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Policy Research

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The Behavior of Russian Firms in 1992

Evidence from a Survey

Simon Commander
Leonid Liberman
Cecilia Ugaz
and
Ruslan Yemtsov

The shocks 41 Moscow firms suffered in 1992 did not necessarily reduce their profitability. But what's good for these few Russian firms may be bad for the economy. Rapid adjustments to price changes, accelerated wage claims, and accommodating monetary policy may lead to high, sustained inflation.

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Policy Research

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National Economic Management

WPS 1166

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The authors surveyed 41 firms in and around Moscow in the last two weeks of November 1992 to get an empirical handle on how firms are responding to the changing economic environment. They found that:

- There were large negative (supply and demand) shocks to output for a significant number of firms and branches.

- Profitability was remarkably buoyant in real terms; there was clear evidence that firms with market power rapidly adjusted producer prices, trying to maintain or increase their markup.

- There was no evidence of a strategic change in pricing rules.

- Most firms experienced relative stability in earnings and in the distribution of revenues. There was no substantial evidence of decapitalization — at least through greater borrowing or predatory wage settlements.

- The upward shift in interfirm arrears was smaller than aggregate numbers might have led one to expect.

- Inertia in the wage system should not be ignored. Real wages were cut back sharply by the great price shock of January 1992, but real statistical wages then climbed back toward early 1991 levels.

- Benefits firms provided account for large shares of labor income and 40 to 45 percent of firms' costs. Firms may have tried to squeeze benefits, particularly in housing, but allocations to the Social Fund have generally stayed constant.

- Employment adjustments were limited, despite the downward pressure on output and the lack of growth in firms surveyed. Net employment separations were relatively restricted. Firms continued to hire at significant rates in 1992, in part because of fixed factors technology, in part because of the reluctance of firms to discard workers. Consequently, firms have shed few workers — mostly ancillary and clerical staff, usually women.

- Some firms chose to place workers on minimum wages, reducing labor costs significantly. The result is that unemployment benefits are provided de facto within the firms rather than through labor offices.

- In short, the status of the so-called production worker, the core of the Russian industrial firm, remains untouched. Clearly, there was a large "employment overhang" at the end of 1992. The next stage of the transition will be difficult.

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The Behaviour of Russian Firms in 1992
Evidence from a Survey

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[1] The authors thank Timothy King and Jeni Klugman for supporting the work. The paper is closely keyed to a companion text -- "Wage and Employment Decisions in the Russian Economy" -- by the same authors which is available on request.

The Behaviour of Russian Firms in 1992
Evidence from a Survey

By
Simon Commander, Leonid Liberman,
Cecilia Ugaz and Ruslan Yemtsov

Table of Contents

Introduction

At the outset of 1992 much was made of the change in regime that was to be associated with price liberalization, reform of property rights and a new-found intolerance by the monetary and fiscal systems to financial indiscipline. The heart of these changes had necessarily to be the enterprise sector -- the bedrock of the planned economy. By early 1993, however, aggregate data indicate that the regime break was less evident than might have expected, that price liberalization had translated into persistent and high increases in monthly inflation and that structural changes remained restricted. Moreover, we have shown elsewhere that despite very significant negative shocks to output over 1992, changes to employment and hence to unemployment have been less than might have been predicted [2]. Further, the shift in the stance of the central monetary authority in mid-1992 validated the accumulation of large inter-enterprise arrears that had been accumulated through the first half of 1992 and, at the same time, sent a qualitatively different signal to firms regarding the viability of their claims -- implicit and explicit -- on the budget and/or banking system.

The response of Russian firms to the price shocks of 1992 and to the large and, in some cases, random disturbances transmitted through the combination of trade and political changes is clearly of key importance. In particular, we need to know how those shocks have distributed themselves with respect to branches and the subsequent actions taken by firms in response to those shocks. This, however, is easier said than done. One cost of disintegration has been considerable disruption of the statistical system and of the reporting protocols that characterised earlier practice. One consequence has been the need to rely on new data collection primarily centred on the firm.

This paper provides an extended discussion of firm behaviour with particular emphasis on the associations between output, financial performance and wage and employment decisions. In addition, we provide a first attempt at systematically quantifying the values and costs of non-monetary wage components. The main objective of the paper is thus to get some empirical handle on a fluid and diverse set of changes in the environment facing firms and structuring their decision rules.

1: The Survey

The paper is largely organized around the results from a small survey of 41 firms that was carried out in and around Moscow in the last two weeks of November 1992. The firms were randomly selected and covered ten branches, including trade and services. Appendix Tables 1 and 2 give the breakdown of the sample by size -- in terms of employment and assets, as well as by branch and property type. As

[2] Commander, Liberman and Yemtsov (1993a)

regards location, iust over 50% of the sample were situated within Moscow, a further 16 firms in Moscow oblast and 3 in other oblasts. All were however in fairly close proximity to Moscow. The bulk of the sample were industrial firms with an average current labour force of over 800. The legal status of the sample was reasonably diverse. If we include state property currently rented by collectives alongside collectives and joint stock entities we can see that 11 or over 25% of the sample were, loosely defined, private firms.

While the sample size is small and localized, the survey results at the least provide some cross-check on the information given by more aggregate data. Comparing the salient 1991 information for the industrial firms in our sample with a Goskomstat survey of over 26,000 Russian industrial enterprises, we find that our sample is, however, strongly biassed toward larger firms. While we find fair correspondence with respect to nominal wages and employment levels, for sales revenues and profits, the World Bank averages are significantly different from the Goskomstat firms. Revenues were over 80% higher for the smallest firms with less than 200 employees but were 30% lower for the other two categories. For gross profits, the World Bank survey reported consistently higher average levels across all size classes. This obviously suggests the dangers of over-generalizing from the sample. Simply put, the universe we have surveyed appears likely to be characterized by larger firms with higher average revenues and gross profits.

Nevertheless, the survey allows us to get a richer handle on emerging changes to important decision rules with respect to wages, employment and benefits that the aggregate data does not capture. Finally, we should note that from aggregate data it is clear that the Moscow region has been subject to higher than average employment contraction over 1992; the sample may then reflect some of the upward bias in separations that appears characteristic of the region as a whole.

2: Output Changes

Aggregate data for Russia indicate that industrial output declined by around 20% in 1992. The distribution of those losses by branch and region is far from uniform but the evidence broadly points to a significant and generalized negative shock to output dominated primarily by an aggregate rather than a sectoral process. Nevertheless, there are some signs that sectoral or reallocation shocks have been present. Relating relative producer price changes to relative output changes we observe a reasonably robust and positive correlation over 1992.

The heterogeneity of the firms covered in the survey and difficulties in securing accurate estimates of either value or volume indicators resulted in the output questions being couched in terms of direction of change and broad physical magnitude. As Tables 1 and 2 indicate the picture is fairly mixed across

firm size classes and branch. For the industrial firms, the weight is clearly on the negative side with nearly 60% reporting declining output. For firms with falling output the unweighted mean projection for the year was 20/25% with roughly half the firms reporting over that range. Even so, the picture is not quite as bleak as one might have initially imagined. 15% of respondents reported output increases and the remaining 25% projected constant output over 1992. While aggregate data show engineering and light industry to have been hardest hit, the survey shows just under half the engineering firms reporting constant or increasing output. Moreover for those firms with output losses, the decline was significantly under the sample mean.

The source of the shocks to output can be variously traced. In 35% of cases where the output change was negative firms reported the primary source of the shock as irregularity of input supplies. This source does not seem to be systematically related to disruptions in intra-CIS or ex-CMEA trade. Firms with significant output declines were primarily served by local subcontractors. In the same proportion, firms reported product demand shocks to be the principal factor -- this dominated, for example, the responses of engineering firms. But in the majority of cases, firms reported simultaneous input supply and product demand shocks. Suspension of subsidies was evidently a lesser factor accounting for only 13% of responses. Not surprisingly, we find both demand supply shocks to be present, even if attribution of components remains problematic.

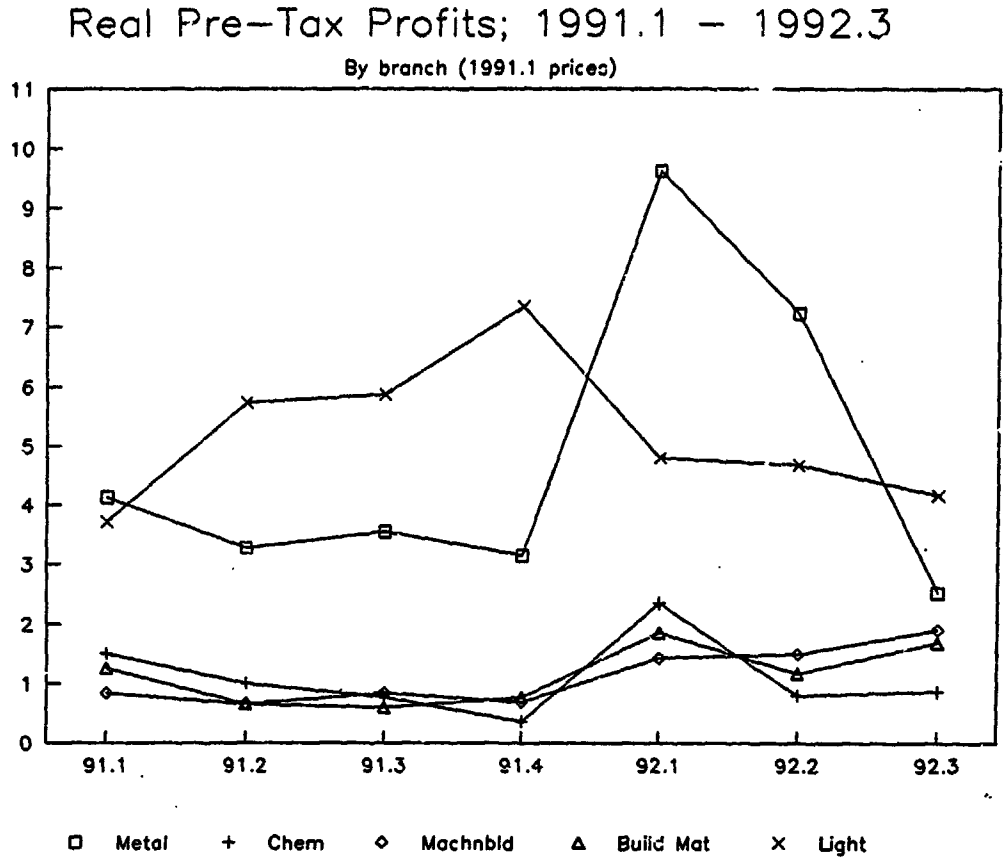
3: Financial Performance

The performance of Russian firms over 1992 is difficult to gauge at all accurately; in part because of accounting procedures. Even so, the obvious impression given by the path of interenterprise arrears and the sets of claims on the budget for preferential treatment, suggest that a significant share of firms have encountered financial difficulties over 1992. Aggregate data show, for example, that while over 55% of Russian firms experienced a fall in output over the first half of 1992, between 60/70% increased input and output inventories over the same period and roughly comparable shares suffered negative demand shocks. The coincidence of deflation in household demand for firm output and by dislocation to inter-firm and inter-CIS transactions could, at first approximation, be expected to result in adverse balance sheet developments for many firms. However, we also know of course that the transition from a suppliers' to a buyers' market -- to use Kornai's term -- requires more than a relaxation of shortages; it presumably requires some basic level of competition in the provision of goods and services. This assumption is rather problematic in the Russian context where we observe relatively high levels of concentration and market power. Indeed, in the survey it is instructive to note that 60% of firms were

	Table 1	Physical Output in 1992: Direction of Change				
		Decline	Constant	Increase	No reply	TOTAL
	BY EMPL.					
	SIZE *					
	1	2	6	2	0	10
	2	6	1	3	1	11
	3	7	3	0	0	10
	4	6	0	1	0	7
	5	2	1	0	0	3
	--------- \	--------- \	--------- \	--------- \	--------- \	--------- ------
	TOTAL	23	11	6	1	41
	Table 2	Physical Output in 1992: Direction of Change by Branch				
		Decline	Constant	Increase	No reply	TOTAL
	BY BRANCH					
	Metall.	4	0	0	0	4
	Chemic.	1	0	1	0	2
	Machin.	3	2	2	1	8
	Bld.Matr.	3	1	0	0	4
	Light	4	2	1	0	7
	Food	2	0	0	0	2
	Agro	2	0	0	0	2
	Constr.	1	4	0	0	5
	Trade	1	1	1	0	3
	Science	2	1	1	0	4
	--------- \	--------- \	--------- \	--------- \	--------- \	--------- \
	TOTAL	23	11	6	1	41
	Source:	World	Bank	Survey		

*Firm Size Categories: 1= 80-350; 2= 351-700; 3= 701-900; 4= 901-1500; 5= >1501 employees
Source: World Bank Survey

Fig 1


Real Pre-Tax Profits; 1991.1 - 1992.3
By branch (1991.1 prices)
11
10
9
8
7
6
5
4
3
2
1
0
91.1
91.2
91.3
91.4
92.1
92.2
92.3
Metal
Chem
Machnbld
Build Mat
Light

