ára a rossz hatékonyságú vállalatok megtartása volt. E mögött az a megfontolás állhatott, hogy Romániában az átmenet első időszakában a foglalkoztatottak száma jelentős mértékben csökkent; ezért a döntéshozók racionálisan dönthettek úgy, hogy nem erősítik ezt a folyamatot a privatizáció vélt vagy valós negatív munkapiaci hatásaival.

Tárgyszavak: privatizáció, kormányzati célok, Románia

JEL: L33, P26

1. INTRODUCTION

Privatization, one of the most important policies that shaped the economic landscape of many countries in the last three decades, has always been a highly politicized process (Kay and Thompson, 1986) and in the last several years a number of studies were published that analyzed the factors that induce or hamper the selection of firms into privatization programs or the sequencing of firms in privatization.[1] In this paper we study this process in Romania, and we argue that the country has several features that make such an analysis potentially very useful. First, the firm-level dataset we use in this analysis contains the whole population of state-owned enterprises (SOEs) in 1992, before the privatization of medium and large corporations actually started. Second, the institutional setting of the early Romanian privatization was such that it allows us the clearly distinguish firms that were, from those which were not included in privatization programs, even if those from the first group were not privatized. In 1990-91, before the privatization process actually started, the Romanian government explicitly prohibited the privatization of a group of firms, and the transfer of ownership from state to private hands of these companies was allowed only seven years later at the end of 1997, after the party governing between 1990 and 1996 lost the elections. These firms were given a special legal form (called *regii autonome* in Romanian). We observe legal form in our data, hence we can distinguish privatizable firms from those kept in long-term state ownership even if both remained in state ownership. This empirical setting presents a clear advantage to the situation when the intentions of the decision makers are tested by comparing actually privatized and not privatized firms, as the state-owned group may contain firms that the government intended to privatize, but for some reason the transfer of ownership did not happen. The importance of this distinction is confirmed by our data, as only 30 percent of the privatizable firms had been actually privatized by 1996, the end of the first political cycle.

The other advantage of the Romanian institutional setting is that the law regulating the categorization of firms into privatizable and non-privatizable groups was rather vague, leaving the decision makers latitude to pursue their own objectives. The stated intention behind the prohibition of privatization for certain firms was to keep the so-called strategic firms under state control, but the law neither specified which industries were deemed to be strategic, nor did it restrict the action of the law over strategic industries: "...(non-privatizable firms) are

[1] Studies using firm-level data to test the selection of firms into privatization programs include Guo and Yao (2005) and Liu et al. (2007) in China, and Dinc and Gupta (2009) in India. Szentpeteri and Telegdy (2009) study the same question in Romania by estimating the effect of privatization from real data and constructing a counterfactual effect of non-privatizable firms. De Fraja and Roberts (2009) and Gupta et al. (2008) study factors that explain sequencing of privatization in Poland and the Czech Republic, respectively.

organized and operate within the economy's strategic branches…as well as in other fields of activity established by the Government" (Law 15/1990 on State Enterprise Reorganization, Art. 2). This formulation left the decision makers rather unconstrained in making privatization decisions in a sovereign way.

In addition to the institutional setting of early privatization, the Romanian economic environment also differs from other countries – China, the Czech Republic and Poland – where the political selection into privatization or the sequencing of privatization has been analyzed. Between 1991 and 1996 employment fell by 13 percent in Romania, and this large decline probably made politicians sensitive to expected employment declines after privatization (National Commission for Statistics, 1997).[2] Indeed, our results support that politicians responded to the challenges of the economic environment as – unlike other studies – we find that large, inefficient companies, which were more likely to shed employment as a consequence of firm restructuring, were kept under state control for an indefinite time. Under the assumption that privatization has the largest efficiency enhancing effect on firms with low pre-privatization efficiency, this also means that the Romanian decision makers did not care much about this positive feature of privatization. The other findings of the paper show that firms with low wages and large overdue payments were also more likely to be sheltered from privatization, although these results are not so robust across different specifications.

In the next section we discuss the data and the estimation methodology. In Section 3 we present the results and the last section concludes.

