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The choice of ownership structure: Evidence from Russian mass privatization

Carsten Sprenger *

International College of Economics and Finance (ICEF), Higher School of Economics, Moscow, Russian Federation

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ABSTRACT

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We use a large data set of Russian manufacturing firms to describe the ownership structure in the Russian industry at the end of the mass privatization program in 1994 and its subsequent evolution. The data shows a high, but gradually decreasing ownership stakes of firm insiders (managers and workers). We estimate the effect of a wide range of firm characteristics on the decision to privatize, the initial ownership structure after privatization, and on subsequent changes of ownership stakes. We test and find support for several predictions of the model by Aghion and Blanchard (1998). For example, collusion among workers makes them more reluctant to sell shares to outsiders. Firms in financial distress show a higher incidence of insiders selecting the option of privatization leading to high insider ownership. This can be explained by their desire to insure against unemployment in the case of restructuring by outsiders. No evidence is found of a sequencing in privatization according to the performance of firms before privatization. A methodological novelty of this paper is the application of a tobit model with sample selection to the choice of ownership stakes. *Journal of Comparative Economics* **xxx** (xx) (2011) xxx–xxx. International College of Economics and Finance (ICEF), Higher School of Economics, Moscow, Russian Federation.

1. Introduction

The transformation of ownership of productive assets from state to private ownership has been one of the most important and, at the same time, most controversial aspects of the transition of the former socialist economies to market economies. Privatization was launched in the countries of Central and Eastern Europe, the former Soviet Union and China to promote enterprise restructuring, with the ultimate goal to improve the operating performance of enterprises. A vast majority of the empirical studies has found positive effects of privatization on indicators of performance and restructuring on average.[1]

However, the success of large-scale privatization in the transition process is far from being uniform across countries, methods of privatization, and types of owners of privatized companies. Brown et al. (2006) find that the effect of privatization on productivity is large and positive in Hungary and Romania, but small or even negative in Ukraine and Russia. Only

* Address: ICEF, Higher School of Economics, Pokrovski Bulvar, 11, Moscow 109028, Russian Federation. Fax: +7 495 7713245.
E-mail address: csprenger@hse.ru

[1] See the surveys of Estrin et al. (2009) and Djankov and Murrell (2002) for the transition countries and Megginson and Netter (2001) for the international evidence.

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privatization by foreign investors had large positive effects in all four countries under investigation. Several studies have shown that company outsiders, i.e. institutional owners and individuals not employed by the company, are better owners than insiders (managers and workers) in the sense that they achieve a superior operating performance.[2] In addition, ownership concentration has been found to be conducive to better performance in several studies (e.g., Hanousek et al., 2007).

This differential effect of various ownership structures on performance is one reason why we wish to study the process of formation of companies' ownership structures during and after privatization more closely. Another reason is that is has been found that companies have not been randomly selected for privatization, which needs to be taken into account when studying the performance effects of privatization. But the question of what determines the outcome of privatization in terms of ownership is also interesting in its own right. This is particularly true for the Russian privatization program where the characterization of the new owners ranges from the constituency of market reforms (Boycko et al., 1995) to a "kleptocracy" that has discredited privatization and other market reforms in the eyes of the Russian population (Black et al., 2000).

Using data on a large sample of Russian enterprises examined over the 1990–1999 period we address a number of interesting questions on the privatization process: How firms were selected for the privatization program? Did the Russian government manage the sequence of privatization of state-owned enterprises, e.g. by privatizing the best firms first? Was there a group of owners been able to select firms of better quality? What explains the choice of privatization options and the extent of insider ownership after privatization?

To answer these questions we estimate the determinants of

- the decision whether to privatize a firm or not,
- the choice among different privatization options that to some extent predetermined the ownership structure,
- the initial ownership distribution after the end of the mass privatization program and
- the ownership change between 1994 and 1999.

Privatization in Russia was conducted at unprecedented speed increasing the private sector share in GDP from 5% in 1991 to 50% in 1994, and further to 70% in 1999.[3] Due to the political circumstances at the time, the Russian privatization program heavily favored company insiders and lead initially to a widely dispersed ownership structure. The designers of the mass privatization program aimed to reduce the influence of politicians on firm decisions as much and as fast as possible (Boycko et al., 1995). To this end they needed to give ownership rights to enterprise managers in exchange for their political support. Secondary markets were expected to lead to more efficient ownership structures soon. Most of the firms in our sample went through the mass privatization program (1992–1994) or were privatized through lease arrangements with subsequent buyouts by employees. Our data confirms the high degree of insider ownership at the end of the mass privatization program in 1994. We also document the changes in ownership structure in Russian enterprises between 1994 and 1999. Ownership structures became more concentrated and outsiders increase their ownership stakes on average. However, this happened at a rather slow pace.

We find that the decision to privatize was positively associated with firm size and two measures of pre-privatization performance: labor productivity and average wages. We do however not find any evidence of sequencing in privatization according to the pre-privatization performance. Firms with relatively high expenses for social benefits to employees were less likely to be privatized, both before 1994 and before 1999. In deciding on the privatization option, wage arrears led employees to choose less frequently an option that would have given more scope for outside ownership. Our interpretation is that the decision of insiders to acquire shares was driven by their motivation to insure against unemployment, a more likely event in a firm in financial distress. As for the ownership stakes, the ability to collude among workers (as measured by the degree of unionization) matters in the decision to sell shares to outsiders and affects positively the share of workers. We also find that insiders hold smaller stakes in large firms, presumably because they do not have the necessary funds to acquire shares beyond what they are assigned in the privatization program on highly-preferential terms. Furthermore, insiders may be unable to raise the necessary funds for the restructuring of large firms. Managers are found to increase their stake more in firms with wage arrears. This is in line with anecdotal evidence that managers purposely accumulated wage arrears in order to force workers to sell them their shares. We do not find evidence that any group of shareholders has been able to select firms with superior performance. Other variables predicting ownership in 1994 and its evolution thereafter are firm size, the supply of social benefits to employees, price controls, and industry affiliation. Finally, the ownership distribution in 1994 affects its subsequent evolution in systematic ways.

Apart from the empirical results, this paper contributes to the literature in several ways:

1. The object of our study is the causality going from a firm's characteristics, including pre-privatization performance, to the likelihood of privatization and the firm's ownership structure. This important issue was neglected in some of the existing literature on the impact of privatization. Our approach contributes to address the problem of endogeneity of the ownership structure when its effect on firm performance is investigated.

[2] See for example Frydman et al. (1999) for three Central European countries and Earle (1998) for Russia. In their survey, Djankov and Murrell (2002) come to the conclusion that privatization by outsiders is associated with the largest restructuring gains, while privatization by workers has no effect in Central and Eastern Europe and is detrimental in the CIS.

[3] This data is from the EBRD Transition report, various issues.