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ENTERPRISE ADJUSTMENT IN POLAND: EVIDENCE FROM A SURVEY OF 200 PRIVATE, PRIVATIZED, AND STATE-OWNED FIRMS

M. BELKA, S. ESTRIN, M.E. SCHAFFER, and I.J. SINGH

ABSTRACT

This paper reports the main findings from a survey of some 200 Polish firms carried out at the end of 1993. The central focus is on the relationship between different emerging forms of ownership and the extent and nature of enterprise level adjustments taking place. Four broad categories of enterprises that distinguish the main ownership forms that characterize Polish industry were included in the survey: (a) traditional state-owned enterprises, (b) corporatized state-owned enterprises that have been converted into joint stock companies but whose shares are now owned by the State Treasury; (c) former state-owned firms that have been privatized; and (d) privately-owned firms which were established *de novo*.

Some of the main findings from the survey are as follows. Growth and investment in 1993 were widely diffused through the economy, but rather more concentrated in the private sector and especially in *de novo* private firms, while financial distress as revealed by low profit margins was concentrated in the state-owned sector. The survey suggests that all firms in Poland have experienced a considerable increase in competition, and have faced the need radically to restructure their patterns of input purchases and marketing strategy. In general, *de novo* private firms have led the way, and changes have been fewer and less deep in the state-owned sector. Developments on the labor side in our sample are rather modest, and to be heavily oriented to satisfy the preferences of insiders, especially workers. Overmanning remains rife in both the state-owned and privatized sector, and differences between the two groups of firms in wage determination appear to stem more from the operation of the excess wage tax than from differences in motivation. Behavior in the *de novo* private firms is, however, clearly different, with a concern to hire not fire, and with lower employee influence. With respect to finance, we find that privatized and especially *de novo* private firms are financially relatively healthy, with higher profits and fewer bad debts than the state-owned firms. Although almost half of private sector firms hold no bank debt, bank credit is flowing fastest to these firms and in general they report the fewest problems in servicing it. Overdue trade credit is common among all ownership groups but more so among state firms; however, the flow problem is not serious, and volumes of total and overdue trade credit are comparable to West European levels. The main method by which severely financially-distressed firms, nearly all of which are state-owned, finance their losses is by running up tax arrears; financing by banks and by trade credit is much less significant.

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1. Introduction

The last few years have seen most dramatic changes in Central and Eastern Europe, most notably the collapse of Communist Party rule throughout the area and the subsequent desire to move from central planning to market methods of resource allocation. The tasks faced in each country are enormous, with the need for economic reform at the level of the macro-economy to stabilize prices and to introduce foreign exchange convertibility, and at the microeconomic level to form competitive product, capital and labor markets. Essential elements in this process of economic transition are the transfer of ownership of firms from public into private hands, and the fundamental adjustment in enterprise behavior in response to the new economic environment.

Though it is now more than four years since the "big bang" in Poland, there have been only a few studies at either a theoretical or an empirical level of enterprise adjustment in transition (but see Pinto, Belka, and Krajewski, 1994, for the results of a survey of 75 Polish state-owned firms). Research is therefore urgently needed to understand the behavior of firms in transition, whether state or privately owned, and to guide policy-makers and potential investors towards business and industries of likely future profitability and growth. In principle this can be done by analyzing longitudinal data on the industrial sector available from official sources - the Central Statistical Offices (CSOs) in each country. But there are two difficulties with this approach. First, where only aggregate industrial or sub-sector data are available, they do not allow one to capture the complexity and dynamics of the adjustment process taking place at the enterprise level, as firms, some failing and others succeeding, respond both to changes in their environment and in their internal organizations and ownership forms. Second, even where longitudinal firm level data are available, they limit the scope of the analysis because these data: (a) follow the Central and East European accounting procedures and are oriented to information about production and material inputs rather than profitability, costs and financial transactions; (b) often exclude private sector firms, which are an increasingly important element in any analysis of micro-economic adjustment; (c) are subject to greater confidentiality as CSOs collect less information each year and confidentiality is likely to apply primarily to variables of key interest to the transition; and (d) suffer from problems of inter-temporal comparability, because the transition is likely to entail vertical or horizontal disintegration as the role of central planning is eliminated and firms redefine the "core" of their business by divestiture and acquisition or are themselves broken up during the process of privatization. In order to undertake a proper longitudinal analysis and overcome some of these deficiencies, it becomes essential to undertake primary data collection through surveys in order to link the quantitative and financial information needed to measure performance and adjustments, with the institutional changes in ownership and organizational forms that take place during the transition.

This paper reports the main findings from a survey of some 200 Polish firms carried out at the end of 1993. The survey was designed to capture the rapid changes in ownership that have been occurring in Poland and their implications for enterprise behavior and performance. The central focus is on the relationship between different emerging forms of ownership and the extent and nature of enterprise level adjustments taking place. Four broad categories of enterprises that distinguish the main ownership forms that characterized Polish industry at the end of 1993 were included in the survey: (a) traditional state-owned enterprises (SOEs), (b) corporatized state-owned enterprises (SAs) that have been converted into joint stock companies but whose shares are now owned by the State Treasury; (c) former state-owned firms that have been fully or partially privatized, mainly though not solely through employee leasing or management buyouts (PREs); and (d) privately-owned firms (POEs) which were established *de novo*.

The methodology of the sample selection and the form of the survey and the characteristics of the sampled firms are described in sections 2-3. Section 4 outlines the main findings on market structure and competition, and section 5, on employment. Sections 6-7 look at issues of finance, investment and technology. Section 8 concludes the paper with a discussion of the findings on ownership and corporate governance.

2. Sample Size and Selection

The survey was sponsored by the World Bank Research Project on Enterprise Behavior and Economic Reform, and was undertaken between November 1993 and March 1994 by a team of Polish economists headed by one of the authors. A survey questionnaire in two parts was administered to 200 enterprises in the manufacturing sector. Eight firms were added later (in part to replace firms that withdrew from the survey after they had supplied most of the requested information), giving a total sample size of 208. The first part of the questionnaire was undertaken primarily by interview with senior managers, and involved qualitative questions about a variety of subjects including marketing, technology, employment, finance and corporate governance. The second part of the questionnaire was quantitative and drew on various elements of the firm's profit and loss accounts, balance sheets and other economic data for the three years 1991-1993.

The minimum firm size covered in the sample was 10 employees. The sample was stratified by ownership form as follows: 40 enterprises were emerging (*de novo*) private firms (POEs); 45 were privatized firms (PREs); 41 were state-owned firms which had been converted into joint stock companies ("commercialized", "corporatized") and were awaiting privatization (SAs) and 81 were traditional (not yet corporatized) state-owned firms (SOEs). Within these categories the selection of firms was random but somewhat concentrated in a fairly narrow group of highly industrialized regions. All major manufacturing subsectors are well-represented; there are only minor differences between the sectoral distribution of the firms in our sample compared to the weight of sectors in aggregate manufacturing employment.

Based on these data it is possible for us to paint a picture of firm performance by ownership type in Poland. This picture is of considerable interest in its own right because of the shortcomings of the available data on the Polish private sector published by the Polish Central Statistical Office. Though the quality of these data is probably the best among transition countries, they suffer from two important drawbacks. First, the CSO data make no distinction between the *de novo* private sector and the privatized sector. Second, the CSO definition of the "private sector" in use since 1991 includes cooperatives. Poland began the transition with a substantial number of manufacturing cooperatives, accounting for 13% of industrial employment in 1989 compared to 17% for the emerging private sector proper. During the communist period Polish cooperatives had little real autonomy, but the situation in the transition is quite different and in this sense cooperatives are correctly classified as part of the private sector. Cooperative performance has, however, been quite poor during the transition, and over the period 1989-1993 the output and employment of industrial cooperatives has roughly halved. But even now their weight in manufacturing is still substantial relative to the emerging private sector, and moreover, because they are larger than the average *de novo* private firm, they are disproportionately represented in much of the CSO's statistics. At the same time, the emerging private sector, by all accounts, has enjoyed explosive growth. The Polish CSO statistics on the private sector thus unfortunately combine what are several quite distinct ownership groups: *de novo* private firms, formerly state-owned firms that have been privatized, and cooperatives.

Our sample of 208 firms included 5 cooperatives founded during the communist period. Given that the transition has meant control of these cooperatives was devolved to their members, for most of the analysis we classify the 5 cooperatives in our sample as "privatized" firms, PRE's. Cooperatives are quite special ownership forms, and we omit them entirely from our discussion on corporate governance in section 8.

Compared to the relative weights of state-owned and private sector employment in Polish industry, our sample is fairly representative. About 60% of firms in our sample are state-owned, compared to about 65% of total industrial employment excluding small firms (employment 5 or less) in Poland in 1993. The division of the state-owned sector into commercialized and traditional SOEs is similarly representative: 1/3 of industrial employment in the state sector in Poland in 1993 was in commercialized firms, and 1/3 of our state-owned firms are commercialized. However, our sample substantially overrepresents privatized firms relative to *de novo* private firms. We estimate (based on Polish CSO data) that employment in privatized industrial firms (excluding cooperatives) in 1993 amounted to about 4% of total industrial employment in firms with 6 or more employees, whereas the *de novo* private sector accounted for about one-quarter of total industrial employment (cooperatives accounted for about 7%).[1] This decision to overrrepresent the privatized sector was deliberate, the aim being to reflect the variety of privatization methods in Poland.

3. Performance of Manufacturing Firms by Ownership

The first five tables provide a picture of the firms in our sample, and of the key differences in situation and enterprise economic performance by ownership type in Poland at the end of 1993. We note first from Table 1 that, as expected, most *de novo* private firms (POEs) are small, and most state firms (SAs and SOEs) are large. However it is encouraging that there are already a few large *de novo* private firms, and that more than one third of privatized firms (PREs) are small or medium-sized. It is also noteworthy that virtually all corporatized firms are large. The reason for this is that the bulk of these firms are to be included in the Polish Mass Privatization Programme (MPP) and so first had to be converted into joint stock companies.