2. DATA

The main data source of this analysis is the Romanian Ministry of Finance balance sheet data, which provide information on financial variables and employment for all SOEs in 1992 and for overdue payments and the value of bad loans for 1993. Privatizations barely started in 1992, so these are also pre-privatization data for most of the firms.[3] Industry code at the 3-digit level and legal form are drawn from the Romanian Enterprise Registry. We use the legal form to distinguish privatizable and non-privatizable firms.

[2] While the positive effects of privatization on firm performance in Central and Eastern Europe are well established (Djankov and Murell, 2002; Brown et al., 2006; Estrin et al., 2009), the employment effects have been much less analyzed and the results are not so conclusive (e.g., Brown et al., forthcoming). Nevertheless, theoretical work predicted large declines in employment (Boyco et al., 1996), and anecdotal evidence also suggest fears from employment declines. In Sri Lanka, for example, a presidential decree was issued stating that workers in privatized companies should not lose their jobs (Knight-John and Athukorala, 2005). Megginson (2005) states more generally that "(all) governments fear lay-offs resulting from privatization" (p. 389).

[3] In our sample there are only 10 firms that were privatized, all of them during the last two months of the year.

From the population of SOEs we selected those 3-digit industries by the NACE classification which contain at least one non-privatizable firm. Appendix Table 1 shows that there are 47 such industries, containing 348 non-privatizable firms. Some of these industries are typically considered of strategic importance, and have been traditionally state-owned in many countries. These include different mining activities, the railway, the post, and a radio communication firm that deals with the distribution of frequencies. These industries contain very few firms, many times only one and these are not privatizable. Other industries can also be considered of strategic importance, such as the energy sector and water distribution, sewage, and land transportation. Many firms belonging to them are non-privatizable, but there is also a large number of privatizable firms in these industries. A third category consists of those industries in which state ownership does not seem to be important, at least not for strategic reasons. Examples can be brought from agriculture, tobacco, constructions, retail, hotels, real estate and many others.

To perform the regression analysis, we restrict the sample to have more comparable firms across the privatizable and non-privatizable groups. Agriculture is dropped from the analysis as the number of non-privatizable firms is a very small proportion of all firms. We drop those industries in which only non-privatizable firms exist. The final sample consists of 2,019 firms, out of which 287 are non-privatizable and 1,732 privatizable. When total assets are used in the construction of the performance measure, the sample shrinks by 178 firms (248 non-privatizable and 1,593 privatizable).

3. POLITICAL OBJECTIVES IN PRIVATIZATION PROGRAMS

Economic theory recommends privatization as a tool to depoliticize state-owned enterprises (SOEs) and to provide incentives to restructure them (e.g., Kornai, 1992), but the designers of privatization programs may have different objectives. Socially sensitive politicians may be more concerned about the current employment of the firm than its future efficiency, especially if they share the widespread belief that privatization results in layoffs. To create political support, self-interested politicians may also be inclined to keep excess employment in firms which are under their control and hamper the privatization of those firms in which subsequent restructuring will result in job losses (Shleifer and Vishny, 1994). Politicians may also be concerned about balancing the state budget (Bortolotti et al., 2003) or care for their own wealth and political career by collecting bribes and political support received from investors in exchange for a low price of the privatizable companies (López-de-Silanes et al., 1997). Finally, the need to attract investors and public support for future reforms may also be major factors among the objectives of politicians (Dewatripont and Roland, 1995).

