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*The Failure of the Government-Led  
Program of Corporate Reorganization  
in Romania*

*by Simeon Djankov and Kosali Ilayperuma*

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**The Failure of the Government-Led Program of  
Corporate Reorganization in Romania**

Simeon Djankov\*

Kosali Ilayperuma\*\*

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**Abstract**

We provide the first comprehensive cost-benefit analysis of government-led reorganization programs for financially distressed firms in transition economies. The study is based on empirical evidence on the programs in Albania, Armenia, Bulgaria, FYR Macedonia, Romania, Kazakhstan, Kyrgyz Republic, and Uzbekistan, with a particular focus on the Romanian program which is the only completed program to-date. Our results indicate that the reorganization program failed to deliver any tangible improvements in the operational performance of firms. We also show that firms included in the program were faced with softer budget constraints than their comparators outside the program. Finally, we show that the cost of the program equaled three years of salaries for all workers in reorganized firms. The use of this money as severance pay for workers may have eliminated the pressure for government support and made it easier to liquidate or privatize firms. These findings question the feasibility for creating workable reorganization programs under government auspices.

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\* World Bank and University of Michigan; \*\* University of Maryland.

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Corresponding author: [sdjankov@worldbank.org](mailto:sdjankov@worldbank.org); tel: 202-473-4748. Address: World Bank, 1818H St. NW, Washington DC 20433. We are grateful to John Nellis, Melinda Roth-Alexandrowicz and Patrick Tardy for helpful suggestions. The views expressed are personal and should not be attributed to the World Bank.

## **The Failure of the Government-Led Program of Corporate Reorganization in Romania**

### **I. Introduction**

The transition from plan to market that has been taking place since 1989 in the former socialist countries has changed fundamentally the relationship between politicians and firms. In the countries which pursued rapid privatization, the dependence of firms on the state budget has been eliminated. The reform of the banking system has hardened budget constraints on firm managers who previously enjoyed a close co-operation with their creditors. Governments which have pursued reforms less rigorously, however, still finance the losses of many large state-owned firms. This provides fiscal instability and potential for financial collapse, as evidenced in the recent experience in Bulgaria. What should governments do to alleviate the drain on the state budget? Can this be handled through the nascent court bankruptcy system? Is it sufficient that (mostly state-owned) banks imposed hard budget constraints on their clients? Or is it necessary to create a special program targeted at the largest loss-makers? If so, how would such program be managed so as not to leave room for bailing out non-viable firms?

Given the number of loss-making enterprises in transition economies, no previous comparable experience exists to provide guidelines for government involvement. The closest experiment in industrialized countries is the reorganization of financially distressed firms under bankruptcy protection. Bankruptcy procedures "isolate" distressed firms from their creditors, while providing opportunity for reorganization. At the same time, firms under bankruptcy are not allowed to borrow additional money: they are prevented from taking resources away from firms in better financial health. Bankruptcy ensures that the allocation of resources across the economy is based on superior financial performance.

Theoretically, isolation programs in transition economies combine the salient features of reorganization under bankruptcy with some additional benefits. In particular, downsizing is made more acceptable if employees are assured that resources are available for severance payments, labor deployment assistance and the transfer of social services; the liquidation of troubled firms frees capital and human resources that can be put to alternative uses. At the opposite end, such programs may induce moral hazard issues in the selection of firms, and the subsequent disbursement of financing. There is also the danger of maintaining such programs too long, i.e., creating yet another government agency for "fixing market failures."

Notwithstanding the opportunity costs of reorganization programs, several governments in transition economies have designed and are in the process of implementing isolation exercises. To the best of our knowledge, however, there does not exist any empirical evidence on the success of these programs. In this paper we provide

the first cost-benefit analysis of government-led reorganization of firms in transition economies. The study is based on evidence from the reorganization programs in Albania, Armenia, Bulgaria, FYR Macedonia, Kazakhstan, Kyrgyz Republic, and Uzbekistan, as well as detailed firm-level analysis of the Romanian program. We choose to focus on the latter since it is the only completed program to-date and has the widest coverage. We also have full financial statements for all firms included in the program, as well as extensive case-study materials prepared by foreign consultants during the initial stage of the program. The rich data allow us to study the structure and outcome of the program in great detail.

Our results indicate that in spite of its substantial costs, the reorganization program in Romania failed to deliver any tangible improvements in the operational performance of firms. We also show that firms included in the program were faced with softer budget constraints than their comparators outside the program through the access to special funds and continued government subsidies. Finally, we show that the cost of the program equaled three years of salaries for all workers in reorganized firms. The use of this money as severance pay for workers may have eliminated the pressure for government support and made it easier to liquidate or privatize firms. These findings question the feasibility for creating a workable reorganization programs under government auspices.

The paper is organized as follows. Section II discusses the experience of industrialized countries in reorganization of firms. Section III details the objectives and components of the programs implemented in eight transition economies, and provides information on their implementation structure. Section IV summarizes the Romanian program. Section V describes the data and provides descriptive statistics. Sections VI and VII provide rigorous empirical analysis. Section VIII concludes.

## **II. Experience with Reorganization under Bankruptcy**

The experience of industrialized countries in reorganizing firms under bankruptcy protection provides a precedent for the programs in transition economies. In particular, it may help answer two related questions: What is the success rate of firm reorganization under bankruptcy?; and, What is the average duration of reorganizations? If the probability of reorganizing in industrial countries is small, this would possibly indicate an even smaller success rate in transition economies, given the uncertain economic environment and weak monitoring institutions. Furthermore, even if a large number of firms emerge reorganized from the program, but take a long time to do so, this route may not be attractive for governments facing large current fiscal deficits. Surprisingly, little empirical evidence exists on the outcomes of bankruptcy reorganizations. Comprehensive studies are available only for Chapter XI reorganizations in the US.

The US Bankruptcy Code forces firms in financial distress to choose between liquidation (Chapter VII) and reorganization (Chapter XI). Managers of distressed firms decide whether to file for bankruptcy; creditors, the state and other third parties cannot initiate bankruptcy. A manager filing for Chapter XI protection must present a reorganization plan for the court to confirm. Plans whose feasibility is in question are dismissed by the court. Bankruptcy is invoked as a defensive mechanism by management against creditors' attempts to take over assets. Managers have incentives to delay filing; when they file, the preferred form is Chapter XI which allows them to remain in control of the firm longer. Managers have 120 days after filing to formulate a reorganization plan. In practice, this time limit can be extended a great deal on appeal (White, 1996) which gives managers the ability to divert assets to forms that cannot be accessed by creditors.

The US bankruptcy law favors debtors for two reasons. First, it avoids job losses that invariably accompany liquidation. Second, it is based on the belief that factors of production yield the highest value while in operation, and that liquidation would be transferring specialized capital to other firms that may not be able to use it efficiently. This reasoning is explicitly modeled in White (1994). The second best use of the capital, expenses of the firm, and revenue generated from current use are followed over time, and the cost of errors in making decisions under Chapter XI is calculated. A type I error occurs if a failing firm goes through reorganization instead of liquidation, prolonging its length of unprofitable operation before closure. A type II error occurs when firms that are only temporarily distressed go through liquidation. This is also known as "filtering failure" (White, 1994, p.269). It occurs due to asymmetric information problems, but also because managers of inefficient firms may prefer to appear viable and vice versa. By being lenient on managers, the US process potentially avoids type II losses but increases type I errors.