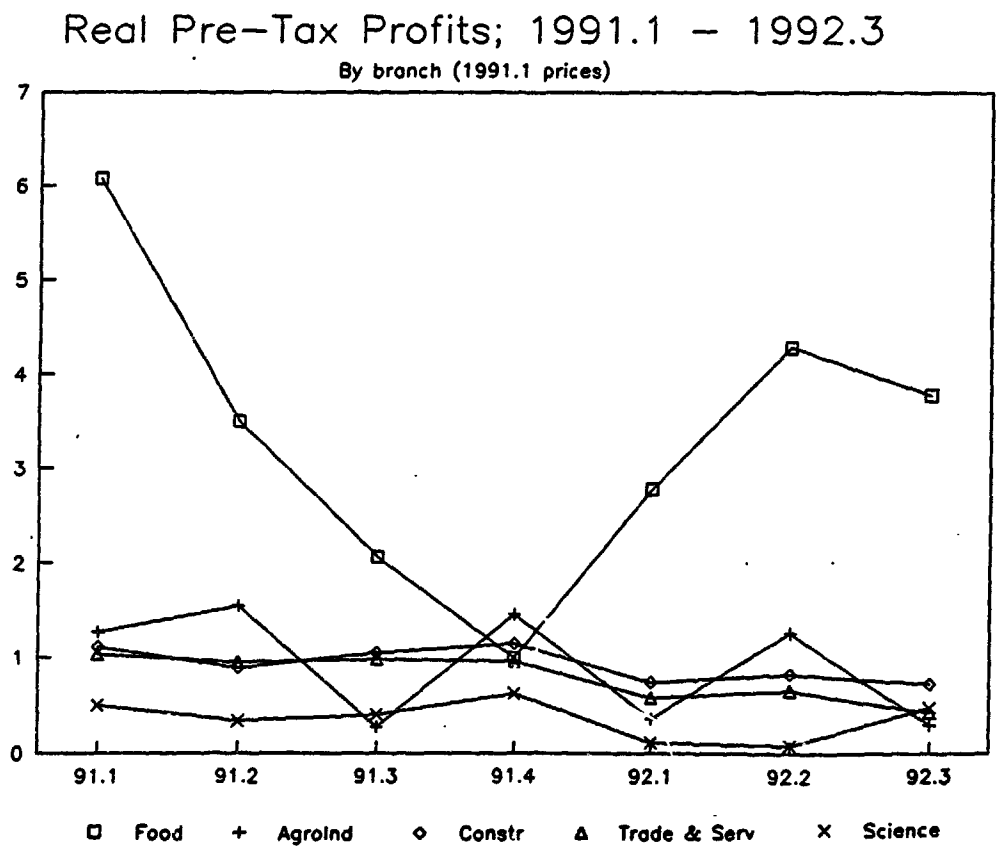
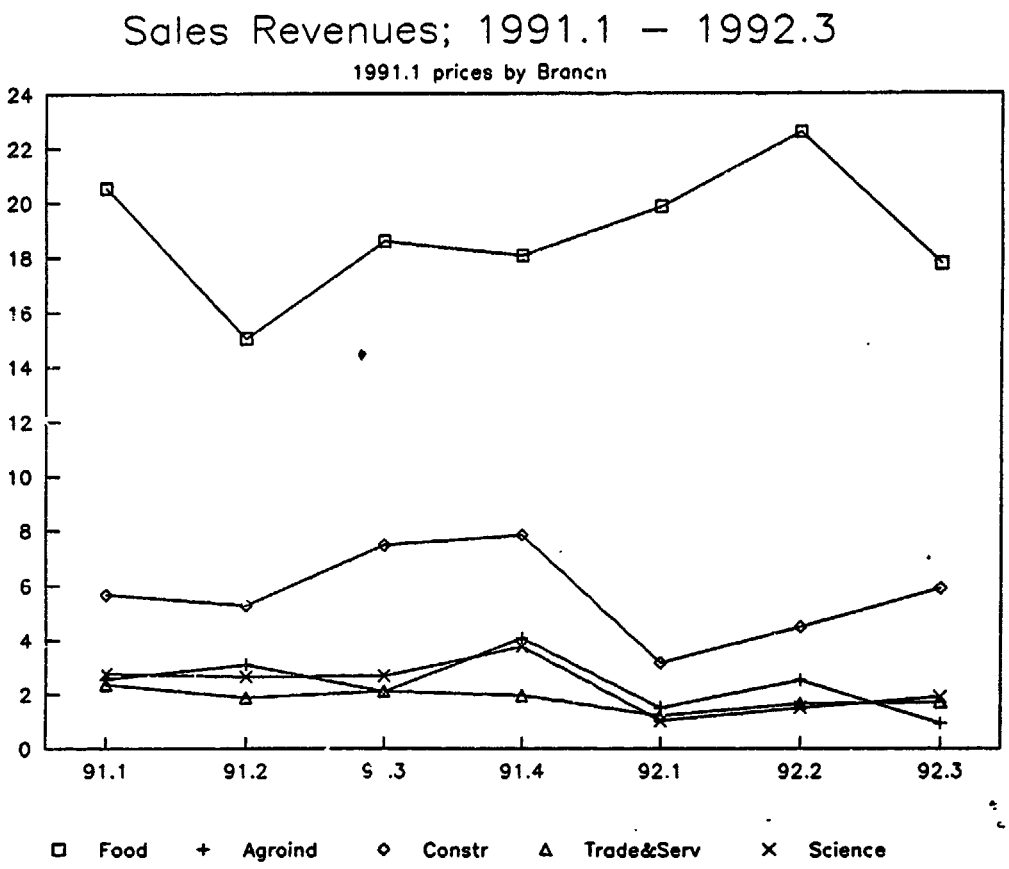
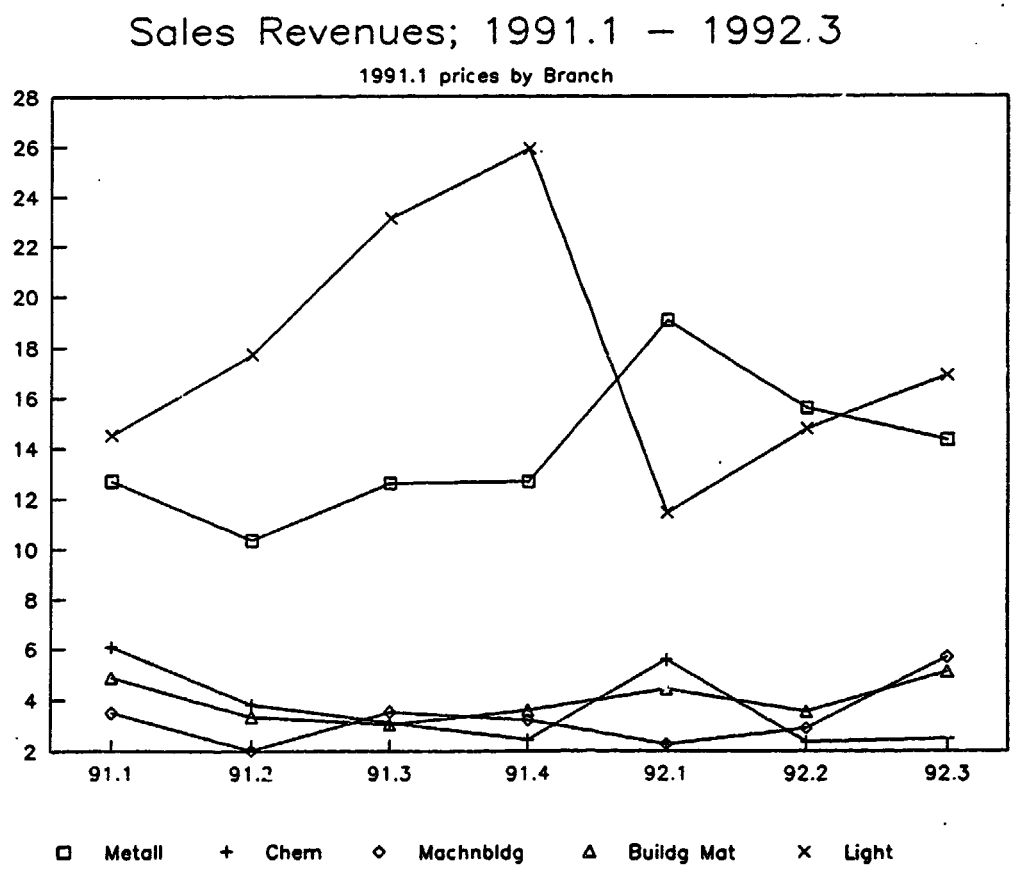

Real Pre-Tax Profits; 1991.1 - 1992.3
By branch (1991.1 prices)
7
6
5
4
3
2
1
0
91.1
91.2
91.3
91.4
92.1
92.2
92.3
Food
Agroind
Constr
Trade & Serv
Science

Fig 2


Sales Revenues; 1991.1 – 1992.3
1991.1 prices by Brancn
24
22
20
18
16
14
12
10
8
6
4
2
0
91.1
91.2
91.3
91.4
92.1
92.2
92.3
Food
Agroind
Constr
Trade&Serv
Science


Sales Revenues; 1991.1 – 1992.3
1991.1 prices by Branch
28
26
24
22
20
18
16
14
12
10
8
6
4
2
91.1
91.2
91.3
91.4
92.1
92.2
92.3
Metall
Chem
Machnbldg
Buildg Mat
Light

either monopolists or oligopolists, here defined as between 2-5 producers. Competitive conditions only dominated in light industry and in other expected areas such as trade and services.

Given the large disturbances to the price level and turbulence in relative prices, we would expect considerable volatility in profits of firms and a higher measure of randomness in their distribution over branches. That, for example, was the evident outcome in Poland in the first year of price liberalization over 1990 and we might expect such random effects to be amplified in the presence of differential constraints on price setting and the insignificant trade liberalization that has occurred in Russia [3]. And it is indeed the outcome we appear to observe over 1992 This result obviously cautions against making any firm predictions regarding the future path of profits or their distribution.

Figures 1 & 2 point to fair persistence in both sales and gross profits. At branch level, we find that revenues and gross profits are generally little shifted from early 1991 levels, even if there is greater intra-quarter variation in 1992. For firms classified by market power, it is striking to observe the divergent movements in real revenues and profits for competitive as against firms with market power. Competitive firms suffer an unambiguous negative shock to gross profits and sales over 1992 (see Figure 3).

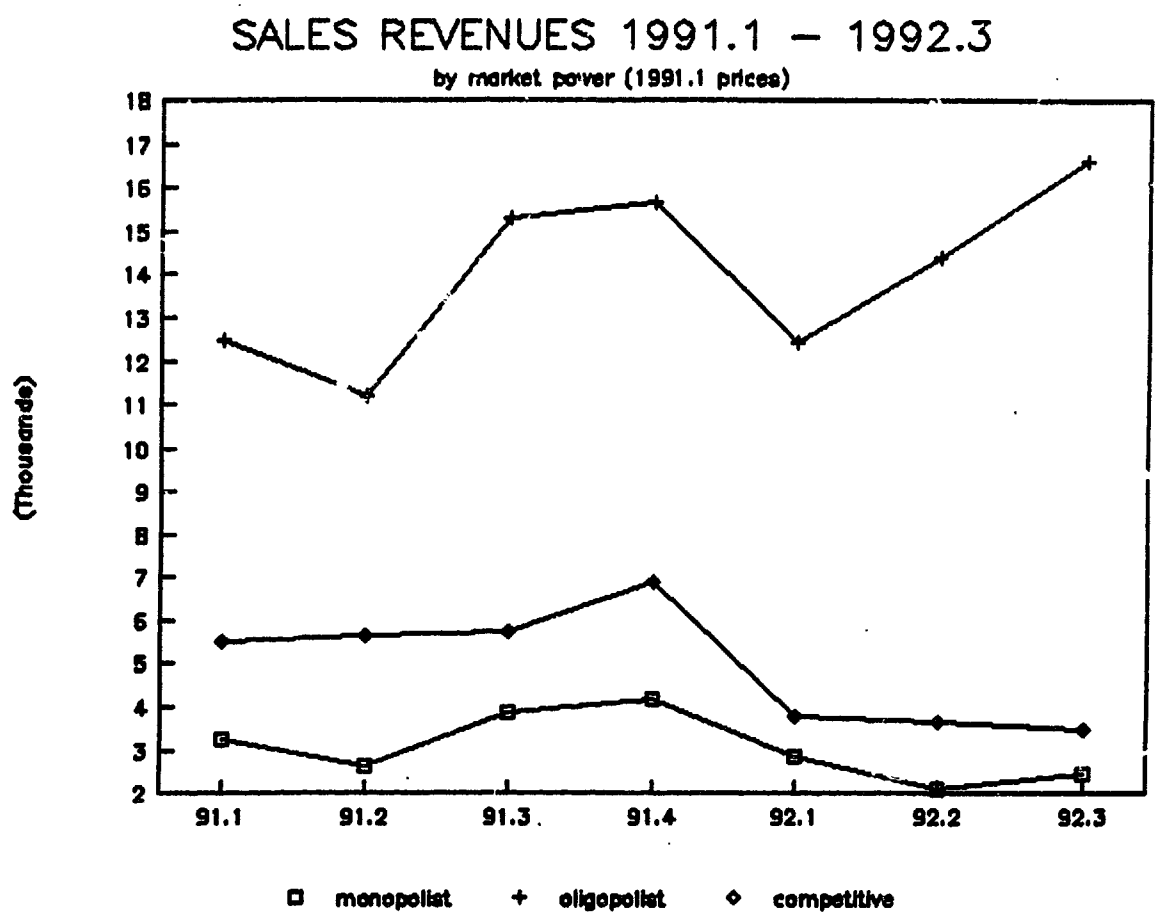
We find some increase in the sample variance over time for monopolists' gross profits but looking at variance in branch level gross profits although there are erratic movements we find no evidence of widespread and increasing variance, as measured by the coefficient of variation. Even so there is considerable dispersion in the level of profits at the firm level. Thus, at first inspection we find no evidence of a generalized sales and profits slump among the sample. There is one exception – the largely budget-financed 'scientific' firms whose revenues indeed turn strongly negative in real terms, particularly in the first half of 1992 when the explicit stance of the government was to reduce budgetary flows to firms. But the bulk of the discussion below centres on the industrial and trade firms in the survey.

In principle, the net profit position of firms ought to provide some indication of retained profits and hence of the implicit trade-off between current allocations and the longer term viability of the firm. This is more complicated in the Russian context as the allocation rule governing the distribution of gross profits has been qualitatively different than in a market-based system.

The net profit position of firms reflects the distribution of gross profits over the respective funds, profit tax and interest payments. In general, firms are expected to assign all gross profits but can hold back a certain share. Tables 3 suggests that in 1992 the dispersion in net profits was considerably greater

[3] See Pinto et al (1992a)

Fig 3


SALES REVENUES 1991.1 – 1992.3
by market power (1991.1 prices)
(Thousands)
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
91.1
91.2
91.3
91.4
92.1
92.2
92.3
monopolist
oligopolist
competitive

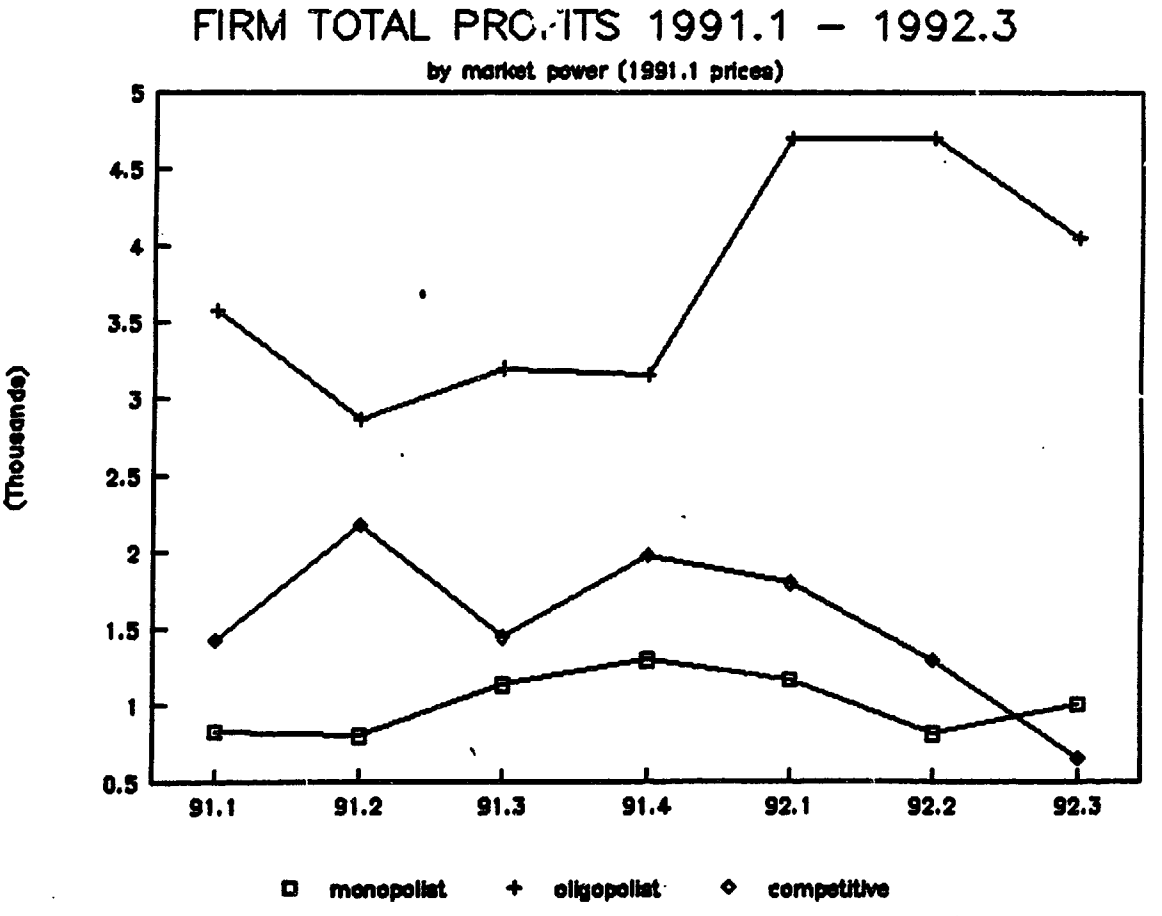

FIRM TOTAL PROFITS 1991.1 – 1992.3
by market power (1991.1 prices)
(Thousands)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
91.1
91.2
91.3
91.4
92.1
92.2
92.3
monopolist
oligopolist
competitive

Table 3

oefficient of variation REAL TOTAL PROFITS BEFORE TAX
orted by branch

	1Q91	2Q91	3Q91	4Q91	1Q92	2Q92	3Q92
1 METALLUR.	0.84	0.86	0.59	0.53	1.05	1.21	0.35
2 CHEMIC.	0.86	0.69	0.42	0.45	0.96	0.83	0.79
3 MACHNBLD.	0.70	0.75	0.90	0.76	1.26	1.67	1.80
4 BUILD.MTR	0.92	0.77	0.68	0.60	0.66	0.49	0.74
5 LIGHT IN.	1.03	0.86	1.12	1.09	1.11	1.13	1.41
6 FOOD IND	0.87	0.61	0.84	0.76	0.80	0.89	0.92
7 AGROIND.	0.49	0.90	0.96	0.83	0.91	1.00	0.95
8 CONSTR.	1.20	0.78	0.56	0.44	0.67	0.86	1.09
9 TRADE&SER	0.63	0.76	0.79	0.80	0.64	0.81	1.13
0 SCIENCE	0.42	0.24	0.35	0.60	0.29	0.71	0.98

oefficient of variation NET PROFITS
orted by branch:

	1Q91	2Q91	3Q91	4Q91	1Q92	2Q92	3Q92
1 METALLUR.	1.08	2.13	4.83	-0.91	0.89	3.31	2.40
2 CHEMIC.	-1.00	-1.00	-1.00	-1.23	1.00	-0.68	1.06
3 MACHNBLD.	-20.64	-37.08	2.46	-1.75	2.88	2.28	2.25
4 BUILD.MTR	-4.02	-2.40	-2.27	0.92	3.27	-1.73	1.47
5 LIGHT IN.	11.86	3.66	4.35	0.78	1.26	2.55	1.61
6 FOOD IND	1.24	1.61	1.28	-0.94	-0.84	-0.89	-0.96
7 AGROIND.	0.86	1.02	-0.74	0.95	0.91	1.01	1.00
8 CONSTR.	-1.44	-3.03	-9.24	-2.07	-1.28	-2.31	-1.40
9 TRADE&SER	3.31	2.36	2.66	1.59	1.71	2.11	-8.85
10 SCIENCE	-2.67	-4.13	-15.71	-7.02	-1.47	-1.48	-4.27

than for gross profits. Indeed, over a quarter of the sample registered negative net profits in at least two of the three reported quarters of 1992. However, almost all these firms reported negative profits through 1991 which obviously weakens the argument that negative profit shocks were loaded into 1992. Further, given uncertainty over rules regarding investment allocations, profit tax rates and self-financing requirements as well as strongly negative real interest rates, it is not surprising to find firms assigning more than current gross profits. This can reflect a drawing down of financial reserves or commitments which firms seek to cover ultimately through financing by the banking system.