We can test several of these objectives with the help of our data. Following Guo and Yao (2005) and Gupta et al. (2008), we assume that privatization can boost more effectively the efficiency of those SOEs which are relatively inefficient pre-privatization. Employment concerns of politicians are also captured partially by firm efficiency: already efficient firms are less likely to shed labor after privatization. In addition, selection by employment size may also indicate employment concerns, as larger firms may lose larger amounts of labor than smaller ones during restructuring. As well as employment, wages can also influence privatization decisions. If the government expects that wages will fall after privatization, this may also decline their chances of reelection. Privatization revenues may also play a role in privatization decisions, as they help governments to ease the burden on the state budget. As we do not observe privatization revenues in the data we proxy them with firm size and firm efficiency: ceteris paribus, large and efficient firms are more valuable than small and non-profitable ones. Privatization, however, can also have an indirect effect on the state budget through higher tax revenues, if privatization increases profits, and by lower transfers to loss making SOEs. We proxy transfers by looking at the existence of soft budget constraints (SBCs) at the firm level. Finally, reputation concerns would also induce politicians to privatize efficient firms first. To test whether bribe collection was an important factor in privatization decisions, we should know privatization prices and contrast them with some estimated value of the firm. Such data unfortunately do not exist, but we argue that bribe taking was probably not a major consideration in the early Romanian privatization. During the first political cycle most of the firms were privatized by the Management Employee Buyout method, in which an organization established by the management and the employees of the firm had the right of first refusal in most of the cases, and the loan taken from the government to pay for the shares had always negative interest rates. If politicians foresaw this when selecting firms into privatization programs, they were also aware that it will not be likely to collect bribes (at least to a lesser extent than in the case when privatization favored outside investors). This argument also applies to privatization revenues: since privatization brought very little revenues, we can rule out the possibility that privatization prices were a major concern for politicians, at least in the early phase of the Romanian privatization.[4]

We use three measures for firm efficiency: return on assets (ROA), return on sales (ROS) and the unit cost of production (UC) (the exact definitions of the variables are provided in Table 1). All three performance proxies show that privatizable firms were more efficient than non-privatizable ones. ROA is 1.1 percent for the average non-privatizable, and 4.5 percent for the privatizable firm. Average ROS is 0 in non-privatizable, and 4.5 in the privatizable group, and UC is slightly larger than 1 for the non-privatizable and 0.935 for the privatizable firms.

[4] On the Romanian MEBO privatization see Earle and Telegdy (2002). Szentpeteri and Telegdy (2009) discuss the relative importance of different factors in the selection of firms into privatization in Romania.

The mean difference among the two groups of firms is statistically highly significant for all three variables, as shown in Column 3 of the table. Non-privatizable firms were much larger than those which were not sheltered from ownership change. The average employment size was 1,079 for the non-privatizable firms, almost four times more than privatizable firms' average employment of 404 (the mean difference between the two groups is statistically significant). The two groups also differ by average wages, as this variable was higher by 9 percent in privatizable firms than in firms kept in long-term state ownership (the mean difference, however, is significant only at the 10-percent level). Our first indicator of SBCs is the proportion of overdue payments in the value of sales (overdue payments include payments to suppliers, creditors as well as tax payments). Overdue payments are larger in non-privatizable firms, where on average it amounted to almost 11 percent of the value of sales, while it was 7 percent for the other group.[5] The other SBC indicator, the proportion of bad loans taken over by the government were, on the contrary, larger in the privatizable group (5.7 and 3.6, respectively).[6] The comparison of means across the two types of firms therefore suggests that Romanian politicians were inclined to privatize relatively small and profitable firms, which paid high wages, had a smaller proportion of overdue payments, but a larger proportion of bad loans.

4. EMPIRICAL SETTING AND RESULTS

To perform the multivariate analysis, we follow the literature and estimate probit regressions, where the dependent variable equals 1 if the firm was kept in long-term state ownership and 0 if not, and the regressors include employment, performance, wages and the two indicators of SBCs (employment and wages, the two variables that do not present proportional differences across firms, are in logarithms). We control for the chance that selection was partially done on the basis of strategic industries in two ways. First, we include a dummy variable indicating that the firm is from a strategic industry and the estimation equation is the following:[7]

$$LONGSTATE_i = \alpha_1 + \alpha_2 EFF_i + \alpha_3 \log EMP_i + \alpha_4 \log WAGE_i + \alpha_5 OVERDUE_i + \alpha_6 BADLOAN_i + \alpha_7 STRATEGIC_i + \varepsilon_i$$

[5] Overdue payments are zero for 675 firms, out of which 69 are non-privatizable and 606 privatizable. The average overdue payment for those firms where this variable is positive is 14 and 11 percent, respectively.

[6] These variables are available only for 1993, so they can be contaminated by privatization effects. When we exclude them from the regressions the coefficients of the other variables do not change qualitatively.