The Polish industrial sector began to grow again in 1992 after a deep recession, and total manufacturing output grew by 8.5% in 1993 in firms employing more than 5 persons. In fact the (weighted) average output growth in our sample in 1993 was also 8.5% (!). Tables 2 and 3 provide a picture of how the growth was distributed between the ownership types. Commencing with output growth in Table 2, we find rapid real growth (in excess of 10 %) concentrated in the private sector, both in privatized and especially in *de novo* private firms. Only a minority of SOEs and merely a quarter of corporatized firms display rapid output growth. On the other hand, the macroeconomic expansion is leaving few firms out completely; only 10% or less of private firms and 20% or less of state-owned firms were (still) shrinking in 1993.

The picture is rather different for employment growth, reflecting the fact that current and former state-owned firms often still had significant amounts of hoarded labor, and that private firms need to employ extra workers in order to grow. Manufacturing employment in Poland in firms employing more than 5 persons grew by 1.7% in the course of 1993; the comparable (weighted average) figure for our total sample was -6%. A third or more of PREs, SAs and SOEs in our sample record rapid employment reductions; in each case, higher proportions than display rapid declines in production. Almost none of the state-owned and formerly state-owned firms record rapid increases in employment, as against 50% of *de novo* private firms. Thus output growth is fairly widely dispersed, though more marked in the private sector, while employment growth is concentrated in *de novo* private firms.

The after-tax profit margin (profit as a percentage of sales) in Polish manufacturing (in firms employing more than 50 persons) was -2% in 1993; in our sample, aggregate (weighted) profitability was -4%. Profitability by ownership type is reported in Table 4. Although there is considerable dispersion of profitability within ownership groups, the patterns are more or less as expected. The bulk of emerging private sector firms have positive or high (margins above 10%) profitability; the privatized firms are mostly profitable, but with a significant proportion making substantial losses (margin < -10%); corporatized and traditional SOEs are mostly profitable or nearly profitable (with relatively fewer profitable SOEs than SAs), but with a large portion making substantial losses and fully one-fifth in serious financial distress (profitability < -25%).

Private and privatized firms were investing more than state-owned firms of both categories. The investment/sales ratio in 1993 for the private and privatized categories was 4-6%, compared to 2-3% for the state-owned firms. Again, there is considerable diversity within these ownership categories; some emerging private firms are reporting little investment, and some traditional state-owned firms are investing considerable amounts. Nevertheless, Table 5 confirms the general pattern; high-investment firms are considerably more common among the private and privatized categories, and low-investment firms are predominantly state-owned.

In summary, most *de novo* private firms are small, while most state-owned firms and especially the corporatized ones are large. Privatized firms can be both medium-sized or large. Growth and investment in 1993 were widely diffused through the economy, but rather more concentrated in private firms, while financial distress as revealed by low profit margins was concentrated in the state-owned sector.

4. Market Structure and Competition

In this section, we use the survey to investigate the changing pattern of sales between the domestic and foreign market, and between firms and budgetary organizations. The data reveal some fundamental adjustments in market structure and the intensity of competition, as well as some associated changes in the way that firms behave in the market place. As one would expect, there are also important differences between different ownership forms in both the way that market structures are perceived to have changed and in firms' responses to those changes.

We commence with the allocation of output between domestic and foreign markets. The distribution by ownership type is summarized in Table 6. Sales are categorized into three destinations: the domestic market, and exports to CMEA and non-CMEA respectively. Frequencies in the four ownership categories are reported for the four different ownership types for the pre-reform year, 1989, and the year of the survey, 1993. In 1989, the table reveals that state-owned categories, and the firms later to be privatized, supplied the domestic market predominantly; typically around two thirds of firms reported that domestic sales represented more than 75% of production. Majority domestic production represented an even larger proportion of the few private firms extant in 1989; around 80% of firms produce more than 75% of their output for the domestic market. It is also interesting that by 1989, most firms already have significant shares of their production going to non-CMEA markets, though almost none exported more than half of their production. Thus we find that around 40% of state-owned firms in 1989 export up to one quarter of their output to the CMEA and more than one half of firms export up to one half of their production outside the CMEA.

The situation had changed somewhat by 1993, though not perhaps as much as one might have expected from the descriptive literature. The proportion of sales going to the CMEA market fell sharply for all firm types, especially for state-owned firms, with a suggestion from the data of considerable substitution of exports to non-CMEA markets. The shares sold to domestic markets did not alter greatly, however.

The next set of questions addressed the changing market structure and emerging competitive pressures post-reform. Enterprises' own evaluation of the market structure is reported in Table 7, which presents frequency distributions of answers to the question "what is your market share in your top three products?". On their own admission, more than one third of corporatized state-owned firms produce more than half of the market output in their leading product, with up to one quarter making the same claim for their second and third products. There is some contrast here with *de novo* private firms, more than two thirds of which claim to have a market share of less than one quarter in all three products. Market structures also appear slightly more competitive for privatized than for state-owned firms. However, market structures are everywhere very imperfect on these measures. Even in *de novo* private firms, almost one in ten claim virtual monopoly power in their first and second products (e.g. market shares in excess of 75%).

However, as Table 8 shows, the reforms have brought about considerable changes in perceived competition from imports. It is striking that imports were rarely seen as a major source of competition in 1989, even for private firms. For the former state-owned sector, less than 10% of firms felt themselves to face serious competitive pressure from aboard. The situation is completely transformed by 1993. Almost two thirds of corporatized firms and nearly one half of privatized and state-owned firms now regard importers as major competitors and only a small proportion (5% in SAs) view importers as not representing a competitive threat. Unsurprisingly, the change is smallest for private companies, relatively more of whom viewed importers as major competitors in 1989 and fewer of whom did so in 1993.

To obtain a feel for how things have developed on the marketing side, a number of questions were asked about the diversification of sales and purchases and the establishment of brands. One indicator of complexity on the marketing side is the distribution of sales between customers, which we proxy by the percentage of output sold to the largest customer. This clearly could be very high if the firm sold its products predominantly to trading organizations or the state. In fact, only around 3% of firms sold all their output to one customer, though the percentage was higher for *de novo* private firms (9%). Around 20% of current and formerly state-owned firms sold more than half their output to a single firm, as against more than 27% of *de novo* private firms. However, the vast majority of firms in all four ownership classes, averaging around 66%, had a quite diversified group of customers with 25% or less of output going to the largest purchaser. This is consistent with the view that many firms in the *de novo* private sector are closely related to, and often dependent upon, their larger purchasers in the state-owned sector. A surprising number of firms had established a significant degree of brand image by 1993, to the extent that 54% of the sample believed that their brand names gave them latitude to change prices. However, the establishment of brands was not well correlated with ownership; the proportion replying in the affirmative to the question was greatest in state-owned firms (60%) and least in privatized firms. The proportion in *de novo* private was also high, 57%.

The development of more competitive relations on the supply side is indicated by the extent of input purchase from the private sector, and we find sharp differences between the state and private sectors. Thus only 14% of SAs and 24% of SOEs purchase more than one quarter of their inputs from the private sector. This contrasts with almost half of private firms. In this respect as in many others, privatized firms look more like state-owned ones, with 74% of firms purchasing less than 25% of their output from the private sector. The findings are disappointing because most firms, regardless of ownership form, consider private suppliers to be at least as good or better than state-owned ones; for example, around 90% of all firms in answer to questions about product quality, 95% in terms of reliability and virtually 100% in terms of responsiveness. The only area in which state-owned firms were seen as better suppliers was in the provision of credit; 60% of firms found private suppliers worse in the provision of credit facilities while only 30% of firms found them to be better.

The survey also reveals rather little difference in the structure of sales (e.g. between consumers and wholesalers) across different ownership types, and surprisingly few changes reported by the firms in the sample between 1991 and 1993 (though of course both years are post-reform). This can be seen in Table 9, which reports the proportion of sales going to final consumers and intermediaries in both foreign and domestic trade in 1991 and 1993. In 1991, around 80% of sales were to domestic purchasers, the bulk to consumers rather than retailers. The remaining approximately 20% were sold abroad. In the state-owned and privatized sectors, these sales were predominantly through domestic trading companies. However, these were completely insignificant for private firms, whose exports predominantly were direct to purchasers. The situation did not change markedly between 1991 and 1993, except for private firms which increased their share of foreign in total sales.

The nature of foreign sales in the different ownership types is indicated by a question about branding. In response to the question, "what percentage of your foreign sales were under your own brand name in 1991?", 71% of private firms and 58% of privatized firms replied zero, as against only 37% of the state-owned firms together. Only 20% of private and 25% of privatized firms sold more than three quarters of their output abroad under their own brand name, as against 35% of state-owned firms. There was however a lot of progress in this area in the private sector between 1991 and 1993. The proportion of private firms selling more than three quarters of their output abroad under their own brand name doubled in two years, and rose by seven percentage points for privatized firms. The percentage also rose for SAs, by seven percentage points, but actually fell for SOEs.

Clear differences between the two types of private firms and state-owned ones emerge when we consider the proportion of sales to budgetary organizations such as the government, army, hospitals or schools. This can be seen in Table 10, which reveals that only 3% of *de novo* private firms and 7% of privatized firms sell more than 25% of their output to budgetary organizations. This contrasts with 21% of SAs and 28% of SOEs. Equally revealing is the fact that 89% of private firms and 81% of privatized ones have no longer any residual commercial market ties with any state organization, as against only 43% of state-owned organizations.