We can also note the general stability of the shares accounted for by the respective funds in the allocation of gross profits (Figure 4). In particular, it is striking to note the resilience of investment and technical development fund allocations. While we cannot satisfactorily capture the end-use of fund expenditures, we do not observe any notable shifting off resources towards bonus payments or the social fund, where the translation into current wages would be easier.

3.1: Market Power

Market power can obviously trace itself into both output and price decisions. High concentration in Russian industry and the maintenance of cost-plus pricing rules are occasionally cited as explaining the inflation in producer prices over 1992. Figure 5 plots the change in aggregate producer prices relative to retail prices. The sharper acceleration in the former is very evident. How can this be explained ? First, we should note that the sample generating the data plotted in Figure 5 is both small and restricted to larger firms in each of the sampled branches. We are therefore observing the behaviour of producer prices for large firms in the Russian economy; a possible indication of the pricing rule pursued by large enterprises.

As revealing, perhaps, is the light that the survey sheds on the implicit differential pricing behaviour of firms when classified in terms of market power. For 32 firms where we have information on both changes in output volume and changes in real profits we are able to break this down in terms of market attributes, classifying in terms of monopolists, few producers and competitive firms [4]. The most striking result is that in nearly half the cases where firms were either monopolists or one among few producers, negative shocks to output in 1992 were systematically and inversely associated with positive changes to profits over the same reference period. The relation holds most strongly for firms in the machine-building and metallurgy branches. By contrast, competitive firms -- particularly in light industry -- display a more conventional positive co-movement in output and profits. For almost all competitive

[4] We exclude the administrative entities, such as those classified in 'Science' from the sub-sample.

Fig 4

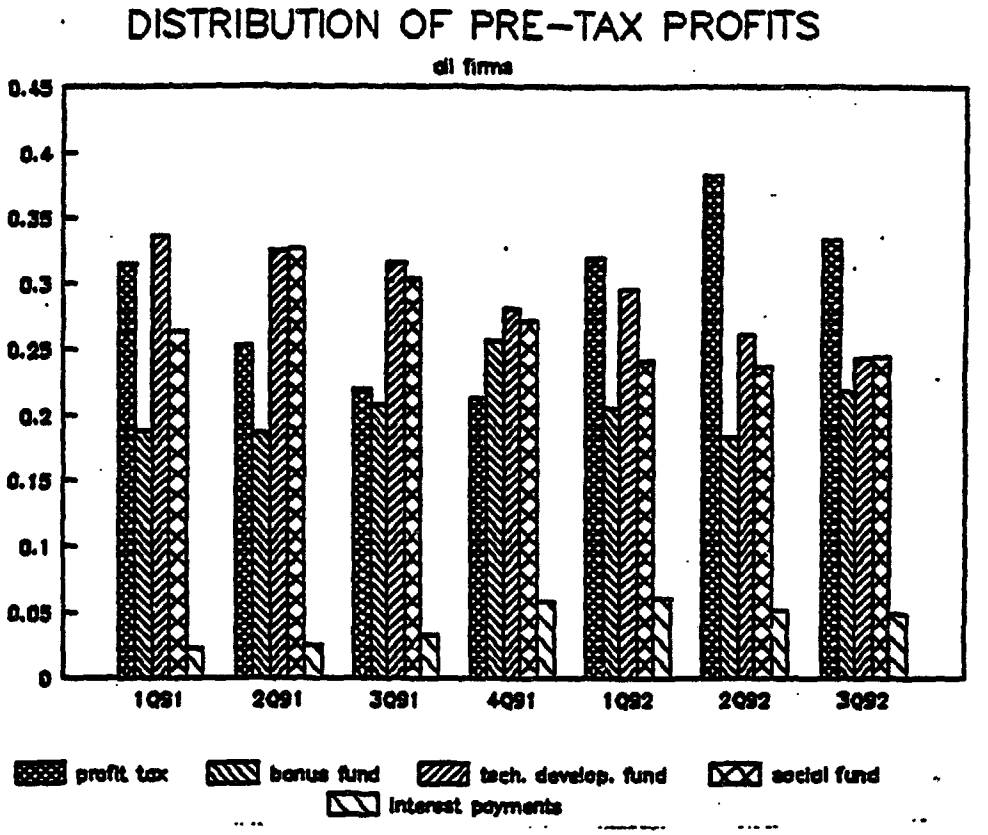
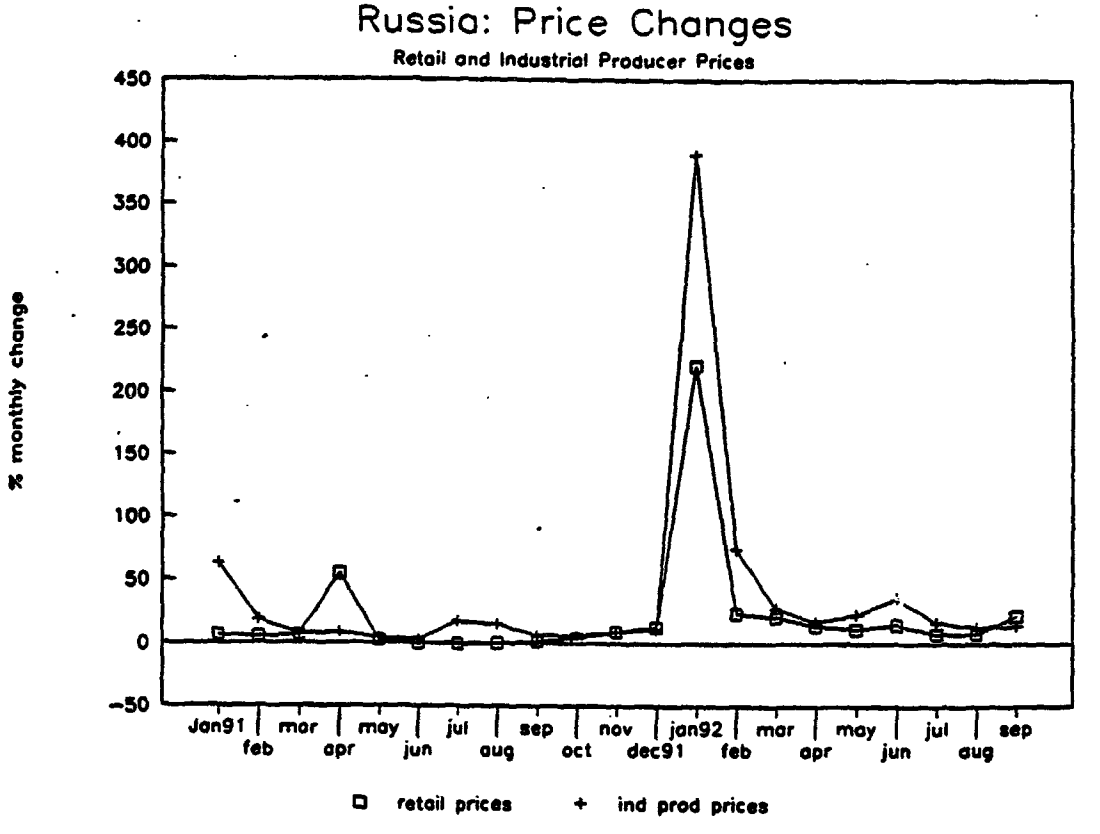

DISTRIBUTION OF PRE-TAX PROFITS
all firms
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
1Q91
2Q91
3Q91
4Q91
1Q92
2Q92
3Q92
profit tax
bonus fund
tech. develop. fund
social fund
interest payments

Fig 5


Russia: Price Changes
Retail and Industrial Producer Prices
% monthly change
450
400
350
300
250
200
150
100
50
0
-50
Jan91
feb
mar
apr
may
jun
jul
aug
sep
oct
nov
dec91
jan92
feb
mar
apr
may
jun
jul
aug
sep
retail prices
ind prod prices

firms, we observe negative changes in output associated with negative changes to profits. The obvious conclusion to be drawn is that firms with market power have adjusted output prices with the intention of maintaining or increasing their mark-up. Figures 6 & 7 provide scatters relating output and gross profit changes. For firms with market power it is clear that negative shocks to output have mostly been associated with positive changes in gross profits. This does not hold for competitive firms.

The firm level information thus seems consistent with the path of the more aggregated producer price series available for branches at a Russian level. The implication is that we are continuing to observe the behaviour of de facto price setters able to control directly gross value added.

3.2: Inter-enterprise Arrears

A well noted feature of 1992 and, it now appears, also of early 1993 has been the accumulation of large inter-firm arrears. The process was motivated by a combination of factors, including institutional factors -- such as the neutrality of payables and receivables with respect to current borrowing from the banking system -- but is generally traced to the initial negative shocks to balance sheets arising from selective liberalization[5]. We can also add that the attribution of arrears financing has had clear political economy implications, being in effect a clear challenge to the credibility of the government's announced monetary and fiscal stance.

The survey results are summarized in Figure 8. This gives the path of net payables over 1991 and 1992 broken down by size of firm. It is clear that firms have generally shifted their net payables position upwards in real terms over 1992 even alongside relatively buoyant profits' profiles. This has partly come about through increasing outstanding payments to suppliers; a feature that seems further to be positively associated with the market power parameter. The ratio of net payables to sales rises quite significantly for monopolists, remaining broadly stable for other entities. But it is particularly striking that, in general, the increase in net payables is largely independent of the path of profits at the firm level. There is no remotely robust inverse association, for example, between profits and net payables; an association that one might presume to hold if arrears are a reasonably strict function of current profitability. This points to a common process and one where it has been perceived that the gains from forced borrowing are non-trivial, either via interest rate effects (ie the negative real interest rates) or via probabilities of having outstanding obligations covered by the Central Bank.

Observing the path of interest costs over 1991/92, Figure 9 provides information on the ratio of total interest to sales for firms classed by asset size. There is little evidence of any increase in interest

[5] See Commander et al (1993a) for more discussion on these issues.