[7] We use a very broad definition of strategic industries, which include the following industries (by the NACE code): 101, 102, 111, 132, 145, 221, 401, 402, 403, 410, 601, 602, 632, 641, 643, 644, 731, 900, 921. By this definition half of all firms and 83 percent of non-privatizable firms operate in strategic industries.

As the grouping of industries into strategic and not strategic is somewhat *ad hoc*, in a second specification we replace this dummy with a full set of 3-digit industry controls. With the disaggregated set of dummies we control better for industry effects, but the results are potentially unstable as we have industries with very few companies.

The marginal effect of the probit estimates, presented in Table 2, confirm the results obtained from the univariate analysis. The estimated marginal effects show that pre-privatization ROA and ROS have a negative effect on the probability of selection in long-term state ownership. UC, which is a measure of inefficiency, has a positive effect. Employment size is estimated to have a positive effect on the chance of being kept under state control. The efficiency and employment effect is very robust to controls for industry (strategic or a full control of three digit industries). Higher wages have a negative significant effect when a strategic dummy is included in the specification, but the magnitude of the coefficient drops when we control with a full set of industry dummies and it also becomes statistically insignificant. Overdue payments have a positive and significant estimated marginal effect when we control for strategic industries, but this effect vanishes (and it becomes negative) when the strategic dummy is replaced with a full set of industry controls. Bad loans seem not to have any effect on the selection of firms into long-term state ownership.[8] The dummy variable indicating whether the company is in a strategic industry always has a positive, significant coefficient.

Our results therefore show that Romanian decision makers kept in long-term state ownership large and inefficient firms, which pay low wages but have large overdue payments (the last two results are lost when detailed industry controls are added). Keeping inefficient firms under state control is consistent with the hypothesis of employment and reputation concerns, and inconsistent with efficiency increase and maximization of privatization revenues.[9] The selection by employment size also indicates the importance of employment concerns, and provides counterevidence for revenue collection. Keeping low wage firms under state control may also show that politicians were concerned with deterioration of worker well-being after privatization, especially if low wages are a proxy for the quality of employees. Low-skilled employees faced a greater threat of replacement and also had hard time finding a new job. Finally, keeping firms which have large overdue payments also shows that balancing the state budget was not a high priority in the privatization process. In conclusion, our results provide evidence that politicians were primarily concerned with employment deterioration, and they did that even if its price was forgone efficiency enhancement of SOEs.

[8] It is possible that this result is driven by positive correlations between the two SBC measures. We rerun the regression without including overdue payments, but the estimated coefficients on bad loans did not change.

[9] Reputation concerns, however, are not likely to have played an important role in the early Romanian privatization, as the process unfolded very slowly in the first several years. According to our data, only about one-quarter of firms was majority privatized by 1995.

The estimated effects of pre-privatization characteristics on the probability of being slated for long-term state ownership are sizable. As Table 3 shows, the firm at the 10th percentile in the distribution of ROA has a chance of 6 or 11 percent to be in the non-privatizable group, while the firm at the 90th percentile has a chance of only 9 to 4 percent (all the other variables are set at their means). We estimate similar effects for the other proxies of efficiency. These effects are not large, but neither negligible if compared to the observed probability of being in the non-privatizable group, which is 13-14 percent. The employment effect is much larger: the probability of being in long-term state ownership of the firm with employment size at the 10th percentile of the employment distribution varies between 2 and 6 percent, depending on the specification. This probability is between 11 and 16 percent for the firm at the 90th percentile of the employment distribution, the difference between the two probabilities being between 8.8 and 12.9 percentage points. When wages are set to the 10th percentile of the wage distribution and we control only for strategic industries, the probability to be in the non-privatizable group is 12-13 percent, and at the 90th percentile of the distribution it declines to 7-8 percent. This represents a fall of 5 percentage points in the probability to be selected for long-term state ownership.[10]