European bankruptcy laws are more creditor-friendly. Banks and the state may take a firm to court if payments have been in arrears for a specified length of time. In Germany, for example, about half of all claims are brought by parties other than the debtor (White, 1996, p.469). Once the firm files for bankruptcy, an outside trustee is appointed to make decisions (including whether to reorganize or liquidate) in contrast to the US where the manager remains in control during reorganization. Sanctions for delay in filing are also imposed in Germany. This is because the longer the firm operates while in distress, the harder it is to resolve financial difficulties. Under French law, firms that declare bankruptcy go through a six month observation period before the court determines whether the entity should be liquidated. In Britain, the process of bankruptcy proceeds even more rapidly. Within three months after filing, a court-appointed administrator decides whether to sell, liquidate or reorganize the firm. Plans must be confirmed by creditors, or else the firm is automatically liquidated. The focus of British bankruptcy legislation is repayment of creditors claims. In all three countries, however,

debtors' interests have been taken into consideration more since the recent bankruptcy code revisions.

The empirical evidence on reorganization under bankruptcy shows mixed results. A recent study (Jensen-Conklin, 1992), using 260 Chapter XI court cases filed in Poughkeepsie, NY between 1979 and 1986, found that 17% of the cases were confirmed, and only 6.5% of firms successfully completed Chapter XI proceedings. The average time to confirmation of a case was 22 months. A nation-wide survey (Flynn, 1989) based on filings in fifteen judicial districts and covering over 750 firms found nearly identical results. The average time from filing to confirmation was two years. At the opposite end, a study of 162 firms under Chapter XI bankruptcy during the 1973-82 period (Morse and Shaw, 1988) found a success rate of 60% for firms entering reorganization. Two related studies (Gilson, 1989; Wruck, 1990) focused on the benefits of organizational changes that took place under or following Chapter XI proceedings. They viewed bankruptcy as a mechanism to initiate top management changes. Each study reported that over half of the CEOs of US companies that entered Chapter XI were forced out in the following five years. A study using data on 277 filings in Great Britain in 1987 (White, 1996) found that half of them resulted in administration orders, and only 17% were sold as going concerns. Using data on 352 composition cases filed between 1982 and 1987 in Japan, Eisenberg and Tagashira (1996) found that about half of the cases were confirmed, 7% rejected and the rest withdrawn. The average time to confirmation was 18 months, while the average time to emerge from bankruptcy under reorganization was 82 months.

A recent study that looks at the evidence of bankruptcy outcomes in transition economies is Gray and Holle (1997) who analyze the experience in Poland. Similar to other European bankruptcy codes, any creditor, owner, or manager of Polish firms can petition the court for a declaration of bankruptcy. The law has several deficiencies. First, only firms that have sufficient assets to cover procedural costs can have their reorganization plans confirmed. This creates a loophole for managers - if the firm shows negative net assets, it is automatically excluded. Second, the order of claimants' preferences reduces the incentive for bank creditors to initiate bankruptcy since the first claimant is the government, the second the employees; only when their claims are satisfied can other parties partake in the distribution of assets. Finally, creditors who initiate the bankruptcy procedure are asked to pay upfront up to 13% of the value of their claims as advance payment of court fees. For the 23 bankruptcy cases covered by the study, creditors recovered only between 7% to 17% of their claims. Thus in two-thirds of all cases creditors received negative value if bankruptcy was successful. The procedure also lasted 41 months on average, mostly because of outstanding property claims from third parties and the absence of developed market for the sale of assets.

Finally, a detailed study on the 1992-94 bankruptcy process in Hungary (Gray et al, 1996) reveals that while it was broadly successful in separating viable from non-viable firms, inclusion of firms in reorganization or liquidation under normal bankruptcy procedures "did little to further either deep restructuring or the exit of ailing firms"

(p.425). Of the fifty firms slated for liquidation, only one was closed down within two years after the initiation of liquidation. The majority of firms under reorganization did reduce their employment but not more than their comparators outside the reorganization process. Also, only 6 percent of firms with successful reorganization plans took steps to change top management, and only 3 percent changed membership of the firms' board of directors. Thus although the Hungarian initiative was useful in terms of institution-building, it did not result in changes in the behavior of firms and their managers.

Isolation programs in transition economies share many of the characteristics of reorganizations under bankruptcy protection. The two differ significantly, however, in that isolation programs also aim at changing the ownership of surviving firms through privatization. In this respect the only precedent to the isolation programs is the East German Treuhandanstalt which existed between 1990 and 1995 with the principal task of privatizing or liquidating over 8,000 state-owned firms with more than 4 million employees, while focusing on job retention and new investment generation. Two hundred large loss-makers were included in the Treuhand's equity portfolio. While comprehensive analyses of the success of the Treuhand have yet to be written, some preliminary evidence on its achievements (and possible failures) already exists (Carlin and Mayer, 1992; Priewe, 1993). These studies indicate that while the Treuhand succeeded in transferring over 6,000 firms to private ownership and liquidating another 1,300 firms, this came at a net cost of over 250 billion DM (US\$170 billion), i.e., the sales revenues were far less than the state guarantees and cash outlays to retain jobs and induce private investors to take over troubled firms. In addition, the government wrote off 80% of (approximately 106 billion DM) debt that firms under the Treuhand owed the state or state banks. Thus, although the East German program was successful in achieving its objectives, this came at an enormous cost. While East Germany had a powerful sponsor to finance this program, none of the other transition economies could have followed this approach.

Three results emerge from this section. First, the success rate of bankruptcy cases is quite low - between 6.5% and 17% in the countries where empirical evidence is available. Second, the average duration of the procedure is six-seven years. These findings give some credence to the need for an alternative mechanism for dealing with financially distressed firms in countries with large fiscal deficits. Third, the only precedent to isolation programs -- the experience of the East German Treuhand -- came at enormous costs to be considered as an option by the cash strapped governments of other transition economies. One extreme solution is to have only Chapter VII-type liquidation, followed by privatization if buyers are available. This will eliminate the large costs associated with delayed liquidation, but may be politically unacceptable since it would result in high layoffs. A less radical solution would be to put such firms in a "fast track" liquidation/privatization program that isolates their impact on the health of the financial system and removes the pressure on the state budget. In the remainder of this paper we analyze the effects of such programs in several transition economies.

### III. Isolation Programs in Transition Economies

The rationale for government-led reorganization programs in transition economies is based on the belief that the existing bankruptcy system could not process the large number of loss-makers expediently so as to prevent a drain on the state budget and an associated collapse of the banking sector. The countries where such programs were not put in place (Czech Republic, Hungary, Estonia) and that followed a universal hard budget constraint approach to corporate reorganization arguably had better institutional environment, had privatized quickly, and had more stable banking systems. Several additional reasons make this approach defensible in theory. First, many transition economies are geographically isolated from major world markets and lack market contestability. Output price determination in such countries remains highly politicized. Second, these countries inherited an industrial structure characterized by large firms that frequently employ all of a town's working population and provide many social services (heating, schools, hospitals). Closing such firms would leave a labor force with few outside options and may cause political upheaval. Third, the implementation of a reorganization program for large loss makers would lessen the vested interest these firms cultivated with the line ministries. Transparency is a major aim of the program, even if firms are to be supported through state funds. Such funding will be made explicit. Fourth, downsizing is made easier if all social services and their financing is placed in the hands of the state, and severance pay for workers are provided.