All types of firms have put an increasing effort into sales and marketing. One indicator is the number of employees in the sales force. Almost all firms employed fewer than 25 workers in the sales force in 1991, the exceptions being in some large SAs. Even in the private firms, 71% employed less than three sales staff, as against 20% in the privatized firms. This probably reflects differences in size as much as market orientation, however. The situation had changed considerably in the two years to 1993; only 46% of private firms now employed fewer than three sales persons, as against 12% of privatized firms. The proportions in the SAs actually went the other way from 7% to 10% employing fewer than three sales staff in 1993 against 1991. This figure is slightly misleading, however; the proportion of firms employing more than 25 sales staff rose from 16% to 32% though it did not change from 8% in SOEs. There has also been an increase in the proportion of costs spent on advertising in all types of firm. Thus in 1991, more than one third of privatized firms and nearly

20% of state-owned firms spent nothing at all on advertising. That proportion had fallen to around 2% by 1993. There were no major differences in the proportion spent in the four ownership types.

In summary, the survey suggests that all firms in Poland have experienced a considerable increase in competition, and have faced the need to radically restructure their patterns of input purchases and marketing strategy. In general, *de novo* private firms have led the way and their record in quality and reliability is seen as good by all parties. Changes have been fewer and less deep in the state-owned sector, and especially in the enterprises which have not been corporatized. Worryingly, privatized firms often resemble state-owned firms more than newly formed private enterprises.

5. Labor

The survey contains information about employment and wages that can be used to analyze the determinants of enterprise behavior of the labor market. The qualitative sections of the questionnaire also contain questions about labor hoarding and turnover, wage determination and employee power, the latter thought to be an important phenomenon in Polish firms (see Estrin, Gelb, Singh (1994)). It is these questions that form the basis of the discussion in this section. More formal analysis of labor market behavior is in Estrin and Svejnar (1994).

We commence with the issue of overmanning. The questionnaire asks whether managers regard the level of employment as being optimal, given current levels of output, capital and technology. The distribution of answers by ownership type is reported in Table 11. The table reveals that even after four years of reform, and after a considerable labor shakeout as evidenced by the large drop in aggregate industrial employment and the high and rising level of unemployment, labor hoarding remains endemic in the Polish state-owned sector. Only around 35% of SAs and 45% of SOEs believe that their employment levels are about right; 38% and 25% respectively consider themselves as overmanned by at least 10% of their labor force. Once again, there is little to distinguish privatized firms from those still under state ownership; only 43% have employment about right, and 20% are overmanned by more than 10%

of the labor force. The real difference is with the *de novo* private sector, where the majority of firms (60%) regard the employment level as about right, and none regard it as too high by more than 20% of the labor force. The different market situation faced by the new private firms discussed above is also revealed starkly by the fact that 23% of firms see current employment levels as too low, presumably because demand is outstripping their capacity to supply.

We find in Table 11 that a majority of state-owned firms and a substantial minority of privatized ones regard themselves as having excessive levels of employment. The natural question to ask is why these firms do not act to reduce employment levels towards what they regard as the optimum. The main answers to this question are summarized for the different ownership types in Table 12. The question only applies to a small number of private firms, because only 17% of them regard employment levels as excessive. Also, the proportions in Table 12 sum to more than 100% because firms could offer more than one explanation. The two main reasons cited for overmanning by all firm types are the expectation of recovery and social factors leading managers to avoid layoffs. Legal obstacles play some role in both types of private firm, but not the state sector. Workers' resistance is also cited frequently in SOEs and privatized firms, though not at all in *de novo* private ones. The responses make clear that all the relevant firms regard overmanning as leading to financial problems - virtually none argue that the extra workers do not cause a financial burden. The table is consistent with the view that workers' influence over employment decisions, either of a positive or a negative sort, is the main reason for the persistence of overmanning.

The questionnaire reveals that most firms have laid off some workers; only around 10% of current and former state-owned firms claim to have laid off no workers over the previous two years. However, it is no surprise that 20% of *de novo* private firms have never laid any workers off, and that layoffs in this sector when they have occurred have typically been small in scale. The largest layoffs have in fact been in the SAs and SOEs, where around 70% of firms have laid off more than 500 workers. They have been more modest in privatized firms. Rather few of these layoffs in any firm type have been via "group layoffs" - only around 9% of the total of private firms used this method and the average was around 30% of the current and former state-owned sector.

The emergence of skill mismatch despite downsizing and overmanning is indicated by the vacancies situation. A sizeable minority of firms reported that they had vacancies that had remained open for more than two months; around 25% of the sample with little variation by ownership type. In fact, vacancies were the greatest problem for SAs, 33% of which reported positions that had been unfilled for more than two months, and smallest for privatized firms, for which the proportion was 21%.

The reasons that firms cite for the problems in hiring are summarized in Table 13. The totals can sum to more than 100% because firms can highlight more than one reason, or to less than 100% because many firms noted very specific hiring problems not reported in the table. The main reason mentioned by all firms is the shortage of qualified candidates. This seemed to be particularly true in the private sector, and was mentioned as a problem by every privatized firm with unfilled vacancies. One can probably also see the impact of the excess wages tax or "popiwek" on the state-owned sector; almost one half of SOEs and more than one third of SAs reported that they were unable to meet the wage paid elsewhere. However, it is also possible that this reflects the worse financial situation in these companies.

The role of the popiwek also emerges when we consider the factor underlying wage determination in the four enterprise types. Managers were asked to cite the most important factor determining the current wage paid. The dominant answer reported in Table 14 for the private and privatized firms was the available cash. However, in the state-owned sector, the popiwek was almost as important (or more important for SAs). The table suggests that labor market pressures were not yet becoming important in wage setting. Even in the private firms, one can interpret "available cash" as evidence of the preponderance of insider power; the need to preserve profits is mentioned by few or no firms, and external labor market pressures via either the wage setting of competitors or previous pay structures appear to exert little influence. However, employee power does not appear to be exercised through traditional employee institutional structures such as trade unions, workers' councils, etc. As with the persistence of overmanning, managers appear to be willing, in this area at least, to act in a way consistent with the preferences of the labor force without employees using formal mechanisms to enforce their preferences. Firms may therefore appear to be managerially controlled, but managers seem to be careful not to cross the workers, at least in areas where employees have very strong preferences such as wage and employment determination.

The popiwek applies only to the state-owned sector, and we have information about the extent to which firms which are paying it have exceeded the wage norms. The numbers involved are in fact modest. In 1993, only 7% of SAs and 3% of SOEs exceeded the norms by more than 25%. These figures broadly apply for the previous two years as well; in 1991 8% and 5% of firms respectively were paying on average more than 25% over the norm. There is also little change in the proportion of firms actually paying over the norm. For SAs it was 68% in 1991 and 70% in 1993 and for SOEs the proportions were 33% and 43% respectively. The higher proportion of SAs paying the popiwek is probably because these firms were in better financial shape than SOEs, as already indicated. The absence of trend in the high proportion of SAs paying popiwek suggests that it is not acting effectively as a disincentive to breaking the wage norm.

We finally return to employee power at the workplace. A standard indicator of workers' influence over decision-making is the proportion of the labor force which is unionized. The distribution by ownership type is reported in Table 15. There is a sharp distinction between the *de novo* private firms, none of which are unionized, and the current and former state-owned sectors where the unionization rates are typically rather high. Average proportions unionized exceed 50% in SAs and SOEs, and are slightly lower in privatized firms. However, it is interesting that unionization is also rarely very high; only in 15% of SAs and 6% of SOEs does it exceed 75%. Given that much of economic growth is likely to be concentrated in the new private sector, the likely future path of unionization rates in Poland is therefore downward, though from relatively high initial levels.

As we suggested in discussing wage and employment determination, unionization rates may not be a good indicator of employee influence. Without attempting to measure actual influence levels, we attempted in the survey to discover its rate of change. The results for the four ownership types are reported in Table 16.

One can hypothesize that the levels of employee influence are already low in private firms, but rather higher in the other three categories. Thus the finding in the table that employee influence is staying the same in private firms, but tending to fall everywhere else, all contributes to the general picture of slowly waning employee power. Perhaps surprisingly, the decline in employee power is greatest in SAs, rather than private firms. This probably reflects the nature of the privatization process, which, since it has typically led to employee or employee-management buyouts, has if anything probably entrenched workers' authority; whereas the corporatization process both removes some formal powers of the workers (see below), and can to some extent be slowed or stopped by workers' resistance. Employee influence is changing little in SOEs, and indeed it is rising in almost as many firms as it is falling.

The firms in the survey were also asked about the provision of social benefits. We have investigated the responses of the firms issue in depth in a separate paper (Estrin, Schaffer and Singh 1994), and report here only our main conclusions. Social provision remains surprisingly widespread, and has not been greatly reduced in either the state-owned or the privatized sectors. Moreover, even *de novo* private firms offer a surprising range of social benefits to workers and, if anything, they are tending to increase rather than reduce the scale of their provision. Social assets are concentrated in state-owned firms, but there is relatively little social asset disposal; the *de novo* private sector is expanding the range of social benefits offered but is not investing significantly in social assets. Changes in the provision of social benefits have been modest and there is also some evidence of substitution between money wages and social benefits in firms subject to the excess wages tax.

In summary, we find developments on the labor side in our sample to be rather modest, and to be heavily oriented to satisfy the preferences of insiders, especially workers. Overmanning remains rife in both the state-owned and privatized sector, and differences between the two groups of firms in wage determination appear to stem more from the operation of the popiwek than from differences in motivation. Behavior in the *de novo* private firms is, however, clearly different, with a concern to hire not fire, and with lower employee influence.

6. Finance

We begin with the basic characteristics of the sample. We noted that the emerging private sector firms had the highest profitability, followed by privatized firms, corporatized state firms, and traditional state-owned enterprises. Table 17 shows the situation with respect to indebtedness is somewhat different. As with profitability we see considerable heterogeneity among ownership groups. All four groups contain some negative equity firms, but these are much more common in the traditional SOE category (18% of all SOEs) than in the others (about 5%). Corporatized firms have a surprisingly high proportion of firms with high equity relative to debt, followed by emerging private firms, privatized, and lastly SOEs. The large number of indebted (but not negative equity) privatized firms may be a result of the method of privatization (leveraged buy-outs).

