

RUSSIAN ENTERPRISES
ON THE PATH OF MARKET
ADAPTATION AND RESTRUCTURING

LAXENBURG, 1-3/11/1996

IIASA

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PROGRAM FOR THE WORKSHOP ON

**Russian Enterprises on the Path of
Market Adaptation and Restructuring**

Wodak Room, IIASA, 1-3 February 1996

Thursday, 1 February

10:00 REGISTRATION

10:30 OPENING OF THE WORKSHOP

- Peter de János, Director, IIASA

10:45 INTRODUCTORY REMARKS: BACKGROUND FOR THE WORKSHOP,
EXPECTATIONS OF FORTHCOMING DISCUSSIONS

- Alexander Bim

SESSION I: Key-Note Presentations

Chair: Alexander Bim

11:15 ENTERPRISES IN TRANSITION ECONOMIES AS AN OBJECT FOR
MACROECONOMIC POLICY

Anders Åslund

11:35 Discussant: Peter Rutland

11:45 General Discussion

12:30 Lunch

14:00 THE ROLE OF FIRMS IN ECONOMIC GROWTH

Richard Nelson

14:20 Discussant: Valery Makarov

14:30 General Discussion

Thursday, 1 February continued

SESSION II: Models of Enterprise Behavior Under Market Transformation

15:00 THE TRANSITIONAL MODEL OF BEHAVIOR OF RUSSIAN INDUSTRIAL ENTERPRISES (on the basis of regular enterprise surveys during 1991-1995)
Tatiana Dolgopiatova

15:20 Discussant: Silvana Malle

15:30 General Discussion

16:00 Coffee Break

16:30 TYPOLOGY OF RUSSIAN ENTERPRISES' ADAPTATION TO NEW ECONOMIC REALITIES
Igor Gurkov

16:50 Discussant: Peter Havlik

17:00 General Discussion

18:00 Social Event

Friday, 2 February

SESSION III: Enterprises and Markets

Chair: Valery Makarov

09:00 ORGANIZATION OF MARKETS AND ENTERPRISE RESTRUCTURING
Barry Ickes and Randi Ryterman

09:20 Discussant: Richard Nelson

09:30 General Discussion

10:00 INDUSTRIAL ENTERPRISES IN THE MARKETS. NEW MARKETING RELATIONS, STATUS AND PERSPECTIVES OF COMPETITION
Andrey Yakovlev

10:20 Discussant: Irina Starodubrovskaya

10:30 General Discussion

11:00 Coffee Break

Friday, 2 February continued

SESSION IV: Financial Problems of Enterprises in Transition

**11:30 DYNAMICS OF FINANCIAL SITUATION OF THE INDUSTRIAL ENTERPRISES
(1992-1994)**

Igor Lipsitz

11:50 Discussant: Mark Schaffer

12:00 General Discussion

12:30 Lunch

Chair: Pekka Sutela

**14:00 DETERMINANTS OF FINANCIAL CHARACTERISTICS OF THE ENTERPRISES
UNDER TRANSFORMATIONAL CRISIS**

Andrey Klepach

14:20 Discussant: Barry Ickes

14:30 General Discussion

SESSION V: Privatization and Enterprise Performance

**15:00 PRIVATIZATION VERSUS COMPETITION: CHANGING ENTERPRISE
BEHAVIOR IN RUSSIA**

John Earle and Saul Estrin. Presented by John Earle

15:20 Discussant: Tatiana Dolgopiatova

15:30 General Discussion

16:00 Coffee Break

**16:30 OWNERSHIP, CONTROL OVER THE ENTERPRISES AND STRATEGIES OF
STOCKHOLDERS**

Alexander Bim

16:50 Discussant: Merton J. Peck

17:00 General Discussion

**17:30 ENTERPRISE PERFORMANCE IN TRANSITION ECONOMIES:
RUSSIA IN A COMPARATIVE PERSPECTIVE**

Mark Schaffer

17:50 Discussant: János Gács

18:00 General Discussion

18:30 Bus to Vienna

Saturday, 3 February

SESSION VI: Enterprise Social Assets Divestiture and Restructuring
Chair: János Gács

09:00 THE INSTITUTIONAL FRAMEWORK FOR ENTERPRISE SOCIAL ASSET
DIVESTITURE IN RUSSIA: THEORY AND PRACTICE
Mari Kuraishi

09:20 Discussant: Pekka Sutela

09:30 General Discussion

10:00 RESTRUCTURING OF ENTERPRISE SOCIAL ASSETS: TRENDS, PROBLEMS,
RATIONAL SOLUTIONS
Lev Freinkman and Irina Starodubrovskaya. Presented by Irina Starodubrovskaya

10:20 Discussant: John Earle

10:30 General Discussion

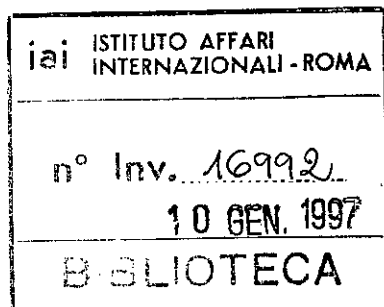
11:00 Coffee Break

**SESSION VII: Principles and Framework of a Potential Joint Research on
Enterprise Behavior**
Chair: Peter de János

11:30 GENERAL DISCUSSION. WORKING OUT THE RECOMMENDATIONS.

13:00 End of Workshop and Lunch

14:30 Bus to Vienna



employees, they do it within restricted limits. Together with unwillingness to give rise to social conflicts this policy is supported by taxation system of salary, different types of the administration's contract obligations to collectives while carrying out privatization, by agreements with local authorities which in return for give different kinds of subsidies.

Last (1995) empiric data demonstrate how the main survival model began to evolve step by step. In bulk industrial enterprises turn from passive survival to strategies based on short-time restructuring (changes in economic links, output mix, etc). Some enterprises' activities show priority of long-term decisions over current adaptation.

Processes of privatization, which went on under strong influence of directors' corps, strengthen their control over enterprises. At the same time mass setting up of joint-stock companies and privatization created starting base for further cardinal changes, let it be redistribution of property right or rearrangement of management. But these changes can take place only under conditions of concrete social and economical relations, appropriate macroeconomic policy, including stable rules and hard budget constrains of enterprises' activities.

2. Enterprises' main strategies of behavior (survival)

As regards the degree of prevalence the strategies are divided into unique and typical. The unique ones deal only with certain enterprises thanks to position on the market, line of production or "lucky chance". The typical strategies are accessible to the overwhelming majority of enterprises. Let us in brief consider the most typical strategies.

2.1. Enterprises strategies in changing institutional environment

In the field of institutional reforms the most typical strategy for survival is the participation in the privatization with emphasis on strengthening of management supervision and closing from outside owners. Relatively new, arising strategy is the attraction of outer owners for production's development (as a rule - without losing supervision). The strategy based on the interlacing of old and new relations is "the parasitism" on state ownership, including usage of buildings, premises, equipment, stocks of raw materials, contacts with managerial bodies and banks in order to improve the position. Different kinds of state enterprise's transformation into companies of alternative economy where in fact goes a part of ownership can also be referred here. According to our estimates from one fourth to one third of enterprises use different forms of ownership's disintegration.

Management's intentions and practice as far as possible to concentrate ownership are also confirmed by the data about sources of shares redemption at the enterprises which we surveyed in the full swing of mass privatization process. See table 1.

In the course of voucher privatization and secondary ownership redistribution the transition of the major share of equity to insiders has become the main tendency. Also shares redistribution within collective is going for benefit of director and his "team". At the same time outsiders (private Russian business, foreign firm, etc.) could obtain property rights at some enterprises. For the present they extremely rare succeed in receiving supervision over equity. These tendencies can be confirm by survey data concerning shares distribution by the end of 1995. See table 2.

For organizational reforms the most typical is the strategy of enterprises' entering vertical structures (corporative groups) reorganized from branch structures or set up a new ones. Moreover there grows the striving of many enterprises for to follow the opposite strategy as well - to be independent. Data in the table 3 partly characterize correlation of these types of behavior. The less spread strategy - the forming of horizontal associations - is within the framework of new relations. Now industrial vertical structures as a rule have

been reorganized into joint-stock companies, holdings and interact with enterprises on the basis of share-crossing ownership.

The typical strategy within the interaction with authority local or federal is lobbying, the pressure in order to get financial support, indirect subsidies, and non-financial assistance for favorable working conditions, investors' attraction etc. as well.

2.2. Enterprises at the commodity markets

During market adaptation of enterprises there formed such contradictory strategies as catering for stable economic ties especially as regards resources' suppliers and at the same time - promoting active sales policy including search for new markets, restructuring of output mix, attraction of new consumers. At the same time intermediaries are used within restricted limits. Some enterprises try to organize their own system of products' realization, including firm shops and marketing centers. Price keeping under strengthening competition has become step by step one of the important part of sales policy.

While restructuring of output enterprises try to orientate in advance the output on the concrete consumer or to find solvent consumers capable of prepayment or payment in cash. At the same time separate enterprises work out sales strategy paying attention not only to the partner's today's financial prosperity, but also to perspectives at the market. Under conditions of the domestic market's contraction the enterprises actively try to organize sales to the former USSR states and other foreign countries.

Our last surveys data give evidence that enterprises have enforced their attention to supply issues and actively began to change economic links with suppliers, to invest into various types of vertical integration. The role of intermediaries has begun to increase in supply and in sales especially.

Data about information channels and organizing forms of setting up economic ties concerning first two reforms years are given in table 4. Measures for supply improvement are characterized by table 5 information. Indices of tables 6 and 7 illustrate some changes in market policy.

2.3. Enterprises at the labour market

For first reforms years the overwhelming majority of managers in all our surveys pointed out the orientation to preserve collective as their main goal. Just that strategy for the collective's preservation determined labour market policy which is expressed in known private tactics: preservation of the employees' backbone, search for additional works, squeezing out of useless workers through voluntary leaving etc. This strategy leads partly to the employees' wage cut. Avoiding forced dismissals different measures are undertaken at the enterprises in order to reduce working hours, thus rise is given to considerable latent unemployment. At a number of enterprises some workers who in fact don't work there regularly get minimum salary which is some kind of unemployment fees.

Subjective statistics of the dismissals' processes at enterprises during the first two years of reforms are illustrated by the results of poll in 1993 in table 8. From the second part of 1994 enterprises' labour force reduction is going more quickly. But as a rule it is a consequence of formally voluntary employees leaving and not a lay-off results.

2.4. Enterprises' adjustment to financial constrains

Enterprises have already felt toughening of financial constrains and are trying to survive showing both strategies of market adaptation and different ways to soften these constrains.

In general attitude towards financial resources has changed. Money is needed now, people try to get or to earn it. Without any agreement directors said the same words: "If you have money you will buy anything you need."

Enterprises try to influence correlation of expenses and incomes, trying first of all to increase the last ones. Here we can see different forms of rent-seeking behavior: getting subsidies, privileges and benefits, erecting protecting barriers, local markets regulation etc. Here also belongs building up arises as the strategy for overcoming demand restrictions in hope that they can be shifted off at least partly on state administration bodies. For all this delays in payment of federal and local authorities' orders, which "morally justified" enterprises' management's deliveries on debt, made a sufficient direct and indirect contribution to arises' crisis. There should be also mentioned adaptation on the credit resources' market (participation in setting up banks, maintenance of "good" relations with banks), which allows to count on selective softening of conditions by banks and other financial institutions.

At the same time enterprises in their activities use strategies of behavior which allow to stabilize incomes and reduce expenses. Inverse link "finance - production" begins to work. This link is becoming the determining outline for making some decisions which was out of question in the old system of management of state enterprises, was not typical for their traditional behavior. Forming the production and sales policy managers take into consideration demands of financial state' normalization. In production there goes on changing of the output mix for products which are salable, more profitable and can be turned over quickly. But the opposite side of such processes is the decline in products' technical level and other regressive changes in the output structure.

As for the production costs at first their level was just included in the price, then gradually some enterprises began to save costs trying to find new suppliers or to organize on their own production of completing units and reduce transport costs. For the time being the main attention is paid to outer factors of costs (relations with suppliers first of all) and only very few ones deal with inner factors - improving of technology and making real steps to save power inputs.

Handing-over of social assets to local authorities has become more active. In 1995 enterprises show high degree of interest in getting rid of social objects or in commercialization of their working conditions.

Another specific strategy of enterprises is their leaving controlled financial turnover. Work with cash money becomes more and more widespread. It doesn't only allow to "solve" tax problems but also guarantees payments. That's why cash turnover at the deliveries to new or once-only consumers is used more often, first of all to commercial structures and private businessmen. Different kinds of barter forms are still used widely. It should be stressed that barter has exhausted itself because of lack of goods, it is changed by barter caused by lack of payment facilities, barriers in payments with the USSR former states and other foreign countries etc. If earlier barter was the evidence of dictates of a supplier who usually solved his own supply problems now a consumer takes over the initiative of barter' usage. A producer who doesn't have or doesn't actively look for other consumers is forced to agree to burden of realization of another's products. It's appropriate to underline that 65% of enterprises surveyed used barter to solve supply problems in 1995 (see table 5).

Just during the period of relative strengthening of monetary and budget policy such forms which are not kept within a priori theoretical schemes are very widely spread.

2.5. Development strategies: enterprises' investment activity

Gradually management begin to understand dependence of financial state on sales restrictions and the necessity of being adopted to them through production restructuring and active investment policy. Enterprises in the main exhausted adaptation reserves

without sufficient investments. It urges enterprises for their survival on forming strategical plans and accordingly on looking for sources of their realization.

Enterprises' management pays more and more attention to investment issues. Enterprises carry out works for forming investment projects (business-plans, ideas), for looking after potential investors and for contacts with them, for interaction with federal and local authorities and branch associations. Firms rendering information and consulting services as well as banks are sometimes used as outer consultants. In table 7 there are given data showing enterprises' actual participation in main investment areas in 1995. One can see that only a little more than half enterprises managed to implement their investment activities. One third of these enterprises continues to invest in non-production objects.