Fig 6: Output & Profit Changes -- Firms with Market Power

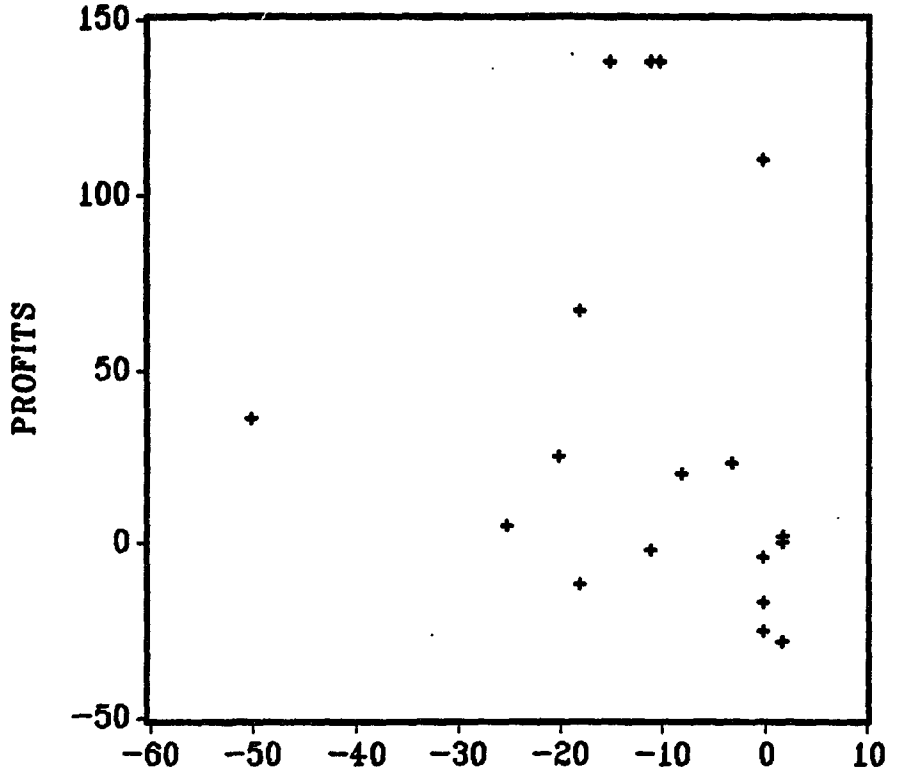


Fig 7: Output and Profit Changes -- Competitive Firms

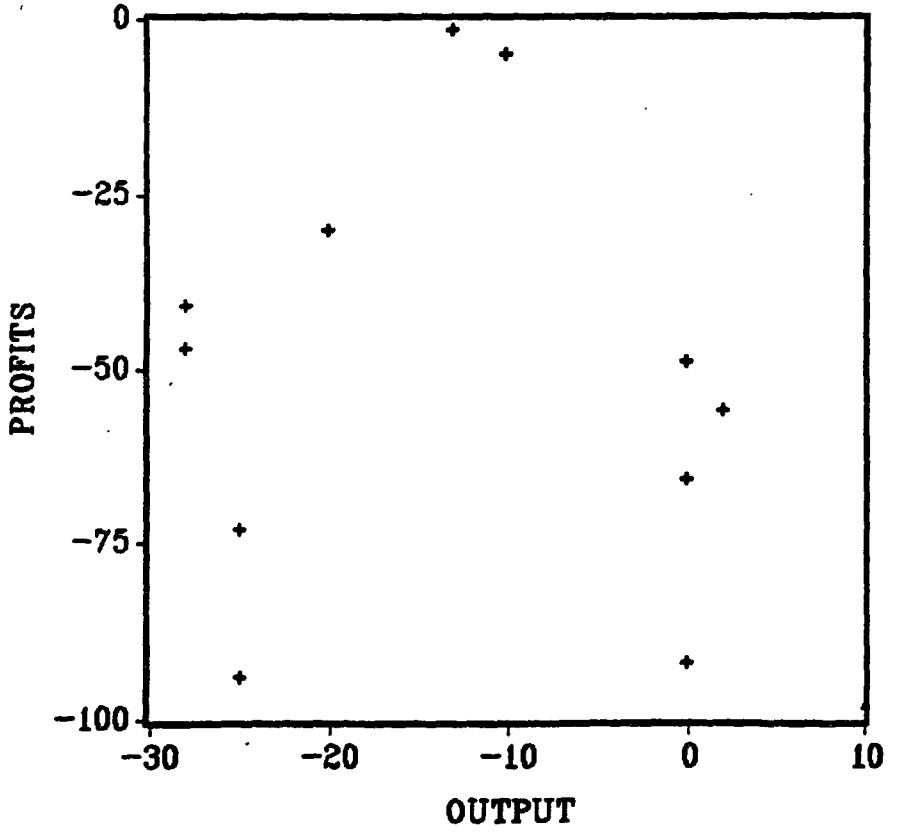


Fig 8

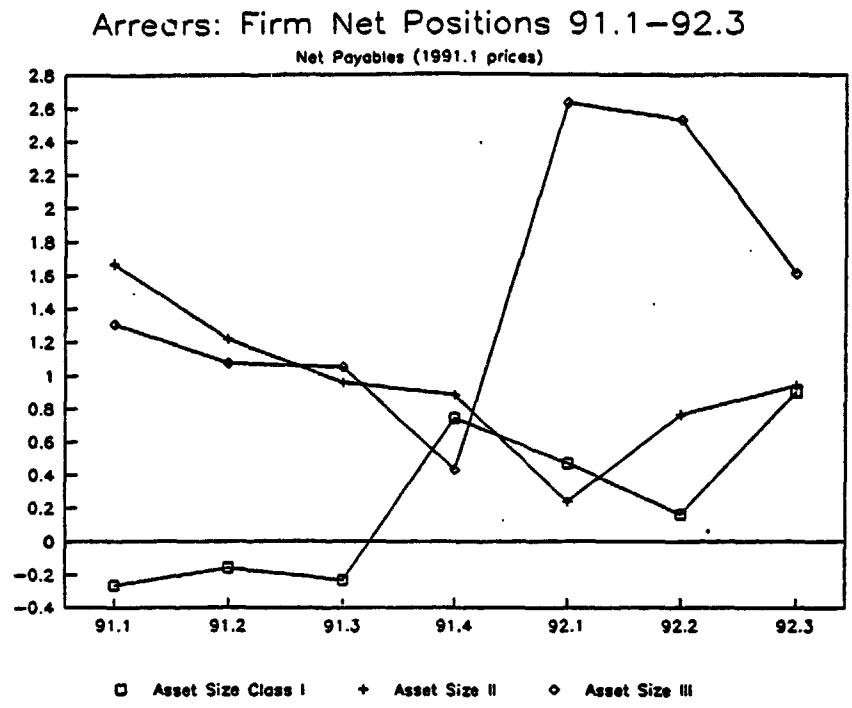
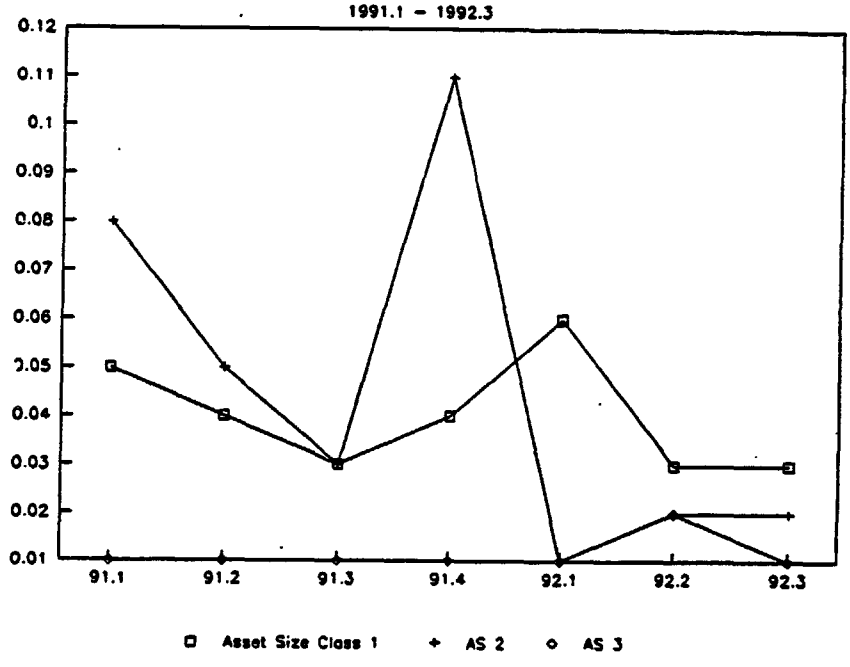

Arrears: Firm Net Positions 91.1–92.3
Net Payables (1991.1 prices)
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−0.2
−0.4
91.1
91.2
91.3
91.4
92.1
92.2
92.3
Asset Size Class I
Asset Size II
Asset Size III

Fig 9


Ratio of Interest to Sales
1991.1 – 1992.3
0.12
0.11
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
91.1
91.2
91.3
91.4
92.1
92.2
92.3
Asset Size Class 1
AS 2
AS 3

charges pointing to a strategy of financial distress borrowing or reliance by firms on borrowing to maintain current output in the face of falling capacity utilization and sales. Taking the same ratio over the branches, we do observe a sharp increase in trade financing costs but the general conclusion holds.

3.3: Decapitalization

The issue of decapitalization of firms is obviously relevant given the loose control structure that now obtains, the uncertainty over future viability and the presence of very significant insider bargaining power. Decapitalization is hard to capture satisfactorily but at first approximation can be thought to proceed by three possible channels. First, by running down current capital stock through little or no maintenance; second, by letting depreciation exceed current investments and third, by excessive current wage claims that likely imperil the future financial well-being of the firm. The first is impossible to measure but some summary ratios are quite instructive in getting a handle on the other two possible channels [6].

On wages and benefits costs, we find considerable stability in the share relative to revenues. The ratio of wage tax payments to revenues also provides a simple proxy. But the data indicate no upward drift across branches, save in the budget sector where the scale of deterioration in revenues swamps the adjustment to wages. We also find no evidence in the evolution of the wage tax of predatory wage setting and short run behaviour.

Data on the investment-depreciation ratio provide no general evidence of a slowdown in investments. At branch level there are signs that by 1992.3 the upward shift in the ratio over early 1992 was being reversed and moving back towards 1991 ratios. Further, we do see a sharper decline for the budget sector entities -- the scientific firms -- that we know to have been in financial difficulties over 1992. However, where we observe a fall in the investment /depreciation ratio little of this can be traced to excess wage tax payments. The finding is hardly surprising given the weak bite of the wage tax, which we discuss further below.

4: Employment Changes

The employment picture is most notable for the relatively slow adjustment of employment given the size of changes to output alongside a substantial volume of labour turnover and churning.

Table 4 provides some information on the structure of employment in the firms that were sampled. Several features stand out. In the first instance, the classical feature of the Soviet-type firm -- the dominance of production workers -- stands out. Across the full sample, nearly 70% of the workforce

[6] As also done in the case of Polish state firms by Pinto, Belka and Krajewski (1992a).

Table 4: Employment Profile, 1992
(%)

Shares	Firm Size Class				
Firm Size	1	2	3	4	5
Administr	26.2	23.8	16.9	40.7	12.9
ITR	21.8	22.4	20.1	33.5	12.1
Clercs	4.3	2.8	2.1	6.8	0.8
F-T Workr	68.9	72.0	71.0	56.3	77.5
Prod.Work	56.9	63.0	68.4	50.2	77.5
Unskill	14.3	15.8	5.8	6.1	0.4
Apprents	0.9	0.2	0.6	0.2	2.8
Part-time	4.1	2.2	3.2	3.0	1.7
Retrain	0.2	0.3	0.4	0.8	0.0
TOTAL	100.0	100.0	100.0	100.0	100.0
Male F-T	61.2	52.8	51.1	48.2	36.7
Fem. F-T	31.7	45.0	45.3	46.3	63.6
Male P-T	3.5	1.2	2.0	1.9	0.8
Fem. P-T	0.6	0.6	0.8	1.1	0.0

Table 5: Employment Changes over 1992, 3rd Quarter
Separation, Hiring and Vacancy Rates (% of labour force)

	Firm Size				
	1	2	3	4	5
Separations	10.5	10.0	9.5	5.7	7.8
Hires	7.2	3.7	4.8	2.5	9.9
Net Separations	3.7	7.0	5.2	3.3	-2.2
Expected Separations in 92.4	2.4	2.4	2.3	0.5	0.5
Vacancies	1.5	3.1	1.0	2.2	1.9
Posted Vacancy	0.1	1.0	0.7	0.9	1.1

Source: World Bank Survey

Table 6: Job Separations by Type
(% of total separations)

	Firm Size				
	1	2	3	4	5
Quits	62.2	52.3	52.9	43.4	52.7
Disciplinary	8.5	3.2	3.4	7.7	4.7
Employment Reduction	10.4	31.3	10.7	37.1	3.1
Other	19.9	13.2	33.0	11.8	39.5

Source: World Bank Survey

was of this category. Moreover, the share of unskilled labour remains fairly low and primarily characteristic of the smaller firms. Second, we note the high proportion of female workers in the labour force. Third, part time work remains a fairly limited phenomenon across all firm size classes.

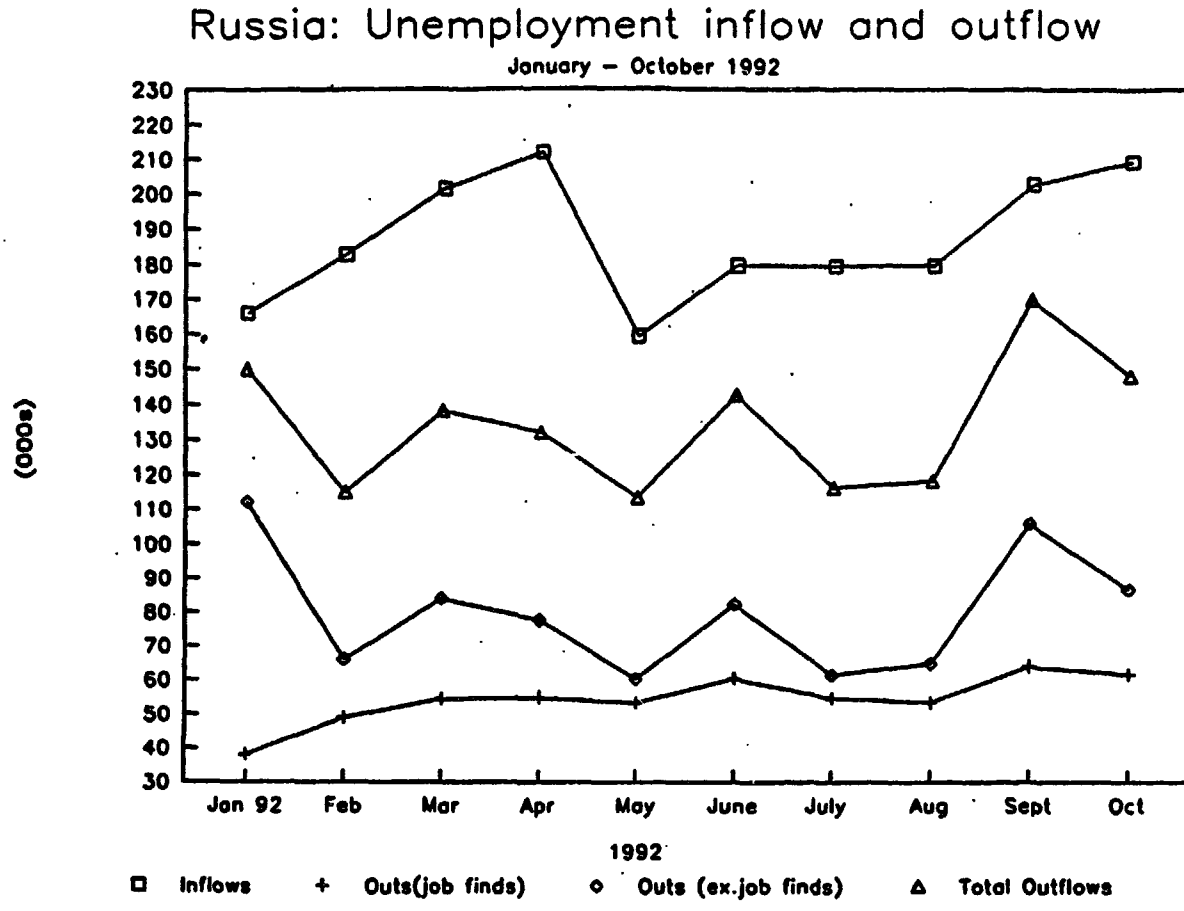
At an aggregate level, the main conclusions that emerge from Russian data regarding the path of employment in 1992 can be summarized as follows. Employment losses have been relatively small across the state sector as whole and for industry in particular. Indeed, over 1992 industrial employment declined by under 1% relative to 1991 levels. The losses in the state sector as a whole -- under 2% -- have been larger and more regionally concentrated. Preliminary information suggests that a sizable share of job losses in the state sector, primarily in the non-material sector -- have been concentrated in the Central region and most particularly in the area around Moscow. Therefore, a starting assumption would be that our survey might impart a upward bias to estimates of job losses, given the overall characteristics of the region.

This is not fully supported by the firm evidence. There has been an undoubted acceleration in the rate of job destruction but the process has not been as one-sided as one might intuite from a casual understanding of the size of the shocks to output. Reallocation shocks resulting from the change in relative prices would hypothetically result in differential paths of job destruction and creation. But we observe little that accords with this view. Rather, we continue to observe the coincidence of relatively high rates of job destruction and creation that do not apparently match to relative price shifts. Of course, one may be failing to capture intra-branch shifts but the dominant impression is of persistence in job hires with low net inflows to unemployment as a consequence. Indeed, aggregate unemployment fell below 2% of the labour force at the end of 1992 in both the Moscow region and in Russia as a whole.

Figure 10 provides the basic information at the Russian level on inflows to and outflows from unemployment. Of course, on the inflows side it includes new entrants but the fact of relatively constant monthly inflow numbers alongside a significant flows out of unemployment, including to jobs, provides a first approximation at the underlying process we appear to be observing. That process seems characterized by a high degree of churning in the labour market that does not simply accord with the prognosis that only job destruction should be occurring. While job destruction obviously dominates new starts, net destruction rates are fairly low. This gives some insight into the type of churning we should expect to see.

The response of firms to a perceived permanent negative shock might be expected to show up in reductions in labour capacity, through short time and involuntary holidays or an increase in part time working. It would also be expected to show up in increased net separations. With regard to the first, we

Fig 10


Russia: Unemployment inflow and outflow
January – October 1992
(000s)
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
Jan 92
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
1992
Inflows
Outs(job finds)
Outs (ex.job finds)
Total Outflows

find little evidence of an increase in part time work being the preferred route. Nor do we find evidence that short time working and involuntary holidays have been that widely used. By 1992.3 under 35% of firms in the sample reported use of short time work and 17% use of involuntary leaves. Under 5% of the total sample labour force was on involuntary leave and nearly 90% were concentrated in machine building and light industry. This estimate appears on the low side comparing with information available from more aggregate data. A far larger Goskomstat survey in August 1992 covering over 1500 firms across all regions reported nearly a third of employees on involuntary leave or short time [7].

For explicit separations, the survey data indicate that while nearly three-quarters of the sample reported net employment losses for the third quarter of 1992, over 25% posted net employment gains. At the same time, in one quarter alone nearly 3% of the labour force experienced some labour market transition. Table 5 contains some interesting information. In the first place, total separations amounted to between 8-10% across the firm size classes and the separation rate was rather evenly distributed. Net job losses were much smaller amounting to no more than 5% over the whole sample. This is higher than the national level but reasonably consistent with what we know about the path of employment in the Moscow region. For net job losers, the dispersion is fairly low but in general biassed upwards for smaller firms. Indeed, the largest firms experienced net increases to their labour force over the reference period. Expected job losses over the fourth quarter of 1992 were similarly reported at low frequencies and were inversely associated with firm size.

Table 6 also pins down the principal characteristics of the separations process. The dominance of quits is striking and over 50% of all separations can be classed as voluntary. Explicit job reduction decisions display considerable variance and amounted to around 17% of gross job losses for the full sample. Total involuntary separations comprised less than a quarter of reported total separations. The weight of quits in total separations reinforces the view that the Russian labour market remains characterized by rather high turnover at local level, if not across regions where institutional, housing and other constraints tend to be more binding.

The persistence in hires raises some interesting questions. Relating output changes to employment changes in the sample is instructive. Perhaps most striking is the absence of a clear and predictable relationship between output and employment movements. Indeed, for the 25% of the sample that reported positive net hires in 1992.3, nearly 70% projected output losses over 1992 with an unweighted mean decline of 15%. There is significant dispersion over branches and firm size classes with respect

[7] For Moscow the figure was 25% for a sample of 23 firms.

to employment changes but there is clear asymmetry with regard to the size of shocks to output. For the outermost observations where output losses ranged between 35-50%, employment contraction averaged no more than 15%.

Table 7 and Figures 11-14 put together the direction of output, gross profit and employment changes for the survey firms. It is clear that the gap between output and employment changes was quite large. The scatters again classify in terms of market power and are mainly remarkable for showing no predictable relationship between output or profits and employment changes for either types of firm.

The clear conclusion that can be drawn, bearing in mind the limitations of the one quarter recall period [8], is that employment adjustments have been sluggish, uneven and restricted given the size of changes to output. At first approximation, we may assume that labour productivity has declined.