How do our results compare to findings from other studies? Pre-selection firm efficiency increases the probability to be in the first wave of mass privatization in the Czech Republic (Gupta et al., 2008), but Dinc and Gupta (2009) do not find any correlation between efficiency and selection into privatization in India, nor the two studies using Chinese data find such effects (Guo and Yao, 2005; Liu et al., 2007). Contrary to our results, both Dinc and Gupta (2009) and De Fraja and Roberts (2009) find that large firms are more likely to be privatized in India and Poland, although the Polish data contains only the largest firms. Gupta et al. (2008) test the employment concerns of politicians by including industry-level employment growth in the regressions and do not find any effect. Guo and Yao (2009) test the effects of SBCs, and do not find any significant effects on privatization. Regarding wages, they have a negative effect on privatization in India and China (Dinc and Gupta, 2009; Liu et al., 2007) while we find that firms with small wages are more likely to remain in state ownership. Finally, Szentpeteri and Telegdy (2009) study Romania by taking advantage of the information on actual privatizations and simulating the possible effects on employment, efficiency and wages, and find similar results to those presented in this paper.

[10] We do not carry out such analysis with overdue payments, as it is equal to zero for 35 percent of the sample. If overdue payments are equal to zero, the probability of being selected in long-term state ownership is 8.2-9.4 percent, which is 2-3 percentage points smaller than if overdue payments are set at their value at the 90th percentile of the sample (in regressions where we control for strategic industry).

5. CONCLUSIONS

In this paper we analyzed several firm characteristics that could contribute to the political selection of firms in long-term state ownership. We find strong evidence that politicians hampered the privatization of large, inefficient companies. We also find that low wages and large levels of overdue payments increased the likelihood of being sheltered from privatization, albeit these results depend on the specification. In conclusion, the main interest of the Romanian politicians was to keep those firms away from privatization which were likely to have large employment losses as a result of post-privatization restructuring. It is probable that the unfavorable economic conditions and large expected employment declines did influence politicians' objectives by increasing the social and political costs of layoffs, and politicians responded to these costs by keeping control in those firms which were most susceptible to such outcomes, even at the cost of forgone efficiency increases.

REFERENCES

Bortolotti, B., Fantini, M., Siniscalco, D. (2003). 'Privatisation around the World: Evidence from Panel Data', *Journal of Public Economics* 88(1-2), pp. 305-332.

Boycko, M., Shleifer, A., Vishny, R. (1996). 'A Theory of Privatization', *Economic Journal* 106, pp. 309-319.

Brown, D. J., Earle, J. S., Telegdy, A. (2006). 'The Productivity Effects of Privatization: Longitudinal Estimates from Hungary, Romania, Russia, and Ukraine', *Journal of Political Economy* 114(1), pp. 61-99.

De Fraja, G., Roberts, B. (2009). 'Privatization in Poland: What was the Government Trying to Achieve?' *Economics of Transition* 17(3), pp. 531-557.

Dewatripont, M., Roland, G. (1995). 'The Design of Reform Packages under Uncertainty.' *American Economic Review* 85(5), pp. 1207-1223.

Dinc, S. I., Gupta, N. (2009). 'The Decision to Privatize: Finance, Politics and Patronage.' http://www.bus.indiana.edu/nagupta/decisiontoprivatize.pdf.

Djankov, S., Murrell, P. (2002). 'Enterprise Restructuring in Transition: A Quantitative Survey', *Journal of Economic Literature* 40(3), pp. 739-792.

Earle, J., Telegdy, A. (2002). 'Privatization Methods and Productivity Effects in Romanian Industrial Enterprises', *Journal of Comparative Economics* 30, pp. 657–682.

Estrin, S., Hanousek, J., Kocenda, E., Svejnar, J. (2009). 'Effects of Privatization and Ownership in Transition Economies', *Journal of Economic Literature*, 47(3), pp. 699-728.

Guo, K., Yao, Y. (2005). 'Causes of Privatization in China', *The Economics of Transition* 13, pp. 211-238.

Gupta, N., Ham, J. C., Svejnar, J. (2008). 'Priorities and Sequencing in Privatization: Evidence from Czech Firm Panel Data', *European Economic Review* 52, pp. 183-208.

Kay, J. A., Thompson, D. J. (1986). 'Privatisation: A Policy in Search of a Rationale.' *Economic Journal* 96(381), pp. 18-32.