Government-led isolation programs similar to reorganization under Chapter XI have been designed in eight transition economies to-date. While there are wide variations across countries in the number of firms, their selection criteria and the subsequent implementation, all programs have the same objectives and components. We first describe the commonalities in the design of these programs and then outline the differences in implementation strategies. Some evidence for the success of each program is presented, but should be treated only as preliminary. At the time of writing, only one program is completed (Romania); six are underway (Albania, Armenia, Bulgaria, Macedonia, Kazakhstan, and Kyrgyz Republic); and one has not entered the implementation stage (Uzbekistan).

The reorganization programs were designed to cover large loss-making state-owned enterprises. Such programs were viewed as short-term substitutes to bankruptcy proceedings through the court system, similar to placing bankrupt firms under temporary receivership. Their objective was fivefold. First, the program would force managers of firms that had been making large losses to drastically reduce these losses without external financial support, to the point where these firms would either generate a positive cash flow or be privatized or liquidated. Second, the program would ensure that firms' losses were not financed through building up arrears to banks, to suppliers, to the state budget, and the social security fund. Third, it would introduce transparency in government policy by forcing explicit decisions on budgetary support for loss-making firms on an individual



and aggregate basis; decisions on tariffs for utility firms; and policies as regards financing of the safety net designed to minimize the social impact of firms' reorganization. Fourth, the programs would place the responsibility of restoring financial discipline with the firms' management, with their debtors and creditors. It would make the prospect of a future government bailout improbable. Fifth, the implementation of such a program would send a signal to other state-owned firms that the imposition of hard-budget constraints was closely monitored and there would be penalties for failure to pursue reorganization. Thus, the ultimate objective of isolation programs was to "bring loss-making firms to rapid privatization or closure by defusing political pressure and alleviating social concerns" (Selowsky and Vogel, 1995, p.9).

While under isolation, the firms are submitted to a hard budget constraint. They are completely cut off from fresh bank credit; banks only maintain their cashier function. Firms are also not allowed to build arrears with suppliers; the program requires suppliers to deliver goods only upon immediate payment. Firms should not build arrears with the budget or the social security fund. The only external source of financing is a special fund created within the framework of the program. Such a fund finances only (i) operating subsidies allocated by the government; (ii) working capital to meet export orders; and (iii) redundancy payments to employees. The fund is a mechanism allowing for transparent allocation of public money to loss-making firms. Any infringement on the rules would result in the dismissal of the management team. The Romanian Enterprise Restructuring Ordinance, for example, states that "failure to observe measures stipulated by the programs for restructuring and financial rehabilitation within the period established, results in the revocation of manager and the replacement of the Administration Council members in the case of state companies and in the revocation of managers in case of the commercial companies."

While in isolation, all overdue debts and current debt service are frozen. Arrears on wages are only paid once the firms has generated internally cash to pay its employees. Debts (including those to the budget, social security fund, and suppliers) are frozen until conciliation agreements with all creditors are concluded. Once firms generate positive cash flow, they can negotiate conciliation agreements and have some of their debt written off, rescheduled, or swapped for equity. If a firm has not reached positive cash flow at the end of the isolation exercise, it should be liquidated or privatized. To alleviate the pressure in shedding access labor, most (but not all) programs had a redundancy payments component, largely financed through government-guaranteed loan from the World Bank. Managers could use this source to provide up to twelve months of wages to employees who would leave voluntarily. The money could also be used for re-training and relocation of workers.

An additional feature of the program is the establishment of a monitoring unit that tracks the financial and operational performance of each firm on a monthly basis. The unit could be part of the newly created agencies for restructuring (as in Romania, Albania, Armenia), or be based in the Ministry of Finance (Bulgaria, Macedonia). Since

accounting practices at the firm level, as well as monitoring by the government were not sufficiently developed this unit had a twofold purpose. First, it provided the government with timely information on the financial status of the largest loss-makers. Second, and more important, it was used as a teaching center for government bureaucrats in following the performance of all companies under its ownership. Such information existed on an annual basis for most manufacturing firms; utilities and firms in the military complex were, however, frequently excluded from the industrial census. By establishing a system of reporting, the government had better information of what goes on in unprofitable SOEs, and could monitor them closely.

Finally, all isolation programs are time-bound. In all seven countries where such program have been implemented, they are designed to last for two to four years. This prevents the "institutionalization" of the program, i.e., turning it into another state-run ministry that carries out industrial strategies. Beyond the program, any firm that is failing should go through the court bankruptcy procedures. The burden to take such firms to court will be on their creditors and not the government.

All programs were initiated by governments under pressure from the IMF and the World Bank in an attempt to curb the worsening of the quasi-fiscal deficit. Frequently, the international lenders provided initial lists of firms to be included in the programs. All major loss-makers were placed under isolation, unless they were liquidated outright. The programs were designed to cover at least 50% of both outstanding arrears and operating losses (calculated on cash basis) in the state sector. They included a small number of firms in each country so as to be manageable. Once the initial list was given to the government, many firms were taken off the list under pressure from local labor unions. In Romania, for example, a large part of the mining sector was excluded for fear of strikes. Thus while programs were similar across countries initially, the final selection and further implementation varied widely. We provide a brief summary of the main features of each program (Table 1).

[Table 1 here]

Most programs include less than 40 firms; exceptions are the Bulgarian and Romanian programs that cover a substantially higher number of firms. There are few firms in utility sectors; the majority cover manufacturing and mining. All programs cover close to half of outstanding arrears and current operational losses. The Bulgarian program has the best coverage with more than 80% of both arrears and losses. This is partly because it was the last program to start and benefited from the experience of previous programs. The average lifespan of a program is 3 years.

Substantial differences exist in the implementation of the programs. Table 1 shows that debt conciliation was introduced in four cases only; similarly, firms were completely cut off of new bank credit in only three cases. The preliminary results are also mixed. The **Albanian** program included a Restructuring Fund set up with the

purpose of financing redundancy payments and liquidation procedures. Most of it was used, however, for subsidizing production. Managers of firms under isolation complained that the strict rules of the program prevented them from pursuing other reorganization options, e.g. joint ventures with foreign partners. The isolation program in **Armenia** initially focused on reorganizing firms and returning them to financial health. Substantial funds were ear-marked for redundancy payments and liquidation. In 1996, however, facing a large fiscal deficit, the government privatized all firms either through mass privatization or international tenders. The **Bulgarian** program had the best coverage of firms and includes all major loss-makers. It was, however, implemented only after the situation in the banking sector had become desperate. The **Macedonian** program was created to remove the authority of the workers councils where necessary, and establish boards of directors or trusteeships. In practice, this goal was achieved in only three firms. The **Kyrgyz** Enterprise Restructuring and Rehabilitation program shut down enterprise operations and placed workers on administrative leave with partial pay until a comprehensive viability study was completed and a downsizing plan implemented.