The survey results reinforce the conclusion gathered from more aggregate data sources regarding the continuing high rates of turnover, very low levels of involuntary separations, significant hiring and a generally low level of net job losses in Russia through 1992. However, several factors repay more attention. First, the high level of quits and hires for workers -- in both cases the proportions are significantly above the share of workers in the firms' labour force. Second, there is the dominance of production workers, rather than unskilled workers, in these quits. It seems likely that this process has been promoted by emerging competition for workers and by the persistence of apparent shortages for skilled or production workers. The recent liberalization of the wage setting and wage structure -- while quite evidently highly incomplete (see Section 5) -- appears likely to have promoted local job turnover as production workers chase relative wage adjustments. This obviously begs the question of why labour demand for such workers remains so relatively buoyant. The answer seems mainly to found in fixed factors or technology. What we know about work organization in Soviet industrial plants also emphasizes the strong and somewhat mechanical association of plant to labour.

Involuntary labour shedding has consequently been concentrated on non-production workers and, in particular, women. We know from the unemployment data that women comprise over 70% of the unemployed in the second half of 1992. We also know that this share has not been vastly shifted by the growing weight of layoffs in total inflows to unemployment. While inflows to unemployment have apparently dominated by releases from the administrative sector, it also seems to be the case that productive sector firms have shed administrative, unskilled and female labour first. The clear implication is that production workers have remained largely untouched by unemployment and by the process of

[8] These limitations include possible seasonal disturbances and out-of-period changes.

Table 7 : Output and Employment Changes in 1992 by Branch

Branch	Output					Employment				
	Increase	Constant	Decrease			Growth	Constant	Decrease		
			1	2	3			1	2	3
Metallurgy				3	1		1	1	2	
Chemicals	1				1			1	1	
Machine Building	2	2	4				2	5	1	
Building Materials		1	2	1			2	1		
Light	1	2		3	1		1	4	1	1
Food			1		1		1	1		
Agroindustry					2		1	1		
Construction		4			1		3	1	1	
Trade & Services	1	1			1		1	2		
Science		1		1	1			2	1	

Decrease : 1= 0.1-9.9%; 2= 10-19.9%; 3= 20% +

Source: World Bank Survey

Fig 11: Output and Employment Changes: Firms with Market Power

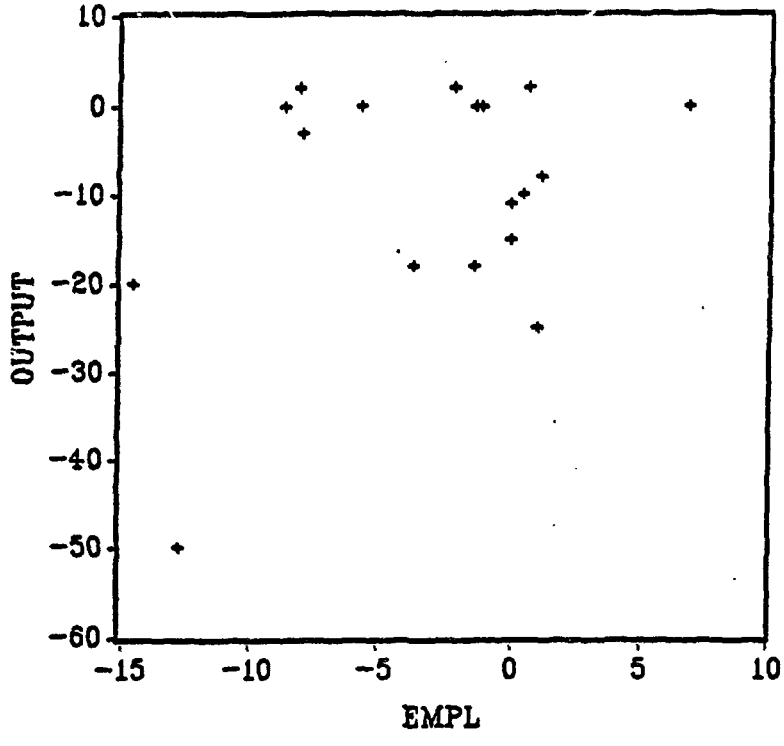


Fig 12: Output and Employment Changes: Competitive Firms

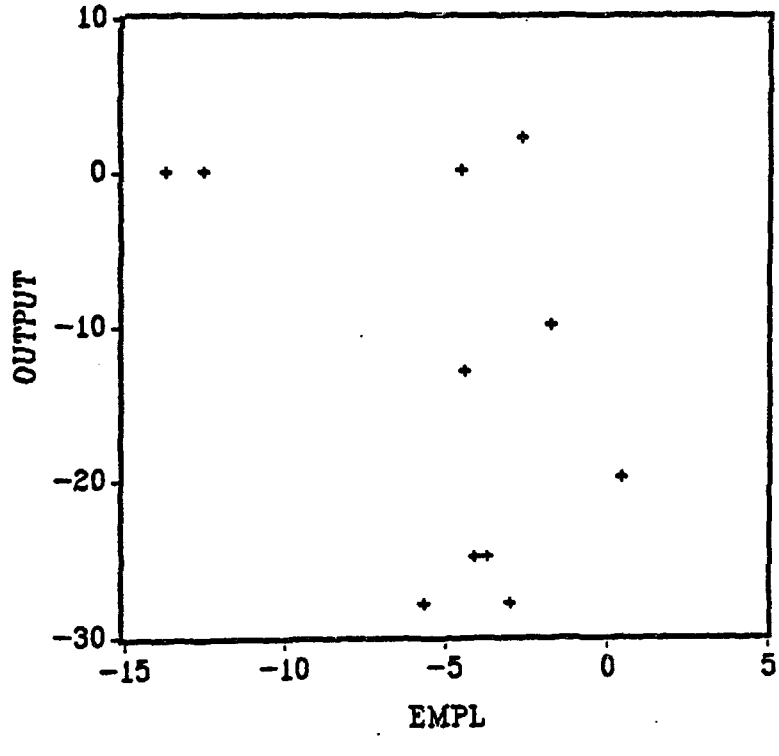


Fig 13
Employment and Profits: Firms with Market Power

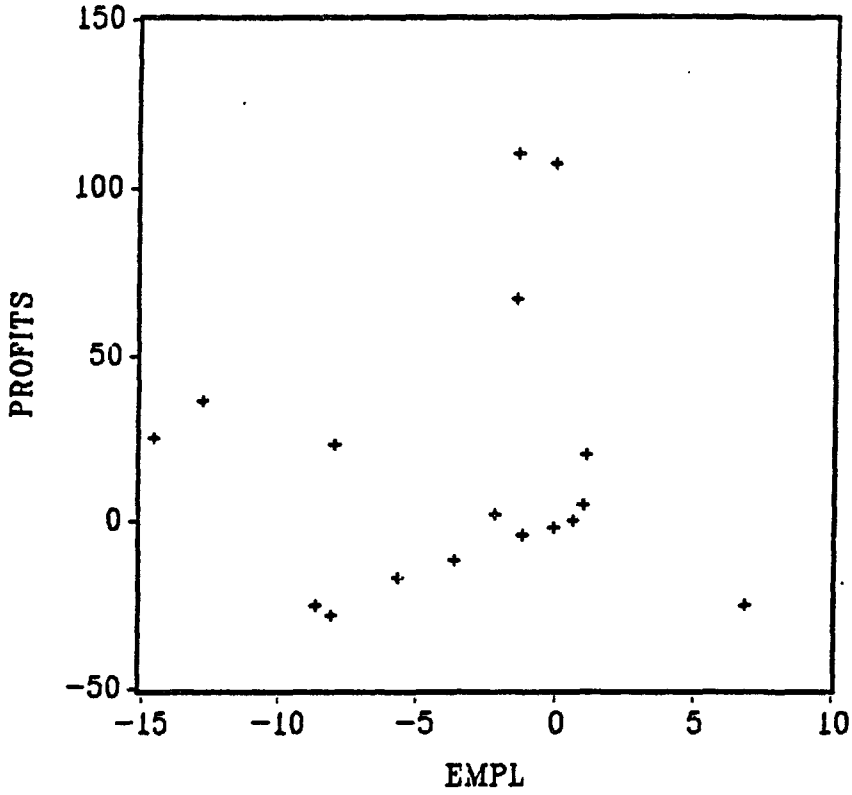
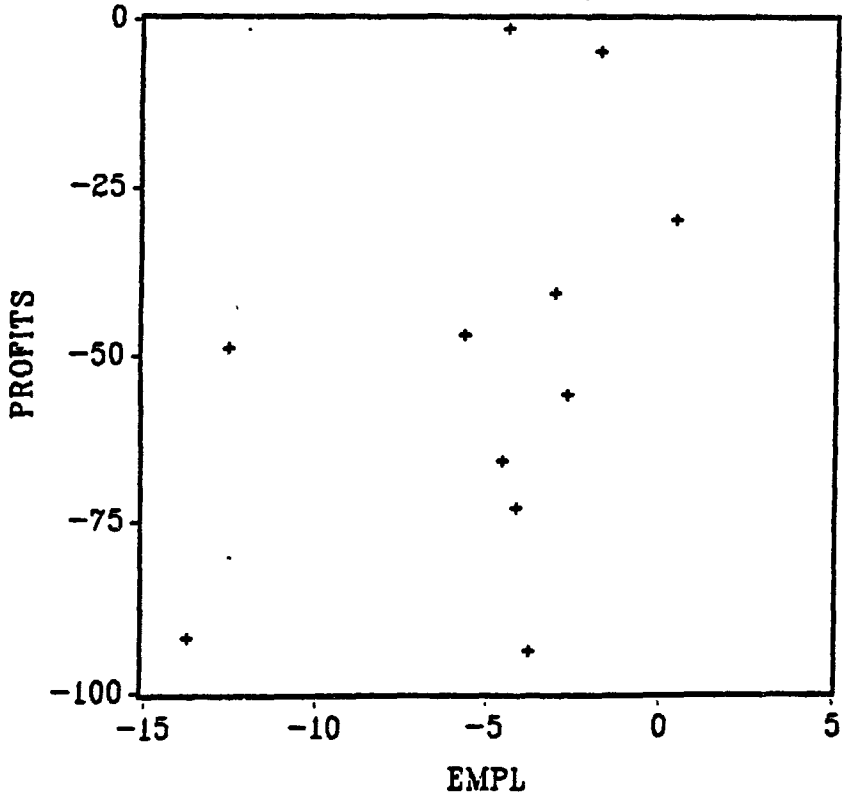


Fig 14: Profits and Employment: Competitive Firms



involuntary separation. Firms have, wherever possible, dispensed with ancillary workers, largely concentrated in administrative work and in many cases female labour. However, even here the job losses in industrial enterprises remained very limited by the end of 1992. The bulk of job losses have been concentrated in the state budget or non-material sector not in industry. This also explains the high weight of female in total unemployment.

4.1: Labour Hoarding

The relatively gentle decline in employment relative to output in industry is striking particularly given the widespread acknowledgement of extensive and continuing labour hoarding. Nearly two-thirds of sampled firms reported excess employment levels in 1992.3. This was fairly equally distributed across firm size class and branch and, with the exception of the largest firms where the estimate was below 1%, was put at between 8-14% of current employment.

At first glance, one might expect institutional factors governing dismissals and/or union presence to impede involuntary separations [9]. But this appears generally not to be true. Unions are present in most workforces but carry negligible bargaining power so that in only 10% of cases where excess employment was present were dismissal rules and worker protest cited as factors of any significance in governing employment decisions. By contrast, in nearly two-thirds of those cases the motive for labour hoarding was the belief that output would shortly expand, warranting current retention of excess workers. In 25% of cases, the argument given was that such workers were not a significant financial burden to the firm.

The latter response can also be related to the prevalence of minimum wage workers within firms. Average industrial wages exceeded minimum wages by a factor of between 5-12 times over 1992. Evidence from the survey suggests that some firms -- particularly in engineering and light branches -- have begun to place parts of their labour force on or around minimum wages with minimal work requirements. Minimum wages were reported for nearly 4.5% of the sample workforce [10]. In one instance, the aerodynamics design firm -- TsAGI -- we found that around a quarter of the workforce of c.10,000 -- primarily the unskilled -- had been placed on minimum wages. This amounts to de facto provision of unemployment benefit within the firm, with, of course, the difference that workers still have access to some firm-provided benefits. Assuming the rough distribution of wages in total labour costs

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[9] Firing decisions were taken by the administration alone in 60% of cases, by the administration in association with the trade union in 15% of cases and by the factory council in the remaining 15%. Opposition to dismissals arose from the trade unions in half the sample, but significantly no opposition was reported in a third of cases.

[10] 13% for engineering firms; 9% for light industry.

from the firm-side (as indicated below in Section 6) and constant access to non-wage benefits, resort to minimum wages would have allowed firms to make per capita cost savings of at least 45% over 1992. At the margin, a reduction in the nominal wage would likely have had a more powerful effect than the cut in benefits costs associated with a marginal employment change.

Finally, in time with aggregate data we observe low vacancy levels with posted labour demand -- a better indicator than notional vacancies -- amounting to under 1% of the current sample workforce. This again is consistent with the idea that hiring behaviour is largely conditioned by replacement of turnovers and by an apparent rigidity with respect to employment levels in industrial firms. Labour hoarding appears motivated by a combination of factors, including technology and an apparent willingness to provide fall-back wages -- the minimum wage -- within the firm.

5: Wage Setting

The appropriate treatment of wages is problematic given significant variance in levels of shortage in goods markets over time and region. Further, there is wide dispersion in price levels across region alongside significant variation in regional inflation rates, as well as in the changes to nominal wages, over 1992. Figures 15 & 16 provides information on wage levels over the period February to October 1992 for all-Russia as for Moscow and Moscow oblast. There is a notable gap between the latter two areas; a gap that widens over the course of 1992, largely via divergences in local inflation rates than by changes to nominal wages.

Despite these significant variations, a summary of recent wage developments need highlight the climb in statistical real wages over the second half of 1991, followed by a substantial cut induced by the price shock of January 1992. That shock took average industrial wages back to mid-1991 levels. Following January 1992 we observe a consistent increase in real wages over the course of the rest of the year. By October 1992, real wages were notionally 13% higher than in July 1991 and over 85% higher than in January 1992. The regional coefficient of variation was around 25%.

The acceleration in nominal claims has to be tempered by the knowledge that cash shortages and other constraints in the first half of 1992 drove a wedge between notional and actual claims, one symptom of which was the accumulation of substantial wage arrears by firms. Nevertheless, the dominant impression is of an initial shock to cash wages subsequently cancelled out by increasing claims and weak constraints exercised through the current excess wage tax rule [11].

[11] A wage bill exceeding the minimum wage times four times the number of employees was added to profits and taxed at 32%.

