

PUBLIC POLICY FOR THE

# Private sector

Note No. 123

July 1997

## Privatization and Restructuring in Central and Eastern Europe

*Robert E. Anderson,  
Simeon Djankov,  
Gerhard Pohl,  
and Stijn Claessens*

This Note reports on the first comprehensive analysis of the industrial restructuring that has taken place since 1992 in Central and Eastern Europe. The study, covering more than 6,000 industrial firms in seven countries, looks at which government policies have been most effective at speeding up enterprise restructuring. The results show that privatization is the single most important factor in restructuring. The method of privatization has been less important: to date management buyouts and massive giveaways of firms through voucher privatization have led to results similar to those of case-by-case sales to foreign or domestic investors. The study also shows that privatizing industrial and commercial firms is the most effective way to improve the solvency of the banking sector—more effective than bank recapitalization or debt forgiveness.

### The approach

The study compares the extent of restructuring by firms in seven Central and Eastern European countries: Bulgaria, the Czech Republic, Hungary, Poland, Romania, the Slovak Republic, and

Slovenia. The number of firms in the sample for each country ranges from 700 to 1,000, and they account for 40–90 percent of employment in manufacturing (table 1).<sup>1</sup> The governments in the seven countries have used different policies to encourage restructuring, and comparing enterprise performance in these countries should shed light on which have been most effective. The study tests the restructuring data for the effect of such policies as: rapid privatization, concentrated outside ownership (for better governance), wage growth restraint (to allow cash flow to improve and fund restructuring), financial discipline (a firm is more likely to restructure if neither the government nor banks finance its losses), and maintaining debt obligations (firms may have a greater incentive to restructure if banks do not forgive or reduce debts). The data are subjected to econometric analysis so that the impact of various government policies can be separated from other factors including size, sector, and initial productivity levels.

The measures of restructuring used in the study include profitability, proportion of firms with

**TABLE 1    FEATURES OF THE DATABASE**

Country	Firms	Employees 1992	Employees as a percentage of total manufacturing employment
Bulgaria	828	314,042	48
Czech Republic	706	829,312	64
Hungary	1,044	428,645	41
Poland	1,066	1,338,645	45
Romania	1,092	2,121,102	91
Slovak Republic	905	578,737	93
Slovenia	727	219,959	90





**TABLE 2** PROGRESS IN PRIVATIZATION, 1995  
(percentage privatized)

Country	Manufacturing firms	Manufacturing firms weighted by output
Bulgaria	8	7
Czech Republic	89	93
Hungary	67	65
Poland	61	60
Romania	15	12
Slovak Republic	79	83
Slovenia	41	41

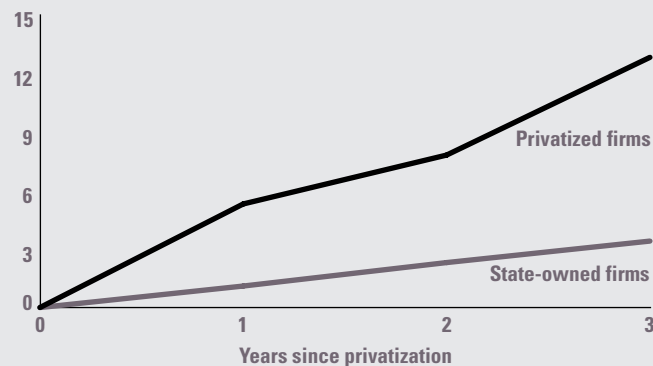
Source: Authors' estimates.

**TABLE 3** ANNUAL LABOR PRODUCTIVITY GROWTH, 1992–95  
(percent)

Country	Privatized firms <sup>a</sup>	State-owned firms	All firms
Bulgaria	12.4	-1.4	-1.4
Czech Republic	8.6	-2.6	6.8
Hungary	6.0	3.2	4.8
Poland	7.5	1.4	5.4
Romania	1.0	-0.5	0.1
Slovak Republic	7.8	-4.1	5.1
Slovenia	7.2	1.8	3.6
Average	7.3	-0.2	3.6

a. Firms privatized by 1995.  
Source: Authors' estimates.

**FIGURE 1** TOTAL FACTOR PRODUCTIVITY GROWTH  
(percent, cumulative)



Source: Authors' estimates.

a positive operating cash flow, average operating cashflow as a percent of revenue, growth in labor productivity, growth in total factor productivity, and growth in exports. The data show that for each firm these measures tend to be highly correlated. The econometric analysis focuses on the two most reliable indicators of restructuring: growth in labor productivity and growth in total factor productivity.<sup>2</sup>

The study defines a “privatized” firm as one that has had more than a third of its shares transferred to private investors. It measures the extent of privatization in a country by using both a simple count of the firms classified as privatized and a count weighted by output to reflect differences in size. On both measures, the Czech Republic, Hungary, and the Slovak Republic come out ahead, while Bulgaria lags behind, having made little progress in privatization (table 2).