The firms deemed viable would start operating in a year with additional financing for working capital. A second group of firms was put under partial stoppage. In both groups, however, the managers (mostly ethnic Russians) left during the period of inactivity; machines were stolen as plants stood idle; the program de facto liquidated most firms but did not recover any assets for creditors. The assets were also not used for alternative production. Under the **Kazakh** program most companies were given to foreign management teams under short-term contracts. This experience proved unsuccessful - foreign managers either colluded with previous management in asset stripping the firms, or opted out after one year. All firms were then put for liquidation or privatization. Only two have been privatized to-date, however, while 4 have been liquidated. The **Uzbek** program has not entered its implementation stage yet. Once the objectives of the program (including labor shedding) became publicly known, the government backed off from its promises and did not ratify the necessary legislature. Since the Romanian program is the only one completed, as well as covers the largest number of enterprises, we focus on its implementation and results in the coming sections.

#### **IV. Description of the Romanian Program**

In 1993, under the pressure of the IMF, the Romanian government asked a group of loss-making firms to design diagnostic reports of their financial situation and operational performance. The Agency for Restructuring (AR) was founded the following year with the principal task of reorganizing troubled firms which would be sheltered from their creditors, and would receive technical as well as financial assistance in restructuring their business. The structure included not only the AR (under the Council for Coordination, Strategy and Economic Reform) but also the Division for Selective Restructuring within the State Ownership Fund (SOF), and the branch ministries responsible for utility firms. Initially about 300 loss makers (accounting for 70% of all total losses) were targeted. Under union pressure, however, the government dropped

many firms off the list. Only 73 firms remained in the final draft. In 1995, another 74 agricultural farms were added to the program. The total number of firms increased to 147.

While the AR had control over most commercial companies and agricultural farms, the State Ownership Fund was given control over the 31 commercial companies, while nine utilities were controlled by the respective branch ministries. The latter was deemed necessary as all utility companies were state-owned, could not be privatized or liquidated by law, and their employees enjoyed special status. The selection resulted in having 4 of the largest 10 loss-makers, 46 of the largest 100 loss-makers, and only 82 of the largest 300 loss-makers among state-owned enterprises in 1994. The program was thus deficient from its inception in that it failed to cover many of the worst firms-beneficiaries of state funds.

All firms in the reorganization program were required to design financial recovery plans with technical assistance provided by World Bank consultants. Recovery plans focused on short term steps to reduce non-essential expenses. The format included proposed restructuring strategy and expected financial impact of each action (within 2 years) as well as detailed profit forecasts. Firms should be able to recover operating finances through simple cash management- tracing where the money was lost, who owed them money - and collecting these receivables diligently. The financial plans had limited success. Managers were reluctant to take measures unpopular with the workers because they were either elected directly by workers, or else their appointment was approved by the union. An additional weakness in the FRPs was the lack of managerial knowledge. Managers were unable to assess their financial status simply because no attention was paid to such details in their previous tenure under state ownership. When assessing profits, they treated subsidies and production for inventories as revenues. At the opposite end, when a firm produced goods for its own consumption, they were not counted as revenues. Finally, only five of the initial 73 firms suggested measures to cut back production. The remaining 68 charted expansionary strategies based on investment and entry into new markets!

The State Ownership Fund was allowed to lend money to loss-making firms. The firms on the list received state funds while the SOEs outside the list did not- the opposite of what was supposed to happen. Also, banks were prohibited from increasing their level of bank credit, but were allowed to continue limited lending. A Structural Fund for redundancy payments and for utility bills was set up. Redundancy payments were equal to 6 months of pay. This made it easier to downsize the labor force. For firms that were too politically important to be shut down, this fund also helped pay their utility bills in a transparent way. It introduced, however, a softer budget constraint. Firms gained access to extra funds. Some protested government attempts to take them off the isolation program list.

At the time of closing the program (February 1997), only four firms had "graduated": two were privatized in 1996, while another two were liquidated. The program did not have a significant impact on managerial turnover: during the

implementation of the program only seven (of 147) CEOs were fired. Although these outcomes were hardly overwhelming in enhancing exits from the state sector, perhaps the program was effective in operational turn-around and eliminating the dependency of isolated firms on the state budget. We consider the empirical evidence on these two indicators in the following sections.

## V. The Data

We have firm-level data (balance sheet and profit and loss statements) for 1992-95 obtained from the Romanian Statistical Office (RSO). The data are annual observations and cover all firms which were registered as state-owned enterprises in 1991. If some plants are owned by the same parent company, this relationship is accounted for in the data. Overall, more than 8,000 individual firms are included. We exclude all firms which have missing observations and form balanced panels, i.e. all firms show up throughout the 1992-95 period. The majority of the excluded firms have missing values between the beginning and end of the sample period, which suggests that they were not liquidated. There is no new entry of SOEs in the sample period (entry through split-ups and spin-offs is captured in the data). The information concerning exit of SOEs is not utilized here since we cannot distinguish between apparent exit (due to non-reporting) and true exit (due to liquidation).

We also have quarterly data for 1996 for the firms in the reorganization program. These data are collected by the Agency for Restructuring and include the standard balance sheet and profit and loss statements' information, as well as detailed data on financing through the Structural Fund. We do not have comparable data for the 1996 control group and use this additional information for the analysis of time-series changes within the reorganization group only.

International accounting standards were not introduced in Romania during the sample period. This is not a problem for our analysis, since we are comparing relative performance across groups of firms in the same year (period). Several adjustments were made, however. Under the Romanian accounting system, for example, subsidies and production for inventories are counted as sales. Since data on sales, subsidies, and inventory changes are reported in all cases, we recalculate the revenue numbers to account for sold (rather than produced) output. Firm-specific output prices are not available. One option is to use output price indices at the industry level, as reported by the RSO. This, however, limits the comparisons between firms within the same sector, given the likely variation in pricing strategies across firms. We hence develop the analysis on the basis of ratios of revenues and expenditures, thus avoiding the need for inflation-accounting, i.e. we use nominal data in both the numerator and denominator.

The balanced set contains 146 firms from the reorganization program, identified by firm numbers. We also selected a control group of firms in the same sectors.

Within each sector, we chose firms which had similar size (measured by number of employees), profitability, and subsidies (as measured by their share in total revenues) in 1992 to corresponding firms in the isolation program. This algorithm resulted in a distribution of firms across sectors (Table 2) which is very similar between the focus and control groups in eight sectors. The only exception is the Utilities sector where the focus group consists of firms that are significantly larger than those in the control group. Firms come from nine sectors. The large share of agricultural firms is due to the inclusion of pig and poultry farms in the reorganization program in 1995. Although numerous, these firms do not account for a large part of overall employment. The largest firms are to be found in coal mining and utility sectors.

[Table 2 here]

We choose as indicators of reorganization the reductions in debts and arrears relative to sales revenues, the improvement in profitability, and the reduction in the labor force. The former two proxy financial disciplines imposed on the firms under reorganization, while the latter two track operational performance. Table 3 presents means, medians and standard deviations of key variables in the focus and control groups for the whole samples. Sector-specific statistics are reported in Table 1A.

[Table 3 here]

The first such ratio is profit to sales ratio (defined as sales minus wages minus materials expenses over sales). The mean of this ratio was similar across firms in the two groups in 1992 - -0.055 and -0.023 for the focus and control group respectively. By 1995, however, firms in the focus groups displayed a rapidly worsening profitability. This trend continued into 1996 with further deterioration - the firms in the reorganization program lost almost half of the value of their production. Since the 1995-96 period is completely covered by the program, one can presume that participation of firms did not result in improvements in their operating performance.