The main hinder of investment programs' carrying out is lack of funds. Industry is an unattractive sphere for investment of capital and enterprises don't possess sufficient means for large-scale investments. According to the interrogations' data it's possible to estimate accessibility of various sources of investments for enterprises in 1995 and in the first half of 1996. Data are evidence of unfavorable investment climate: over 40% had no sources of investments while the access to outer sources is rather limited. Only 2,5-5% of enterprises managed to attract means on micro level and participation of bank capital in industry's restructuring is very rare.

But fulfillment of investment programs is also limited by other factors. Many enterprises' inability to work "for the market", investment projects' low quality, striving for wide and unjustified diversification etc. are evident. Aiming at capital's "closeness", striving for use outer means without waiving control over an enterprise are typical for most managers. But some directors demonstrated also forming of considered strategy of the enterprise's work and readiness to waive control for the sake of large-scale investments. But such enterprises in industry is a minority for the time being.

3. The main determinants of transitional behavior features

Typical strategies for enterprises' survival are based in the main partly on traditional economical relations revived in new forms and on using new market relations. This behavior has a transitional character and is caused by number of reasons.

Economic theory suggests well-known paradigm "market structure-conduct" for study enterprises' behavior determinants which deals with state policy (in fact antitrust legislation mainly) and features of the enterprise' market. Such framework for analysis is not quite acceptable for the transition economy as market system economy in fact is not exist, and limited as focus attention on external conditions.

Undoubtedly enterprise's behavior is under the influence of market characteristics and working conditions part of which "is inherited" from the past: level of technology, wear of equipment, dependence on the partners from CIS or foreign countries etc. The character of manufactured products is also important: investment, intermediate, consumer, for military purpose. These parameters are the subject of concrete analysis which allow to talk about branch and individual differences.

At the same time there are more deep determinants of economic behavior caused by formed and gradually transformed system of social and economic relations. There are two groups of factors in the transition Russian economy which caused emergence of such model of behavior. Their role turned out to be more important than direct influence of measures of macroeconomic policy which some liberal economists counted on.

External conditions - it's mainly the absence of market environment, competition mechanisms and market infrastructure (institutional and information ones). Existing economic system has stopped to be a command-administrative one, but it is premature to call it market one as well. Moreover, the regulation of a number of economic sectors by federal and local authorities is still preserved.

Along with "the system" reasons, a number of other external factors also produce a certain impact. One of them is the practical policy of the government that gave precedents of inconsistency, "weakness" in the relations with the directorate and workforce collectives. As this took place, financial injections in economy were mainly effected in an unsystematic manner and were a mere response to the pressure but not a thought over industrial policy. Recently, instead of direct subsidies, the first place was occupied by their indirect forms. The latter are related to creating protectionist barriers guarding domestic manufacturers from foreign competition. At the same time, many privileges have moved to the regional level where they are granted (as far as possible) by the local authorities, in their turn actively trying to receive and successfully receiving "aid to the regions" from the state.

The second group of factors forming the model of economic behavior of the enterprises reflects internal determinants proper caused by institutional transformations. Here the most important role is played by factual "non-state" character of governmental property, vagueness of the property rights. The traditions of pre-reform Soviet economy with its mighty bureaucracy and weak law supported by the system of non-formal relations should be also noted.

The role of corporative structures is still great. These structures have been reorganized from the former ministries of the branches of industries and their departments. Many enterprises are still included in such structures. That allows them to receive assistance in the field of supply and distribution, foreign economic activities and - what is especially important - financial support of corporative financial institutions as well as the lobbying of their interests in the top echelons of power. In return for that the enterprises are supposed to follow certain rules often contradicting the market aims. In the corporative structures the formed links and sources of business information are preserved.

"The directors' ethics" affecting the economic behavior of the enterprises is becoming a non-formal part and the basis for preservation of the corporative structures in the industry. Such ethics presupposes certain norms in the relationship among directors of "a certain circle". This circle is not obliged to be a component part of any formal structure. The orientation for preserving the work collective can be considered as an element of the directors' ethics, though such orientation has an independent value.

Despite of financial problems it was normal for many directors to sale products to established customers on preferential basis (prices discounts, sales in debt, without payment in advance etc.). And their attitude to new commercial structures was watchful enough. However financial constraints gradually loosen these rules reducing "circle" by that traditional partners which actively help the enterprise. Cooperation of state-run enterprises with new private business in market policy and investment activities has become quite permissible.

Within orientation to survival, the special place is occupied by the target to preserve basic work collective that has proved its vitality. This situation can be interpreted as forming informal agreement between administration (director, narrow group of superior officers) and employees. The latter preserves the jobs and administration reinforce its control over the property in the process of privatization. This creates prerequisites for joint pressure on the State in order to obtain financial support. This situation has a rich tradition in labour relations, which is supported by "bargaining" among their agents. Managers and employees had common interests trying to implement economic independence through monopoly position in markets. Identity of purposes of working collective and company's management created a unity in administrative system destruction.

Another stable element of the enterprises' behavior is an orientation for state paternalism. In the transition economy it is mainly reflected in the aspiration to have property rights without economic responsibility, to receive access to the subsidies in order to preserve the enterprise and vacancies. The traditions of paternalism have penetrated the whole society. They are still strong, though they are being eroded. They are descending from the state level "down" to the regional level, to large industrial structures and,

probably, to financial and industrial groups. To some extent, they are preserved within the framework of an enterprise and are related to the interrelationship between administration and workers. The forms of support are being modified and besides direct privileges include various indirect measures, in particular, related to the market regulation and protection from the competition, including the ones applied in labor market.

When reforms began there were a lot of debates concerning monopolization in Russian industry. Many economists interpreted enterprises behavior as monopolistic one based on his external features - drop in output accompanying by increase of prices. We suppose enterprises behavior should explain by other factors. It couldn't be described by microeconomic monopoly model where profits maximize using dominating in the market. "Monopolistic phenomena" of Russian enterprises' behavior connect more with pre-reform development traditions and survival orientation then market structures. So this orientation created behavioral stereotype when changes in demand led to output decrease (or production partly continued in forms of "work for warehouses" or deliveries for insolvent customers). Costs due to idle time of equipment and employees included into product prices. As a result drop in output led to price growth, but established customer was agree with it hoping to get state financial support and preferences from old suppliers. Of course monopoly position of some manufacturers helped them to preserve markets.

An important role in the forming of behavior model was played by the information and organizational crisis created by the collapse of the previous system of control. Economic behavior is based not only on the certain data on suppliers, consumers, prices but on the generalizing signals allowing to judge the quality of goods, reputation of the partner firm, authority of the trade mark, etc. In fact, the enterprises possessed the information concentrated only in the system of traditional economic links. That fact has predetermined the significance of the latter in the economy of transition. Although the measures on the reforming these links (including organization of marketing and advertising) are being taken, at the micro level the information is still insufficient for the active policy of manufacturing and links' restructuring.

Information shortage is also one of the reason for overestimation of monopolization degree in Russian economy. Lack of data about potential suppliers and customers create illusion of monopoly position for existing ones.

Informal relations and interactions became amortization of lack of information. But their role is wider - they insure against lack of development of legislative and mechanisms of legal regulation. At the same time they are the traditional component of Russian economy which fastened mechanism of command system during pre-reform period. Informal interactions run through management system, supporting mechanisms of hierarchical haggling, and part of them served shady economy.

Informal relations are preserved in transition economy, but they are a little bit modified replacing or helping market interactions. These relations exist in branch corporative groups, in the activities for getting financial support. They develop and become stronger in the regions where they are mediated by interaction of regional elites. On the personal level this interaction in the main formed in the past (board of directors of state and privatized enterprises has been preserved and party and soviet officials continue in the main to work in local authorities bodies) involving gradually new business circles as well. Regionalisation of economic life and regions' "closing" at the property's redistribution become stronger. Change of motives with preservation of the main forms of activity is typical for shady economy proper: latent production, corruption, pressure in order to get privileges. It's not needed to reduce production capacities and to find access to deficit, but there are stimulus to reduce costs and to increase real incomes. Shady activity is stimulated by striving for to avoid taxation including social payments.

Despite that the model described by us prevails there are sufficient differences in behavior of separate enterprises. To our mind it's due to subjective factor. Just the personality of the enterprise' director - his qualification, former experience, stereotypes of

behavior and motivations determined to a large extent character of changes. In the theory when goals of firm are identified with managers' goals its behavior is considered to be discretionary. The reasons of such behavior are connected with insufficient competition on the commodity market and on the market of hired labour of higher managers, with weakness of corporative control through financial markets, with ineffective system of stimulus and managers' responsibility. All these circumstances are in full typical for Russian economy. It's typical for it lack of former mechanisms of administration control, destruction of regulation even for enterprises which remained state-owned. Only mechanisms of informal relations have been preserved, they influence managers' motivations, ways of their realization in the activities of enterprises.

4. The transitional model's evolution: from survival to restructuring?

The comparable analysis of strategies of enterprises' behavior in the dynamics allows to draw some conclusions of general character as regards the formed transitional model of behavior and its evolution.

One can see that the ruling, typical model of behavior is modifying. Conservation of economic links is now not first and foremost. These links are mostly maintained there where costs accompanying the break are higher than conservation's costs. Managers don't any longer consider the working collective's preservation to be their leading aim, though the sphere of working relations doesn't usually undergo an active influence. The role of independent adaptation to financial restrictions has grown in the survival behavior, while aiming at getting financial support from the state has weakened because it's hardly probable. But the orientation of enterprises' management on the strengthening of its control over their enterprise is still a dominating one. There are prevailing integration tendencies to preserve an enterprise as an integrity and as a consequence - often ineffective diversification aspirations.

The restructuring tendency has accordingly become more visible in the activities of many enterprises. This tendency is a result of both passive adaptation and active deliberate management policy. Let us point out the newest and the most important moments: elements of an active policy for restructuring of economic links in supply; resolute actions and/or intentions for getting rid of social assets; more consistent sales policy on which changes in the production orientate directly; the process of leaving of excessive personnel is getting more intensive.

At the present moment the short-term restructuring prevails, while enterprises' efforts are more bending to activities' outer sides than to inter organization and technological processes. But the overwhelming majority of enterprises understood the necessity of an active investment policy as a necessary element of survival, many enterprises make concrete steps for looking after investors, concentration of their own means for investments and forming investment projects though often unjustified and ineffective. In this connection there appear examples of redistribution of property rights in the favour of outer investors. Aiming at capital's "closeness" is getting diffused, though enterprises' management controls processes of capital's redistribution and intends to do it in the future as well. These processes have and are going to have mostly non-market forms limiting themselves to regional level.

Data are evident of strengthening of economic relations' "regionalization". Actions for restructurisation of economic links as well as the formed type of investment activity with taking into consideration local authorities and well-known entrepreneurs have a bent for it. Together with regional restriction of labour market there strengthens territory segmentation of commodity and resource market favoured by grow of transport charges. "Market of capitals" is evidently getting a regional character which is partly under the control of local authorities. Their policy exert in many respects also outer capital including the foreign one. Let us note for the sake of justice that in many towns especially in the

small ones local authorities are open for contacts with a potential investor, are ready to help and to support because they worry about problems with local budgets and preservation of jobs. But it's quite possible that local authorities can interfere in the projects' implementation proceeding from their own understanding of the aims, they have plenty of levers to do it. So it's easy to forecast the conflicts here.

Proceeding from the aforesaid it seems necessary to pay attention to the following sides of economic policy.

It's necessary to pay more attention to restructuring of social sphere in small towns. There should be combined organizing measures (adoption and completion, informing about decisions) and financial measures of support including special purpose support for local budgets.

Federal and regional authorities should be ready to beginning of the restructuring process of production assets. Here are needed measures which promote it - tax policy, acceleration of the land's privatization, increase of rental charge together with measures allowing not to lose potential through putting it to other sectors of economy (coordination with the programs for entrepreneurship's and small business' assistance).

The important aspect is the support and the development of information infrastructure including the state one. It's necessary here to support access to information of general type (legislation, normative acts and decisions) up to thrusting it to the consumer. Information about markets, suppliers and consumers is also extraordinary important here. Logistic and financial support of information centers is a real help in restructuring of economic links, a factor of competition's strengthening.

As regards the support to investments the most preferable are projects orientated on changing of technology and forming of alternative raw materials base. They give costs' economy, quality increase, strengthen competition and not only increase sales which perspectives is difficult to estimate today. Financial support to the projects through branch structures is not an always effective way. It's more rational to invest in forming horizontal amalgamation of concrete enterprises (including also with private firms) which themselves provide rather sufficient part of investments. It's more reasonable to carry out budget investments not in the form of credits but as a participation in equity in order to have influence on management and later on to sell shares to the project's participants.

For forming favorable investment climate it's also important to have such moment as state support to the process of managers' training and retraining. Methodical help and teaching principles of rational management without which it's still possible to survive in Russia are already needed in order to form development strategy and are of vital importance in order to find "a mutual language" with outer investor especially the foreign one.

Table 1.

Sources of privatization, data of enterprises survey in 1993 (in % to number of enterprises polled) */

	All enter-prises	Joint-stock companies	State-run and leased companies
employees' vouchers	64	66	61
enterprise's funds	58	67	44
funds of other enterprises	11	12	9
funds of private companies, commercial structures	4	6	2
population money	9	8	9
population vouchers	9	10	8
funds of foreign institutions	0	0	0
bank loans	11	12	11
employees' money	7	11	3

*/ About 8% of respondents couldn't select an answer as they didn't know yet or their companies 'wouldn't be privatized.