Knight-John, M., Athukorala, W. (2005). 'Assessing Privatization in Sri Lanka: Distribution and Governance' In Nellis, J., Birdsall, N. (eds.), *Reality Check: The Distributional Impact of Privatization in Developing Countries*, Washington, D.C.: Center for Global Development.

Kornai, J. (1992). 'The Principles of Privatization in Eastern Europe', *De Economist* 140(2), pp. 153-176.

Law No. 15 on Restructuring State-Owned Enterprises (1990). http://www.angelfire.com/biz/isml/l15p90.html

Liu, G., Sun, P., Woo, W. (2007). 'What Motivates and Constraints Politicians to Privatize? The Case of China', *Economics Letters* 97, pp. 81-86.

López-de-Silanes, F., Shleifer, A., Vishny, R. (1997). 'Privatization in the United States.' *RAND Journal of Economics* 28(3), pp. 447-471.

Megginson, W. (2005). *The Financial Economics of Privatization*. New York: Oxford University Press.

National Commission for Statistics (1997). *Romanian Statistical Yearbook, 1997*. Bucharest.

Shleifer, A., Vishny, R. (1994). 'Politicians and Firms', *The Quarterly Journal of Economics* 109(4), pp. 995-1025.

Szentpéteri, A., Telegdy, A. (forthcoming). 'Political Selection of Firms into Privatization Programs. Evidence from Romanian Comprehensive Data', *Economics and Politics*.

APPENDIX

Table 1

Non-Privatizable and Privatizable Firm Characteristics

Name of variable	Definition of variable	Non-privatizable	Privatizable	Mean difference
Return on Assets (ROA)	Net income over value of total assets	0.011 (0.003)	0.053 (0.003)	-0.042*** (0.010)
Return on Sales (ROS)	Net income over value of sales	-0.000 (0.016)	0.045 (0.002)	-0.045*** (0.009)
Unit Cost (UC)	Total costs over value of sales	1.003 (0.021)	0.935 (0.004)	0.068*** (0.013)
Employment	Average number of employees	1,078.7 (225.2)	403.1 (22.4)	675.6*** (106.8)
Wage	Wage bill over employment	288.3 (13.5)	316.0 (5.6)	-27.8* (14.8)
Payments overdue	Overdue payments (suppliers, creditors, tax payments) over sales	0.107 (0.009)	0.071 (0.004)	0.036*** (0.010)
Bad loans	Bad loans taken over by the government over sales	3.601 (0.050)	5.771 (2.257)	-2.164 (5.544)

Notes: Number of non-privatizable firms: 287 (248 for ROA and ROS). Number of privatizable firms: 1,732 (1,593 for ROA and ROS). Mean difference represents the difference between the average value of non-privatizable and privatizable firms. Standard errors in parentheses. *** = significant at the 1-percent level; ** = significant at the 5-percent level; * = significant at the 10-percent level.

Table 2

Determinants of Selection into Long-Term State Ownership

Variable	1	2	3	4	5	6
ROA	-0.132*	-0.177***				
	(0.078)	(0.049)				
ROS			-0.190***	-0.178**		
			(0.068)	(0.079)		
UC					0.081***	0.047*
					(0.036)	(0.025)
Employment	0.030***	0.026***	0.031***	0.029***	0.031***	0.033***
	(0.006)	(0.005)	(0.006)	(0.005)	(0.009)	(0.005)
Wage	-0.070***	-0.009	-0.065***	-0.007	-0.049***	-0.007
	(0.020)	(0.014)	(0.020)	(0.015)	(0.018)	(0.014)
Payments overdue	0.122**	-0.056	0.165***	-0.035	0.137***	-0.028
	(0.061)	(0.037)	(0.056)	(0.042)	(0.027)	(0.014)
Bad loans	-0.021	-0.003	-0.022	-0.004	-0.014	-0.001
	(0.018)	(0.004)	(0.018)	(0.004)	(0.009)	(0.003)
Strategic	0.154***		0.156***		0.140***	
	(0.015)		(0.015)		(0.034)	
Industry controls	No	Yes	No	Yes	No	Yes
Observed prob.	0.135	0.135	0.135	0.135	0.142	0.142
Pseudo R^2	0.117	0.441	0.123	0.447	0.148	0.452
N	1,841	1,841	1,841	1,841	2,019	2,019

Note: The coefficients are marginal effects from probit estimations (robust standard errors in parentheses). Dependent variable = 1 if the firm is not privatizable. Employment and wages are in log form. The exact definition of variables is provided in Table 1. *** = significant at the 1-percent level; ** = significant at the 5-percent level; * = significant at the 10-percent level.