The second descriptive statistics is the average number of employees per firm. Between 1992 and 1995, firms in the focus group reduce their employment by 17.1% while firms in the control group by 24.1%. This difference may, however, be due to firm size - firms in the program are somewhat larger than firms in the control group. This argument can only be supported if there exists some rationale for having more constraints to employee reductions in larger firms, e.g., the role of plant-specific labor unions. We next exclude the Utilities sector which accounts for much of the difference in size. The difference in labor shedding between the two groups remains about the same - 15.4% and 28.3% over the 1992-95 period.

Indebtedness as measured by total debt to assets ratio increased by 50% between 1992 and 1996 (from 0.223 to 0.349) for firms in the isolation program. Control group firms also experience increased indebtedness over the sample period

(0.206 to 0.262), but not to such a large extent. As mentioned earlier, bank credit is not the only source of financing to loss making firms. When banks monitor lending carefully, firms develop other methods of avoiding payments and accumulating credit. One such way is to delay payment for inputs. Overdue payments to suppliers constitute about 70% of all overdue payments, falling from 73% in 1992 to 58% in 1996, the biggest fall being in 1996 (not reported in Table 3). This suggests that suppliers, not banks might be source of the soft budget constraint. Anecdotal evidence suggests that many firms built up arrears to their energy suppliers-the electric utilities in particular. Utilities in turn built up arrears with their suppliers, the coal mines. Mines were not, however, the ultimate loser, since they enjoyed significant subsidies through the state budget.

Direct subsidies from the budget have remained approximately constant over the 1992-96 period, instead of disappearing altogether. In addition, the isolated firms received additional Structural funds not available to control group firms to the amount of 0.037 and 0.053 of total revenues in 1995 and 1996 respectively. Thus in total, transfers from the budget increased from 5.4% of total revenues in 1992 to close to 12% by 1996. This increased dependence on outside funds can be (at least in part) traced down to the focus on production targets rather than revenue maximization. This continuing trend can be seen in the inventory to sales ratio that increased fourfold in the sample period for firms in the isolation program. Firms in the control group also registered increased inventory build-up albeit to a lesser degree.

These simple descriptive statistics suggest that the isolation program did not result in improved operational performance. Nor did it eliminate (or even curb) access to state funds. Since these observations are not based on econometric analysis, they may be misleading. In particular, the observed trend may be endogenous - if the Romanian government selected (with perfect foresight) the worst loss-makers into the program, the results on operational performance would be less surprising. This consideration would not, however, alter our tentative conclusions as regards (lack of) hard budget constraints. We address the endogeneity issue in the next section.

## VI. Evidence

The description of the Romanian isolation programs in Section IV suggests that it was adopted with specific objectives in mind. In particular, the program was expected to bring (1) reduced operational losses to the isolated firms; (2) reductions in excess employment; (3) elimination of government subsidies and reductions in arrears to banks, suppliers, and the budget; and (4) overall reduction in the debt burden. In this section we test if and to what extent these objectives were achieved.

Our sample selection criteria outlined in Section V allow us to test whether the performance of firms changed after inclusion in the program. We employ a matched pair methodology for comparing pre- and post-inclusion performance of firms. We also compare the performance of firms in the reorganization program with firms outside the program which otherwise had similar characteristics. In both cases, we use the Wilcoxon signed-ranked test as the principal method for testing our hypotheses.<sup>1</sup> If significant changes in the behavior of firms under reorganization did take place, we would expect to see improved performance both over time and as compared to the control group of firms that did not participate in the program.

Table 4, Panel A looks at differences across time of individual firms by sector for the control and isolated firms separately. The differences are calculated using 1995 performance as a benchmark. A negative Z statistics on employment would mean that the firms have reduced labor force over time. Since agriculture constitutes about half the sample for both sets of firms, it is possible that it drives the overall result. To avoid this complication, we run the Wilcoxon Test on all sectors combined excluding agriculture. The results are reported in the next to last row of Table 4, Panel A.

[Table 4 here]

Across sectors, in both the control and the isolation groups, the Wilcoxon test statistics indicate that employment was reduced significantly between 1992 and 1995. The largest reductions occurred in agriculture. Although the Romanian reorganization program resulted in labor shedding, we show that even more drastic labor reductions took place in firms outside the program, despite their lack of access to redundancy payments. Subsidies (as a percentage of revenue) were cut in all sectors with the exception of agriculture. Again, control group firms seem to have been cut off from subsidies more than their comparators under reorganization. This may, of course, be endogenous. If the reorganization group includes the worst performers, we may expect to see higher level of support, all else equal. Our earlier analysis shows, however, that this was not the case in the majority of sectors - less than half of the largest loss-makers were put under isolation. Finally, profitability went down for both groups for the total samples. In both cases, however, this decline was driven primarily by the worsening of the agricultural sector. Once agricultural farms were excluded, profitability in the reorganization group actually increased (Z-statistics of 2.148). Significant positive improvements were recorded in three manufacturing sectors (Non-Metallic Products; Chemicals; Metallurgy). The same sectors (plus Machinery and

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<sup>1</sup> One alternative method to compare changes over time and between the two groups is to perform T tests on select performance indicators. This approach, however, is inefficient when a large degree of variation (represented by high standard deviations of indicators) in the sample exists. We also performed regression analysis on the main indicators of firm performance (profitability, employment changes). Since the results are qualitatively similar to the findings using Wilcoxon sign tests -- no differences were found in firm behavior in the focus and control groups -- they are not reported here.



Equipment) showed an improving trend in the control group, although the improvement was not significant in Machinery and Equipment.

Panel A only compares firm performance at the end of the sample period relative to the beginning of the sample period. An alternative method for evaluating performance would be to compare matched pairs from the focus and control groups (Panel B). Given the size of the control group and the apparent lack of significant selection bias in the choice of firms into the reorganization program, we can find a smaller set of control firms to compare with reorganization firms in paired matchings. The criteria used for matching was that the control firm had to be in the same sector, had about the same number of workers and about the same operating profit to sales ratio in 1992. In this way, we can argue more convincingly that before the start of the program, the two groups were similar and that the differences between them in the latest year (1995) should be exclusively a result of the program. A Wilcoxon test statistics were computed for the difference in characteristics between pairwise matched isolation and control firms in 1992, as well as in 1995. The former shows that our matching procedure did manage to pair firms well. As in Table 4, Panel A, the inclusion of agriculture may drive overall result. We use a separate test on all sectors combined excluding agriculture.

When comparing the two groups using this method, control firms improved their performance relatively more, and have reduced their labor force by more than their matched isolated firms. Significant differences existed in 1992 between the two groups; control firms were overall larger, more profitable and received less subsidies. The differences are less apparent within sectors. The labor force is significantly different in 1992 in two sectors, profitability in one, but subsidy differences are seen in 5 sectors. Relative to the initial differences, the situation in 1995 reflects an improvement for the control group in all aspects (subsidies have stayed roughly similar between the two groups). Subsidy differences have become significantly negative (from non significant) in food and chemicals, and have become insignificant in road transport. The size of isolated firms as proxied by labor force became significantly larger in agriculture, and significantly smaller in chemicals. Profitability within sectors did not have any significant differences in 1992, but three years later the control firms in agriculture had become more profitable than the isolated firms. The overall result in profitability seems to be driven by the inclusion of agriculture. Once this sector is excluded, the 1992 and 1995 differences between the two groups become insignificant (Z-statistics of 1.357 in 1992 and 1.434 in 1995), while all other results remain the same in sign and significance.