Table 2

Shares distribution among main groups of shareholders (in % to number of answers) */

Shareholders	no	<=10%	>10% <=25	>25% <=50	>50% <=75	>75% <=100	average % of shares
federal and local authorities	64.9	7.7	15.4	7.7	4.0	0.3	9.5
workforce including management	0.0	5.4	11.4	34.8	21.7	26.8	52.3
former employees	19.7	50.5	22.4	4.7	1.3	1.3	11.0
Russian private business	56.2	18.4	10.0	12.0	3.0	0.3	10.1
industrial enterprises	76.6	9.0	7.7	4.7	1.3	0.7	5.4
private persons	58.5	32.4	5.4	2.0	0.7	1.0	5.0
industrial organizations	84.9	5.0	6.4	3.0	0.7	0.0	3.1
foreign firms	93.0	2.3	2.0	1.3	1.0	0.3	2.0
banks	88.6	6.4	4.0	0.7	0.3	0.0	1.6

*/ Results were calculated on data received from IET Business surveys laboratory sample (299 joint-stock and partnerships answered in November 1995)

Table 3

Enterprises' membership in amalgamations, actual and desirable (in % to number of enterprises pol

	Now are a member	Want to be a member
don't take part in any association	4.8/34.4	10.9/43.0
report to Ministry, department, "glavk"	6.2/13.2	4.6/6.0
regional amalgamations	3.1/4.6	6.2/2.6
industrial organizations established from former Ministry, "glavk" etc.	57.8/34.4	34.4/8.6
voluntary amalgamation of enterprises - manufacturers of some product	25.0/12.6	48.4/25.8
voluntary amalgamation of enterprises - customers of some product	3.1/2.6	15.6/9.3

*/ Numerator - data of the survey in January 1992, denominator - data of the survey in Autumn 1993.

Table 4

Channels of establishing links with suppliers and customers (in % to number of enterprises polled) */

	With suppliers	With customers
mainly through established old links	36/83	66/70
through his Ministry, department	9/5	5/3
use assistance of concerns, associations etc.	14/9	9/2
use commodity exchanges, broker firms, other intermediary institutions	22/5	9/4
use commercial centers or other institutions formed from former	9/9	12/4
"Gossnab system"		
new links we find ourselves using our contacts	84/64	50/55
our partners find us	14/17	34/43
with help of advertising information	6/7	6/11
now the commercial firm makes our sales	-	5/6

*/ Numerator - data of the survey in January 1992, denominator - data of the survey in Autumn 1993.

Table 5

Enterprises' measures for supply support in 1995 (in % to number of enterprises polled)*/

The main measures	All enter- prises	including sectors of:		
		consumer goods	investment goods	intermediate goods
search of new suppliers	57	65	53	58
using barter	62	45	76	73
diminishing of output mix	7	8	11	6
decrease of output volume	12	15	9	10
using services of intermediaries	25	23	22	33
investment in suppliers development	2	2	0	2
organization of materials production at the enterprise	7	6	7	8

*/ Results are based on Russian Economic Barometer sample (187 enterprises were polled in November 1995)

Table 6

Determinants of customers' structure changes, data of enterprises survey in 1993 (in % to number of enterprises polled)

	All com- panies	Mili- tary	High tech	Raw proces- sing	Con- sumer goods	Others
no changes	35.1	38.2	30.4	32.3	30.0	61.5
established customers are insolvent	34.4	32.4	34.8	32.3	38.0	30.8
customers have refused to buy our products	8.6	5.9	8.7	16.1	4.0	15.4
due to obstacles for sales to the CIS republics	23.8	38.2	17.4	35.5	16.0	0.0
due to obstacles for sales to others Russian regions	6.6	11.8	0.0	9.7	6.0	0.0
we've reoriented to more promising state-run companies	4.0	2.9	4.3	0.0	8.0	0.0
we've decided to reorient sales to private companies	11.3	8.8	17.4	3.2	16.0	7.7

Table 7

Enterprises' measures for sales improvement in 1995 (in % to number of enterprises polled)*/

Sales measures	All enterprises	including sectors of:		
		consumer goods	investment goods	intermediate goods
changes in profile	6	3	13	4
changes in output mix	45	52	49	40
keep increase of our prices	65	70	56	71
active advertising	24	18	31	27
work with intermediaries, dealers	29	26	38	29
exit into foreign markets	5	5	7	4
attempts to find state orders	5	2	7	6
nothing, anything is useless now	4	8	4	2
there's no sales problems	5	3	0	8

*/ Results are based on Russian Economic Barometer sample (187 enterprises were polled in November 1995)

Table 8

Personnel dismissals in 1992-93, data of enterprises survey in 1993 (in % to number of enterprises polled)

	All companies	Military	High tech	Raw processing	Consumer goods	Others
no dismissals	29.1	21.7	26.5	35.5	28.0	38.5
yes, but insignificant	55.6	34.8	55.9	58.0	62.0	61.5
yes, substantial	14.6	39.1	17.6	6.5	10.0	0.0
no answer	0.7	4.4	0.0	0.0	0.0	0.0

Table 9

Enterprises' investment policy in 1995 (in % to number of enterprises polled)*/

Investment areas	All enter- prises	including sectors of:		
		consumer goods	investment goods	intermediate goods
there's no investment	47.0	41.0	49.0	52.0
equipment purchase	32.0	35.0	20.0	38.0
reconstruction	25.0	21.0	20.0	35.0
construction of housing and social objects	16.0	12.0	13.0	23.0
purchase (construction) of other objects - land, shops, etc.	6.0	12.0	2.0	4.0
shares, securities purchases	4.0	5.0	4.0	2.0

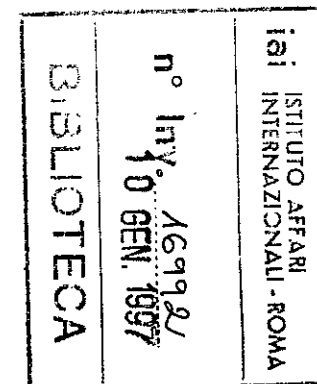
*/ Results are based on Russian Economic Barometer sample (187 enterprises were polled in November 1995)

Table 10

Enterprises' assess to investment sources (in % to number of enterprises polled)*/

investment sources (investors)	All enter- prises	including sectors of:		
		consumer goods	investment goods	intermediate goods
federal or local budget	12.3	16.3	9.4	11.2
enterprises' own fund	43.0	40.0	45.0	43.3
long-term bank's credit	10.5	13.3	12.1	6.7
bank's capital	1.2	1.5	1.3	0.8
industrial enterprises	4.9	6.0	2.0	6.0
Russian private business	2.6	2.2	3.4	1.5
foreign investors	3.5	4.4	2.0	4.5
industrial organizations, holdings	3.0	3.0	4.0	2.2
don't attract funds	41.2	40.0	41.0	41.8

*/ Results are based on Business surveys laboratory sample (430 enterprises were polled in November 1995)



TYPOLOGY OF RUSSIAN ENTERPRISES' ADAPTATION TO NEW ECONOMIC REALITIES

Paper to be presented at Workshop "Russian Enterprises on the Path of Market
Adaptation and Restructuring" -- International Institute for Applied Systems
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1. INTRODUCTION

The process of social transformation in Russia has had a plethora of significant effects upon production. It is now provoking an economic depression of unprecedented proportions. It is also increasingly evident that any attempt to effect long-term political stabilization in Russia should be based on economic stabilization, or--at the very least--the successful adaptation of new rules of economic behavior by the country's principle industrial producers. The future will depend on the ingenuity of Russian managers to link the legacy of the communist regime and the national patterns of industrial organization with the prerequisites of a modern economy.

In analyzing transitional economies and transitional management, it is better to develop a set of knowledge clusters which can be applied to business transactions than to construct one universal theory. The exploration of organizational transformations in transitional economies has attracted myriad management scholars. Numerous articles, attempting to explain particular aspects of organizational transformations, have been published in both academic and management journals. Analysts have concentrated upon changes in decision-making authority (McCarthy and Puffer, 1992; Luthans, Welsh and Rozenkrantz, 1993; Welsh, Luthans and Sommer, 1993); the emerging new model of leadership (Puffer, 1995); developing marketing strategies in the most vital sectors of the Russian economy (Elenkov, 1995); modification of human resource management (Koubek and Brewster, 1995) and the acquisition of new knowledge and skills. (Holden and Cooper, 1994)

An examination of such studies, however, reveals a series of inadequacies. First, given the incredible speed of change in Russia, the technique of single observation used in most studies do not make it possible to accurately retrace emerging trends in

organizational development and business policies. The limited scope of single observation studies robs them of the power of prediction, thereby limiting their usefulness as decision-making tools in an era of constantly changing reality. Second, the aim of most studies has been to retrace particular aspects of corporate transformations. Even the most complex surveys (such as Webster et. al., 1994) have focused almost exclusively on the decomposition of Russian businesses, rather than their integration and reorganization.

This paper fills the aforementioned gaps in the study of the transformation of enterprises in Russia through an examination of the adaptation strategies of recently privatized industrial companies. Specifically, the goals of this study are:

1. To clarify the overall level of companies' adaptation in terms of productive efficiency's and social adaptation's dynamics.
2. To retrace the differences in corporate environment and business strategies between companies at various levels of adaptation.
3. To explore the algorithms of corporate success in main Russian industries.
4. To classify the main forms of adaptation currently being implemented in Russian industries, and to assess the perspectives of each form for the further development of the Russian economy.

The paper is organized as follows. In the second section we outline the main assumptions in the evaluation of adaptation processes and present the methodology and research instruments of the study. The third section describes the main pre-requisites of the adaptation process. The fourth section is devoted to the results of quantitative analysis of the adaptation process - dynamics of productive efficiency. The fifth section presents the results of qualitative analysis of companies' strategies. We use here "micro case studies" to illustrate the principal steps for corporate successes. The dynamics of personal adaptation is presented in

the sixth section. The typology of corporate adaptation is exposed in the seventh section, while conclusions and suggestions for further studies are drawn in the eighth section.

2. METHODOLOGY FOR THE ANALYSIS OF ADAPTATION

2.1 Basic definitions and assumptions in exploring adaptation processes

Adaptation of enterprises in transitional economies is a complex phenomenon which may be viewed in three "dimensions":

- *adaptation of enterprises as production systems to the radical changes in external conditions of their functioning.* This includes response to opening-up of domestic markets to foreign competition, accommodation to conditions of high inflation, chaotic tax legislation and other "delights" of transitional economies;
- *social adaptation of employees, both managers and workers* to the new conditions of life, including the appearance of unemployment and fall in purchasing power of wages in industrial sectors;
- *insertion of enterprises as networks of legal, economic and social relations to a new system of economic organization.* In a few words such insertion may be called a transition "from enterprise to firm" (see Ickes and Ryterman, 1994). This insertion comprises: privatization as the first step of legal transformation, the emergence of markets for corporate control, the establishment of harder budget constraints, the modification of enterprises' objective functions, etc.

We believe that these three "sides" of the adaptation process are closely interrelated. In exploring their relationship, our working hypothesis is based on the following causal connections:

1. Insertion of enterprises into the new system of economic organization rests upon the creation of new ownership arrangements. According to the classical conception of ownership (Barzel, 1989), ownership is identified as the right to exercise control over resource allocation and to receive any residual returns that may remain after contractual obligations have been fulfilled. Although agency theory (Jensen and Meckling, 1979; Fama and Jensen, 1983) raised the issue of separation between ownership and control, it argues that the control structure of the firm is part of the firm's production function, together with the technology and productive resources. This implies that different control arrangements may result in different production possibilities sets, and, therefore, in different production efficiency dynamics.
2. The production efficiency of companies in transitional economies depends mainly upon the "inventiveness" of their managers in capturing the floating market conditions, and their readiness to operate in a hyper-turbulent environment. Such a creativity is, in turn, the outcome of the optimal solution of agency problem.
3. Both over-performing and under-achieving companies emerge as "goods" in the market for corporate control. The former present tempting "tid-bits", while the latter lack the means to resist corporate takeovers.
4. In principle, the level of social adaptation of employees should be the consequence of companies' performance. On the one hand, however, such an assumption may be violated under the conditions of the various types of social policies implemented within companies. On the other hand, differences in social adaptation may affect the employees' conduct, thereby altering the company's adaptability.

2.2 Research method

This study uses both qualitative and quantitative methods to generate insights into the organizational development and re-engineering of business in Russian companies. The

qualitative approach has been employed as a means of revealing several of the more obscure, unique, and enigmatic aspects of Russian corporate life. The qualitative approach was also used in the basic formulation and classification of such complex phenomena as marketing strategies. This application of qualitative methods is consistent with the general function of qualitative research as a means "to seek answers to questions that stress how social experience is created and given meaning." (Denzin and Lincoln, 1994, p. 4). Quantitative methods were used mainly to assess the performance of companies and to estimate the popular perception of company life as a means of verifying, and hence expanding, the results of the qualitative analysis.

In this study three sources of information are used:

1. Interviews with top managers of industrial firms and observations of companies' activities by some sort of "expert investigation".
2. Records of business activities of the observed firms and an evaluation of their performance.
3. A survey of managers and employees using a special developed questionnaire for each group.

The interviews with company presidents, chief accountants, chief engineers, and personnel officers were conducted in an informal setting. The principal leading questions raised during the interviews concerned the current economic situation of the company; the goals of its top managers; the implemented marketing, human resource and organizational strategies; and the relationships with outside shareholders, business partners and local authorities.

The length of individual interviews depended largely upon the availability of a corporate executive, but usually lasted between one and three hours. Shortly after the interviews the structural decomposition and normalization of answers were carried out using a

special framework, which enable us to construct some expert measures. As a result of interviews and personal observations of companies activities a set of "expert" empirical indexes was created. The main variables were the following:

- 1) the share of export in sales - EXPORT;
- 2) the level of social orientation in corporate policy- SOCIAL ORIENT;
- 3) the intensity of contacts between the company and the local administration - LOCAL ADMIN;
- 4) the degree of company's involvement into illegal business transactions - SHADOW;
- 5) the share of a company on the relevant market - MARKETS;

All these indicators enabled us to construct a "snapshot" of companies, to be used in performance analysis.