Fig 15

Russia and Moscow Region Nominal Wages

July 1991 - October 1992

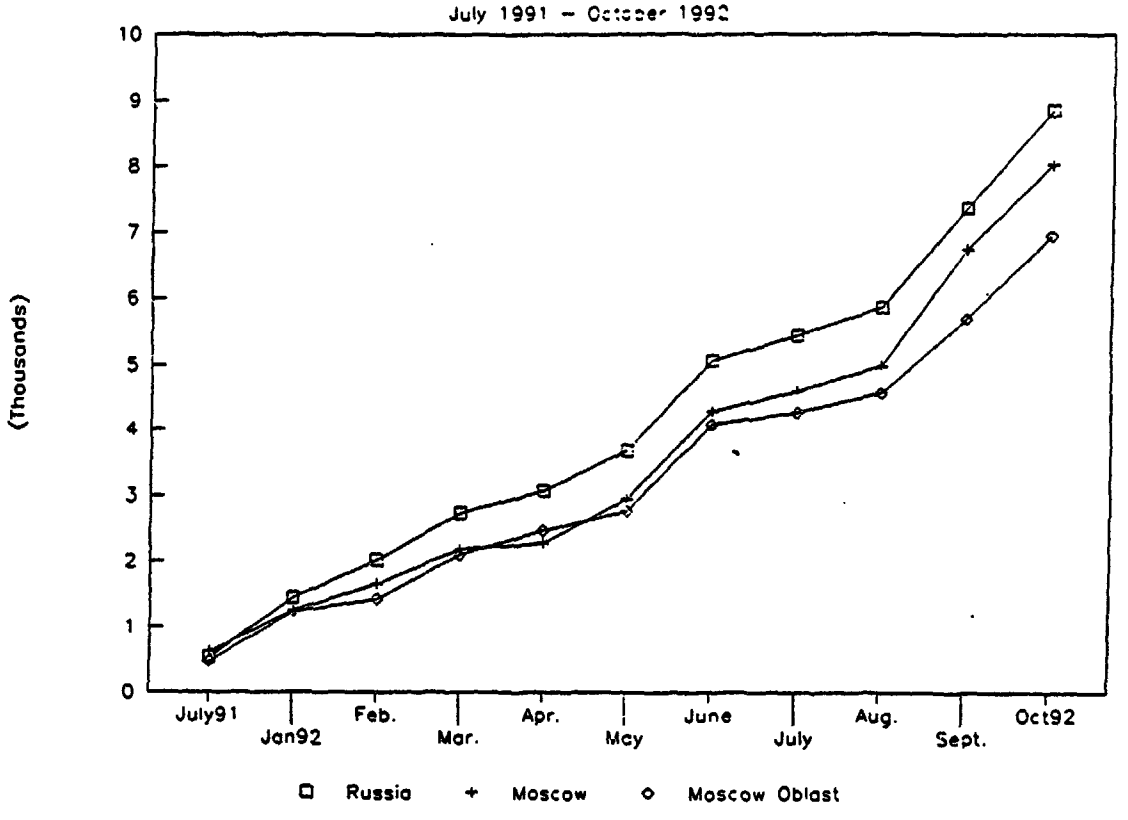
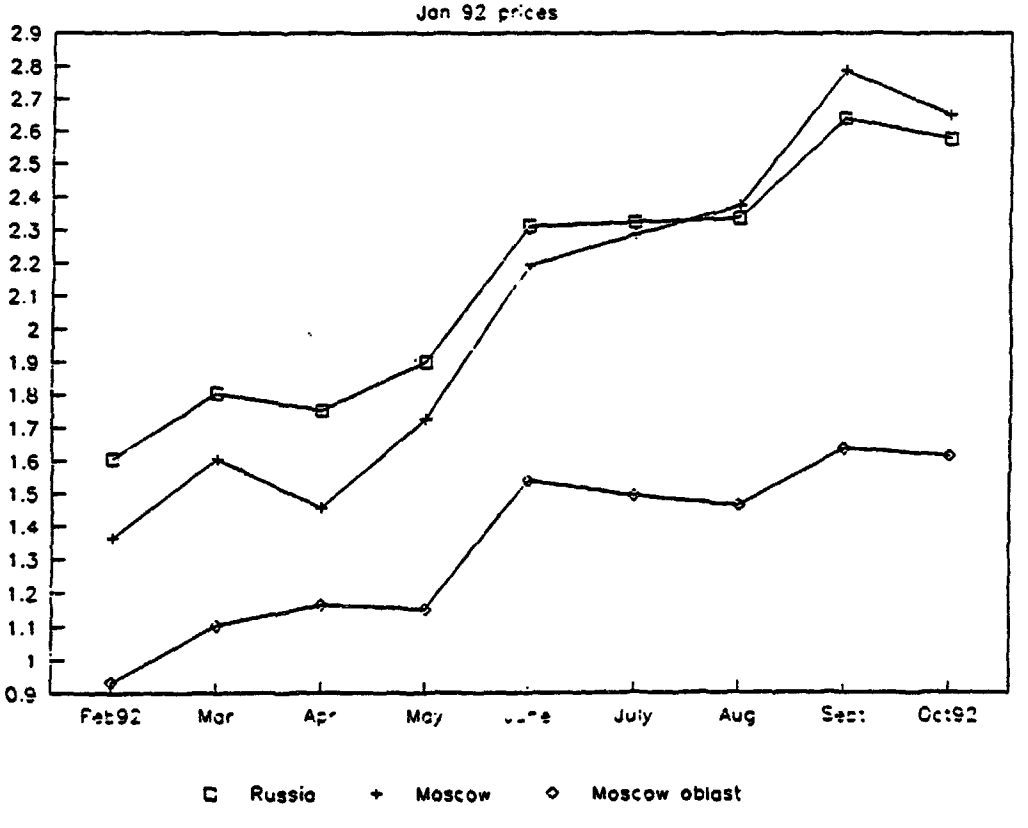


Fig 16

Russia and Moscow Region Wage Levels

Jan 92 prices



The survey results are broadly consistent with the story told by aggregate data. In the first place, comparing the third quarters of 1991 and 1992 we find that real statistical wages (see Tables 8 & 9) fell on average by around 30%; a fall consistent with real wages broadly equating early 1991 levels by the third quarter of 1992. Figure 17 presents information on the evolution of the real wage bill across firm size classes using the retail price deflator. It can be seen that for the full sample the aggregate real wage declined slightly over the period 1991.1/3 - 1992.1/3. There is a clear dip in the first quarter of 1992 followed by a robust, across-the-board recovery. By the third quarter of 1992 wages had largely recovered the levels of early 1991. There is some evidence of growing variance within three of the ten branches, but in general we observe little movement in the coefficient of variation.

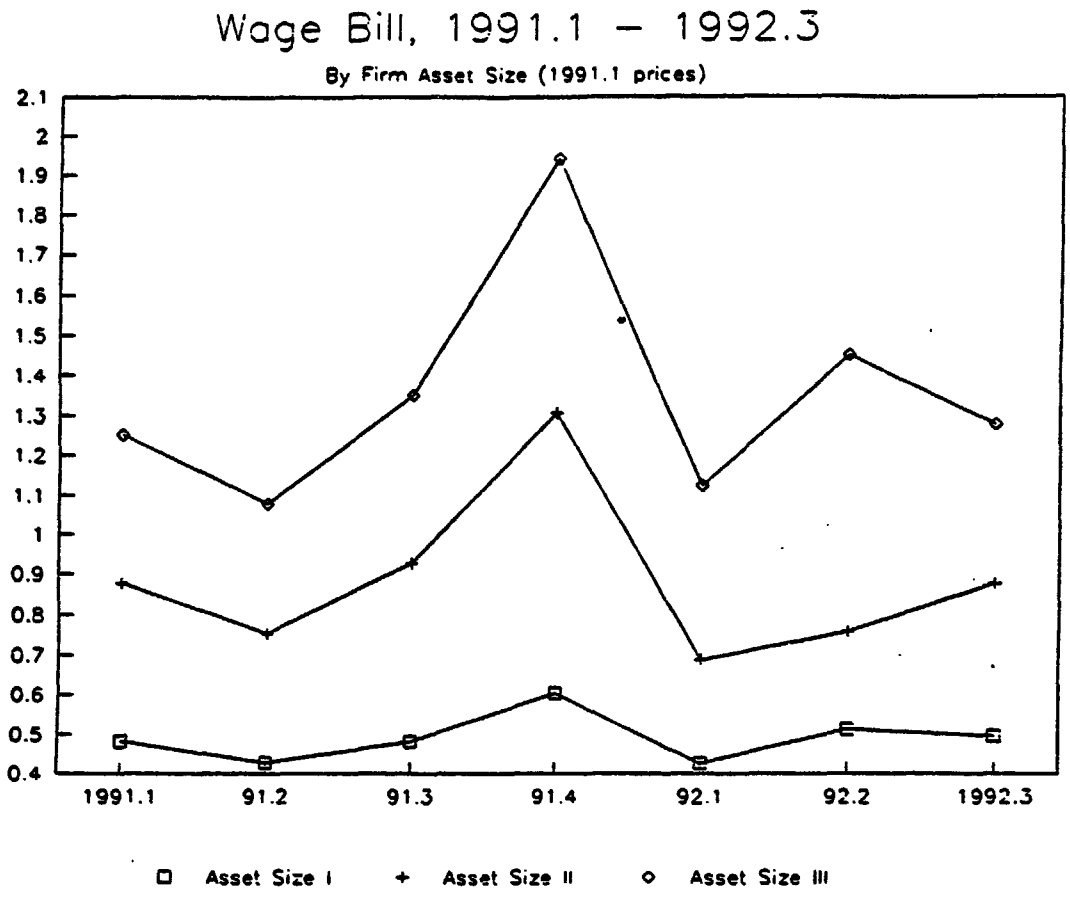
The wage path is striking for demonstrating the apparent rigidity of real statistical wages. Over the same period, we know that for the sample there were employment losses, even if not of high magnitudes. The clear result is that average per capita wages increased unambiguously over the same reference period.

Relating wage changes to the measure of market power is again quite interesting. The stability or growth of real statistical wages of the period for monopolists or those with few competitors contrasts with the non-trivial decline in wages that can be seen for competitive firms. Further, relating output and wage changes by categories of firm, we can see from the scatters (Figures 18-19) that for firms with market power, output and real wage changes are largely inversely related. However, as we also know that output and gross profit changes were inversely related for many of these firms, the association between profits and wage changes is more conventional. By contrast, the majority of competitive firms demonstrate clear co-movement of output and wages. Again, the reference periods are the first three quarters of 1992 over the same quarters of 1991.

5.1: Relative Wages

The path of relative wages is revealing. Table 8 drives home the perverse wage structure of the Russian firm and the strong bias toward skiled workers in the earnings profile. But they also bring home the point that relative wages had by 1992.3 shifted surprisingly little. Over the period 1991.3 - 1992.3 we find rather close convergence in the rates of increase across the main grade categories. The only relative loser was professional or ITR staff, such as engineers, but the shift in relativities was not that large. It is also evident that wage changes at the top of the grade structure -- for highest level management -- have been consistently higher and that this has been true particularly among the larger firms.

Fig 17


Wage Bill, 1991.1 – 1992.3
By Firm Asset Size (1991.1 prices)
2.1
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
1991.1
91.2
91.3
91.4
92.1
92.2
1992.3
Asset Size I
Asset Size II
Asset Size III

The data presented above suggests that the compression in the returns to skills given by the previous tariff wage system has only just begun to come apart and the process as yet remains rather muted. Indeed, while 40% of sampled firms reported an increase in wage differentials, the remaining 60% reported either no change or a decline in differentials. Where differentials increased, the primary reason given was developments in the labour market rather than any explicit association to private sector wages or prices. Indeed, in 75% of cases private sector wages were viewed to be consistently higher across all comparable grades and skills. The shift in relativities is likely to be part of the process geneating the substantial churning among skilled workers that we have already referred to in Section 4.

5.2: Bargaining and Wage Targets

The survey also allows us to get some idea of the process by which wage claims are generated and subsequently validated. Several features -- largely of an inertial quality -- can be isolated. First, few firms resort to any systematic bargaining with labour over wages. When explicitly asked whether wages were set by management or resulted from an explicit bargain between the administration and workers, only 7 (17%) firms reported the latter procedure. Of interest is the somewhat higher predominance of bargaining among cooperative, private and collective firms -- over a quarter of these firms had active bargaining.

This is not to say that current members do not have very significant influence over the wage setting. The path of nominal claims and the stability of employment is reasonable enough evidence of that fact. But it may be more appropriate to couch the problem in terms of a cooperative association between management and workers with current membership claims on employment and wages given preference. However, this can also explain, through the continuing dominance of general or administratively set wages, the relatively restrained rearrangement of relative wages that appears to have occurred and which we have noted above.

Clear evidence of the increasing association of wage changes to consumer prices also emerges -- over 60% of firms sought to link wages to prices explicitly and the remainder complemented this with increased provision of social benefits. However, while the benchmark for wage changes was indeed consumer prices for over a quarter of firms, we can observe the presence of constraints on this linkage. Nearly 70% of the sample noted that the wage benchmark was largely overdetermined by current within-firm resources. This is confirmed by the responses to an explicit question on constraints to wage increases over 1991 and 1992. For the former, we find that taxation and current revenues have equal weight (both yielding 40% of responses) in determining the wage path. Explicit outside regulation only was a factor in 7 firms, declining to 4 in 1992. Most significantly, taxation constraints were cited by

only a quarter of firms as a strong constraint in 1992, with over 60% citing current revenues as the primary factor. This is consistent, of course, with what we know about the excess wage tax rule and its general ineffectiveness over 1992. And as expected, we find that real wage tax payments by firms decline slightly across most size classes for the period 1992.Q1-3 over 1991.Q1-3.

6: Firm-Provided Benefits

It has long been realized that benefits provided through the firm were an important component of labour income. Nevertheless, it has been far from clear what the value of such benefits were, particularly given the large non-monetary component. The matter acquires yet more significance in the light of demands for local authorities and other institutions to take over the benefits programmes hitherto run by firms. This section provides both an overview of the type of benefits provided by firms and then attaches costs and/or income flows to those benefits. In this way, we hope to provide some measure of the share of benefits costs in total labour charges from the cost perspective of the firm while also picking up the effective distribution of labour income. In addition, we provide a more extended discussion of one crucial component of benefits -- the housing programmes run by a significant minority of firms in the survey.

But first a simple listing of the types of benefits provided by firms is given in Table 10. It can be seen that a significant proportion of the total labour force continues to have entitlements to child care, paid vacations, housing and holiday homes. We can make a distinction over mandatory benefits -- such as maternity or child care allowances -- and discretionary benefits. It is clear that the latter are both varied and pervasive across all firm size classes. Further, there is a positive association between firm size, as measured by employment, and range of benefits. The absence of housing programmes among several of the largest firms may be unrepresentative. Bigger samples -- such as the ILO survey of 500 firms -- point to housing programmes as an almost defining feature of larger firms [12]. This is more likely to be true for firms that act as locally dominant employers. Here, the functions of local authorities appear to be commonly arrogated.

Among smaller firms with less local labour market dominance, the evidence suggests that firm provided benefits may not necessarily exceed those covered by local authorities. Indeed, in our sample for housing, child care and health facilities, firm expenditure at local level was comparable or in excess of local authority or non-firm expenditures in only 10-30% of cases, depending on the function (see

[12] See Standing (1992a)

Fig 18: Wage & Output Changes: Firms with Market Power

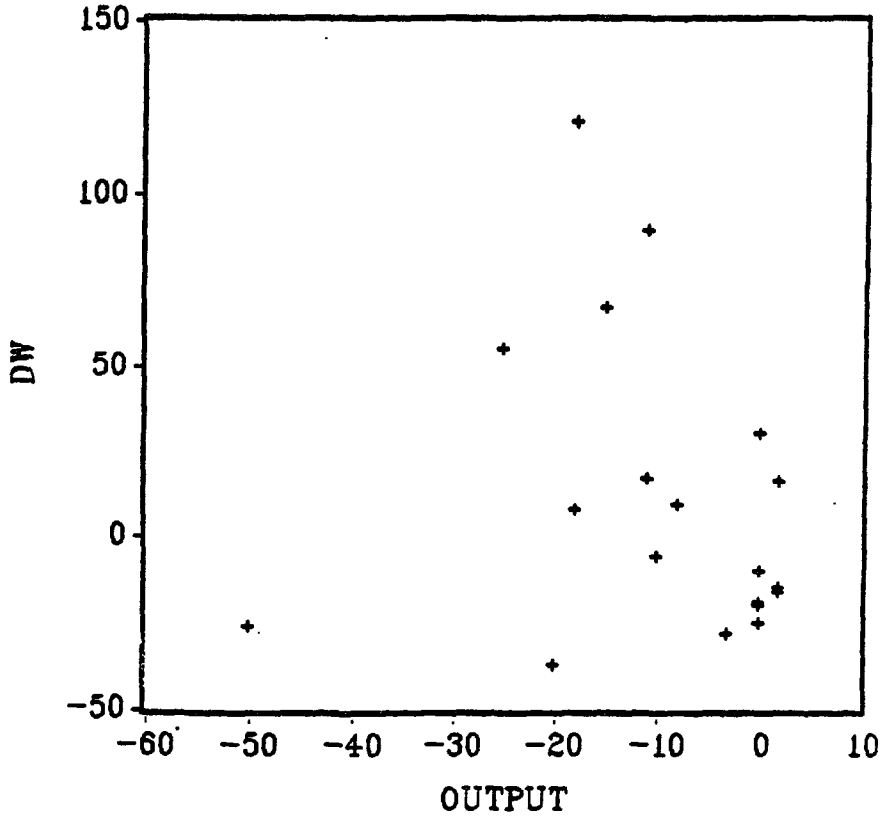


Fig 19: Wages & Output Changes: Competitive Firms

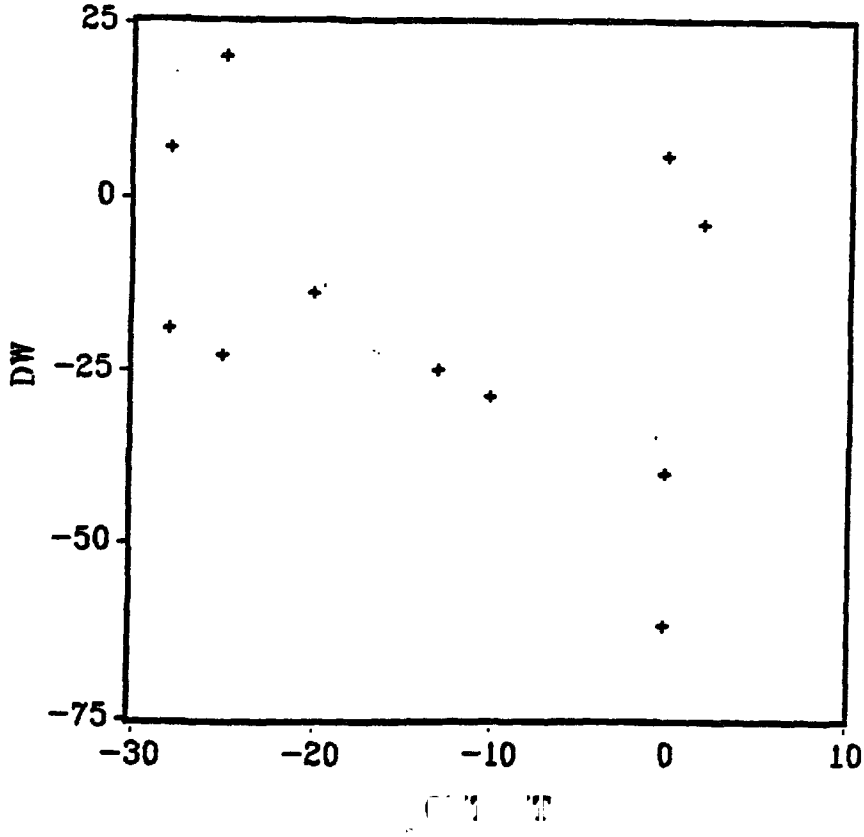


Table 8: Wage Levels, 1991.3Q - 1992.3Q: Moscow Region
By Firm Size and Type of Employee: Monthly Wages (roubles) 1991 and 1992 Third Quarters