Overall, no significant differences in the behavior of firms between the two groups are found.

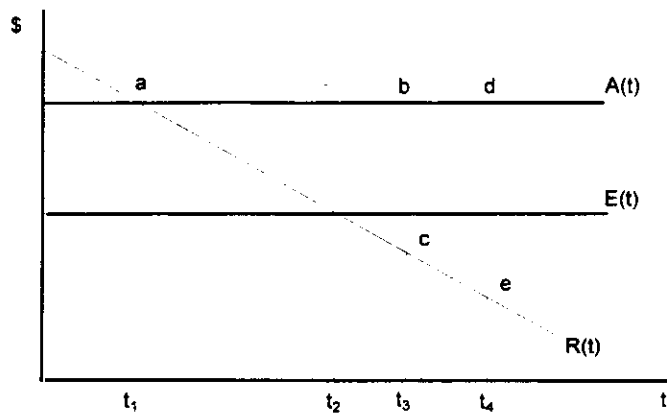
## VII. The Cost of Reorganization

The findings in the previous section suggest that the reorganization program in Romania had little impact on the performance of included firms. Its implementation, on the other hand, resulted in substantial costs during the period in which the government supported these firms (October 1993-February 1997). In this section, we estimate these costs, following the methodology developed in White (1996). To put these costs into perspective, we evaluate them in terms of foregone severance payments to workers. In other words, we ask the question "How many months of average wage could have been paid to each worker with the funds spent reorganizing these firms." This also helps answer the question as regards alternative strategies that the Romanian government could have followed in addressing the worsening quasi-fiscal deficit that resulted from state support of loss-making firms.

Since the suggested alternative (privatization or outright liquidation) may be difficult to implement for utility firms, those are excluded from the analysis. The losses that those firms incurred as well as the fees to consultants for technical assistance were not included in the cost calculations. We do not count any monitoring expenses either, since those were handled through the line ministries. Since utility firms were present to a significant extent only in Bulgaria and Romania, this does not affect the robustness of our findings significantly.

The analysis in this section closely follows that in White, 1996. Figure 1 (Figure 30.1 in White, 1996) represents a financially distressed firm which is economically inefficient.  $R(t)$  is the firm's revenue at time  $t$ . revenues are declining because the firm's products cannot find markets.  $A(t)$  is the revenues that the firm's capital would generate if it were shifted to its best alternative use, net of conversion costs.  $E(t)$  is the firm's expenses at time  $t$ , including principal and interest payments due at time  $t$ , and expenses on wages, materials, and energy. Expenses are assumed to be constant over time; they are also assumed to be the same under both the actual and best alternative use of the firm's capital. These assumptions are made for the sake of simplicity and serve only for illustrative purposes. We also discuss the case where inefficient firms are included in reorganization exercises. For the case of economically efficient firms, see White (1994).

Figure 1: The Cost of Delayed Liquidation



From time  $t_1$  onward, it is economically efficient to reinvest the firm's capital. Even if assets are not invested, there will be an efficiency gain from liquidating the firm, since this will free the assets to move to higher value use. From time  $t_2$  onward, the firm makes losses.<sup>2</sup> Now it is economically efficient to shut down operations even if the firm's capital cannot be used for alternative value generation. Given the overall flux in transition economies, let's assume that it is not possible to distinguish between efficient and inefficient firms at time  $t_2$ . The government then waits until  $t_3$  to recognize the firm's type. Once the type is identified, the government can liquidate the firm or put it in a reorganization program. Suppose that the government decides to put the firm through reorganization instead of liquidation. This may be dictated purely by political reasons. The political costs of liquidation are large since the losers (redundant workers and fired managers) are clearly identified; the benefits are long-term and accrue to unidentified tax payers. The cost of reorganization for an individual firm is the area between the  $A(t)$  and  $R(t)$  from time  $t_3$  to  $t_4$ , or the area  $bcde$ .

When the firm depends on support from the budget for its continued operations, the analysis is more complex. First, the government incurs costs in maintaining the program, payments to consultants for the preparation of financial recovery plans, plus loans from the World Bank for monitoring developments. Second, given the focus on curbing the quasi-fiscal deficit, the government is interested in eliminating operational losses (the difference between expenses and revenues) and not in putting the firm's capital to alternative uses. Lastly, some firms may have attracted buyers immediately, i.e., before the start of reorganization. Since capital is being run down during the course of reorganization, the price that these firms would fetch after the program will likely decline due to the amortization of productive assets. The overall calculation of the cost of reorganization would then include the cost of delay of liquidation, the administrative costs of the program, and the differences in privatization price that the government will receive if buyers are present. Since the latter is not available in the dataset, we assume that there is no amortization or loss of goodwill involved in postponing privatization.

<sup>2</sup>  $R(t) - A(t)$  is not exactly profits since depreciation charges are excluded.

In sum, the costs incurred in running the isolation program are divided as follows: continued operational losses by the firms in the program; financial support for the maintenance of the agencies responsible for implementation and monitoring; and finally, fees for consulting services and technical assistance. The latter should include resources spent not only by the Romanian government, but also by the international organizations that co-operated with it during the creation and implementation of the isolation program (World Bank, EU-Phare, USAID).

Data on the costs of these three components indicate that the amount of fresh operational losses (covered by new government subsidies or loans) amount to the equivalent of 23 months of severance pay for all 542, 980 workers in isolated firms<sup>3</sup> as of December 1992; the costs of maintaining the program amount to the equivalent of 5 months of severance pay; finally, the cost of technical assistance from the government and its donors amounts to an addition amount of 4 months of severance pay for all (over 350,000) workers. Thus the total opportunity cost of the Romanian isolation program can be approximated to 32 months of severance pay (average wages) for all workers involved.

One may argue that if a decision was forced on workers whether they would continue working (hence opposing liquidation or privatization) or take almost three years of average pay and commit to not putting further political pressure on the government, most workers may have preferred the latter option. If that were the case, in effect we would have had rapid liquidations at the expense of paying off workers for not working!

### VIII. Conclusions

This paper analyzes the performance of firms selected into the Romanian reorganization program. We show that the firms in the isolated group displayed worsening profitability as compared to their counterparts, and that they were more likely to receive government assistance. The firms chosen were not always the largest loss-makers in their respective sectors. The empirical evidence shows that many of the intentions of the isolation program did not materialize. In fact, the program might have delayed restructuring by not imposing a credible hard budget. The failure of the program resulted partly from the way it was perceived by managers - as a 'sanatorium' rather than a 'jail'. Firms were eager to join the program because this would give them access to further sources of state funds. Being in the program also meant it was easier to reschedule debt. Government debt (and arrears to government institutions) were often forgiven.

The difficulties that the isolation program faced were due to both the selection of enterprises into the program and its subsequent implementation. Loss makers were not selected on objective criteria, and the agency in charge was not sheltered from political pressure. When special agencies were created to implement the program, they

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<sup>3</sup> This excludes Road Transportation and Utilities firms as stated earlier.

turned it into a long term project. Bank debt conciliation was scheduled too early in the adjustment process to be efficient. The conciliation achieved before restructuring looked too much like debt forgiveness. Also, management contracts were not updated to align incentives. This meant that contracts did not include rewards for meeting targets of employment and loss cuts. Utilities were included in the isolation exercise, instead of being treated separately as regulated monopolies.