The evaluation of company records provided additional insights into the economic viability of the companies under observation. All of the information concerning the performance of these companies was provided by their accounting offices. Quarterly balance sheets and income statements for the last three years were also obtained from these companies. In addition, copies of the official statistical forms -- reporting the physical output of these companies in detailed nomenclature, cost structure, shutdown periods, etc. -- were obtained. Most of the data, including financial data, was adjudged reasonably reliable. For each surveyed company 54 quarterly performance indexes were constructed for 1992-1994. As an overall measure of performance an integral index of economic efficiency was constructed.

We implemented a method for measuring efficiency known as Data Envelopment Analysis (DEA). DEA floats a hyperplane on data for a set of operating units, such that units with maximal output/input ratios are on the surface and units with less-than-maximal output/input ratios are beneath it. DEA is a variation of linear programming, suitable for benchmarking efficiency among a set of comparable decision-making units

(DMU's). This method, invented in 1978 by Charnes, Cooper and Rhodes (1978) has been increasingly used for the last decade in studies on performance evaluation (see Norman and Stocker, 1991; Gurkov, 1992; Land, Lowell, and Thore, 1994; Leibenstein and Maital, 1994, Gurkov and Maital, forthcoming). This methods is especially fruitful in the suitiations, where organizational perfomance should be assessed in non-financial terms.

The formal formulation of a DEA problem looks as follow:

$$\begin{aligned} \min h &= \frac{\sum_{i=1}^m v_i x_{i0}}{\sum_{r=1}^s u_r y_{r0}} \\ \text{subject to } &\frac{\sum_{i=1}^m v_i x_{ij}}{\sum_{r=1}^s u_r y_{rj}} \geq 1 \end{aligned}$$

where y_{rj} - output r ($r=1, \dots, s$) from producer j ;

x_{ij} - input i ($i=1, \dots, m$) used by each producer j in the sample

$j= (1, \dots, n)$ - index of Decision-Making Units;

u_r - shadow prices (dual variable) of output;

v_i - shadow prices (dual variable) of input,

h - input based efficiency indices;

x_{i0}, y_{j0} - inputs and outputs of the particular producer whose efficiency is being measured.

We chose as a measure of output, gross sales, adjusted for inflation. For inputs, we chose three: the number of employees (labor input), the inverse liquidity ratio (as a measure of capital intensity), and the ratio of quarterly sales to stocks of finished goods (as a measure of marketing success/trouble).

We entered each firm's data, for each of 16 quarters (1991-I through 1994-IV), as a data point. DEA analysis provided an efficiency measure (a scalar varying from zero to 100%) for each firm, and for each quarter. We took the quarterly average of the efficiency scores as our performance measure.

The third component of the study was a survey of managers and workers. It involved all levels of the managerial staff, as well as production and clerical workers. The questionnaires were distributed and collected by research assistants - students of Higher School of Economics, Moscow. Individual respondents were repeatedly and explicitly reassured that neither their supervisors nor their colleagues would have access to the answers which they provided the researchers.

The questionnaires consisted of several blocks used to measure and map the response to the following key variables:

- the perception of the present economic situation of a company and the causes of its successes and troubles;
- trust in the abilities of top managers to improve the companies' economic performance;
- transformations in the decision-making authority;
- perception of changes which took place after privatization.

Assessing the individual adaptation to the present economic and social conditions, job security and necessary knowledge and skills was done using the following instruments. The individual adaptation was assessed using 11-item instrument, which contained statements about personal purchasing power and job characteristics. The reliability coefficient -- Cronbach's alpha -- of this instrument was .6018

The job security was assessed using an original 6-item instrument, which contained statements about security of a present job and possibilities of finding another job in the same line of work. The reliability coefficient alpha of this instrument was .7248.

Assessing the job satisfaction required a special 11-item instrument for evaluation of overall job satisfaction and satisfaction with specific job features. This instrument is a modification of the Michigan Quality of Work Questionnaire (Moch at al., (1983), adopted to the specific Russian conditions. A 5-point scale ranging from "very dissatisfied " to "very satisfied" was used to rank the responses. The reliability coefficient for this scale was 0.7669.

Assessing the degree of partnership and mutual confidence between workers and managers was assessed using an original 11-items instrument . The respondents were asked to indicate their opinions about:

- the abilities of the management to improve the economic position of the firm;
- the loyalty of managers in defending the interests of their employees;
- the efficiency of conflict resolution within the firm.

The 5-point respondent scale ranged from "strongly disagree" to "strongly agree". The reliability coefficient for this scale is 0.8060. The mutual partnership between workers and management and the cohesion within management teams may be considered as an important input for measuring changes in both production efficiency and power mapping.

Assessing the acuteness of routine problems and disturbances in business and production activities was done using an original 11-item instrument. The 5-point response scale ranged from "not significant at all" to "extremely significant". The reliability coefficient for this scale is 0.8066. The examples of routine problems are "non paying debtors", "shortage of qualified managers" etc. The appraisal of routine problems is a necessary element of understanding of the companies situation. We also

ranked the type of problems for each company and establish a pattern within the survey set.

All respondents were asked to give their opinion of real and desired owners of a firm. They were able to choose one answer among 11 items, including "your fellow-workers", "managing director" or even "nobody really owns". We also asked respondents to assess the changes they had observed in 9 particular areas as a result of privatization. The 5-point scale ranged from "much worse" to "much improved" with "no change" set at the midpoint (a value of 3). The most valuable outcomes of this part of the survey was the opportunity to compare the perception of privatization, experienced by different groups within the company. This clarifies the results of the satisfaction measurement and adds more information for power mapping. The reliability coefficient for this instrument is .7058.

The above described instruments were used in the questionnaires both for managers and for workers. The next parts of the questionnaires was reserved for only managers.

First, the questionnaire contained 27 items pertaining to four types of decisions common in managerial work, namely :

- 1) strategic decision and capital investment - 8 items,
- 2) human resources - 7 items,
- 3) wage and benefits - 5 items,
- 4) production decisions (i.e. product characteristics, value chain, quality issues) - 7 items.

Managers were asked to describe the level of decision-making authority they experienced for each decision item on a 6-point scale ranging from "beyond my position's duties" (a value of 0), through "marginal authority" (a value of 1) to "total authority" (a value of 5). This scale is the development of McCarty and Puffer's instrument (McCarty, Puffer (1992)). The respondents indicated the perceived changes

after privatization. The additional point on the scale, "beyond my duties", allowed us to restrict the appraisal of perceived authority to strongly reliable points.

Second, we asked managers to indicate the influence of 15 business environment factors at the two levels: operational business decisions and company policy. The response to the 7-point Stapel's two-pole scale ranged from "completely determines negatively" (a value of -3) to "completely determines positively" (a value of +3) with "no influence" set at the midpoint (a value of 0). The total number of factors, influencing the firm's activities, was limited to 15, from "political situation in Russia" to "local inspections' behavior". The set of different government bodies, that could affect the enterprises' behavior, was limited to 6 items; for example, "president administration", "central government", "local authorities" etc. The reliability coefficient for the first scale is 0.9409, for the second scale - 0.8445. The main reason for including this instrument into the survey was to get a picture of the macro environment and the industry environment of the surveyed companies. We listed in the macro-environment political, social and macroeconomic factors, such as the "disintegration of the former USSR, high inflation, tax policy of the central government". The set of the industry environment factors follows the Porter's model and includes bargaining power suppliers, consumers and competitors (present and potential).

2.3 The Sample

The large scope of data required from the companies and the very limited financial support for the research project restrained the scale of field study to companies in one-day trip distance from Moscow. Field research was carried out in two steps. First, a pilot study, extending from November 1993 through May 1994, examined 35 companies in the central region of Russia. The pilot study proved the reliability of the measurements used and the general applicability of the research methodology. Twenty

companies were then selected for repeat observation, conducted in April-May 1995. In general, 143 interviews were conducted with top executives, while questionnaires were administered to 399 managers and 804 workers. All of the surveyed firms were single-plant companies, privatized under the same "second variant of privatization". That meant that in 1993 in all of the companies at least 51% of shares were acquired by employees. Moreover, in 12 companies there were complete employees' buy-outs, which transferred 100% of the stock to employees.

The use of DEA methodology put additional limitations of sample selection, because of the sensitivity of the method to missed data points. Therefore, in all the reported results which include DEA_FIN variable, the sub-sample includes 13 companies, in which 898 persons were surveyed.

3. TWO MAJOR PRE-REQUISITS FOR ENTERPRISES' ADAPTATION: ESTABLISHING EFFECTIVE CONTROL ARRANGEMENTS AND BUILDING THE STRATEGIC AGENDA FOR COMPANY SURVIVAL

3.1 Macro and Meso-economic Conditions of Russian Industrial Enterprises' Functioning

The break-up of the Soviet Union and the liberalization of prices from state control on 1 January 1992 inaugurated a new economic era in Russia. The collapse of business ties between Russian companies and companies in other former Soviet republics, high inflation, and the reduction of government support to producers have combined to cause a deep fall in the nation's industrial output. In 1992, Russia's industrial output decreased by 16%; in 1993, by 15%; and in 1994, by 24%. (Institute of Economy in Transition, 1995) Estimates for 1995, however, indicate that the rate of recession has

slowed considerably. Indeed, industrial output for the first 10 months of 1995 fell only 4.7% from the levels reported for January-October 1994. (The Economist, January 6th, 1996.) However, two of the main causes of industrial decline--import substitution and the shortening of domestic solvable supply--are still valid.

First and foremost, import substitution affected the production of consumer goods. The share of imported goods on the Russian commodity market increased from approximately 30% in 1991, to 48% in the first half of 1994, and further, to 54%, in the first half of 1995. (Statistical Review, #8, 1995.) Because of rapid export substitution, the decline in commodity production was greater than the average for all industries. While the physical dynamics of industrial production virtually stabilized in the third quarter of 1994 at 55% of the level for December 1991, the output of textiles, footwear, and home electrical appliances has continued to decline in 1995. The production of many types of commodities--tape recorders, video recorders, sewing machines, footwear, knitted-wear--almost ceased altogether in 1995. In those industries, the level of production consisted of less than one sixth of the 1991 level.

Real income also continued to decrease in 1995. In July 1995, real disposable income was only 89% of the July 1994 level. Official figures for real income, however, are quite misleading, as they also encompass any income derived from benefits, business activities, and speculation in real estate and financial operations. If we examine the disposable income of industrial employees, the economic situation of the individual Russian worsens dramatically. By 1994, the real purchasing power of industrial wages had plummeted 55% from the 1989 level. (Centre for Economic Conjuncture, 1994.) The dollar equivalent of wages has hovered around \$100 a month from July 1994-July 1995. It is important to take into account, however, that, in 1994-1995, the dynamics

of the dollar exchange rate was below the consumer price index. We should also note that multi-month delays in the payment of wages is the norm in many industries.

The companies observed in this study shared the same fate as Russian industry as a whole. In 1993, the industrial output, in constant prices, of the companies under observation was only about 40% of the 1989 level; while the industrial output of these companies for the first quarter of 1994 was only 20% of that posted during the first quarter of 1989.

Moreover, during the recession, Russian enterprises were forced to pass through a corporate restructuring process, called privatization. According to the World Bank, "mass privatization is a process in which a substantial portion of an economy's public assets is quickly transferred to a large, diverse group of private buyers... Mass privatization usually involves the distribution of shares of state enterprises to the public, either for free or for a minimal charge, generally through a voucher allocation scheme. Vouchers take the form of certificates distributed to the population and are convertible into shares in state enterprises... The economic objective of such a programme is quickly privatizing a large number of firms to deepen market forces and competition within the economy." (World Bank, 1995, p. 3).

With the launching of the State Programme of privatization in June 1992, Russian enterprises were given sixty days to corporatize (i.e. to transform their legal entity into joint partnership or joint-stock company), select privatization variants, and develop and submit their privatization plan to a supervisory privatization agency. Three variants of privatization were proposed for medium and large industrial enterprises. In the so-called "second variant", for example, chosen by 74% of enterprises, workers and managers could purchase up to 51% of a company's stock by closed subscription at a nominal price: 1.7 times its July 1992 book value. The remaining 49% was divided

into two parts. Twenty-nine percent was to be sold by voucher auction before June 1994, while the government retained possession of the remaining 20%, which was to be sold off through cash auctions or investment tenders.

Until the middle of 1993, however, complete employee buyouts were still allowed. As a result, many state enterprises were transformed into 100% employee-owned closed partnerships or closed joint-stock companies. Since the middle of 1993, when complete employee buyouts were forbidden, managers have sought to circumvent this proscription by collecting vouchers from workers or buying vouchers on the "street market", thereby assuring the "working collective" the maximal possible share of corporate ownership. As a result, when the voucher privatization programme was officially reported "successfully completed" on 1 July 1994, most of the managing directors of Russia's medium and large industrial enterprises found themselves the newly elected presidents of failing joint-stock companies manned by employee-shareholders interested not in dividends, but in keeping their jobs. Moreover, their companies' stock had been dangerously devalued. Many workers had been defrauded of their shares by investment companies interested only in speculation, while large numbers of shares had been acquired by outsiders, in exchange for vague promises of future investment.

Three years after price liberalization and the opening of domestic markets to foreign competition, the prevailing attitude within Russian firms could be encapsulated in the pathetic complaint of one re-engineering pioneer: "No more unearned, inherited brand loyalties; no more cordial rivals in the same markets; no more confident pass-alongs of rising wages and benefits in the form of higher prices; and no more indulgent protection by national government." (Champy, 1995, p. 18.) In actuality, the everyday problems confronted by Russian industrial companies are quite similar to those faced by their American counterparts, particularly smaller companies, during a recession--

lack of cash, high bank indebtedness, irregularity of production due to the absence of orders and uneven supply, and poor work discipline. (see National Institute of Business Management, 1991.)