The structure of debts also holds some surprises. Table 18 presents the percentages of liabilities of each ownership group to the three main groups of creditors: other firms, banks, and government (tax and social security liabilities). The fraction owed to other firms - trade credit received - is very similar in all four groups (about 40% of total debt). Where the ownership groups differ is in the amounts owed to banks vs. the amounts owed to the government. Emerging private firms have little in the way of outstanding taxes liabilities relative to total debt, and hold more in the way of bank credit (about 40% of total debt); as we move to the privatized category, then to corporatized, and finally to the SOEs, the proportion owed to the government increases and to the banks decreases. As usual, these figures conceal considerable variation, especially concerning debt to banks and to government. It is important to note that tax and social security liabilities include, but are by no means limited to, "tax arrears", as taxes are payable with a lag; we will see below that in fact most tax liabilities of the firms in our sample are not overdue. We will return to tax liabilities in a moment, and focus here on bank debt. Table 19 groups firms within ownership groups according to the size of their bank debt relative to their annual sales (rather than by total debt). Corporatized and traditional SOEs hold more bank debt relative to turnover than the private and privatized groups, and more frequently. About 40-45% of both groups of private firms hold no bank debt at all, compared to 20-25% of the state-owned groups. However, the larger firms in the private and especially privatized groups hold very substantial amounts of bank debt - enough to make the aggregate debt/sales ratio roughly the same for private and state-owned firms (about 6-8%).

How do firms behave with respect to these three groups of creditors? Firms were asked to rank their payment obligations to creditors and to employees, in the order they are covered in practice; the answers are summarized by ownership group in Table 20. There is surprisingly little variation by ownership group, with taxes and wages ranked either first or second by all types of firm, and payments to suppliers (trade creditors) ranked last. Obligations to workers are on average ranked slightly above those to government in state-owned firms, and visa-versa in private firms. Data supplied by firms on the term structure of credit (how long overdue) reported in Table 21 are consistent with this, though there are variations by ownership group. Private and privatized firms have the best payment records vis à vis trade creditors, but even they have on average over 20% of their commercial payables overdue. Corporatized and traditional state-owned firms have about 50% of their trade credit overdue. This may well reflect the size and market power of state-owned firms as much or more than their financial difficulties. It is a commonplace in Western countries for small firms to complain about the slow payment by large customers, and in fact the proportion of trade credit overdue in our sample (about 50% or so) is close to the West European average.[2] The payment record of all firms vis à vis bank credit is considerably better for trade credit, and in fact shows less variation by ownership group: the average percentage of bank credit overdue ranges from 0-15% for privatized and *de novo* private, to 10-25% for corporatized and traditional SOEs. With respect to taxes, private and privatized have the best records, with less than 20% overdue; corporatized have 30% of their outstanding tax liabilities overdue, and almost half of the taxes due from SOEs are overdue. Note that the fact that these figures for the percentage of taxes overdue exceeds those for bank credit across ownership groups does not necessarily indicate banks have higher priority than the tax man, because the volume of non-overdue tax liabilities depends on tax regulations and schedules. We will return to the problem of tax arrears shortly.

There are also signs in Table 21 of substantial numbers of firms with "bad debt" stock problems in the state-owned groups, especially the SOEs; interestingly, the problems seem less severe for "bad" bank debt than for trade credit or tax arrears. About one-third of SOEs had more than 25% of the their total trade credit and total tax liabilities overdue one year or longer, but only 14% had that much of their bank debt overdue one year or longer. Flow problems are, however, not so severe. This can be seen by comparing the percentage of liabilities overdue 0-3 months with the percentage overdue 3-12 months, in monthly average terms (that is, divide the 0-3 months overdue category by 3 and the 3-12 months overdue category by 9). The average per month for the 3-12 months overdue category is typically much smaller than that for the 0-3 months overdue category for all classes of creditor in all classes of ownership, indicating that most payables which do become overdue eventually do get paid.

A very sharp distinction in behavior towards creditors appears if we distinguish firms not by ownership but by serious financial distress, which for our purposes we define as post-tax profitability (profit/sales in %) being less than -25% in 1993. There are 26 such firms out of a total of 203 firms with complete data: no emerging private firms, 3 privatized firms, 8 corporatized firms and 15 traditional SOEs. That is, 90% of our financially-distressed firms are state-owned; and 20% of the firms in both our state-owned categories are financially distressed. How are these firms financing their losses? We look at the change in trade credit, bank credit, and tax and social security liabilities, all as a percentage of annual sales, for our financially distressed firms and for the remaining 177 firms. These are presented in Table 22, along with profitability and equity/debt ratios for the two groups.

The figures are striking. The financially distressed group is failing to cover even its core costs: the operating losses of this group, defined as revenues minus costs but before depreciation, interest costs, and exceptional charges, amount to the equivalent of 16% of sales. Bottom-line (after-tax) losses come to 76% of annual sales (!), and over half of this - the equivalent of 46% of sales - is being financed by an increase in tax and social security liabilities. Financing by bank credit and trade credit, each amounting to about 9% of annual sales, is much less important, at less than the equivalent of 10% of annual sales each.[3] Financing of the 177 other firms by trade creditors, banks and government amounts to about 3% of annual sales each. The key appears to be financial distress rather than ownership per se; when the 177 non-distressed firms are broken down by ownership, no such major differences in financing appear. These figures conceal some variation among enterprises, but the pattern stands up to closer scrutiny; for example, about 1/3 of financially distressed firms had increases in trade credit which were greater than 50% of annual sales; 20% had increases in bank credit greater than 50% of sales; and 70% had increases in outstanding tax liabilities which were greater than 50% of sales.

This pattern is also reflected in the responses to the question asked of firms about how they ranked their payment obligations by creditor. Table 23 contains the responses of firms, this time separated into the financially-distressed group and the remainder. The effect of financial distress on state-owned firms is to increase the priority accorded to paying wages (almost universally ranked first) and to paying suppliers (now almost on a par with taxes and banks), at the expense of the government. Again, the key is financial distress; the rankings by non-distressed state-owned firms and private firms were nearly identical.

These findings suggest that when state-owned firms get into serious trouble, they respond by changing the priority of their payments. Outgoings for essential current operations - payments of wages, and to a lesser extent, payments to suppliers - are raised in priority. If the firm fails to pay wages or suppliers, it will not be able to function at all, whereas if tax payments are missed, the firm will get into trouble with the tax office . . . which is better than closing altogether. The effectiveness of this strategy of extracting what are in effect subsidies from the state can be seen from the output and employment growth of our 26 financially-distressed firms. Three-quarters of them actually increased their output in 1993, compared to 82% of the rest of the sample. The increase in tax arrears was nevertheless not enough to completely cushion the firms, and they shed substantial amounts of labor in 1993: 22 of the 26 decreased their total employment, 14 of them by over 10% (compared to 66% and 24%, respectively, of the rest of the sample).

We now consider the relationship between firms and banks in more detail. The standard view of private sector firms as starved of bank credit does not seem to hold true, at least for Poland in 1993. Balance sheet data from those firms which do hold bank debt suggest that credit from banks is growing fastest in private and privatized firms, and slowest in corporatized and state-owned firms. Table 24 tabulates firms according to the change in real bank debt in 1993.[4] Of those emerging private and privatized firms holding bank credit at the end of 1993, 45-50% had seen increases in real bank credit of over 10%, compared to 25-30% of the two state-owned groups. Somewhat surprisingly, even in the two private ownership groups close to half decreased their real bank debt by over 10%. Firms were also asked if they had ever been refused bank credit in the period 1990-93. Only 10-15% of private and privatized firms responded yes, compared to 35-40% of corporatized and traditional state-owned firms. The most common reason for given for refusal of bank credit to private and privatized firms was inadequate collateral (between 1/3 and 1/2 of the few cases reported); the most common reason by far given by the two kinds of state-owned firms was the poor financial situation of the firm (about 3/4 of all cases).

Firms were asked if their bank had ever classified them as "uncreditworthy" in the period 1990-93. Not surprisingly, very few private or privatized responded "yes", but fully 40% of corporatized and traditional state-owned firms had been classified by their banks as such. Very few firms reported that the first such episode took place in 1990; the most common response was 1991 (about half of firms ever classified as uncreditworthy) and 1992 (about one-third). This is consistent with reports that the bad debt problems of the banks emerged in 1991.[5] The results of getting into trouble with the bank were long-lasting; over two-thirds of the firms which reported being classified as uncreditworthy had not, at the time of the survey, regained their good standing with their bank.

Firms were also asked if they had failed to repay or service a bank loan in the previous year. About 20% of all firms, meaning about a quarter of all firms with bank debt, responded yes. Somewhat surprisingly, emerging private firms have about the same recent bank record as corporatized and traditional state-owned firms - between one-quarter and one-third of firms with bank debt in these ownership groups report failing to service fully their debt in the preceding year. Privatized firms, by contrast, have a noticeably better record - about one-seventh of firms with bank debt failed to keep up payments at some point. When asked "what happened then?", the most common response by far was capitalization of interest payments, rescheduling of the debt, etc., mentioned in about 2/3 of all cases (with no major differences across ownership groups). Conciliation arrangements (meaning arrangements under the enterprise and bank restructuring program) were mentioned in fewer than 20% of all cases; bankruptcy or other legal measures, in 5% of cases; and in only one case did the bank collect on collateral.

We now turn to the other side of the balance sheet and look at trade credit extended (receivables for goods and services). The total volume of trade credit measured as an average payment period in months (receivables/monthly sales) in the total sample is about 2 months, close to the West European average; the percentage overdue in the sample, about 50%, is also close to the West European average.[6] Table 25 presents the term structure of receivables by ownership group. There is somewhat less divergence than for trade credit received: about 40-45% of the receivables of private and privatized firms is overdue, compared to 50-60% of the two state-owned groups. The latter also show signs of "bad debt" stock problems, with 22% of SAs and 37% of SOEs having more than a quarter of their receivables overdue more than one year. Again, however, the flow problems do not appear great (most receivables are eventually paid for); the average per month in the 0-3 months overdue category is once more considerably lower than the average per month in the 3-12 months overdue category.