	Firm Size (employment)									
	1		2		3		4		5	
	91.3	92.3	91.3	92.3	91.3	92.3	91.3	92.3	91.3	92.3
Vice-Director	826	8192	1175	10583	1209	13581	1186	13766	1058	16896
ITR Professional	803	6773	904	5559	791	7952	796	8001	546	6533
Skilled Workers	903	8070	808	6927	877	9410	738	8566	681	9151
Unskilled Workers	539	5897	524	4600	400	3591	275	3354	299	4207

Firm Size Categories: 1= 80-350; 2= 351-700; 3= 701-900; 4= 901-1500; 5= >1501 employees
Source: World Bank Survey

Table 9: Real Statistical Wage Index; by Firm Size and Type of Work; (1991.3=100)

	Firm Size				
	1	2	3	4	5
Vice-Director	64	58	72	75	103
ITR Professional	54	40	65	65	77
Skilled Workers	58	55	69	75	87
Unskilled Workers	70	57	58	79	91

Source: World Bank Survey

Table 10: Benefits -- Type and Availability by Firm Size, November 1992

	--- Firm Size ---				
	1	2	3	4	5
SAMPLE SIZE	10	11	10	7	3
Housing (permanent)	2	5	8	5	0
Housing (temp)	1	3	4	3	0
Kindergarten	1	5	8	6	2
Land for dachas	3	7	7	6	3
Canteen (subsid)	4	6	8	7	2
Polyclinics access	2	2	5	5	2
Community House	0	1	3	3	0
Fitness facilities	0	0	1	2	0
Sanatorium	0	6	4	4	1
Food Store with subsidiz. prices	8	9	7	6	2
Sick Pay	0	0	3	2	1
Housing rents assistance	0	0	0	1	0
Other forms of housing help	0	6	4	4	0
Transport allowance	3	3	1	3	2
Maternity allowance	10	11	10	7	2
Child Care allowance	10	11	9	7	3
Paid Vacation	4	8	7	3	0
Pre-dismissal allow.	8	10	8	4	3
Sanatorium vouchers	8	10	9	6	3

Source: World Bank survey

Appendix Table 3). As these items constitute the major expenditure charges on the benefits side, this cautions against a simplistic view of the scale of firm-level functions.

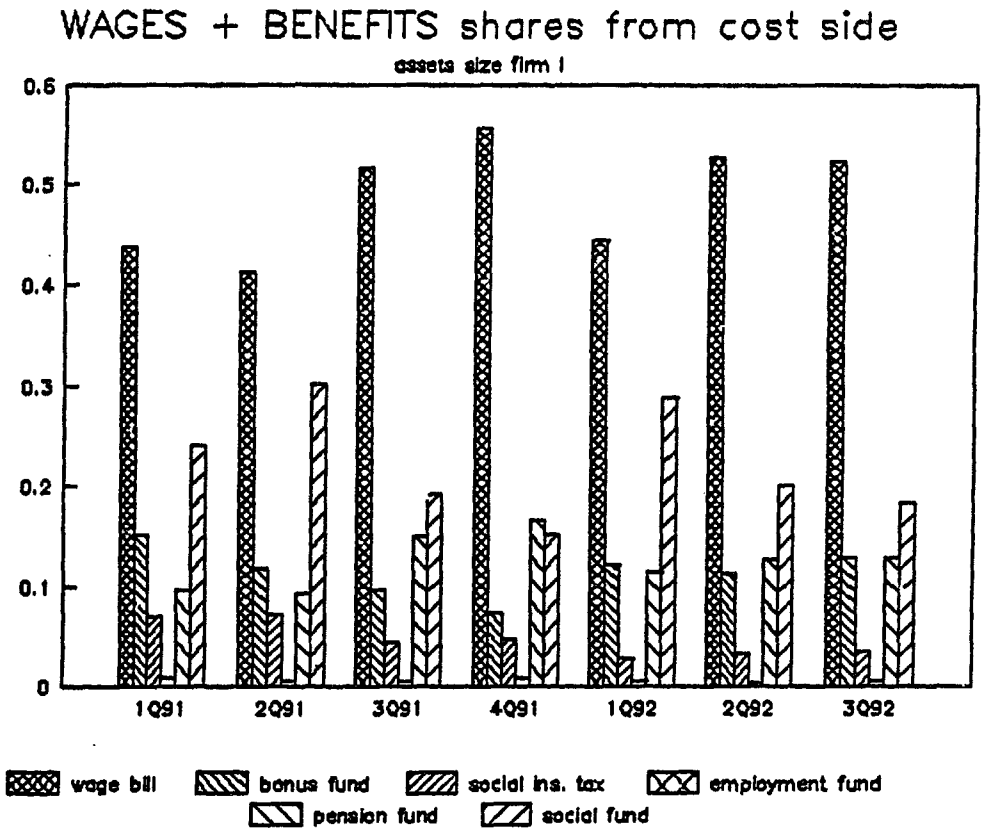
6.1: Costs of Benefits

Considerable uncertainty currently exists with regard to the respective shares of benefits costs in firms' labour payments. The survey allows us to get a reasonably detailed picture on this score. Several points stand out. First, wages as reflected in the firms' wage bills (inclusive of the wage tax) account for roughly 50% of total labour costs. Including bonuses raises this share to just over 60% for the entire sample. The remaining costs are distributed over Pensions, Social Insurance taxes, Employment Fund payments and, most significantly, Social Fund allocations. The latter amount to over 20% of total labour-related costs and around 40% of benefits charges (ie; excluding the wage bill). This information is given in terms of firm size for 1991.1 - 1992.3 (Figures 20 - 22). While we observe considerable variance over firm size classes, as well as for branches, for the respective shares, we do in general find a surprising degree of stability. This is also true for the levels. There is some evidence that social fund shares have been boosted over 1992, possibly as a mechanism for raising de facto wage payments while circumventing the excess wage tax, but the trend is by no means universal across or within firm size classes. Overall, the inertia in shares is the more striking feature.

Comparing the first three quarters of 1991 with 1992 real aggregate labour costs fell slightly. Small declines were registered in 70% of branches with, significant increases in the remaining 30%. Figure 23 shows the path of aggregate labour-related costs for the period 1991.1 - 1992.3. The main story is the fair constancy of labour-related costs when ironing out the climb in statistical claims over the second half of 1991. As such, we find considerable corroborative support for the conclusions derived from more aggregated wage data. Further, we can pin down reasonable stability in the cost structure allowing us to conclude that, at least for our sample, benefits do not appear to have been a widespread mechanism either for significantly raising or lowering aggregate labour costs. The path of both the levels and the shares indicates that including benefits costs in total labour costs has no marked effect on the distribution. This holds whether classifying over branch or firm size, as measured by employment or value of fixed assets.

Taken from the income side, we likewise find considerable stability in the shares -- wages accounting for roughly 50% of total labour income, rising to around 65% when factoring in bonus payments -- and for the levels. In summary, it seems that benefits, dissociated from more conventional cash wage or effort-related incentives, comprise at current prices approximately 35% of labour income. The dispersion is dampened by the dominant, across-the-board weight (0.6) of Social Fund expenditures

Figs 20 - 21


WAGES + BENEFITS shares from cost side
assets size firm I
0.6
0.5
0.4
0.3
0.2
0.1
0
1Q91
2Q91
3Q91
4Q91
1Q92
2Q92
3Q92
wage bill
bonus fund
social ins. tax
employment fund
pension fund
social fund

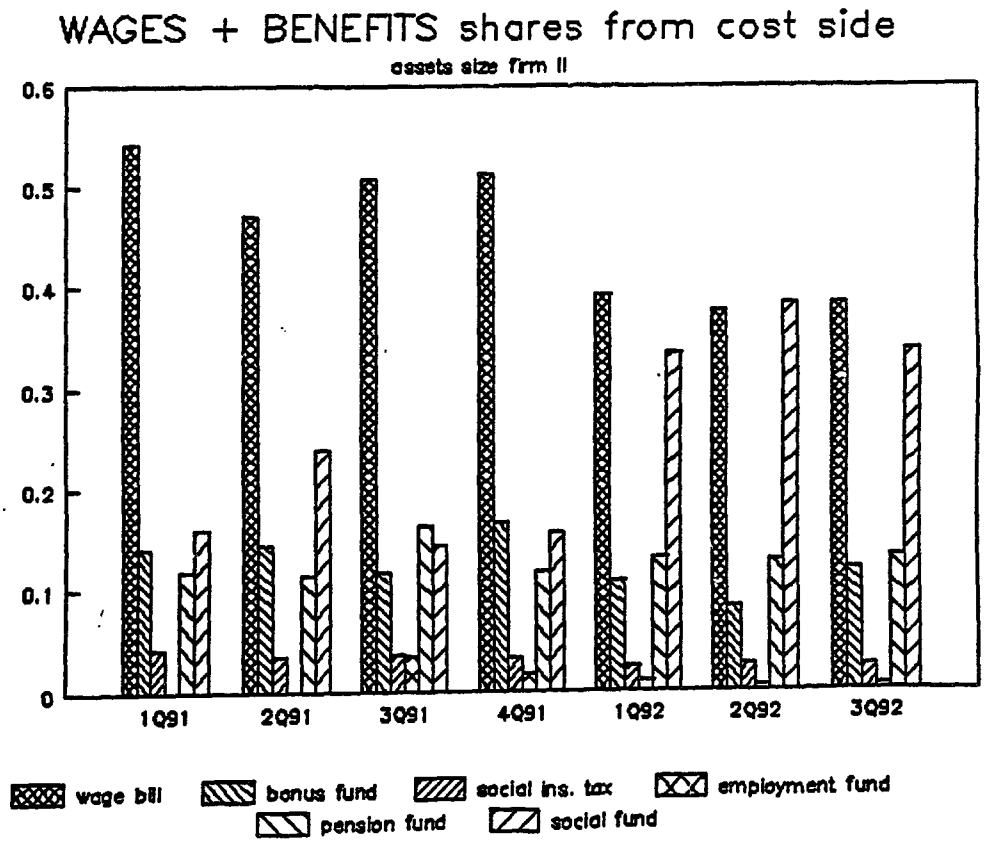
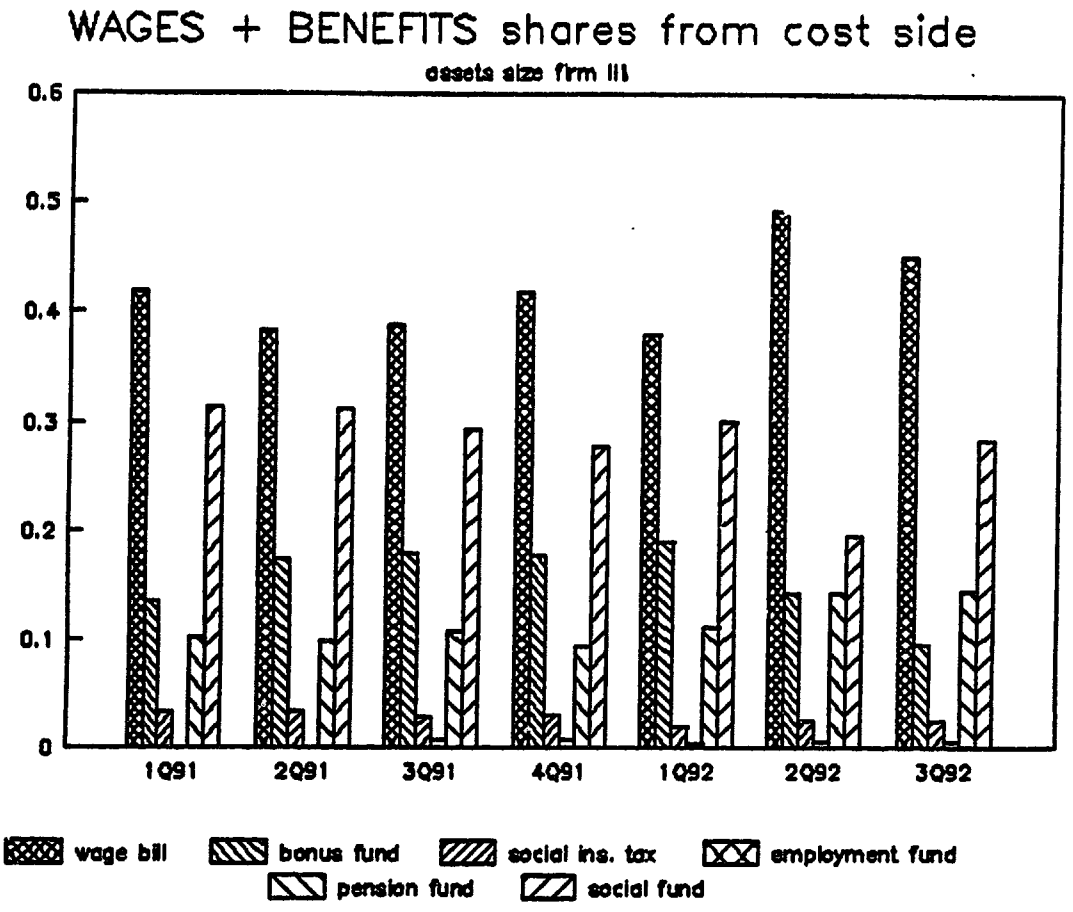

WAGES + BENEFITS shares from cost side
assets size firm II
0.6
0.5
0.4
0.3
0.2
0.1
0
1Q91
2Q91
3Q91
4Q91
1Q92
2Q92
3Q92
wage bill
bonus fund
social ins. tax
employment fund
pension fund
social fund

Fig 22


WAGES + BENEFITS shares from cost side
assets size firm III
0.6
0.5
0.4
0.3
0.2
0.1
0
1Q91
2Q91
3Q91
4Q91
1Q92
2Q92
3Q92
wage bill
bonus fund
social ins. tax
employment fund
pension fund
social fund

in total benefits. Clearly, a more satisfactory measure might be achieved by attributing shadow prices. Given the volatility of prices and the uncertainty with respect to the levels at which key prices are likely to settle, we do not attempt this task.

6.2: Housing

Housing programmes provide the single largest component of benefits programmes. Though by no means universally provided, we found that a significant minority of firms -- over 50% of the sample -- had some form of direct housing programme. There seems to be a clear positive association with firm size but, save among the smallest firms, housing programmes were offered by a majority of enterprises. In all, over 28% of the total labour force was housed in firm property and this share rose to over 75% in the case of the second largest firm size class (see Table 11).

While housing has normally been financed through the Social Fund, the survey indicates some recent departures from this practice. Firms with large housing programmes have tended to shift to financing directly from profits or by borrowing. This is likely to reflect in part some of the risk sharing that firms are creating for new construction projects.