When surveyed, managers and workers were asked to indicate the most disturbing factors facing their company's operations, using a 5-point scale ranging from "not important at all" to "extremely important". (see Table 1.) Mutual arrays, lack of the means to purchase raw materials and semi-finished goods, high debts to banks and suppliers, and irregularity of production were listed as the most disturbing factors both in 1994 and 1995. The only statistically significant improvements in 1995 were the stabilization of energy supply and the strengthening the work discipline. At the same time, the managers realized the increasing danger of unemployment as their companies were moved towards bankruptcy. In this point the difference between 1994 and 1995 was quite significant (2-tailed prob. <0.01)

Put Table.1 here

The continuous nature of the above mentioned disturbances has seriously affected the functioning of the observed companies. By 1995, the acuteness of the situation had become glaringly evident to all employees, regardless of rank or seniority. In the 1995 survey, both managers and workers were asked to assess the status of their companies. (see Table 2.) On the whole, only 12% of managers and 11% of workers characterized companies as "stable", while 18% of workers and 13% of managers viewed the situation as "extremely bad". It is hardly surprising that managers were slightly more optimistic in their estimates than were workers, for managers are better informed about prospective contracts, and hence are able to perceive opportunities far earlier than are workers.

Put Table 2 here

The assessment of the current situation varied between companies in different industries. While 14% of the managers and 16% of the workers in construction-related companies perceived the situation as "stable", there was not a single manager in a machine-building company who reported a "stable" situation. Almost half of the managers in machine-building companies described the situation as "bad", while another 27% reported the status of their enterprise as "very bad".

Managers and workers were also asked to select a possible explanation for businesses failures. Managers and workers alike selected three main causes of failure: the "collapse of former business ties" (37% of managers and 37% of workers); "weak top management within the company" (20% of managers and 32% of workers); and "business partners let us down" (17% of managers and 20% of workers). The explanations emphatically stressed the human element--namely, the incapability of top managers to maintain business ties or to establish new contacts.

The survey also revealed a profound discrepancy between managers and workers in their assessment of the abilities of current top-level management to improve the situation. Both managers and workers were asked to express their level of agreement on a 5-point scale, ranging from "completely disagree" (coded as 1) to "completely agree" (coded as 5), with several statements that described the behavior of top management. In 1994, the assessment of managers by workers was positive. However, in 1995 survey the assessment of current top-level management by workers was changed into overwhelmingly negative. (see Table 3.) The only segment of management singled out for positive assessment by workers were their direct

supervisors--shop-floor managers, the majority of whom vigorously defend the rights of workers. In addition, while managers of lower ranks still assess positively the actions of top managers, the confidence of shop-floor and middle managers in the goodwill and abilities of top managers to protect jobs and to defend their other interests also deteriorated.

Put Table 3 here

This situation presents a serious potential threat to the top managers. It should be emphasized, however, that privatization initially transferred controlling interests in companies to employees. In most of the observed cases, the top managers did not own more than 5% of the shareholders' equity at the beginning of 1994. Such findings are generally consistent with the results of other surveys of privatized Russian companies. (Blasi, 1994) The profound dissatisfaction of worker-shareholders with present top management, therefore, may proceed to changes in corporate governance.

Currently, the top executives of Russia's privatized companies face two major challenges: the expansion of their control over the companies they manage, and the discovery of solutions which will enable their companies--and, by extension, themselves--to survive the recession. These tasks are closely interrelated. Indeed, on the one hand, in order to survive the recession, top executives should implement a major reorientation of their company's operations, thereby establishing new standards of performance and quality, and new requirements for their company's personnel. To realize this goal, however, these top-level executives need more power over, and more autonomy in, strategic decision-making. On the other hand, should an executive prove his ability to successfully run a company, despite an uncertain and unfavorable economic climate, that manager will have derived a tangible claim to ownership over

that company. Moreover, a company's improved performance increases both its cash-flow and its credit rating, potentially facilitating a managerial buy-out. The analysis of these companies, therefore, makes it possible to discern the interaction of these processes in real life.

3.2 Establishing New Control Arrangements

The first issue which these surveys explored was the configuration of control over privatized companies. In order to determine the extent of organizational transformation, managers were asked to select the "real owner" of the company they administer from a list of 11 options which included: "yourself and the employees of your level"; "the general director"; "the top managers"; "domestic financial institution"; "foreign firm"; and even "nobody really owns" this company. Since the number of respondents varied from company to company, the main intent of this line of inquiry was not to determine the general distribution of answers, but rather to discern the situation of individual companies.

Four prevalent types of control patterns for privatized companies in Russia emerged from the surveys conducted in 1994:

- dispersed control, defined as a situation where more than 40% of a company's managers select themselves as the "real owners";
- concentrated managerial control, where more than 40% of managers consider the top management the "real owner" of their company;
- director's control, where at least 40% of a company's managers view the general director as the company's "real owner";
- non-clear control, where more than 40% of managers believe that "nobody really owns the company".

Of the twenty companies surveyed in 1994, dispersed managerial control prevailed in six, concentrated managerial control governed a further six, the general director was viewed as the real owner of three, while no clear control was reported in five companies. (see Gurkov, 1995.)

The survey of 1995 revealed new evidence of post-privatization development. First, a slight rise in director's control -- from three to four companies -- was observed. Second, while the share of companies under concentrated managerial control remained unchanged, the number of companies under dispersed managerial control decreased from six to four.

After cross-tabulation of "old" and "new" control arrangements, these changes become more evident. In two companies previously under dispersed managerial control, there was a shift towards concentrated control, while another shifted towards director's control.

Another significant result of the comparison of control arrangements between the 1994 and 1995 surveys, was the appearance of a new type of control--"outsiders' control". It should be stressed that prior to 1994, "outsiders" had acquired considerable interests in eight of the twenty companies which comprised the total sample. In only two instances, however, during the period extending from 1994 through the first half of 1995, did outsiders' interests increase through investment tenders obtained through the selling off of the government's 20% share of a privatized company's holdings. By contrast, in 1994, there were no companies under the control of outsiders, and none of the managers then surveyed reported a significant influence over their company's business by foreign shareholders. In 1995, three companies previously reported as under unclear control had become controlled by outsiders, while in another three companies, at least 10% of managers believed that outside shareholders--in particular

foreign investment funds and banks--had become the "real owners" of their company. Clearly, the survey shows that by 1995, the intervention of foreign investors in the management of Russian industrial concerns--or at least the perception of such intervention-- had become glaringly apparent to an ever-growing number of managers.

Insert Figure 1 here

Both in 1994 and 1995, almost in a half of the surveyed companies managing directors or other top executives were viewed by other managers as "real owners" of their companies. However, despite this confluence of managerial opinion, the two surveys described above clearly illustrate the inherent instability of the corporate control arrangements present in post-privatization Russia. Between 1994 and 1995, the managers of three of the companies under observation reported that their general managers had lost control over corporate strategy. The second survey revealed that, while in one instance, the director now shared authority with the company's other top-level executives, the managers of the other two companies reported a situation of general strategic confusion, which had led to the loss of a clear market orientation, resulting in the companies' deteriorated performance. Such a situation was characterized by managers as a shift to "nobody's control". During the analysis of transformations in control arrangements we revealed some branch specific. For surveyed milk factories we observed the stability of "disperced managerial control". All the surveyed machine-building enterprises experienced in 1994 "uncrear" control and in 1995 became outider-controlled. In textile, chenicals and construction industries we observed unstable situation, when similar companies moved to opposite directions in control transformations.

In an effort to avoid such instability, top-level corporate managers are attempting to acquire controlling interests in the companies they administer, thereby converting themselves into the companies' legal owners. Executives view this step not only as a means of consolidating their personal control over corporate policy, but as a shield against challenges to their authority from both employees and "outsiders".

In-depth interviews with top executives revealed five principal methods employed in transferring employees' shares to top-level managers. The first method entails the direct buy-out of employees' shares at arbitrarily set prices. It should, however, be noted that the [current] face value of shares corresponds to the book value of fixed assets in 1992 prices. In order to counterbalance the deleterious effects of high inflation during the era of privatization, fixed assets were re-evaluated, in accordance with new replacement prices, annually. The resultant increase in equity, however, was simply accounted "additional capital", without new stock being issued or an alteration of the face value of existing stock. As a result, the formal stockholders' equity (registered capital) amounts to less than 1% of the total equity in the majority of the surveyed companies. The usual price per share, paid to employees by executives, while 15 to 50 times the face value of the stock, is at least several times lower than its real value. Since none of the joint-stock companies surveyed were listed on the stock exchange, employee-shareholders were forced to sell their stock for artificially low prices in a buyer's market which is manipulated and monopolized by the buyers.

The second method of transferring employees' shares in a joint-stock company to its top-level managers is the formation of an alliance between the company's top managers. This pattern of transference emerges in instances where the managing directors lack the financial and organizational wherewithal necessary to acquire the employees shares outright. The surveys conclusively demonstrated a pattern of clustering amongst the worker-shareholders. Each group of employees revolved

around, and was identified with, one of the allied top managers. Each manager--for example, the general director, the chief engineer, and the chief accountant--maintained such a "cultivated plot" of employees, from whom he attempted to elicit control over the rights pertaining to their shares in the company. The assignment of voting and return rights to the manager was then legalized by a formal agreement, known as "passing the title". There is considerable anecdotal evidence that similar schemes have been employed in many other privatized Russian companies. Few top managers, however, are willing to admit to complicity in such a scheme, so as not to reveal the true extent of their extensive wealth and power.

When employees proved unwilling to sell their stock, top-managers engineered high levels of personnel turnover by employing such tactics as wage delays, the enforcement of absurd rules of employee conduct, and by refusing to rectify poor or dangerous working conditions. Such extraordinarily high turnover rates were the culmination of a well-defined organizational agenda. By law, any employee-shareholder who was fired from a closed joint-stock company or from a limited partnership was required to sell his/her shares in the company back to the company for a nominal price. All the "liberated" shares were then concentrated in the hands of general directors and other top executives. While a stockholder who is fired from an open joint-stock company is free to keep or dispose of his or her shares as he sees fit, former employees of open joint-stock companies overwhelmingly prefer to sell their shares back to the company for a standard nominal fee, rather than risk a potential loss of principal in Russia's underdeveloped, unstable, and largely unfamiliar capital markets.

In the fourth method of stock transference documented by this study, the general director served as the "black knight" of a corporate takeover--the point-man for the investment company, trading house, or commercial bank which provided the means

necessary to conclude an intensive buy-out of a company's workers' holdings. As payment for such service, the general director was awarded a significant amount of the company's stock (between 20 and 30%) once the outside interest's controlling interest had been consolidated.

Finally, the fifth method, used mainly by large companies, entailed the unification of workers' shares in holding companies. General directors were then elected to the presidencies of these new companies, which functioned as "parent" companies, enabling the general directors to maintain control over "subsidiary" businesses. Top-level management was thus able to retain the profits accrued by the "subsidiary" companies, thereby gaining sufficient credit to finance a stock buy-out of the "parent company".

3.3 Relationship Between Control Arrangements and Models of Economic Behavior

It should be stressed that the distribution of control arrangements in our 13-companies sub-sample corresponds to the general distribution. Indeed, in 1994 in the sub-sample "dispersed managerial control" was observed in 27% of companies (30% in the general sample), "concentrated managerial control" - in 35% (30%), "director's control" - in 15% (15%) and "unclear control" - in 23% (25%) of cases. In 1995, the distribution of control arrangements in the sub-sample also repeated the distribution of the total sample in general: "dispersed control" was reported in 21% of the cases (20% in the total sample), "concentrated control" in 21% (30%), "director's control" in 16% (30%), "unclear control" in 26% (15%), and "outsiders' control" in 16% (15%) of cases. The performed T-test confirmed the low probability of unequal means of the total and sub-sample (2-tailed prob.>.1). Therefore, we decided to present the results of the relationship

between expert and efficiency measures and the control arrangements for the sub-sample as sufficiently representative for the whole sample.

First at all we computed DEA efficiency measures for each company. As an additional measure of financial performance the "financial stability ratio" was computed. The expert and performance measures for the surveyed companies are presented in Table 4.

Insert Table 4 here

The correlation analysis showed a high correlation between the efficiency scores and the measure of financial performance. Therefore, we decided to base our assessment of performance solely on DEA scores. The averages of the principal expert and performance measures for each type of control are shown in Table 5.

Insert Table 5 here

It may be seen that concentrated managerial control was established in the companies with the highest dynamics of economic efficiency, some involvement in export operations, good relations with the local authorities and weak contacts with "the shadow economy". Companies under "director's control" are characterized by high economic efficiency, marked social orientation in corporate policy, low share of the relevant markets and relatively high involvement into "shadow transactions". The prerequisite for the corporate takeover of Russian enterprises by outsiders (financial companies, banks, and diversified trading houses) was the existence of established relations between the outside interest and the Russian company. The possibility of the targets' corporate executives mounting an effective "anti-takeover"

defence was severely depreciated by their companies' weak financial performances. The main interest of those outsiders which invest in a Russian company is its influence on overseas markets. Companies under "unclear" control enjoy a quasi-monopolistic position in relevant markets that enables them, on the one hand, to devote less attention to promoting export contacts while, on the other hand, maintaining a social orientation. Finally, companies viewed by their managers as "collectively controlled" are characterized by the worst dynamics of productive efficiency, and, therefore, possess severely limited means with which to realize social programmes for their employees.

This step of analysis confirmed the first assumption of our working hypothesis-- different control structures do result in different production possibilities sets, and, therefore, in different production efficiency dynamics. The next step was to clarify how different aspects of adaptation behavior interact at the corporate level and what the consequence of various adaptation models at the "micro-micro" level are.

4. QUANTITATIVE ANALYSIS OF ECONOMIC BEHAVIOR - TOWARDS THE TYPOLOGY OF CORPORATE ADAPTATION

The forms of economic behavior are specific and there are various causal relations between them. Although the size of the sub-sample was very limited, it enabled us to reveal the main tendencies of the parameters' interaction. Table 6 exhibits the results of the correlation analysis of the main efficiency and expert measures.

Insert Table 6 here

The closest positive relationship (corr.=.84, 2-tailed prob. .001) was found between the export orientation of companies and the intensity of contacts with the local authorities. It is reasonable to suppose that local authorities profit in different ways from companies' export contracts. Interviews with corporate executives also revealed an additional explanation for such close connections: in many of the observed cases, the local authorities serve as the promoters of contacts between local companies and foreign partners.