The evidence presented in this paper questions the design of isolation programs, but does not offer a comprehensive alternative solution. It puts in place, however, some components of such a solution. Most importantly, we show that it is often useful to pay off workers to leave and not create political pressure on the government rather than try and keep loss-making firms running. The design of viable alternatives to isolation programs is an important policy issue and merits further investigation.

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**Table 1: Reorganization Programs in Transition Economies**

	Starting Date	Number of Firms	Number of which utilities	Number of Employees	Lifespan of program	Severance payments	% of Total Arrears	% of Total Losses	Bank Finance Allowed	Debt Reconciliation
Albania	January 1994	32	4	13.000	2.0	No	45	40	No	No
Armenia	January 1995	11	0	18.000	3.0	Yes	30	40	Yes	No
Bulgaria	October 1996	71	31	170.000	2.5	Yes	80	82	No	Yes
FYR Macedonia	May 1994	25	2	45.000	2.0	Yes	65	80	Yes	No
Kazakhstan	May 1995	20	0	62.000	4.0	Yes	35	45	Yes	Yes
Kyrgyz Republic	June 1994	29	2	40.000	4.0	No	35	40	No	Yes
Romania	October 1993	147	9	850.000	3.3	Yes	40	47	Yes	Yes
Uzbekistan	November 1995	30	3	130.000	3.0	Yes	20	15	Yes	No



Table 2: Sample Statistics

SECTOR	Reorganization Group						Control Group					
	Firms		Employment		Sales Revenues		Firms		Employment		Sales Revenues	
	No	%	No	%	No	%	No	%	No	%	No	%
Agriculture	70	47.95	49,703	5.70	719.00	9.09	70	47.95	38,343	7.82	148.64	6.16
Coal and Petroleum	5	3.42	192,419	21.65	2,090.00	26.42	5	3.42	138,285	28.23	555.94	23.01
Food and Beverage	4	2.74	3,278	0.37	17.22	0.22	4	2.74	3,699	0.82	15.63	0.65
Non-metallic Products	14	9.59	62,461	7.03	909.86	11.50	14	9.59	44,839	9.16	395.62	16.37
Chemicals	12	8.22	39,267	4.42	320.81	4.06	12	8.22	38,811	7.92	391.23	16.19
Metallurgy	12	8.22	103,255	11.62	1,057.49	13.37	12	8.22	84,315	17.21	408.66	16.91
Machines and Equipment	19	13.01	91,598	10.31	294.42	3.72	19	13.01	82,330	16.81	176.78	7.32
Road Transport	6	4.11	49,026	5.52	177.65	2.25	6	4.11	40,669	8.32	266.34	11.02
Utilities	4	2.74	296,801	33.39	2,323.70	29.38	4	2.74	18,630	3.81	58.27	2.41
All	146	100.00	887,808	100.00	7,910.34	100.00	146	100.00	489,921	100.00	2,416.49	100.00

**Table 3: Descriptive Statistics of the Sample**  
(Mean, Median, Standard Deviation)

Variable	All Firms Including Utilities and Road Transportation						All Firms Excluding Utilities and Road Transportation					
	Reorganization Group			Control Group			Reorganization Group			Control Group		
	1992	1995	1996	1992	1995	1996	1992	1995	1996	1992	1995	1996
<b>Profitability</b>	-0.055	-0.358	-0.453	-0.023	-0.086	-0.086	-0.079	-0.434	-0.547	-0.031	-0.079	-0.079
	0.019	-0.117	-0.218	0.036	0.017	0.017	0.022	-0.122	-0.228	0.041	0.017	0.017
	0.331	0.618	0.656	0.296	0.405	0.405	0.434	0.742	0.849	0.307	0.392	0.392
<b>Employment</b>	6331	5252	5168	3752	2848	2848	4134	3498	3438	3581	2567	2567
	1598	1099	1048	1426	743	743	1151	927	963	1244	661	661
	19504	15982	15797	8176	6599	6599	8639	8302	8227	8317	6344	6344
<b>Debt to Asset Ratio</b>	0.223	0.295	0.349	0.206	0.262	0.262	0.219	0.301	0.356	0.205	0.268	0.268
	0.200	0.257	0.329	0.179	0.224	0.224	0.203	0.267	0.334	0.183	0.241	0.241
	0.128	0.153	0.164	0.117	0.199	0.199	0.134	0.152	0.161	0.121	0.202	0.202
<b>Additional Funds to Sales Ratio</b>	---	0.038	0.053	---	---	---	---	0.036	0.056	---	---	---
		0.012	0.006					0.014	0.005			
		0.165	0.093					0.173	0.098			
<b>Subsidies to Sales Ratio</b>	0.054	0.077	0.066	0.017	0.030	0.030	0.054	0.076	0.064	0.013	0.026	0.026
	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.004	0.001	0.000	0.000	0.000
	0.091	0.119	0.108	0.068	0.082	0.082	0.088	0.111	0.097	0.056	0.065	0.065
<b>Inventory to Sales Ratio</b>	0.113	0.324	0.424	0.114	0.257	0.257	0.134	0.354	0.457	0.122	0.2262	0.2262
	0.027	0.204	0.253	0.036	0.162	0.162	0.028	0.203	0.284	0.044	0.167	0.167
	0.214	0.367	0.462	0.202	0.306	0.306	0.316	0.406	0.486	0.202	0.308	0.308

**Table 4: Comparison of Performance Changes in the Reorganization and Control Group, 1992-95**

SECTOR	Panel A. Comparison over Time within Each Group (Z Statistics using a Wilcoxon Signed Ranked Test)			
	Changes for Reorganization Group, 1992-95		Changes for Control Group, 1992-95	
	Employment	Profitability	Subsidies	Subsidies
Agriculture	-3.485	-6.633	4.861	-6.342
Coal and Petroleum	-0.944	-0.944	-1.213	-2.023
Food and Beverage	-1.826	-0.731	0.731	-0.367
Non-Metallic Products	-2.919	1.977	-3.290	-3.296
Chemicals	-3.059	2.510	-1.412	-0.476
Metallurgy	-2.981	2.197	-3.059	-3.059
Machinery and Equipment	-3.461	0.885	-3.823	-3.823
Road Transport	-2.201	-0.314	-2.201	-2.201
Utilities	-0.730	-1.095	0.000	-0.732
Excluding Agriculture	-6.549	2.148	-3.422	-5.679
All	-7.594	-4.072	-5.127	-8.448

	Panel B. Comparison between the Reorganization and Control Groups (Z Statistics using a Wilcoxon Signed Ranked Test for Matched Pairs of Firms)			
	Differences between Means, 1992		Differences between Means, 1995	
	Employment	Profitability	Subsidies	Subsidies
Agriculture	-1.766	1.103	-5.898	-5.047
Coal and Petroleum	-1.483	-0.535	-0.535	-1.214
Food and Beverage	0.730	-0.783	-0.535	-1.826
Non-Metallic Products	-1.601	1.363	-3.180	-2.417
Chemicals	0.078	0.392	-1.647	-2.118
Metallurgy	-2.275	0.314	-3.059	-2.118
Machinery and Equipment	-2.455	1.167	-3.823	-2.334
Road Transport	-0.105	1.082	-2.201	-0.314
Utilities	-1.826	-0.365	-0.365	-0.730
Excluding Agriculture	-4.044	1.357	-5.499	-4.623
All	-2.662	1.642	-7.809	-6.511