Figure 24 is instructive for showing a significant decline in the real value of housing outgoings for firms. Construction by firms across most firm size classes fell by around 60% when comparing 1991.1-3 with the same period of 1992. We also observe a fall in maintenance charges which, considering the limited scale of the intervening privatisation of housing -- barely 2% of tenants had privatized their apartments by November 1992 -- largely relates to the same housing stock. Over the same reference period, the decline is less than 30% and is not uniformly distributed over size classes. Putting the two expenditure items together, the result is a halving of housing sector outlays by firms comparing the first three quarters of 1991 with 1992. The fall is considerably steeper among the firm size classes with higher frequencies for housing programmes. Relating housing outlays to total benefits expenditures captured by the firms' Social Fund, we again see a reasonably significant reduction in the share. For all firms housing expenditures declined from around 45% in 1991.1 to under 20% in 1992.3. A similar decline in the share of gross profits -- from 9% to 5% -- can also be observed.

The motivation behind the fall in housing expenditure is not difficult to fathom; indeed one might erhaps have expected a sharper decline. Rents remain regulated and yield derisory current incomes. Moreover, while housing programmes were commonly built up in the Soviet period to reduce labour mobility, this is certainly not an objective they attain at the present. We can see, in fact, that nearly 40% of current tenants in the housing stock of the survey were not current firm employees. This share was moreover rather stable across all firm size classes with significant housing stock.

Fig 23

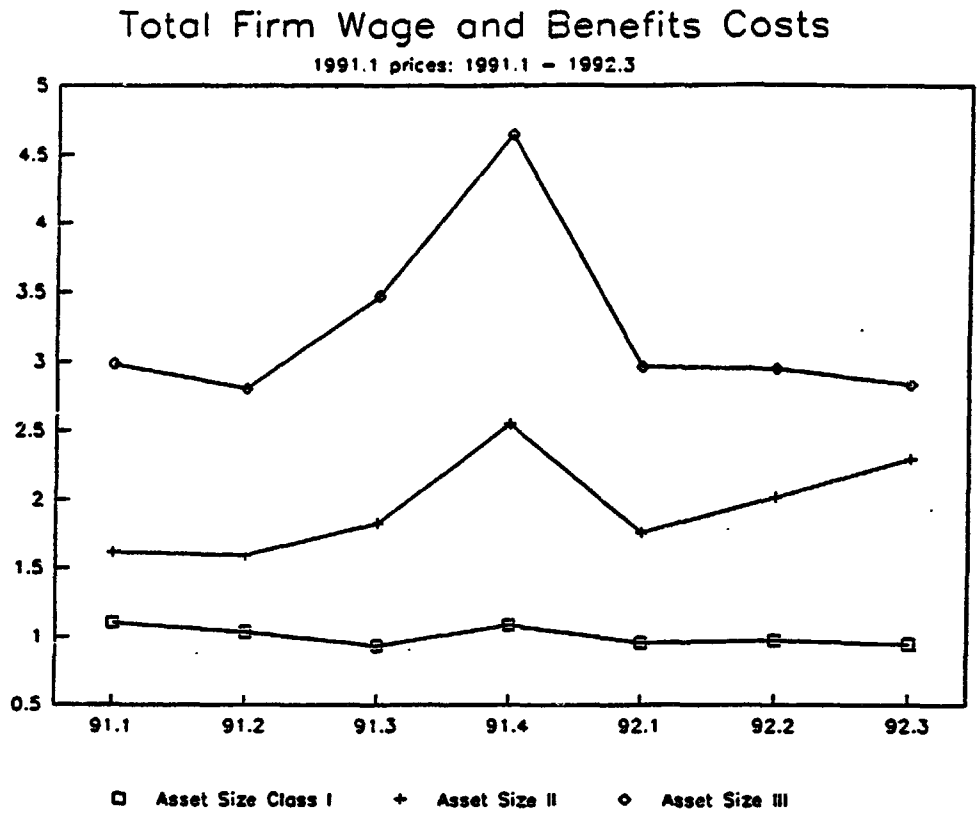

Total Firm Wage and Benefits Costs
1991.1 prices: 1991.1 - 1992.3
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
91.1
91.2
91.3
91.4
92.1
92.2
92.3
Asset Size Class I
Asset Size II
Asset Size III

Fig 24

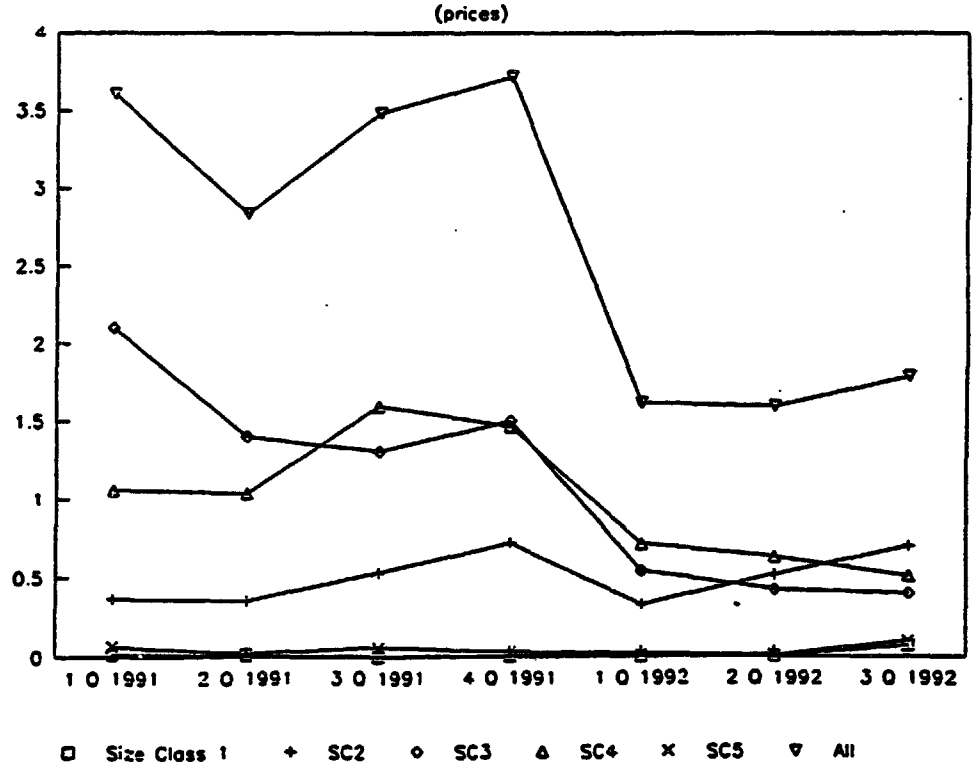

Total Real Housing Expenditures
(prices)
4
3.5
3
2.5
2
1.5
1
0.5
0
1 0 1991
2 0 1991
3 0 1991
4 0 1991
1 0 1992
2 0 1992
3 0 1992
Size Class 1
SC2
SC3
SC4
SC5
All

Table 11: Housing Programmes by Firm Size

	Firm Size Class				
	1	2	3	4	5
Type of Programme:					
Permanent	2	5	8	5	1
Temporary	1	3	4	3	0
Housing Loans	0	6	4	4	0
No Programme	7	3	1	1	2
% of workforce housed	0	13.3	26.7	75.4	2.0
% of non-firm tenants	0	37.7	36.9	39.4	45.4
% of tenants that have privatised	0	3.3	1.3	1.1	6.1

Source: World Bank Survey

It is interesting to estimate the likely effect of reducing rent controls. Recent figures suggest large negative shocks to current income given the extremely low base from which adjustments will be made. Fortunately, the survey allows a rough estimate of the likely impact of rent adjustments in terms of wage income. As a base, we assume that the objective of the firm is simply to close the financing gap generated by maintenance expenditures. Bearing in mind that such outlays were 50% lower in 1992.3 than in 1991.3, we can calculate that it would require an additional rental payment by each current tenant of around 320 roubles per month in order to cover maintenance costs for 1992.3. The figure doubles if we assume that 1991.3 expenditures were a more appropriate target. This implies that between 15-30% of average wages (excluding benefits) would need to be directed at housing rents simply to cover maintenance.

We also get some idea of the likely direction of change for housing variables. In this regard, we can highlight two factors. First, housing benefits were unambiguously the last benefit that workers were prepared to lose, but inversely a benefit that some firms were ready to shed first. The picture on the firm side is ambiguous because housing construction programmes potentially offer high rates of return and current revenue streams -- either by direct sales of new housing stock or increased commercial lettings[13]. This ambiguity further shows up in the responses to questions about future plans for housing. Nearly 50% of responses indicated that housing programmes would be sustained at comparable levels to the current. Only 3 firms had already suspended their housing programme with a further 2 reporting it as an intention. A further 30% (7 firms) intended to scale back. Finally, in just over 50% of cases housing stock had already been or was in the process of being transferred to local authorities. The decision appears unrelated to current firm profitability but is clearly associated at the level of the firm with the decision over new programmes. Those firms with continuing or new housing programmes tended to retain previous housing stock, possibly cross-subsidising it through new starts.

In short, the survey results indicate a scaling back of housing construction and maintenance. There is a clear and sharp fall in the share of housing in total Social Fund outlays. But the picture is by no means uniform. Housing starts remain reasonably high as sales and more commercial lettings offer the prospect of reasonable current income streams. There is also some evidence that firms are using new programmes to subsidize the substantial outgoings on existing programmes arising primarily via rent controls. Such programmes tend to be primarily financed outside the Social Fund, commonly through borrowing.

---

[13] See the case of TsAGI (Box 2) reported in Commander, Liberman and Yemtsov (1993a).

7: Conclusion

Drawing on a small survey-generated database but checking those findings against information available from more aggregated series, we have attempted to chart the behaviour of some Russian firms over 1991 and 1992. The findings are revealing. Large negative shocks to output for a significant number of firms and branches can be observed in 1992. These shocks came from both demand and supply sides and were fairly common. Aggregate rather than sectoral shocks appear to have dominated. This was not generally associated with a collapse in gross profits. Indeed, the most striking result is that industrial and trade sector firms' profits stayed remarkably buoyant in real terms. There is clear evidence that firms with market power have exercized that muscle by rapid adjustment of producer prices. The inverse association of the changes to output and profits for firms with market power suggests that such firms have tried to maintain or increase their mark-up. Certainly, we find no evidence of a strategic change in the underlying pricing rule.

Reasonably robust financial performance did not characterize the budget-financed entities in our sample. Their implicit call on public financing was probably significant through 1992. But for the bulk of firms in the sample, the main impression is of relative stability in earnings and in the distribution of revenues over the various assigned funds and expenditure titles. We do not find any substantial evidence of decapitalization, at least through greatly enhanced borrowing or predatory wage settlements. Likewise, the shift upwards in interfirm arrears is less large than we might have expected from the aggregate numbers.

Despite the downward pressure on output and the absence of major growth in any of the surveyed firms, employment adjustments were limited. That is not to say that employment transitions were infrequent, but that net separations were relatively restricted given what we know about the size of shocks to output and the continuing presence of labour hoarding. Revealing is the fact that firms continued to hire at significant rates over 1992. This can most likely be explained in terms of fixed factors. It is also obviously related to the continuing high rates of local turnover in Russian firms. In short, firms have discarded little labour and mostly ancillary and female staff.

There is evidence that some firms have chosen to place workers on minimum wages, reducing labour costs quite significantly but with the result that fall-back income is provided within the firm rather than through the labour offices. Increased per capita contributions for the Employment Fund would obviously be one mechanism for breaking this practice. But the larger question relates to the efficiency of fall-back payments through the firm, the implications for job search behaviour and any significance

difference in the likely discount rate to be applied to the human capital -- and hence ultimately to the efficiency of job search -- from paying de facto unemployment benefits inside rather than outside the firm. In the absence of adequate mobility, for example, and other labour market rigidities, the inside-firm option may have merits that in other settings would not be obvious. In summary, the core of the Russian industrial firm -- the so-called production worker -- remains untouched. The clear implication is that a large 'employment overhang' existed at the end of 1992. The next phase of transition will be suitably difficult.

The wage path revealed in the survey responses matches well with the aggregate information. Cut sharply back by the large price shock of January 1992, real statistical wages then consistently climbed through the remainder of 1992 back toward early 1991 levels. Relative wages began to move somewhat but to a smaller extent than might have been expected. The inertia in the system should not be ignored.

Benefits provided by firms are shown to account for large shares of labour income and firm costs; to the order of 40/45% in the latter instance. There are signs that firms have tried to squeeze benefits -- particularly in housing -- but that Social Fund allocations have generally stayed constant in the levels and shares. Housing programmes are already being divested and annual maintenance outlays curtailed. Yet simply to cover annual maintenance charges would require raising current rents to levels equivalent to between 15/30% of 1992.3 wages.

The overall conclusion that we derive from this small survey exercise is that matters on the ground are both more diverse and perhaps rather more original than conventional economic intuition might have led us to believe. Firms did suffer for the most part negative shocks to production in 1992 but this was not generally translated into comparable declines in profitability. Of course, the survey is localized and does not really cover the large uni-firm towns or military-industrial complexes that are elsewhere reported to be in widespread financial distress. Further, the 1991 comparators suggest that average sales and gross profits in our sample were high and this likely results in a more positive picture of firm financial results. But the results drive home the sad observation that what is true in some sense for the firm may clearly be deleterious for the economy at large. Rapid adjustments to product prices and a stable pricing rule, combined with a strong acceleration in nominal wage claims and an accomodating monetary policy, are key ingredients for high and sustained inflation.

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Appendix Table 1

BY BRANCH

BY SIZE EMPLOY	Metall.	Chemic.	Machin.	Bld.Matr.	Light	Food	Agro	Constr.	Trade	Science	TOTAL
Vry Small	0	0	3	1	1	1	1	2	1	0	10
Small	1	2	2	0	2	0	0	1	2	1	11
Medium	1	0	2	2	2	0	1	1	0	1	10
Big	2	0	1	1	1	0	0	0	0	2	7
Very Big	0	0	0	0	1	1	0	1	0	0	3
TOTAL	4	2	8	4	7	2	2	5	3	4	41

BY BRANCH

BY SIZE FIX.ASSTS	Metall.	Chemic.	Machin.	Bld.Matr.	Light	Food	Agro	Constr.	Trade	Science	TOTAL
Small	0	1	2	2	2	1	1	3	3	1	16
Medium	1	1	4	0	2	1	0	1	0	3	13
Big	3	0	1	1	3	0	1	1	0	0	10
Unclaas			1	1							2
TOTAL	4	2	8	4	7	2	2	5	3	4	41

Source: World Bank Survey

Appendix Table 2

	Legal form of enterprises(property)						
	Federal	Rep.(obl)	Municip.	Col.	Rent.	Cooper.	JntStock	TOTAL
BY EMPL. SIZE *								
Vry Small	1	4	3	2	0	0		10
Small	3	5	0	1	1	1		11
Medium	4	3	1	0	1	1		10
Big	5	0	0	0	0	2		7
Very Big	0	1	0	1	0	1		3
TOTAL	13	13	4	4	2	5		41

	Legal form of enterprises(property)						
	Federal	Rep.(obl)	Municip.	Col.	Rent.	Cooper.	JntStock	TOTAL
BY BRANCH								
Metall.	3	1	0	0	0	0		4
Chemic.	2	0	0	0	0	0		2
Machin.	1	4	1	0	1	1		8
Bld.Matr.	2	0	0	1	0	1		4
Light	0	3	2	0	0	2		7
Food	0	2	0	0	0	0		2
Agro	0	0	1	0	1	0		2
Constr.	1	2	0	2	0	0		5
Trade	1	1	0	1	0	0		3
Science	3	0	0	0	0	1		4
TOTAL	13	13	4	4	2	5		41

		Ttl number
* Staff: 78- 350	Vry Small	10
'351-700	Small:	11
'701-900	Medium:	10
'901-1500	Big:	7
>1501	Very Big:	3
		41

Source: World Bank Survey

Appendix Table 3

Share of social programmes at the local level

		MOSCOW	MS.OBLAST	OTHER	TOTAL
Enterpr.which have					
HOUSING:	None	14	3	0	17
	Small	6	7	3	16
	Compartoloc.	2	3	0	5
	High	0	3	0	3
KINDERGAR	None	14	7	1	22
	Small	3	3	1	7
	Compartoloc.	4	3	1	8
	High	1	3	0	4
HEALTH	None	13	8	3	24
	Small	8	5	0	13
	Compartoloc.	1	3	0	4
	High	0	0	0	0

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