A close positive correlation (corr. .43, 2-tailed prob. .01) was also found between the dynamics of economic efficiency and the social orientation of corporate policy. The results of such a policy are quite obvious. Indeed, the high motivation of employees, which manifests itself in higher production efficiency, may be attributed to the high visibility of a company's "social care" programme. Good performance, in turn, facilitates the implementation of social programmes.

The most intriguing outcome of the correlation analysis, however, was the discovery of a strong negative relationship between involvement in the shadow economy and economic efficiency (corr. -.22)--especially between involvement in the shadow economy and the share of relevant markets (corr. -.53, 2-tailed prob. .001). We concluded, therefore, that companies which have an insufficient share of their relevant market and a low productive efficiency are liable to turn to the "shadow economy".

The results of the correlational analysis between the principal expert measures and the variable, drawn upon managers' surveys, revealed the consequences of involvement in the shadow economy as well as the sources of superior economic performance.

First at all, Mafia involvement was initiated when directors had less influence over the initial distribution of shares during privatization (corr. = -.25, 2-tailed prob. .01). In the surveys, managers were asked to assess the financial situation of their companies on a 3-point scale and also to report the layoff level at their company for the last three years. It was found that variable MAF95 strongly correlates negatively (corr.=-.37, 2-tailed prob. .01) with the assessed financial performance and also correlates positively with the intensity of layoffs (corr. = .31, 2-tailed prob. .01). Based on these correlations, we concluded that involvement in the shadow economy serves as an umbrella for ineffective, troubled companies. The costs of such protection are obvious. Indeed, there is a strong negative correlation between MAF95 and

- the level of managers' salaries (corr. = -. 23; 2-tailed prob. 0.01),
- the possibility of lower-ranking managers receiving social benefits from the companies (corr.= -. 22, 2-tailed prob. 0.01);
- the assessment of the influence of privatization on the personal economic situation of employees (corr. = -. 29; 2-tailed prob. 0.01).

The negative correlation between the degree of involvement in the shadow economy and the change in the managers' influence on productive decision is also instructive. Out of a possible 27 types of productive decisions, involvement in the shadow economy is positively correlated with the expansion of managers' autonomy only in two cases--in decisions concerning the layoff of workers and the promotion of exports.

The correlation analysis also revealed a very interesting divergence in public opinion between effective and mafia-run companies. While the DEA-efficiency correlates positively with the perceived "impact of the public opinion on both operating business decisions" (corr.=.23; 2-tailed signif. .01) and corporate policy (corr.=.26; 2-tailed signif. .01), as involvement in the shadow economy increases,

public opinion becomes increasingly negative (corr.=-.18 for the impact on operating decisions and corr. =-.20 for the impact on corporate policy). This correlation shows that Russian public opinion is starting to play a role in shaping socially accepted forms of corporate adaptation.

Correlation analysis between the DEA efficiency measures and variables drawn from the questionnaire for managers unveiled the source of good performance. First and foremost, the positive correlation between DEA efficiency and the "impact of solvable demand of population on corporate policy" (corr.=.26^{*}) signifies that the over-achieving companies have been successful in capturing the segments of solvable demand. This is also suggested by the positive correlation between DEA scores and the assessment of the managers of positive influence of privatization on consumer satisfaction (corr.=.24^{*}).

Currently over-achieving companies have a very good chance of surviving in the future. Such confidence is not only consistent with the self-assessment of managers (the correlation between DEA scores and the managers' agreement with the statement "The present top management is capable of considerably improving the situation of the company" is .27^{**}). It also confirmed by the fact that economic performance is correlated with "accessibility of external financial resources (corr.=.24^{*}) and with "possibilities to improve responsibility and job requirements" (corr.=.22^{*}). Perhaps the most informative connection, however, is the strong positive correlation between the DEA efficiency scores and the admission--made by surveyed managers--that "it became interesting to work". This is the only statistically significant correlation between DEA efficiency and the measures of personal adaptation.

Good performance provokes a placid assessment of the factors of micro-environment. There are statistically significant positive correlations between DEA scores and the behavior of suppliers (corr.=.25^{*}), banks (corr. = .28^{*}), customers (corr.=.24^{*}) and even tax inspectors (corr.=.26^{*}). Indeed, there are good suppliers, fair bankers, and nice tax inspectors, but only if the bills, interest, and taxes are paid on time.

There is also a positive correlation between performance and the assessment of the behavior of different subjects of corporate governance--the managing director, top executives, and employee-shareholders (corr.= respectively .22^{*}; .24^{*} and .22^{*}).

The correlation analysis also revealed Russian managers' highly selective perception of the governmental economic policy. Indeed, as the role of exports rises, so too does the negative assessment of the impact that the disintegration of the USSR's has had on strategic decisions, and the negative impact of the current customs policy on corporate decisions. (corr. = -.20^{*} and -.21^{*} respectively). On the other hand, there is a statistically significant negative correlation between the degree of involvement in the shadow economy and the assessment of the impact of local authorities (corr. = -.21^{*}).

In general, the correlation analysis between DEA_FIN, EXP95, and MAF95 variables, and selected results of the managers' self-assessment of the overall situation of their companies revealed the following relationships:

- Good dynamics in productive efficiency are strongly related to sufficient financial performance (corr. = .34^{*}), while involvement in the shadow economy is strongly associated with bad financial performance (corr.=-.37^{**}).

- The degree of export orientation has no direct impact upon the financial well-being of the companies.
- The dynamics of productive efficiency--especially the degree of export orientation--are strongly correlated positively with the size of companies (corr. = .36^{**} and .59^{**} respectively). This may reflect the effects of scale and scope on the economy, as well as the greater opportunities larger companies have to overcome entry barriers on overseas markets. Good dynamics in productive efficiency has a very strong positive impact on labor force dynamics (corr. .71^{**}). This means that the "soft" employment policy still results in better performance at the micro-level.
- Export orientation, however, has a negative impact on labor force dynamics (corr. = -.26^{**}).
- Finally, involvement in the shadow economy is characteristic mostly of small and medium sized companies (corr. = -.44^{**} between size and MAF95). Moreover, mafia-involved companies are characterized by maximal layoffs (corr. = -.31^{*}). We should remind the reader here that the administering of layoffs was the sole area where the managers of mafia-run companies had experienced an increase in their authority.

In the next section, we will show how these quantitative results reflect actual, implemented adaptation strategies.

5. QUALITATIVE ANALYSIS OF ADAPTATION STRATEGIES IN RUSSIAN PROCESSING INDUSTRIES

5.1. Some common features of the Russian corporate strategies

In this section we will change the methods of analysis from organizational economics' approaches to strategic management. We will outline some distinguished features of Russian industrial companies. First at all, the most common feature of the surveyed companies in terms of their competitive situation is the single-business orientation. This is the consequence of sixty years of "specialization" policy. All of the surveyed companies are single-plant firms. Second, there is traditional separation between production and marketing. It is apparent that most Russian companies do not compare well with their western counterparts in terms of *non-product* attributes such as delivery, convenience, information, and attendant services (before, during, and after sale) (Abell, 1992). Third, all of the surveyed industries (food-processing, textile, basic chemicals, construction materials and machine-building) are mature or declined industries. Moreover, in textiles, construction materials and machine building there is a situation of fragmented industries made up of numerous small and medium size companies. Increasing transportation costs and local "regulatory" requirements (from both the local authorities or local mafia dons) are making food processing markets also highly fragmented.

Finally, most of the Russian markets exhibit the conditions of *emerging markets*:

- There are no "rules of games"; the issue of how the market will function is open-ended.
- Firms lack solid information about competitors, buyer needs and preferences; industry participants are forced to grope for the "right" strategy.

- Difficulties in securing ample suppliers of raw materials and components are encountered and raising the capital needed is a strain (Thompson and Strickland, 1987, p. 122).

The only possible strategy in such conditions is offensive strategies -- building and maintaining competitive advantages via simultaneous attack on many fronts. The next paragraphs exhibit some of the most distinctive cases of successful crafting and implementation of adaptation strategies.

5.2 Creation of a New Strategic Vision

The first, most crucial challenge for Russian companies is the creation of a new strategic vision. A new strategic vision has begun to noticeably permeate the agendas of director-controlled companies. Short-term goals have begun to be displaced by long-range planning, marketing strategies have begun to broaden and diversify, existing modes of business have begun to be examined critically, and a genuine disdain for unprofitable and counterproductive activities and practices has emerged. We observed, that as a result of their self-propelled transformation into the true owners of their companies, director-owners have begun to consider their companies not as sets of obsolete equipment, old buildings, outdated infrastructure and workers which they must maintain, recompense, or feed, but as networks of tangible and intangible assets, that must be augmented and safeguarded in order that they might be transferred to the next generation. This new strategic vision is, perhaps, the most significant shift in the mind-set of Russia's top executives.

5.3 Developing Sensitivity to Customers

The newly privatized Russian companies find themselves in a unique situation: after decades of operating in a closed market - complete with state subsidies and price controls - they must now develop the requisite marketing skills to protect local markets against both foreign and domestic competition. In order to achieve these goals, Russian

companies must quickly learn the rudiments of customer satisfaction. As one production superintendent colorfully phrased it during his interview: "We have spent all our life sitting behind the high fence that separated us from the customers."

The urgency of learning modern marketing techniques is also dictated by a threat from newcomers -- imported commodities to Russian markets. Moreover, since 1992, Russia has been inundated with an ever-increasing influx of imported consumer goods. While not always of the highest quality, most of these imports are attractively and colorfully packaged, and shrewdly marketed through aggressive advertising campaigns. "New Russians" - the only group of domestic consumers with a high income and low price elasticity of demand - have constructed a conspicuous social image based upon a total aversion to domestic-made goods. Lower income groups have tried to emulate the spending habits of the New Russians. While they share the same appetites and aspirations as the New Russians, lower income Russians are hamstrung by a high price elasticity of demand. The commercial cravings of this class of consumer have led to the development of a new strategy called "window-dressing", which entails the production of mediocre quality goods which are marketed at a sharp price.

An analysis of the data collected for this study indicates that the "window-dressing" strategy has been successfully adapted by the majority of successful Russian companies. The realization of such a strategy requires two pre-conditions:

- a good understanding of the preferences and tastes of the "poor" consumers who ape the tastes of "rich" consumers;
- selling at bargain prices.

In turn, these pre-conditions require an enormous amount of preliminary and constant work, which includes:

- the qualitative and geographical segmentation of consumers and markets;
- determining the demand elasticity of each type of consumers in each sales location for every kind of good to set "significantly" different competitive prices;
- the minimization of overhead, transport, distribution and production costs in order to maintain the profitability of sales at bottom prices.

Maintaining production operations at the lower limit of profitability and on the "sensitivity border" of the marketing department forces a company to completely reorganize its production and distribution systems. Successful implementation of the "window-dressing" strategy also necessitates a re-organization of the distribution system in order to enable the producing company to employ a direct sales strategy so as to maximize its profit from the production and sale of low-margin items. A direct sales strategy not only eliminates the role of the profit-draining middle-man, but enables the company to keep a close eye on the ever-shifting tastes and demands of the market for which it is in the business of producing goods. The "window-dressing" strategy, therefore, forces a company to be more flexible in its production schedules, to acquire new contracts, and decrease the turn-around time of orders, which are executed immediately so as not to lose the market.

Variants of the "window-dressing" strategy have been successfully applied in all of the observed industries. In, for example, the housing industry - an industry which is now catering to a small, relatively rich, Russian market consisting of businessmen, local Mafiosi, directors of privatized companies, and the like - producers of panel-construction apartment blocks began to offer inexpensive "pseudo-cottages" built from large panels, but decorated so as to resemble more expensive brick villas. Likewise, in the food processing industry, dedicated to the mass consumer, the main attention of managers is devoted to discerning every aspect of solvable demand. Company No. 22, for example, a dairy, divided its production lines into two segments: one which

produced small packages, which were then retailed from moving kiosks which served offices and factories, and another which produced large packages, designed for household consumption, which were retailed in supermarkets.

Another example of adaptation to market conditions can be found in the geographical segmentation of markets. In small towns, confectionery producers determined the location of commercial banks and installed retail outlets for the vending of more expensive confectionery at those locations. Spurred by the success of these ventures, several confectioners have effectively marketed goods in sophisticated packaging which imitates the style of imported - and hence, more expensive - goods, thereby increasing their profit-margins. Privatized bread factories, which face stiff competition from small private bakeries, have attempted to offer new and imaginative services to customers whose primary commercial impetus is no longer merely hunger, but, increasingly, convenience. Many bread factory managers have discovered that the fleets of lorries which their companies maintain for the distribution and sale of their baked goods provides them with a "competitive advantage" over private bakeries. Several enterprising managers have exploited that "competitive advantage" by delivering fresh bread to summer-cottage communities, cementing a year-round link with their winter customers - city-dwellers who seek refuge from the crowded cities during the summer months.

None of the strategies enumerated above could have come to fruition had not new channels of distribution been established following the dissolution of the Soviet Union's centrally planned economy. One of the primary features of the centrally planned system was a tightly controlled monopoly over the distribution of goods. After the collapse of the communist system, around one million new private wholesalers and retailers have been established. Most of these new economic distributorships are little more than small scale traders which conduct business within a small geographic area.

Manufactures have thus been forced to deal with a large number of distributors operating under vastly different conditions. Moreover, the extremely high commission rates applied by private retailers make it impossible for producers to maintain competitive consumer prices. Fortunately, Russian managers entered the recession without textbooks such as "How to Survive the Recession", which suggested that "strategies should (at least until the crisis is over) generally avoid a fundamental change in the character of business and major changes in the business at the interface with consumers." (Prescott, 1982; p. 117).