Interestingly, when firms were asked which type of customers were most likely to fail to pay on time, the overwhelming response - about 2/3 of each ownership group - was "small firms". We have seen that the small firms in our survey, namely the private and privatized firms, were in fact the most reliable customers for their suppliers. This may be simply the result of selection bias - any firm which is willing to be interviewed and reveal its financial records is likely to be of above-average integrity.

The firms we surveyed used a wide range of methods to control their receivables. The responses of firms differed little by ownership group, and are presented for the sample as a whole in Table 26. Half of the firms surveyed always or frequently required payment in advance from new customers; this falls to 20% for established customers. 60% frequently charge interest on overdue receivables; the same portion refuse to resupply a customer in arrears until his outstanding debt is settled or rescheduled; and again the same portion frequently pursues "informal methods" to chase up overdue receivables. The lowest responses are for pursuit of overdue receivables by legal action (37% of firms use this frequently) and sale of overdue receivables on the debt market (only 10% use this method even occasionally). The only variations by ownership group are that emerging private firms rarely charge interest on overdue receivables (17% do this frequently) and rarely take legal action to chase up late payers (only 10% do this frequently).

In summary, we find that privatized and especially *de novo* private firms are financially relatively healthy, with higher profits and fewer bad debts than the state-owned firms. Although almost half of private firms of both categories hold no bank debt, bank credit is flowing fastest to these firms and in general they report the fewest problems in servicing it. Overdue trade credit, both extended and received, is common among all ownership groups but more so among state firms; however, the flow problem is not serious, volumes of total and overdue trade credit are comparable to West European levels, and all firms report a wide variety of methods in use to control their overdue receivables. A significant minority of state-owned firms, especially traditional SOEs, suffer from stock problems (bad debts long overdue) and flow problems (large losses). The main method by which severely financially-distressed firms, nearly all of which are state-owned, finance their losses is by running up tax arrears; financing by banks and by trade credit is much less significant. This problem is largely limited to state-owned firms in financial distress; state-owned firms which are not in such financial difficulties have payment records similar to those of private firms.

7. Investment and Technology

Most firms reported that they saw profitable investment opportunities: 75-80% of private, privatized and corporatized saw such opportunities, and even 60% of traditional state-owned firms. Few firms, however, saw no factors which restricted their investment decision (17% of private and privatized firms, and fewer than 5% of both state-owned categories). The single biggest obstacle was felt to be high interest rates - 60-70% of firms in all ownership groups reported this as the most important obstacle to investment. The next most common obstacle cited by firms in all ownership categories was the poor financial situation of the firm, the variation being in the frequency cited: about 15% of private and privatized firms mentioned this as first or second in importance, compared to 40% of corporatized firms and 53% of traditional state-owned firms. The third most common obstacle cited by firms was "unwillingness of banks to lend", but this was cited as first or second in importance by only 10-20% of firms, with little variation by ownership category.

To what extent are increased investments going into new investment capacity as distinct from repair of existing equipment embodied in older technologies? Over 65% of the firms used their new investments to provide new productive capacity while the remainder used it to repair existing machinery and equipment. A larger proportion (84%) of the *de novo* private firms (POEs) used their fixed investments for additions to new productive capacity compared to 50-60% for other forms of ownership. There was significant inverse correlation between size and the proportion of investments allocated to new productive capacity. Thus a very large share (88%) of the total new investments occurring in the smaller firms (< 50 employees) went towards acquiring new productive capacity compared to less than half for the large firms (> 250 employees).

A major aspect of restructuring during the transition relates to the replacement of old technologies with newer ones acquired either through new investments or joint ventures. Many firms, including most state-owned ones, cite the need to acquire modern technologies as the major reasons for their willingness to enter into joint ventures with foreign, mainly Western, firms. Commencing with the vintage of the capital stock, we find in Table 27 that less than a quarter of the entire stock of machinery and equipment was less than five years old; nearly two thirds was more than 10 years old in 1993. Because a greater proportion of new private firms and recently privatized firms have been undertaking new investments, the resulting differences in the vintage of the capital stock by ownership are now striking. While two thirds of the capital stock in *de novo* private firms is less than 5 years old; the comparable percentages for privatized, state-owned corporatized and state-owned firms are 22%, 9% and 11%. In state-owned firms, whether corporatized or not, almost half of the entire stock of capital equipment is older than 15 years.

When firms were asked whether or not they had introduced any new technologies within the last 2 years, over 61% answered in the affirmative, though with important differences by ownership. Nearly 77% of the newly private and 72% of the privatized firms had introduced new technologies; only 46% of the state-owned firms had. It can bee seen in Table 28 that most of the acquisition of new technologies have been from the OECD or other non-CMEA or domestic sources. However, most of this technology has been purchased outright and not acquired through joint ventures or outside investors. The bulk of the technology acquisitions still coming from the former CMEA countries are acquired by firms that remain under state ownership, while over two thirds of the acquisitions from OECD countries are by *de novo* private or privatized firms.

Acquiring foreign designs or technologies are major elements in the way in which firms are restructuring. Nearly 15% of the current output of all firms is now based on products of foreign design while another 15% is based on foreign production technologies; and these shares have been increasing. While all firms have to some extent been taking advantage of this type of restructuring through technology and product transfer, clearly the edge has been with newly formed private companies. In privately-owned companies over 27% of their output is based on foreign product designs and another 31% on foreign technologies, as against an average of around 13% on both counts for those firms that remain under state ownership.

Although, as we report in Table 29, the share of total output based on products of foreign design does not vary much by performance, the more successful firms produce a larger share of their output based on foreign production technologies. Of the 25 firms indicating that more than half of their output was produced on production technologies acquired abroad, over two thirds recorded growth in real sales in excess of 10% in 1993.

Clearly the size of the firm matters in the acquisition of new technologies, and we investigate this more in Table 30. Nearly two thirds of all such acquisitions in the survey were by larger firms (those with employment greater than 250). Over 70% of acquisitions from the OECD were made by the large firms. There is little evidence that success in acquiring new technologies is linked with export intensity (as measured by the share of output exported); indeed there was a negative correlation between export intensity and percentage of new technologies acquired and introduced. This stands to reason if we recall that most of the technologies acquired to date have been purchased outright and have not come through any specific tie-ins with joint ventures or direct foreign investors.

8. Problems of Ownership and Governance

The sample with full data which we use in this section is composed of 40 private, 40 privatized, 40 corporatized (state-owned) firms and 80 "traditional" SOEs. As noted in the introduction, we omit discussion of the 5 cooperatives in this section. All of these groups, possibly with the exception of the traditional SOEs, are highly heterogenous and should be described in more detail.

The emerging private sector firms are predominantly small companies, founded in the 1980s or just very recently in the 1990s. There are 3 joint stock companies, 19 limited liability companies and 1 general partnership, all of which need to satisfy regulations concerning their organizational structure: i.e. an assembly of shareholders, Board of Directors (Zarząd) and most frequently a Supervisory Board. The rest of the group are individually owned. Moreover, some of the limited liability companies are individual ownerships in disguise, where the owners (founders, as a rule) chose this legal status out of fiscal considerations, but retain 80-95% of shares.

Ownership is highly concentrated. In addition to the 17 individually-owned firms, in almost all of the 23 firms with a corporate form the share of the principal shareowner exceeds 50% with a tendency to approach 70-85%. In a few of these firms ownership is shared by two parties in a 50/50 or 49/51 proportion. Eight of the 23 are dominated by senior managers or other employees, 10 by other private individuals (of which 2 are returning expatriates and 2 are foreigners), and 5 are dominated by foreign or joint-venture entities. The role of minority shareholders seems to be generally insignificant; total number of shareholders is low, not exceeding 10 on average. Foreign capital is involved in 8 firms.

Enterprises in the privatized group are previous state firms or parts of state firms. Privatization took place in the last 4 years, in 32 cases at the initiative of the managers and/or employees of the firm in question. In only one case did the state initiate the process; in the remainder the initiator was a prospective outside investor.

Eighteen of the privatized firms are joint-stock companies, and 22 are limited liability companies. The real dividing line is, however, between the enterprises in which insiders (managers, other employees) took over the firm, and ones in which outsiders took control. This broadly reflects the difference between the so-called capital privatization and privatization through employee leasing, though this division is not precise as insiders can also use capital privatization. Nineteen of the 40 firms have been taken over by outsiders in result of: (a) direct sale to a specific buyer of a whole enterprise or its selected assets, (b) sale through public offering, (c) liquidation under the Law on SOEs (firm in bad shape - 1 case) and restitution (1 case). Insiders took control of the firm in at least 21 cases; employee leasing, preceded by liquidation under the Law on Privatization of SOEs, was the dominant route.

Looking at the structure of share ownership in the privatized category, in 22 firms managers and other employees together hold an absolute majority of shares. The managers' share is significantly lower (21.6% on average in 27 firms in which they own any shares) than the employees' share (48.8% in 24 firms), but is probably high enough to control enterprises when the employee ownership is dispersed. Of the remaining 18 privatized firms, 8 are controlled by foreign or joint-venture firms or individuals, 4 by Polish SOEs, 3 by Polish private firms (of which one is an investment fund), and 3 by domestic individual investors. This picture is blurred somewhat, as 3 firms are also listed on the Warsaw Stock Exchange, where the numerical "domination" on the part of individual and institutional investors is misleading. In fact, therefore, the position of the management should be expected to be very strong in more than half of the sample. Among the minority shareholders we find domestic private banks (2 cases), a pension fund (1 case), foreign investment funds (2 cases), Polish individuals and firms, both private and state-owned (9 cases), managers and other employees, but rarely foreign firms and individuals (2 cases).