Table 3

Variation of the Probability of Selection into Long-Term State Ownership by Firm Characteristics

Variable	1	2	3	4	5	6
Performance	ROA		ROS		Unit Cost	
10th percentile	0.110	0.063	0.111	0.063	0.081	0.049
90th percentile	0.092	0.041	0.089	0.043	0.102	0.062
Difference	-0.018	-0.022	-0.022	-0.020	0.021	0.013
Employment						
10th percentile	0.061	0.022	0.059	0.021	0.052	0.022
90th percentile	0.157	0.108	0.159	0.115	0.149	0.117
Difference	0.096	0.086	0.100	0.094	0.097	0.095
Wage						
10th percentile	0.133	0.058	0.130	0.059	0.120	0.062
90th percentile	0.080	0.051	0.081	0.053	0.071	0.052
Difference	-0.053	-0.007	-0.049	-0.006	-0.049	-0.01
Observed probability	0.135	0.135	0.135	0.135	0.142	0.142

Note: The coefficients represent the probability of being selected in long-term state ownership when the variable is set at value of the 10th or the 90th percentile of the distribution, and the other variables are set at their means. The regression specifications are the same as in Table 2.

Table A1

Industrial Distribution of Non-Privatizable and Privatizable State-Owned Enterprises

NACE code	Description	Non-privat.	Privat.
11	Growing of crops; market gardening; horticulture	2	443
12	Farming of animals	1	191
13	Mixed farming	2	177
14	Agric. and animal husbandry service activities exc. vet. act. landscape gardening	1	547
21	Forestry and logging	1	1
22	Forestry and logging related service activities	1	6
101	Mining and agglomeration of hard coal	1	0
102	Mining and agglomeration of lignite	1	0
111	Extraction of crude petroleum and natural gas	1	0
132	Mining of non-ferrous metal ores, except uranium and thorium ores	2	0
144	Production of salt	1	0
145	Other mining and quarrying	1	5
160	Manufacture of tobacco products	1	0
201	Sawmilling and planing of wood; impregnation of wood	2	20
221	Publishing	1	56
222	Printing and service activities related to printing	5	26
244	Manuf. of pharmaceuticals, medicinal chemicals and botanical products	1	13
246	Manufacture of other chemical products	1	13
362	Manufacture of jewelry and related articles	1	1
401	Production and distribution of electricity	1	1
402	Manufacture of gas; distribution of gaseous fuels through mains	1	2
403	Steam and hot water supply	84	40
410	Collection, purification and distribution of water	90	29
452	Building of complete constructions or parts thereof; civil engineering	17	450
502	Maintenance and repair of motor vehicles	1	53
511	Wholesale on a fee or contract basis	1	259
512	Wholesale of agricultural raw materials and live animals	2	18
514	Wholesale of household goods	1	125
524	Other retail sale of new goods in specialized stores	1	236
526	Retail sale not in stores	3	17
551	Hotels	1	115
601	Transport via railways	1	0
602	Other land transport	45	532
632	Other supporting transport activities	6	9
641	Post and courier activities	1	0
643	Radio communications	2	5

Table A1 continued

NACE code	Description	Non-privat. firms	Privat. firms
644	Other radio communication related activity	1	0
701	Real estate activities with own property	2	6
702	Letting of own property	5	45
703	Real estate activities on a fee or contract basis	6	20
731	Research and exp. development on natural sciences and engineering	3	178
742	Archit. and engineering activities and related technical consultancy	1	133
743	Technical testing and analysis	2	5
747	Industrial cleaning	1	2
900	Sewage and refuse disposal, sanitation and similar activities	36	20
921	Motion picture and video activities	3	4
927	Other recreational activities	2	19
Total		**348**	**3,825**