One of the most original solutions to this problem was proposed in director-controlled company No. 15. This company produces winter outer wear. Production has a strict seasonal character; in March-April the demand falls by 70-80%. During the summer down-time, almost all middle and shop floor managers and engineers work as distributors. A flexible system of benefits, which rewards managers for every contract they conclude, makes the summer distributorship a highly attractive activity. Direct observation of company No. 15 revealed that the managers had already divided Russia into separate trading areas and competed among themselves, establishing long-term relations with retailers. As a result of such close contact with the retailers in their designated sales area, each manager obtains a clear and detailed picture of consumers' needs and preferences. Thus, potential misunderstandings between the marketing, engineering, and production departments are circumvented, and a constant stimulus towards production innovations and high quality was firmly established.

5.4 Vertical intergration

Another example of an enterprise re-organizing its marketing strategies in order to adjust to economic realities was observed when a second textile plant - a large factory which had tremendous difficulty finding a market for its material- took over several clothing factories. The textile plant first forced the clothiers to tailor exclusively with the

material it produced. It then concluded long-term agreements with more than 100 retail shops concerning the marketing of both the material and the clothing it produced. This scheme enabled the textile factory to establish close contact with the consumers of its products, which led to the implementation of strict new quality standards for its material. This vertical intergration strategy led to superior financial performance of the company.

5.5 Overall low-cost leadership

The maintenance of low prices should be based on cost advantages, which, in turn, lead to the optimization of the production structure, the exploitation of the economies of scale, and the minimization of organization expenses. An excellent example of this principle in action is company No. 1, which produces furniture. Over the last two years, the list of suppliers was drastically revised by the company's procurement department. The main criteria for the choice of a supplier were:

- the quality of the semi-finished products and raw materials it supplied;
- reasonable price;
- stability of supply;
- the financial position of the supplier.

The last two points were of crucial importance. Company No. 1 preferred to deal with suppliers which were in dire financial straights and which suffered from problems of procurement. The company's strategy towards such firms was to intercept their key lines of procurement, thereby forcing a supplier to conclude a special agreement of barter trade. Such long-term bilateral agreements granted firm No. 1 the exclusive rights to the supplier's stock of raw materials. A special Russian term, "davalcheskoe syrie", describes this system of multi-level barter trade, in which a consumer provides a manufacturer with the raw materials necessary to fashion the desired product. The terms of these agreements, concluded while suppliers are in dire fiscal distress, are

naturally extremely favorable towards company No. 1. The prices the company sets for raw materials are 50 to 60% below average market prices. (see Gurkov and Kuzminov, 1995a.)

5.6 Re-shaping the industry structures

When the abovedescribed strategies are difficult to implement, the natural exit is inter-enterprise agreements and cartelization. The initiation of inter-enterprise agreements starts from two sides. First, there are tacit or open agreements between producers of some basic comodities. Usually the agreements determine the territorial segmentation of markets, because in the conditions of high inflation the price agreements are difficult to monitor. Some of the well-known examples are the cement cartel in Central Russia, panel brick producers' cartel etc. Second, the impulse for cartelization originates from large banks and investment companies. Having acquired controlling interests in a number of main producers of inter-related industries, Russian banks create mechanism of inter-industrial integrations. Sometime such mechanisms embrace not only Russian companies, but producers from other CIS countries.

Irrespectably to the welfare effects of monopolization and vertical restraints, it should be stressed that at least in the USA both areas are the objects of more and more permissive antitrust policy (see Mueller, forthcoming). Mergers in globally oriented industries (aerospace, electronics) also have received "softer" treatment in the USA in the last two decades. In this respect, in our opinion the "J.P.Morganization" of Russian industries by creation of diversified concerns is inavoidable step of creation of a market economy. The main question here is to create the set of economic regulation so the business concentration would have positive impact on competitiveness:

5.7 Edging to overseas markets

The last type of adaptation strategy observed in the surveyed companies can be called "edging towards overseas markets." Such a strategy entails the concentration of a company's efforts on the maximization of export sales. Of the 35 observed companies, four--two textile companies, an electronic plant, and a producer of fertilizers--exported more than 70% of their total production.

The initial impetus behind the evolution of exclusively export-oriented enterprises was a shortage of domestic solvable demand. The development of this strategy, however, cannot be traced to the initiative of Russian corporate executives, but to those trade intermediaries who "discovered" these companies and "betrayed" them to foreign partners. As a result, none of the intensively export-oriented companies among those surveyed has had direct access to foreign retail, or even small wholesale, markets. In all such cases, foreign intermediaries completely controlled the companies' marketing channels. In the textiles industry, foreign intermediaries also control the supply channels. Their foreign partners provide them with raw materials such as wool and cotton--commodity credits which are satisfied with supplies of finished products.

It is obvious that under such conditions the foreign partners are able to manage the value-adding chain so as to set the minimal share in value added to Russian producers. In all of the cases we observed, the redumption prices set by foreign partners have not covered the discounted production costs of the Russian producers (accounted for production cycle and inflation index). The freezing of the exchange rate in July 1995, however, has made exportation absolutely unprofitable, as prices have not covered even the current variable costs.

The fixed exchange rate policy has resulted in a "stalemate" situation for export-oriented companies. On the one hand, they cannot return to the local markets they abandoned in favor of an export-oriented enterprise, for over the last few years they have not only lost the necessary local contacts, but have dismantled their local-oriented marketing management. On the other hand, these companies also lack the requisite financial wherewithal and technical skills necessary to succeed in direct sales in overseas markets. They lack brand-name recognition, experience in modern sales techniques, and even often have no staff with a working knowledge of foreign languages.

The obvious economic inefficiency of these export-oriented enterprises may have serious negative repercussions on the future adaptability of Russian industry. Indeed, direct foreign investment in the Russian economy is still infinitesimal. More than half of the total foreign investment was oriented towards energy-related sectors, finance, banking and trade. From January-July 1995, the machine-building industry received the impressive amount--\$22.9 million. Under such conditions, the participation of Russian industrial enterprises in the international division of labor, even as unequal partners, will lead to the transfer of managerial techniques, methods of quality control, marketing knowledge, etc. Viewed in perspective, export-oriented enterprises should serve as "benchmarks" for other Russian companies within the same branch of industry. In this respect, the further shortening of export from processing industries will extend the gaps in production and managerial technologies.

6. DYNAMICS OF SOCIAL ADAPTATION

Beyond the dynamics of economic efficiency and sophisticated marketing strategies we should recognize the adaptation process at the "micro-micro" level - the personal adaptation of managers and workers to swapped living and working conditions. In our

study we preferred the self-assessment of adaptation to doubtful figures of "real wages", "consumption power" and other aggregated measures.

6.1. Self-assessment of living and working conditions by employees

First, we retraced the dynamics of self-assessment of living conditions of managers and workers, comparing the results of 1994 and 1995 surveys (see Table 7).

Insert Table 7 here

We may see that the most visible change that has occurred in the last few years is the increased feeling of instability and incertaincy. Indeed, 85-90% of both the surveyed managers and workers confirmed that "they worried much more about tomorrow" and around 80% "might rely only upon themselves".

Second, the majority of employees have experienced a reduction of food consumption and purchase of clothes. It should be stressed that the significant difference between managers and workers in these two points, observed in 1994, completely smoothed in 1995.

Third, we recorded the changes related to job conditions. It became more difficult to work to workers and especially to managers; both managers and workers had to work much more and to search for additions sources of income. However, for a considerable part of managers (25% in 1994 and 30% in 1995) the work became more interesting.

The mentioned types of changes in living and working conditions are reflected in dynamics of overall job satisfaction (see Table 8). Around a half of the surveyed

employees were unable to assess their overall job satisfaction, but expressed their satisfaction by different job's facets.

Insert Table 8 here

We may see that the overall job satisfaction considerably decreased between 1994 and 1995 for both managers and workers. Among the different job's facets the main deterioration occurred in payment's satisfaction. At the same time, for workers a significant regress was recorded in 1995 in satisfaction by the conditions of displaying skills and faculties. The share of workers completely dissatisfied in 1995 by this point is two time greater than that of managers. This reflect the underutilization of labor potential in Russian industries.

6.2. Social adaptation - positional or situational phenomenon?

To understand the source of social adaptation we should distinguish positional and situational factors. The positional factors reflect external, non-controllable conditions, especially the line of business (industry) of a companies. Traditionally, in the Russian economic and social life there exists a watershed between "socially soft" industries, especially food-processing, and sometimes chemicals and "socially hard" industries - machine-building, construction. The level of social "rigidity" of the industries was determined not by the formal working conditions or the level of salary, but by the "informal opportunities" to profit besides the salary and official social benefits. The situational factor is the economic performance of companies. Therefore, we decided to observe the variation of job satisfaction across industries and companies in different economic situation.

First, we devised the surveyed 20 companies into economically "weak" and "strong". The measure of economic success was the relation between the dynamics of DEA efficiency of a company and the average DEA dynamics within the industry. A series of T-test was performed to estimate the statistical differences in the assessment of job facets' satisfaction by managers of "successful" and "troubled" companies (see Table 9).

Insert Table 9 here

The strongest statistically proved difference was found in "satisfaction by job security" between successful and troubled companies (2-tailed prob. of equality of means = .000). There are also statistically significant differences in satisfaction by "overall job satisfaction" (2-tailed prob. = .003), "possibility of receiving social benefits" (2-tailed prob. = .012), "salary" (2-tailed prob. = .18), "regime of work" (2-tailed prob. = .047) and, finally, "labor conditions" (2-tailed prob. = .084). From another side, the differences in satisfaction by prestige, displaying knowledge and skills and especially career possibilities were not statistically significant. Therefore, we may see that till now the consequence of good performance on social adaptation is the satisfaction of "basic needs"-- job security, salary, physical labor conditions. At the same time, some "higher" needs like "displaying knowledge and skills", "career" is still not affected by the level of company performance. It means that the personal adaptation in overperformed companies still has today-oriented, occasional character.

We also tried to clarify the impact of industry characteristics on the level of social adaptation. Table 10 displays the distribution of answers about overall job satisfaction by industries.

Insert Table 10 here

We may see the social state significantly depends on the economic situation of an industry. The food-processing industry as the most prosperous as well as traditionally "soft" industry is characterized by the highest level of job satisfaction among the workers. The most troubled machine-building industry has the lowest level of job satisfaction by workers, while in the textile industry, which is also experiencing serious difficulties, managers display the greatest discontent. It should be stressed, that the absolute differences between the shares of satisfied manager, as well as the differences between the shares of unsatisfied workers are greater across industries, than between successful and troubled companies. This means the industry specific still plays a considerable role in determination of social adaptation processes.

6.3 Typology of personal adaptation

To clarify that fact we constructed two aggregate measures of adaptation--one for "current adaptation" and another for "potential adaptation". The index of "current adaptation" is the sum of answers to three questions--about the level of consumption of food, clothing, and furniture and appliances. The index of "potential adaptation" was compiled from the sum of the respondents' self-assessments concerning the prospect of finding another job (better job according to the specialty of the respondent, better job in another field, any job). We should remind the reader that for all questions a 5-point scale, with values ranging from "completely disagree" (recorded as "1") to "completely agree" (recorded as "5") was used.

The group of "presently adapted" people is composed of employees who did not, at least, report a deterioration in consumption. The stability of consumption of the industrial population of Russia from 1993-1995, therefore, may be viewed as a significant achievement. This group entailed 35 % of managers and 33% of workers.

The medium adapted group (composed of employees who reported a moderate deterioration) comprises 23% of managers and 21% of workers. Finally, badly adapted employees constitute almost 42% of managers and 46% of workers.

It was found that the level of "current adaptation" has no impact on "potential adaptation" (corr.=.03 for managers and .00001 for workers). This means that the self-confidence of people is not related to their present income. Some additional reasoning revealed that the "current adaptation" is a very temporary situation, which is not influenced by savings or other sources of social stability. This was revealed when we compared the models of job-hunting behavior provided by employees with different levels of "current adaptation". Both managers and workers were asked about their planned behavior if their company should fall bankrupt. To our surprise, the share of employees (both managers and workers) who would accept any new job, monotonically increases as the level of current adaptation rises. (see Figure 2.) Indeed, only 3% of the surveyed managers who reported a deterioration in their level of consumption, would accept any job, while 16% of the well-adapted managers and 27% of the well-adapted workers would prefer any job to unemployment benefits. At the same time, possible unemployment benefits would present a reliable source of income for badly-adapted managers and workers. In addition, we observed a sort of "carelessness of poor people"--almost one third of the badly-adapted managers "has not brooded about their actions after the company's possible bankruptcy". The share of well-adapted managers who have chosen such an answer is almost two times smaller.

Insert Table 11 here

In general, our findings suggest that social adaptation is the most dramatic and longest process within the transition to a market economy. The level of employee satisfaction

significantly decreased in 1995, in comparison to 1994, for both the managers and workers we surveyed. The differences between managers and workers in the level of adaptation, however, has smoothed. The level of social anxiety and uncertainty has reached the maximal possible level--85% of workers and 93% of managers worry much more about tomorrow. The acute feeling of uncertainty, like any "irritant" experienced for a long period, provokes a specific "inhibition"--32% of unadapted managers expressed their estrangement from the affairs and the future of their companies. This disaffection in company life represents the main source of danger for successful adaptation at the corporate level. In this regard, we present the typology of socio-economic adaptation in the next section, taking the indexes of social adaptation as the basic criteria.

7. TYPOLOGY OF SOCIO-ECONOMIC ADAPTATION

Two measures of adaptation--personal adaptation and institutional adaptation--are closely interrelated. To clarify the possible "configuration" of socio-economic adaptation, we used cluster analysis (SPSS for WINDOWS 6.0). For the clusterization of the surveyed companies, the following indexes were chosen:

- 1) the change of employment level. The scale used: "1"--fall in employment more than 50% in the last three years; "2"--fall between 10 and 50%; "3"--fall up to 10%; "4"--raise of employment.
- 2) the average job satisfaction of employees (as an average of the 10 questions for all the employees within a company). The scale used: "1"--completely dissatisfied, "5"--completely satisfied.
- 3) the assessment of top managers' actions by employees (as a weighted average of 5 questions about top managers' actions). The scale used: "1"--the top managers neglect

completely the interests of employees", "5"--the top managers do their best to protect the interests of employees".