The group of 40 corporatized state enterprises (SAs) comprises state enterprises that have been corporatized (converted into joint-stock companies with the sole ownership of the state) in 1990-1993, mainly with a view to their participation in the mass privatization program. The state (i.e. the "founding organ") was a driving force behind the change (as initiator or active partner) in only 10 cases, with the firm playing the decisive role in almost all other cases. Also, not less than 38 firms expect to be privatized in a foreseeable future: 27 by mass privatization, 2 by employee leasing, and the rest by various forms of capital privatization.

There are 3000 "traditional" state-owned enterprises (SOEs) in Polish industry, with as yet unchanged ownership and legal status, and which account for more than 50% of industrial production and 60% of industrial exports of Poland. In our sample of 80 SOEs, a majority (44) have plans to go private by various methods: mass privatization (13), employee leasing (15), direct sale to specific investor or public offering (12), restitution (3) and other, sometimes unspecified.

We can distinguish between six types of firm from the point of view of ownership and legal status. These are:

i) traditional, labor-dominated SOEs
ii) corporatized state firms
iii) insider-controlled privatized firms
iv) outside-investor-controlled privatized firms
v) private firms owned by individuals
vi) private partnerships

The survey questionnaire also permits us to study three issues in corporate governance and control: the impact of corporatization of SOEs on decision-making process in enterprises; the changing power structure in the process of privatization; and the nature of governance in typical Polish private firms. We first examine the effect on state firms of the change from a traditional SOE to a joint-stock company (SA).

Polish SOEs are formally dominated by the workers, i.e. by the General Assembly of Workers and the Workers' Council. In theory, the Workers' Council has most powers of the governing organs in a corporation: it approves or takes all most important decisions, nominates and fires the management, and sets their wages. The role of the owner (the state) is very limited both in theory and in practice. It is represented by the founding organs - the Ministry of Industry and Trade or voivods - which approve changes in the legal and organizational status of the enterprise (privatization, corporatization, sale or acquisition of assets, mergers). An SOE is autonomous, self-financing and self-governed (the famous Polish "3S" from the early 1980s); the role of the state, certainly in the vast majority of manufacturing firms, was reduced drastically some years previously.

"Corporatization" involves liquidation of workers representation (Workers' Councils); the nomination of a Supervisory Board (SB) as a representative of the owner; and nomination of a Board of Directors (BD). The hitherto unclear form of state ownership takes the form of 100% stock ownership. To exercise its powers as an owner, the "General Assembly of Shareholders" is convened from time to time, consisting in the representative of the Ministry of Privatization or the voivod informing the usually present members of the SB and BD about the owner's decisions, among them concerning the nomination of the SB. As a rule, two of 6-9 Board members are elected by the workers. In our sample 80% of the firms reported having a six-person Supervisory Board. The BD is composed of 2-5 members of top management of the firm; almost without exception acting executive officers. In practice, then, there is no distinction between the BD and the top management in Polish corporatized state enterprises.

Corporatization was meant to be a preliminary stage in preparation of privatization, particularly mass privatization. Also, it was and still is seen as a means of clarifying the legal status and internal power structure of state firms: ownership is better defined, allowing for better control and reorganization, management's position strengthened, the infamous "Bermuda triangle" of Polish SOE's eliminated. The latter resulted from the co-existence of three decision-making centres - the Workers' Council, trade union, and directors - which (according to popular opinion) practically paralyzed restructuring efforts.

Turning to the changing structure of influence, we find the influence of the State in traditional, labor-dominated SOEs is virtually undetectable. Of 80 firms, only 15 noticed the impact of "government (non-shareholders)" in our main question concerning the relative influence of various interests, and only very few (2-4) saw any practical or formal influence that it may exert on any aspect of the firm.

In the 40 corporatized enterprises the situation changes dramatically. The State has a well-defined representation and procedures of control. The Supervisory Board is seen as having major influence on hiring/firing managers (34 cases, in 24 practical, not only formal), setting managerial compensation (23, only 4 formal), allocation of profits (22), major investments (23), mergers/acquisitions (20), sale or lease of assets and amending the statutes of the corporation (24). On the other hand the SB does not intervene in changes in internal structure, firing/hiring workers, setting their wages and benefits; nor does it participate in the planning process in the enterprise - preparing the budget or financial statements. Slightly surprising is a clear perception of the role of the General Assembly of Shareholders, that makes final approval of financial statements (23 cases, of which in 15 practically), decides about profit allocation (24) and amending the statutes (29, of which 18 practically). The Shareholders Assembly, which means in practice the representative of the Ministry of Privatization in most cases, is also said to have a say in mergers/acquisitions and sale or lease of assets. However, its influence is more frequently of formal than practical character.

In traditional SOEs labor dominates management through the Workers' Councils, at least in theory. In corporatized firms workers have just two representatives in the SBs . . . and their trade unions. The survey indicates that in the SOEs, Workers' Councils are said to have substantial influence on most important decisions: hiring/firing managers (in 80% of observations), setting their compensation (67%), profit allocation (61%), major investments (65%), changes in internal structure, mergers/acquisitions (both around 66%) and sale or lease of assets (79%). The last situation reflects the tendency for the Councils to strictly control the socially and politically suspect process of creating the "nomenklatura" partnerships, allegedly to siphon off resources from state companies. Workers' Councils are also said to give the final approval of the financial statement (in 71%), e.g. carrying out their controlling function over management.

However strong the Workers' Council's position is, we should not treat it as absolute domination. Firstly, in all decisions their role in practice is seen as weaker (by 10 to 20 percentage points) than in theory. Secondly, in many issues (hiring/firing managers being one of the notable exceptions) their influence is weaker than the influence of the management. Thirdly, the role of the Councils in hiring/firing of workers and setting their wages is seen as much weaker than that of the trade unions, whose influence in all other issues is described as close to none.

Possible exceptions may include trade unions' attempts in around 25% of firms to meddle with managers' compensation and internal structure.

Summing up, managers generally perceive Workers' Councils as strong partners, dominating in the process of hiring/firing top management, equally influential in setting managerial compensation and determining profit allocation, but junior partners in other decisions.

In corporatized firms the influence of workers is drastically lower. Employee representatives on SBs pass entirely unnoticed, though unions play some role in their traditional domains of employment and wages. Though less than half of the respondents linked trade unions with these issues, about half thought they played an important role in making decisions on hiring/firing workers, and about two thirds admitted their influence on wage policy in the firm.

In assessing managerial influence, we have to allow for their probable tendency to overestimate the formal division of powers and underestimate the practical impact they have on the decision-making process. There is a certain analogy between the SOEs and corporatized firms: in the former case it is the Workers' Council that controls the management; in the latter, the Supervisory Board. However, a marked difference in the responses can be seen: in certain areas, managers in SOEs are much stronger than in corporatized firms.

In the SOEs managers strongly influence all the important decisions, even if they have to share power with the Workers' Councils. In the state corporations, managers (i.e. the Board of Directors) are dominated by SBs in the matters of profit allocation, major investments and mergers/acquisitions; wage-setting is also less dependent on them. However, when asked in another context who really chooses the members of the BD, our respondents indicated in 17 cases (of 40) it was the management. At the same time, there is less interference in their running of the current business - hiring/firing of workers, setting their wages, changing the internal structure of the firm, etc. - on the part of the SBs. "Less" does not mean that they are passive, however. According to the questionnaires, the influence of SBs on the overall business is quite high. On a scale from 1 (extensive day-to-day influence) to 5 (very little influence), 12 SBs are given a rating of 1, 8 are given a rating of 2, and 16, a rating of 3. They usually meet once a month, their presence is felt by the management, but disagreement occurs rather rarely (in 11 firms only, and in just 4 more than once).

Corporatization does not formally strengthen the position of managers within the firm. Undoubtedly, one of its consequences is a more precise definition of competencies of different bodies, which makes the situation in the firm more transparent. Managers clearly like it, maybe because the possible conflict of interests (if it appears at all) with the SB is less acute and easier to manage than a conflict with the workers. Both in SOEs and in corporatized enterprises managers dominate: in the former they have a less competent but also a less predictable partner; in the latter the partner has broad and better-defined competencies, but is "of the same kind". Thus, corporatization seems to change the balance of power in enterprises: the State gains in influence, the workers lose, the managers remain in control but in a better defined environment.

We turn now to the question of who takes control of the firm after privatization. Following privatization, the State disappears from the scene. The main actors are management and owners, represented by the shareholders meeting and/or the Supervisory Board. Trade unions seem to pass totally unnoticed; in only 1-2 enterprises do they have an influence on workers' compensation. In the insider-dominated privatized firms it is understandable, as employees become shareholders and exert control through the existing institutional framework of the company; in other cases this change remains somewhat mysterious.

In the group of 40 privatized enterprises, the questionnaires provide a picture of managers (BD) running the current business - preparing the budget and financial statement, hiring/firing workers and setting their wages (more than 75% answers indicating their practical and formal influence), sharing power with shareholders' representatives (SB and shareholders meeting) as far as changes in internal structure, major investments and sale/lease of assets is concerned (50-60% of positive answers) and accepting owners' decisions on profit allocation, mergers/acquisitions and changes in statutes.

To detect differences between insider- and outsider-privatized firms we looked at who are the dominant decision-makers in four important, and potentially conflictual, areas. We distinguish between insiders' firms (21 cases), firms with participation of foreign capital (10), firms listed on the Warsaw Stock Exchange (3), and others (6). When someone was quoted as having practical influence, we interpreted it as dominating someone having only formal influence. In some cases we were not able to tell who really makes a decision as two bodies are ascribed the same weight. As a result the numbers in Table 31 do not necessarily sum up to the number of firms in each category.