### Impact of privatization

The data show that labor productivity growth across the seven countries averaged 7.3 percent a year for privatized firms during 1992–95, but -0.2 percent for state-owned firms (table 3). The econometric analysis indicates that privatization accounts for almost all this productivity growth. The only exception to the rule is Hungary, where state-owned firms achieved half the productivity gains of privatized firms. In Bulgaria and Romania, where privatization has been insignificant, productivity in state-owned firms is declining, pulling down labor productivity for the manufacturing sector as a whole.

Results are similar for the productivity of all factors of production. The cumulative gains in total factor productivity for privatized firms far exceed those for state-owned firms in the sample (figure 1). The analysis shows that privatization has increased total factor productivity growth by about 4 percentage points a year.

The data also show that even a credible threat of privatization promotes restructuring. For example, in Poland, where the government’s commitment to privatization was perceived as credible, the firms included in the mass privatization program began to show rapid improvement in profitability in 1994 and 1995—long before they were formally privatized in November 1995. One possible explanation for this is

that managers, expecting to be held accountable by the future new owners, improved their performance. Government plans for large-scale privatization programs appear to boost productivity in state-owned firms, probably because of similar anticipation and signaling effects.

## Method of privatization

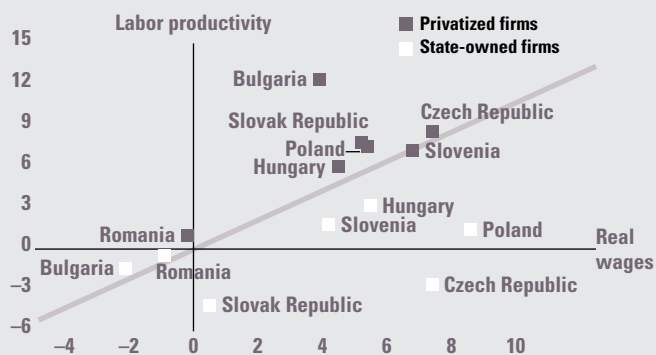
Many foreign advisers to the governments of transition economies initially believed that mass privatization and insider buyouts would lead to weak pressures to restructure and that the preferred strategy should be sale to strategic investors. But the study finds no significant differences in the effectiveness of privatization methods. Productivity growth for privatized firms is similar in the Czech and Slovak Republics, which chose mass privatization, and in Hungary and Poland, which have relied more on case-by-case privatization (table 3). Also in the Czech Republic, where data on the results of different privatization methods are available for a sufficiently long period, the study finds only minor differences among the methods. But it finds strong effects of ownership concentration on the speed of restructuring (Viewpoint 111).

## The role of wage restraint

Restructuring is likely to be encouraged if the workforce does not initially absorb all the productivity gains through higher wages. Firms must finance much of their investment with retained earnings from current cash flow especially when the financial system is weak. But this demands new habits. While firms in industrial countries have relied mostly on internal cash flow to finance working capital or new investment, firms in the formerly socialist economies have relied heavily on loans from state-owned banks.

The study finds that privatized firms have retained most of the large productivity gains from privatization to finance productivity-enhancing investments. Labor productivity has grown faster than real wages in privatized firms in all countries (above the diagonal in figure 2). That does not mean that real wages in privatized firms did not also grow rapidly. But since the firms maintained a large margin between labor productivity and wages, they were able to sustain high levels of investment per worker (table 4). By contrast, real wage growth in state-

**FIGURE 2 ANNUAL GROWTH IN LABOR PRODUCTIVITY AND REAL WAGES FOR PRIVATIZED AND STATE-OWNED FIRMS, 1992–95 (percent)**



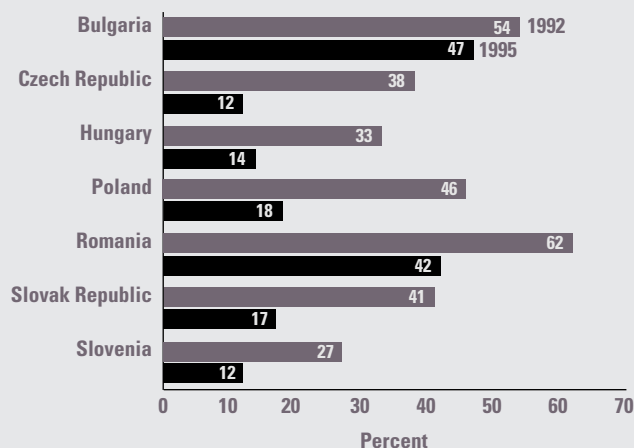
Source: Authors' estimates.