Discussion Papers published in 2009

Judit KARSAI: The End of the Golden Age - The Developments of the Venture Capital and Private Equity Industry in Central and Eastern Europe. MT-DP. 2009/1

András SIMONOVITS: When and How to Subsidize Tax-Favored Retirement Accounts? MT-DP.2009/2

Mária CSANÁDI: The "Chinese Style Reforms" and the Hungarian "Goulash Communism". MT-DP. 2009/3

Mária CSANÁDI: The Metamorphosis of the Communist Party: from Entity to System and from System towards an Entity. MT-DP. 2009/4

Mária CSANÁDI – Hairong LAI – Ferenc GYURIS: Global Crisis and its Implications on the Political Transformation in China. MT-DP. 2009/5

DARVAS Zsolt - SZAPÁRY György: Árszínvonal-konvergencia az új EU tagországokban: egy panel-regressziós modell eredményei. MT-DP. 2009/6

KÜRTI Andrea - KOZAK Anita - SERES Antal - SZABÓ Márton: Mezőgazdasági kisárutermelők nagy kereskedelmi láncooknak történő beszállítása a nagyvevői igények alapján a zöldség-gyümölcs ágazatban. MT-DP.2009/7

András SIMONOVITS: Hungarian Pension System and its Reform. MT-DP.2009/8

Balázs MURAKÖZY - Gábor BÉKÉS: Temporary Trade. MT-DP. 2009/9

Alan AHEARNE - Herbert BRÜCKER - Zsolt DARVAS - Jakob von WEIZSÄCKER:
Cyclical Dimensions of Labour Mobility after EU Enlargement. MT-DP. 2009/10

Max GILLMAN - Michal KEJAK: Inflation, Investment and Growth: a Money and Banking Approach. MT-DP. 2009/11

Max GILLMAN - Mark N. HARRIS: The Effect of Inflation on Growth: Evidence from a Panel of Transition Countries. MT-DP. 2009/12

Zsolt DARVAS: Monetary Transmission in Three Central European Economies:
Evidence from Time-Varying Coefficient Vector Autoregressions. MT-DP. 2009/13

Carlo ALTOMONTE - Gábor BÉKÉS: Trade Complexity and Productivity. MT-DP. 2009/14

András SIMONOVITS: A Simple Model of Tax-Favored Retirement Accounts. MT-DP. 2009/15

Ádám SZENTPÉTERI - Álmos TELEGDY: Political Selection of Firms into Privatization Programs. Evidence from Romanian Comprehensive Data. MT-DP. 2009/16

András SIMONOVITS: Pension Reforms in an Aging Society: A Fully Displayed Cohort Model. MT-DP. 2009/17

VALENTINY Pál-KISS Károly Miklós: A nélkülözhetetlen eszközök értelmezése és a postai szolgáltatások. MT-DP. 2009/18

Gábor BÉKÉS - Péter HARASZTOSI - Balázs MURAKÖZY: Firms and Products in International Trade: Data and Patterns for Hungary. MT-DP. 2009/19

Judit KARSAI: Áldás vagy átok? A magántőke-befektetések hatása a gazdaságra.
MT-DP. 2009/20

László HALPERN–Balázs MURAKÖZY: Innovation, Productivity and Exports: the Case of Hungary. MT-DP. 2009/21

Zsuzsa KAPITÁNY: Non-employment, Ill-being and Subjective Well-being. MT-DP. 2009/22

Szilárd BENK-Max GILLMAN-Michal KEJAK: A Banking Explanation of the US Velocity of Money: 1919-2004. MT-DP. 2009/23

Zsolt Darvas: The Impact of the Crisis on Budget Policy in Central and Eastern Europe. MT-DP. 2009/24

Nemes Gusztáv: Gondolatok a vidékfejlesztési programok értékeléséről: Társadalmi tanulás a LEADER programban. MT-DP. 2009/25

Discussion Papers are available at the website of Institute of Economics
Hungarian Academy of Sciences: http://econ.core.hu