We notice striking difference between the categories. Insiders' firms (most of them employee leasings) can be characterized as follows:

- managers (BD) have a very strong position vis à vis the other partners

- the SB looks rather weak, although it is said to have a say in determining managerial compensation

- the shareholders meeting has, according to the questionnaire, a decisive voice in profit allocation

In reality, managers' domination is probably even higher than this suggests. Supervisory Boards are almost entirely composed of employees, and they are very unlikely to resist their bosses' suggestions. An interesting finding is a strong position of the shareholders meeting, which means that it has taken over the role of Workers' Council and trade unions in determining wages. A general manager has to play a smart game with the workers (this time as shareholders) during these meetings; he need not be afraid of "his fellow capitalists" from the SB. Total elimination of unions is quite consistent with this scenario.

Because only 3 firms in the sample are listed on the Stock Exchange, no serious conclusions can be drawn about them. Information from Table 31 indicates that the power structure is similar to that in insider-dominated firms.

Categories (2) and (4) are both outsider-dominated firms and the influence patterns differ significantly from those observed in insider-controlled firms. Managers, particularly in the firms with foreign participation, are clearly subordinated to the owners, although they make the day-to-day decisions and play important role in major investment decisions. In firms with foreign capital the position of SB compared to the shareholders meeting seems to be more pronounced than in the firms owned by domestic investors. This reflects the more complex institutional structure of the foreign-owned firms, which are usually larger.

Therefore managers lose their domination in the firms that are taken over by outside investors. To secure the interests of the owner, and to upgrade the level of management, foreign firms not infrequently delegate their people to the Board of Directors. Out of 8 firms in which foreigners are majority owners, 4 have one or two foreign directors.

We move now to the *de novo* private firms. At least 22 of the 40 private firms are individually owned, with all decisions concentrated in the hands of the owner. This is typical for the Polish private sector, which consists largely of small and medium-sized units. Such arrangements, although convenient for firms just entering the market, are a serious obstacle to growth. We note that the frequent bankruptcies of private firms, often after a short period of very rapid expansion, are commonly attributed to improper management. Owners try to manage a $100 million firm in a way they used to run a 20-man shop.

In the other *de novo* private firms, ownership is still heavily concentrated, though in these enterprises there is a formal corporate structure with a Board of Directors and Shareholders Meeting (and sometimes a SB). Responsibilities are shared in a typical way, e.g.:

- managers make the day-to-day decisions: prepare budget and financial statements, hire/fire workers and set their wages, determine the internal structure, but also major investments (in two thirds of cases)

- owners are said to control allocation of profits (in 12 of 18 cases) and mergers/acquisitions (similar frequency)

- managers' nominations and compensation is determined by managers and owners in an equal number of firms, suggesting that the distinction between manager and owner is blurred.

Summarizing and leaving the *de novo* private firms aside, we can look at the ownership change in Polish firms as a struggle for power. The government's goal seems to be an "orderly withdrawal", possibly with somewhat more determination in "strategic" or "political" sectors. Workers pursue "social" goals. Managers want, wherever it is possible, to take control of the privatized state firm. The outside investor has a chance in one of the following three situations: (a) firm is too big to be taken over by insiders, but is not seen as "strategic", so privatization will not be blocked by political considerations; (b) the firm is bankrupt, or seems to be so; (c) an alliance with the managers is formed. Given the strong and historically militant trade unions, the lack of consistent government policy, and the limited interest shown by foreign capital, it is not surprising that privatization in Poland is dominated by insiders, mainly the managers.

ENDNOTES

1. As of end-September 1993, employment in "capital privatized" industrial enterprises in Poland amounted to 80 thousand. We estimate employment in firms privatized via leasings and liquidations in industry to have been about 40-60 thousand. Total industrial employment in firms with 6 or more employees was 3.3 million. See the Polish CSO publication Prywatyzacja Przedsiębiorstw Państwowych według stanu na 30.09.93 r. (Privatization of State Enterprises as of 30.03.93).

2. It is also about the same as the proportion of trade credit overdue in Hungary as of end-1991, the Czech Republic as of end-1991, and Russia as of 1993. See Fan and Schaffer (1994) for more details.

3. The picture is muddied somewhat by the treatment of interest on liabilities. This is included in balance sheet figures for bank debt if the interest is formally capitalized. We note that accrued interest charges for the 26 financially-distressed firms amounted to the equivalent of about 5-6% of annual sales, making a net flow of bank credit to these firms of about 3-4% of sales (see Table 22). Balance sheet data on tax and social security liabilities apparently include penalty interest on arrears, but we have no separate data on this. Penalty interest charges on taxes and social security charges are likely to have been substantial in the financially-distressed firms.

4. End-year bank debt deflated by the December-December industrial price index (37% in 1993), as a % of start-year bank debt. Bank debt excludes bank debt overdue. Firms with positive end-year bank debt and zero start-year bank debt are included in the highest bank debt growth category.

5. We leave open the question of how much was due to banks becoming "tougher" in 1991, and how much was due to a large number of firms holding bank debt getting into difficulties in that year.

6. See Fan and Schaffer (1994).

NOTATION

POE = *De novo* private firms

PRE = Privatized firms

SA = Corporatized state-owned firms (joint stock companies, 100% state-owned)

SOE = "Traditional" (unincorporated) state-owned firms

Table 1: Size by Ownership Category

Employment in 1993 (% of group)	POE	PRE	SA	SOE
≤ 50 employees	31	2	0	3
51-250	62	36	8	29
251-1000	8	45	53	41
1001+	0	16	40	28
Total	100	100	100	100
Mean employment (persons)	111	594	1007	703

Table 2: Output Growth by Ownership Category

Output Growth in 1993 (% of group)	POE	PRE	SA	SOE
< -10%	5	12	20	16
-10% - 10%	21	31	53	43
10% - 25%	13	29	18	23
> 25%	61	29	10	18
Total	100	100	100	100
Unweighted average in %	66.5%	20.1%	9.2%	9.8%

Table 3: Employment Growth by Ownership Category

Employment Growth in 1993 (% of group)	POE	PRE	SA	SOE
< -10%	16	27	28	35
-10% - 10%	32	66	73	54
> 10%	53	7	0	5
Total	100	100	100	100
Unweighted average in %	23.3%	-6.7%	-6.1%	-8.1%

Table 4: After-Tax Profit Margin (Profit/Sales in %) by Ownership Category

Profit Margin in 1993 (% of group)	POE	PRE	SA	SOE
< -25%	0	7	20	19
-25% - -10%	0	18	12	17
-10% - 0%	25	11	15	22
0% - 10%	53	55	48	37
> 10%	23	9	5	5
Total	100	100	100	100
Average in %				
Weighted	3.7%	1.3%	-0.9%	-11.1%
Unweighted	4.3%	-2.6%	-9.9%	-18.3%

Table 5: Investment/Sales Ratio in 1993 by Ownership Category

Investment/Sales Ratio in % (% of group)	POE	PRE	SA	SOE
0% - 1%	10	13	44	43
1% - 3%	43	38	28	31
3% - 5%	13	18	18	13
5% - 10%	10	15	8	10
> 10%	23	15	3	3
Total	100	100	100	100
Unweighted average in %	5.8%	4.4%	2.2%	2.5%

Table 6: Distribution of Sales by Market and Ownership Type in 1993 and 1989

a. % Sales to National Market	POE		PRE		SA		SOE	
	1993	1989	1993	1989	1993	1989	1993	1989
0 - 25	11	3	0	7	3	3	4	4
26 - 50	6	9	7	12	18	8	11	14
51 - 75	11	9	16	14	18	30	24	18
76 - 100	71	79	77	67	63	60	61	65

b. % Sales to CMEA	POE		PRE		SA		SOE	
	1993	1989	1993	1989	1993	1989	1993	1989
0	80	91	63	49	60	45	76	46
1 - 25	14	9	34	40	40	35	16	43
26 - 50	6	0	3	9	0	18	4	5
51 - 75	0	0	0	2	0	0	3	4
76 - 100	0	0	0	0	0	3	0	3

c. % Sales to non-CMEA	POE		PRE		SA		SOE	
	1993	1989	1993	1989	1993	1989	1993	1989
0	49	76	52	49	15	20	39	41
1 - 25	29	6	34	33	55	68	30	48
26 - 50	11	9	7	9	10	10	21	10
51 - 75	3	6	7	9	20	3	6	1
76 - 100	9	3	0	0	0	0	4	0

Table 7: Market Share in Top 3 Products in 1993

	Product 1				Product 2				Product 3			
% market	1	2	3	4	1	2	3	4	1	2	3	4
0	38	19	0	13	46	26	6	14	70	22	7	18
1 - 25	31	44	46	47	29	52	69	53	25	48	64	64
26 - 50	9	14	20	13	17	10	9	16	5	11	4	10
51 - 75	13	11	14	13	0	10	3	6	0	4	14	2
76 - 100	9	11	20	14	8	3	14	11	0	15	11	6

POE = 1
PRE = 2
SA = 3
SOE = 4

Table 8: Imports As Source of Competition 1993 and 1989

	Ownership Type							
	POE		PRE		SA		SOE	
	93	89	93	89	93	89	93	89
Importers are								
a. major competitors	34	12	48	9	62	10	45	6
b. minor competitors	37	29	28	36	33	51	37	42
c. not competitors	29	58	23	55	5	38	18	51

Table 9: Sales and Marketing

Type of Sale %	Ownership Type							
	POE		PRE		SA		SOE	
	93	91	93	91	93	91	93	91
1. Domestic sales of which	77	86	86	87	77	77	79	82
- to consumer	45	50	46	50	55	58	50	52
- to retailer	32	36	40	38	22	18	29	30
2. Foreign Sales of which	23	14	14	13	23	23	21	18
- direct to purchaser	16	13	6	4	9	5	7	3
- via trading co's (domestic)	3	0	4	6	13	18	11	13
- via trading co's (foreign)	4	1	3	2	1	1	3	2

Table 10: Percentage of Sales to Government or Budgetary Organizations

% Sales	Ownership Type			
	POE	PRE	SA	SOE
0	89	81	43	43
1 - 25	9	12	38	30
26 - 50	3	7	15	21
51 - 75	0	0	3	5
56 - 100	0	0	3	1