**TABLE 4 AVERAGE ANNUAL INVESTMENT PER WORKER, 1992–95 (U.S. dollars, purchasing power parity)**

Country	Privatized firms	State-owned firms
Bulgaria	2,790	90
Czech Republic	3,290	470
Hungary	2,990	460
Poland	1,880	410
Romania	590	110
Slovak Republic	3,340	230
Slovenia	1,690	310

Source: Authors' estimates.

**FIGURE 3 SHARE OF NONPERFORMING LOANS TO INDUSTRIAL FIRMS, 1992 AND 1995**



Source: Authors' estimates.



owned enterprises has exceeded labor productivity gains, eroding internal financing.

The analysis shows that privatization has had a greater effect on wage restraint than government wage policies. Most of the seven countries had a policy of limiting wage increases (though by 1995, all countries had market-determined wages). For example, the Czech Republic, Hungary, and Poland each introduced an excess wage tax during 1991–94. But even though government-led wage restraint applied primarily (or exclusively) to state-owned firms, wages grew faster in the state sector than in the private sector in both Hungary and Poland. And in Bulgaria and the Slovak Republic, which pursued more vigorous wage restraint in the state sector, real wages still outstripped productivity in state-owned firms—but not in the private sector.

### Financial restructuring and the role of banks

What actions, if any, should governments in the region take to encourage the financial restructuring of over-indebted firms. In industrial countries, most financial restructuring takes place through private negotiations between private lenders (mostly banks) and private firms. But in transition economies most of the banks and many firms are still under state ownership, so the incentives to negotiate are different. Many banks in the region inherited large portfolios of nonperforming loans when state enterprises, suddenly exposed to competition, started running big losses. Audits done in accordance with international accounting standards showed that up to 60 percent of the banks' loans were considered irrecoverable. The usual advice at this point was for the government to take over the bad loans and recapitalize the banks (usually through an asset swap).

The study's analysis shows that this course was premature. In countries that pursued large and rapid privatization programs, privatized firms have improved their profitability much more than expected, making government interven-

tion in the banks unnecessary. By contrast, in countries that have done little or no privatization, firms' financial conditions did not improve and the banks' bad-loan problems are worse than the pessimists expected (figure 3). The speed of privatization of the industrial and commercial sectors has proved to be the most important policy issue for the financial sector.

### Conclusion

One of the most important policy questions in the transition economies is what governments can do to speed the restructuring of firms and thus hasten the transition to a mature market economy. The study provides some answers. Rapid and comprehensive privatization leading to concentrated ownership encourages restructuring. Privatization also promotes restructuring because privatized firms are more likely than state-owned enterprises to exercise wage restraint—and wage restraint is vital to free up internal finance. Policies that increase bank lending to firms, such as debt forgiveness and recapitalization, may do more harm than good. The safest course is to recapitalize banks only as part of privatization and to encourage negotiations for financial restructuring only after the banks are privatized.

This Note is based on a paper by the authors of the same title (World Bank Technical Paper 368, Washington, D.C., 1997).

<sup>1</sup> To ensure comparability, the study adjusted the data to reflect differences in accounting standards both over time and among countries and excluded utility, banking, and agricultural firms and new private companies. The distribution of firms among subsectors—mostly food, textiles, chemicals, metals, machinery, and transport equipment—is similar across the countries.

<sup>2</sup> Labor productivity (value added per man-hour) does not take into account depreciation, debt service, and taxes, which are more likely to differ from country to country because of historical circumstances, differences in tax laws, or accounting standards.

*Robert E. Anderson (anderson9@worldbank.org), Senior Private Sector Specialist, Simeon Djankov (sdjankov@worldbank.org), Financial Economist, and Gerhard Pohl (gpohl@worldbank.org), Manager, Europe and Central Asia, and Middle East and North Africa Technical Department, and Stijn Claessens (claessens@worldbank.org), Principal Economist, East Asia and Pacific Vice-Presidency*

Viewpoint is an open forum intended to encourage dissemination of and debate on ideas, innovations, and best practices for expanding the private sector. The views published are those of the authors and should not be attributed to the World Bank or any of its affiliated organizations. Nor do any of the conclusions represent official policy of the World Bank or of its Executive Directors or the countries they represent.

To order additional copies please call 202-458-1111 or contact Suzanne Smith, editor, Room F6P-188, The World Bank, 1818 H Street, NW, Washington, D.C. 20433, or Internet address [ssmith7@worldbank.org](mailto:ssmith7@worldbank.org). The series is also available on-line ([www.worldbank.org/html/fpd/notes/notelist.html](http://www.worldbank.org/html/fpd/notes/notelist.html)).

♻️ Printed on recycled paper.