**Table 1A: Descriptive Statistics by Sector**  
(Mean, Median, Standard Deviation)

	Reorganization Group		Control Group		Reorganization Group		Control Group		Reorganization Group		Control Group	
	1992	1995	1992	1995	1992	1995	1992	1995	1992	1995	1992	1995
	<b>Agriculture</b>											
<b>Profitability</b>	0.048 (0.116)	-0.632 (-0.433)	0.094 (0.113)	-0.112 (0.008)	0.047 (0.090)	-0.309 (0.178)	0.008 (0.045)	-0.294 (-0.087)	-0.314 (-0.300)	-0.692 (-0.925)	-0.168 (-0.304)	-0.207 (-0.159)
	0.308	0.693	0.245	0.433	0.425	0.962	0.204	0.875	0.562	0.557	0.369	0.578
<b>Employment</b>	736 (518)	667 (415)	613 (451)	345 (222)	38097 (33124)	36265 (27312)	29621 (29500)	24349 (21460)	849 (686)	536 (408)	1008 (446)	624 (381)
	1152	1012	483	337	18971	19816	13879	14155	712	430	1202	604
<b>Debt to Asset Ratio</b>	0.250 (0.227)	0.334 (0.287)	0.186 (0.165)	0.264 (0.217)	0.178 (0.162)	0.246 (0.235)	0.179 (0.163)	0.336 (0.294)	0.432 (0.284)	0.319 (0.286)	0.276 (0.296)	0.196 (0.211)
	0.133	0.168	0.131	0.253	0.081	0.135	0.091	0.162	0.389	0.150	0.104	0.097
<b>Subsidies to Sales Ratio</b>	0.063 (0.034)	0.122 (0.112)	0.008 (0.000)	0.044 (0.025)	0.171 (0.070)	0.267 (0.072)	0.067 (0.000)	0.106 (0.000)	0.112 (0.114)	0.068 (0.070)	0.073 (0.000)	0.001 (0.000)
	0.067	0.085	0.028	0.063	0.192	0.339	0.152	0.233	0.389	0.048	0.142	0.002
<b>Inventory to Sales Ratio</b>	0.041 (0.004)	0.471 (0.288)	0.051 (0.000)	0.337 (0.189)	0.051 (0.050)	0.082 (0.026)	0.054 (0.028)	0.144 (0.047)	0.263 (0.026)	0.315 (0.297)	0.309 (0.148)	0.296 (0.284)
	0.169	0.448	0.178	0.384	0.054	0.144	0.062	0.346	0.495	0.330	0.436	0.306
	<b>Food and Beverage</b>											

(continued)

	Reorganization Group		Control group		Reorganization Group		Control group		Reorganization Group		Control group	
	1992	1995	1992	1995	1992	1995	1992	1995	1992	1995	1992	1995
	<b>Non-Metallic products</b>											
<b>Profitability</b>	-0.258	-0.061	-0.291	-0.086	-0.050	0.038	-0.058	0.056	-0.302	-0.083	-0.248	0.033
	(0.258)	(0.025)	(0.246)	(0.029)	(0.037)	(0.075)	(0.042)	(0.048)	(0.248)	(0.031)	(0.226)	(0.061)
	0.254	0.209	0.324	0.294	0.150	0.149	0.148	0.122	0.343	0.242	0.239	0.116
<b>Employment</b>	4895	3759	3884	2627	3593	2461	3316	2948	8885	7822	8126	6044
	(4580)	(2555)	(3577)	(2361)	(2324)	(1393)	(2810)	(2482)	(5594)	(3565)	(2649)	(2257)
	2052	2609	1695	1037	2189	1946	1898	1687	10086	10113	15388	11035
<b>Debt to Asset Ratio</b>	0.257	0.312	0.268	0.336	0.219	0.293	0.200	0.264	0.159	0.252	0.247	0.296
	(0.253)	(0.314)	(0.266)	(0.334)	(0.187)	(0.304)	(0.186)	(0.243)	(0.150)	(0.246)	(0.203)	(0.278)
	0.093	0.126	0.132	0.152	0.097	0.112	0.074	0.108	0.083	0.099	0.126	0.135
<b>Subsidies to Sales Ratio</b>	0.000	0.000	0.000	0.000	0.097	0.000	0.054	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.056)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	0.000	0.000	0.000	0.000	0.113	0.000	0.124	0.000	0.000	0.000	0.000	0.000
<b>Inventory to Sales Ratio</b>	0.180	0.164	0.208	0.212	0.115	0.229	0.127	0.114	0.175	0.211	0.167	0.112
	(0.166)	(0.114)	(0.189)	(0.162)	(0.102)	(0.055)	(0.119)	(0.092)	(0.155)	(0.162)	(0.137)	(0.078)
	0.124	0.157	0.117	0.223	0.073	0.504	0.076	0.064	0.106	0.205	0.126	0.089
	<b>Metallurgy</b>											

(continued)

Reorganization Group		Control group		Reorganization Group		Control group		Reorganization Group		Control group	
1992	1995	1992	1995	1992	1995	1992	1995	1992	1995	1992	1995
<b>Machinery and Equipment</b>											
<b>Profitability</b>	-0.147 (-0.037)	-0.042 (-0.044)	-0.128 (-0.035)	0.033 (0.015)	0.007 (0.030)	0.116 (0.125)	-0.113 (-0.011)	0.025 (-0.046)	-0.405 (-0.130)	0.020 (-0.052)	-0.264 (-0.012)
	0.367	0.239	0.368	0.179	0.176	0.119	0.234	0.179	0.820	0.172	0.927
<b>Employment</b>	5186 (3126)	3673 (2461)	5315 (2463)	2955 (1778)	6449 (6155)	7041 (4179)	7854 (4179)	77849 (58865)	63024 (52680)	4622 (969)	4822 (544)
	4688	3538	9207	4447	4726	4609	9656	88967	67924	7609	8908
<b>Debt to Asset Ratio</b>	0.171 (0.152)	0.221 (0.226)	0.194 (0.167)	0.225 (0.232)	0.278 (0.257)	0.187 (0.199)	0.246 (0.175)	0.070 (0.082)	0.104 (0.111)	0.079 (0.062)	0.104 (0.068)
	0.091	0.132	0.083	0.094	0.159	0.069	0.193	0.050	0.067	0.056	0.083
<b>Subsidies to Sales Ratio</b>	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.148 (0.106)	0.273 (0.223)	0.186 (0.140)	0.199 (0.084)
	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.166	0.270	0.223	0.298
<b>Inventory to Sales Ratio</b>	0.329 (0.193)	0.279 (0.271)	0.262 (0.182)	0.206 (0.216)	0.226 (0.215)	0.031 (0.028)	0.227 (0.191)	0.000 (0.000)	0.008 (0.007)	0.002 (0.000)	0.098 (0.000)
	0.337	0.196	0.303	0.146	0.102	0.030	0.196	0.000	0.007	0.006	0.187
<b>Utilities</b>											