Table 11: Employment Relative to Optimal Level in 1993 by Ownership Type

Employment is	Ownership Type			
	POE	PRE	SA	SOE
a. too high > 20%	0	11	5	10
b. too high 10-20%	3	9	33	15
c. too high 5-10%	14	30	20	29
d. about right	60	43	35	45
e. too low	23	7	8	1

Table 12: Why firms do not reduce employment if it is too high

	% Possible Respondents			
	Ownership Type			
	POE	PRE	SA	SOE
a. extra workers cause no financial burden	0	0	4	4
b. recovery expected	50	52	65	51
c. legal obstacles	33	33	4	7
d. social reasons	50	29	61	56
e. workers' resistance	0	33	17	30

Table 13: Main Obstacles to Filling Vacancies

	Ownership Type			
	POE	PRE	SA	SOE
a. no qualified applicant	89	100	54	58
b. regulations about hiring	0	0	0	0
c. unable to pay competitive wage	0	11	38	47

Table 14: Significant Factors in Wage Determination

Most important factor	% Firms by Ownership Type			
	1	2	3	4
a. available cash	60	84	45	56
b. need to pay competitive wages	14	5	3	0
c. popiwek	0	0	47	40
d. unions, workers' council, etc.	0	0	3	1
e. previous wage	8	7	0	1

Note: some firms ranked more than one factor as being most important

Table 15: Unionization by Ownership Type

% unionization	% firms in each ownership type			
	POE	PRE	SA	SOE
0	100	18	0	5
1 - 25	0	11	5	15
26 - 50	0	48	52	44
51 - 75	0	16	27	29
76 - 100	0	7	15	6

Table 16: Influence of Workers and Their Representative Bodies

Influence has been	% firms in each ownership type			
	POE	PRE	SA	SOE
a. increasing	0	11	5	14
b. same	97	59	50	70
c. decreasing	3	30	45	16

Table 17: Indebtedness by Ownership Category

Equity/Debt ratio at end-1993 (% of group)	POE	PRE	SA	SOE
< 0	8	7	5	18
0-1	38	61	20	35
1-2	18	16	19	22
> 2	38	16	46	26
Total	100	100	100	100

Table 18: Distribution of Debt to Firms, Banks and Government by Ownership Category

Percentage of Liabilities in 1993 owed to:	POE	PRE	SA	SOE
Firms (payables for goods and services)	46	45	49	44
Banks	32	16	19	23
Government (taxes and social security)	19	27	24	28
Other	3	12	8	5
Total	100	100	100	100

NB: Unweighted means, Q34.

Table 19: Bank Debt/Sales Ratio in % by Ownership Category

Bank Debt as % of Sales in 1993 (% of group)	POE	PRE	SA	SOE
0%	40	45	22	23
1% - 5%	35	27	34	23
5% - 10%	10	14	22	23
> 10%	15	14	22	31
Total	100	100	100	100

NB: Q37.

Table 20: "Rank your payment obligations according to priority they are met in practice." (1=top priority)

Average rank of payments to:	POE	PRE	SA	SOE
Government (taxes and social security)	1.7	1.6	2.0	1.8
Banks	2.7	2.6	2.7	2.8
Employees (wages)	1.8	1.8	1.6	1.7
Firms (suppliers)	3.6	3.5	3.6	3.3

NB: Q35.

Table 21: Term Structure of Liabilities by Ownership Group

% of payables to suppliers which is:	POE	PRE	SA	SOE
Not overdue	78	78	52	44
Overdue 0-3 months	8	13	17	16
Overdue 3-12 months	4	7	15	17
Overdue > 1 year	10	2	16	23
Total	100	100	100	100
Percentage of firms with a quarter or more of their payables overdue > 1 year	7%	11%	22%	37%

% of bank debt which is:	POE	PRE	SA	SOE
Not overdue	86	100	90	75
Overdue 0-3 months	3	0	0	2
Overdue 3-12 months	3	0	2	8
Overdue > 1 year	8	0	7	15
Total	100	100	100	100
Percentage of firms with a quarter or more of their bank debt overdue > 1 year	5%	2%	10%	14%

% of taxes payable which is:	POE	PRE	SA	SOE
Not overdue	83	88	71	52
Overdue 0-3 months	4	6	7	9
Overdue 3-12 months	9	3	15	16
Overdue > 1 year	4	3	7	23
Total	100	100	100	100
Percentage of firms with a quarter or more of their taxes overdue > 1 year	2%	4%	10%	33%

NB: unweighted means; firms with zero debt in a category excluded.

Table 22: Severely Financially-Distressed Firms and the Financing of Losses

All quantities measured as a percentage of 1993 sales	26 Financially-distressed firms (1993 profitability < -25%)	177 Other firms
"Operating profit", 1993 Net profit after tax, 1993	-16.0 -76.1	14.0 0.5
Change in payables to suppliers 1.1.93-31.12.93	8.8	3.0
Change in bank debt 1.1.93-31.12.93	9.1	2.5
Change in tax and social security liabilities 1.1.93-31.12.93	46.3	2.0
Memo items:		
Tax and social security liabilities in % of 1993 sales		
1.1.93	34.0	4.7
31.12.93	80.3	6.7
Taxes and social security contributions during 1993, in % of 1993 sales (accruals basis)	31.2	17.0
Equity/debt ratio, end-93	-0.1	1.2
Distribution of debt in % (end-93)	100	100
Total	41	48
Firms (trade creditors)	16	24
Banks	41	22
Government	2	7
Other		

Operating profit = revenues minus accrued costs (including accrued taxes) before depreciation, interest charges and exceptional charges.

NB: weighted averages (aggregates); unweighted means are similar. Distribution of debt from Q34.

Table 23: Severely Financially-Distressed Firms and Their Creditors

"Rank your payment obligations according to priority they are met in practice." (1=top priority)

Average rank of payments to:	Financially-distressed firms	Other firms
Government (taxes and social security)	2.7	1.7
Banks	2.8	2.7
Employees (wages)	1.1	1.8
Firms (suppliers)	3.0	3.5

NB: Q35.

Table 24: Real Growth in Bank Credit in 1993 by Ownership Category

Growth in bank credit (% of group)	POE	PRE	SA	SOE
< -10%	42	44	62	53
-10% - 10%	12	8	14	17
> 10%	46	48	24	31
Total	100	100	100	100

NB: end-year bank credit deflated by Dec-Dec PPI (37%); overdue bank credit excluded.

Table 25: Payment Period and Term Structure of Receivables from Customers

	POE	PRE	SA	SOE
Average payment period (receivables/sales in months)	1.6 months	1.8 months	2.4 months	2.4 months
% of receivables from customers which is:				
Not overdue	60	57	49	39
Overdue 0-3 months	12	21	17	21
Overdue 3-12 months	9	13	17	16
Overdue > 1 year	8	9	17	24
Total	100	100	100	100
Percentage of firms with a quarter or more of their receivables overdue > 1 year	7%	11%	22%	37%

NB: unweighted means.

Table 26: Methods Used to Control Level of Receivables

Method	Frequently or always used (% of firms)	In use (% of firms)
Require payment in advance from new customers	49	64
Require payment in advance from established customers	19	42
Charge interest on overdue receivables	61	77
Refuse to supply to a customer behind in payments	59	83
Informal methods	63	83
Legal action	37	72
Sell overdue receivables	2	10

Table 27: Vintage of Capital Stock by Ownership.
(Percentage of Equipment in Each Age Category)

Vintage of Capital Stock	POE	PRE	SA	SOE	TOTAL
Less than 5 Years	66.9	22.6	9.2	10.9	23.0
5.1 - 10 Years	22.1	24.9	12.9	19.4	19.4
10.1 - 15 Years	7.1	23.0	27.1	21.2	20.3
More than 15 Years	5.9	29.6	50.8	48.5	37.3

Table 28: Methods of Acquisition of New Technologies by Source.
(Percentage of Acquisitions)

SOURCES	Domestic	CMEA	OECD	Other	Total
Via Purchase	27.5	5.5	42.9	9.9	85.7
Via Jt. Venture/Outside Investors	3.3	2.2	7.7	1.1	14.3
Total	30.8	7.7	50.5	11.0	100

Table 29: New Technology Acquisitions by Performance
(Real Sales Growth in 1993) and (Percentage of Acquisitions)

Performance	< - 10%	-10 to +10%	> + 10%	Total
Source:				
Domestic	5.1	10.7	15.7	31.5
CMEA	0.6	3.4	3.9	7.9
OECD	5.6	20.2	23.6	49.4
Other	0.6	3.9	6.7	11.2
Total	11.3	38.2	50.0	100.0

Table 30: New Technology Acquisitions by Size of Firm
(Percentage of Acquisitions)

Employment	1 to 50	51 to 250	> 250	Total
Source:				
Domestic	2.7	8.8	19.2	30.8
CMEA	0.5	3.8	3.3	7.7
OECD	3.3	11.5	35.7	50.5
Other	0.5	6.6	3.8	11.0
Total	7.1	30.8	62.1	100.0

Table 31: Relative Influence of Various Interests in Privatized Firms

Issue	Type of firm	BD	SB	Shareholders meeting
Profit allocation	Insiders (21)	6	2	13
	Foreign capital (10)	1	4	7
	Stock Exchange (3)	1	1	3
	Other (6)	0	2	4
Hiring/firing managers	Insiders (21)	9	5	7
	Foreign capital (10)	1	8	1
	Stock Exchange (3)	2	1	0
	Other (6)	1	2	3
Managerial compensation	Insiders (21)	10	9	2
	Foreign capital (10)	2	8	0
	Stock Exchange (3)	2	1	0
	Other (6)	3	2	2
Major investment	Insiders (21)	12	4	6
	Foreign capital (10)	3	2	4
	Stock Exchange (3)	3	1	1
	Other (6)	3	0	4

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