4) the direction of changes in living conditions (as an weighted average of 10 questions): The scale: "1"--the life became much more difficult; "5"--"the life became easier".

5) the subjective appraisal of the economic situation of a company. The scale: "1"--the company is on the verge of bankruptcy; "5"--the company is stable and there are good business perspectives.

The 13 surveyed companies were allocated in three clusters (see Figure 2). To understand the nature of the selected groups we computed the averages of expert and efficiency measures for each cluster (see Table 12). We can see that the main difference is created by the first and the fifth parameters--"change in employment" and "economic situation of enterprises".

Insert Figure 2 here

For the first cluster the value of parameter "change in employment" is 1.79; that signifies a fall in employment of more than 10%. Simultaneously, the respondents assessed the financial situation of their companies as "very bad". The subjective measures are confirmed by objective criteria. Indeed, the fall in economic efficiency for the enterprises of the first cluster was 45%. We may call the first cluster "troubled companies". The values of other expert measures confirm are previous findings about the behavior of troubled companies. Indeed, we see that the companies of that cluster maintain close contacts with "shadow structures". Such companies are display some involvement into overseas operations (the level of variable EXPORT is 1.75 on 3-point scale).

The second cluster may be called "socially stable" companies. Indeed, there is a minimal fall in employment. In general, their employees do approve of the actions of their top managers in pursuing the employees' interests. The employees also at least express positive satisfaction with job conditions. The situation of these enterprises is viewed as "stable", which is confirmed by moderate fall in economic efficiency (26%). The prosperous companies have, on average, an insignificant involvement in export operations. The "socially stable" companies probably have little needs for risky foreign business alliances because of their high shares in their relevant markets (the value of variable MARKET is 3.6 that corresponds to the share around 50%).

Insert Table 12 here

The third cluster presents the most interesting case. On the one hand, it unifies the best performing companies--the fall in economic efficiency is 23%. That their top managers are quite persistent in defending the interests of employees, can be inferred from their very moderate amount of layoffs. On the other hand, the economic situation of these companies is not too stable (assessment 2.5 of 4-point scale). Moreover, the employees of those companies indicate the greatest fall in living conditions (assessment 1.99 on 5-point scale) despite all of the "noble impulses" of the top management. This contradiction can be explained by the popular perception that the positive dynamics of economic efficiency invariably invoke a corresponding social outcome. Subsequently, their social claims are overestimated, and, as a result, they are inclined to understate their appreciation. However, the key to understanding this situation is the very low shares of relevant markets enjoyed by these companies (value of variable MARKET is 1.5 that corresponds to the share less than 20%). While continuous "sparring" with competitors--including those in overseas markets--"keeps the companies in good form", forces them to invest in production improvement, quality control, and

advertising, but prevents them from accumulating any "fat"--i.e. financial and material reserves which can be spent on employee benefits. We can characterize such companies as "actively adapting to real market conditions". The fact that the employees of these third cluster companies appreciate the "goodwill" displayed by their top managers in defending their interests attests that these companies have not exhausted the reserves of their employees' "social patience".

8. SUMMARY AND CONCLUSIONS

In this paper we presented the patterns of adaptation processes at different levels in Russian enterprises' framework--governance, management, behavior and performance. (see Vogelsang, 1990.) The key findings may be summarized as follows:

1. The economic situation of most Russian processing industries is still "alarming". The partial economic stabilization achieved during the first months of 1995 was disturbed by the fixed exchange rate policy. Among the six surveyed industries, only in food processing and partly in construction materials did employees express some certainty about the economic future of their company.
2. The social situation in Russia is deteriorating. The comparison between the surveys of 1994 and 1995 revealed that the perception that working and living conditions are declining has grown stronger among employees. This perception has provoked an extremely low level of job satisfaction. The dilapidation of job satisfaction, in turn, has eroded the mutual trust between employees and corporate executives. The average assessment of managers by workers changed from positive to negative in 1995.
3. The wide dispersal of employee ownership--the result of the implementation of the privatization programmes of 1992-1994--transferred employees' discontent to the problem of corporate governance. This study reports the different types of methods employed in effecting the transfer of employees' shares in individual industries to top-level managers.

4. In this study, five types of control were identified in order to classify the configuration of power within and around the surveyed privatized companies. The dominance of top executives is associated with better dynamics in economic performance. Companies whose financial situation is weak, but which have good export potential, are the main targets of corporate takeovers by financial institutions. Finally, companies viewed by their managers as "collectively controlled" are characterized by the worst dynamics of productive efficiency, and, therefore, possess limited means to realize social programmes for their employees.

5. The quantitative analysis of elements of economic behavior revealed that larger companies out-perform small ones. Larger companies also have a better chance of edging into overseas markets. However, the degree of export orientation has no impact on company performance. Small and medium-size companies are more likely to find the solution to their business problems through high involvement in the shadow economy, i.e. risky illegal business transactions. Involvement in the shadow economy may serve as a temporary buffer for "going-to-bankruptcy" companies, but it ultimately results in a higher layoff level, thereby damaging the public image of such companies.

6. The list of corporate-level strategies, implemented by over-achieving companies, includes market segmentation, overall low-cost leadership, vertical integration along the production and marketing chains, and the re-shaping of their industrial structure. The mastering of a victorious strategy starts with creation of a new strategic vision, when short-term goals begin to be displaced by long-range planning (in Russia's hyper-turbulent conditions, the long range is two to three years). The new strategic vision is more likely to be established in companies where the controlling interest has already been secured by its top executives.

7. In terms of overall socio-economic adaptation, the surveyed companies may be divided into three clusters:

- 1) economically and socially successful;
- 2) economically successful and socially troubled;

3) economically and socially out-performed.

These findings enabled us to construct a conceptual model of the adaptation processes in Russian industries (see Figure 3).

Insert Figure 3 here

We should acknowledge one important limitation to our work--the sample size. The sufficient reliability and validity of the research instruments used, however, enables us to regard this work as a pilot study for larger corporate surveys on adaptation mechanisms in Russian industries. Such surveys should provide a firm foundation for the development of practical and well-founded governmental economic policies, including selective state aid programmes and foreign trade regulation.

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Table 1. Assessment of the Importance of Business Problems by Managers

	1994	1995
Non-paying debtors	4.22	4.07
Disturbances in supply of raw materials	4.15	4.02
High bank debts and trade liabilities	4.02	3.72
Irregularity of production operations	3.96	3.88
Absence of orders, contracts	3.92	3.84
Irregularity in energy and fuel supply	3.84	3.42*
Poor work discipline	3.76	3.54*
Staffing by managers	3.69	3.78
Staffing by qualified workers	3.61	3.53
Delays in wage payment	3.37	3.42
Languor of the company's top management	3.31	3.49
Danger of unemployment	3.35	3.70**

Note: * - difference is statistically significant at .05 level; ** - difference is statistically significant at .01 level

Scale: 1 - not important at all, 2- small importance, 3 - significant, 4 - important, 5 - extremely important

Table 2. Distribution of answers of managers and workers about the situation of their companies

Branch	Managers					Workers				
	Stable	Difficult	Bad	Very bad, may be called bankrupt	Have not brooded about that	Stable	Difficult	Bad	Very bad, may be called bankrupt	Have not brooded about that
Textiles	7.4	25.9	33.3	22.2	11.1	8.6	22.4	46.6	10.3	12.1
Food-processing	25.7	37.1	17.1	11.4	8.6	17.9	25.5	33.0	17.0	6.6
Chemicals	6.7	46.7	42.2	4.4	0.0	2.6	29.5	44.9	16.0	7.1
Construction complex	13.6	30.5	45.8	8.5	1.7	16.4	16.9	40.1	19.2	7.3
Machine-building	0.0	19.2	50.0	26.9	3.8	1.9	11.3	52.8	30.2	3.8
Average across all industries	11.5	33.3	38.5	12.5	4.2	10.5	22.2	42.0	18.0	7.3

TABLE 3. Managers' and Workers' Assessment of the Present Top Management of their Companies

Statement	Managers		Workers	
	1994	1995	1994	1995
The present top management of the firm is able to improve its economic situation	3.57	3.27*	3.51	2.98***
Management does its best for employees' benefits.	3.70	3.29**	3.16	2.63***
Management does its best to maintain job security	4.03	3.60***	3.42	2.98***
Management does its best to protect the employee-shareholders' interests	3.58	3.14***	3.17	2.55***
My supervisor is sufficiently vigorous in defending the interests of his subordinates.	3.82	3.62	3.86	3.36***
The disagreements in our firm are settled quickly and effectively.	3.41	3.18*	3.25	2.89***

Note: * - 2-tailed probability of equality of means < .05; ** - 2-tailed prob. <.01; *** - 2-tailed prob. <.001

The original scale: 1- completely disagree, 5- completely agree.

Table 4. Performance and "Expert" Measures for the Sub-Sample of the Surveyed Companies

Number of a Company in the general sample	9	12	13	15	16	17	18	19	22	23	24	25	27
Type of Control ¹	4	5	1	3	3	1	3	5	1	2	2	4	4
Export Orientation ²	1	3	1	2	1	2	2	2	1	1	3	1	1
Social Orientation ³	4	3	3	5	4	3	3	4	4	4	4	3	4
Contacts with Local Authorities ³	4	5	3	5	3	4	3	4	4	4	5	3	3
Involvement into Shadow Transactions ³	4	3	2	3	3	3	3	4	1	1	2	3	3
Share on the Relevant Markets ⁴	4	2	3	1	2	2	2	2	5	2	3	2	3
Efficiency Score (Average in 1994)	69,4	50,2	88,5	72,3	56,9	33,3	77,4	100	38,1	73,8	76,9	93,0	67,4
Financial Stability Ratio (Average in 1994)	0,66	0,78	0,90	0,45	0,62	0,65	0,85	1,25	0,68	0,81	0,87	0,78	0,73

Notes:

- 1) Type of Control: 1- "collective"; 2-concentrated managerial; 3- directors; 4 - unclear; 5 - outsiders'
- 2) Export Orientation: 1 - complete absence of export; 3 - export is more than 50% of the total sales
- 3) The levels of Social Orientation, Contacts with Local Authorities, Involvement into Shadow Transactions were assessed on 5-point scale: 1 - "almost absent", 5 - "extremely intensive"
- 4) Shares on the Relevant Markets: 1= less than 20%; 2 = 21-40%; 3 = 40-60%, 4 = 60-80%, 5 = more than 80%,

Table 5. Characteristics of Control Arrangements

Type of Control	Average Scores					
	Economic Efficiency ¹	Export Orientation ²	Social Orientation ³	Contacts with Local Authorities ³	Involvement into Shadow Transactions ³	Share on the Relevant Markets ⁴
"Collective"	53,5	1,3	3,3	3,3	3,0	3,3
Managerial	73,8	2,0	4,0	4,5	1,5	1,5
Director's	68,9	1,7	4,0	3,7	3,0	1,7
Unclear	76,6	1,0	3,7	3,3	3,3	3,0
Outsiders'	75,1	2,5	3,5	4,5	3,5	2,0

Notes:

- 1) Type of Control: 1 - "collective"; 2 - concentrated managerial; 3 - directors; 4 - unclear; 5 - outsiders'
- 2) Export Orientation: 1 - complete absence of export; 3 - export is more than 50% of the total sales
- 3) The levels of Social Orientation, Contacts with Local Authorities, Involvement into Shadow Transactions were assessed on 5-point scale: 1 - "almost absent", 5 - "extremely intensive"
- 4) Shares on the Relevant Markets: 1 = less than 20%; 2 = 21-40%; 3 = 40-60%, 4 = 60-80%, 5 = more than 80%,

Table 6. Correlation Matrix of Expert and Performance Measures

Correlations:	DEA_FIN	EXP95	SOC95	LOC95	MAF95	MARK95
DEA_FIN	1.0000					
EXP95	.0602	1.0000				
SOC95	.3424**	-.0765	1.0000			
LOC95	-.0954	.7560**	.0691	1.0000		
MAF95	-.3627**	-.1523	.0648	-.2168*	1.0000	
MARK95	-.0937	-.3044**	.0462	-.2922**	-.4358**	1.0000

2-tailed Signif: * - .01 ** - .001

Table 7. Changes in Conditions of Life in the Last Years

	Workers		Managers	
	Agree %	Disagree %	Agree %	Disagree* %
In the last two years...				
I have experienced a reduction in food consumption.				
1994	52,6	23,4	36,5	26,5
1995	51,3	27,3	52,1	23,4
I buy less clothes.				
1994	63,4	18,8	31,2	25,4
1995	58,2	24,5	60,6	19,5
I buy less home furniture and appliances.				
1994	62,9	23,2	63,5	20,6
1995	63,3	23,3	67,5	17,0
I have to work much more				
1994	54,3	18,1	49,7	19,6
1995	44,8	25,0	55,2	12,5
I have to find additional sources of income				
1994	63,1	21,2	55,1	27,0
1995	60,7	26,0	60,6	21,5
It became much more difficult to work.				
1994	52,3	20,0	65,8	13,9
1995	42,5	29,0	58,4	13,4
It became much more interesting to work.				
1994	20,0	48,6	24,9	37,6
1995	15,4	55,7	29,6	44,1
The management became much more fault finding.				
1994	41,8	27,5	31,1	28,9
1995	33,2	35,4	32,6	27,9
I can rely only upon myself.				
1994	82,6	5,2	81,8	4,2
1995	80,5	6,4	85,4	5,2
I worry much more about tomorrow.				
1994	90,2	5,3	83,8	3,9
1995	85,3	7,8	92,7	3,6

Note: the sum is not equal 100% due to missing answers "difficult to say"

Table 8. Job Satisfaction of Workers and Managers

Job Facet	Workers		Managers	
	Agree %	Disagree %	Agree %	Disagree %
Payment				
1994	18,6	50,3	28,7	36,7
1995	11,3	62,6	21,9	48,8
Regime of work				
1994	70,1	13,8	80,5	5,5
1995	66,4	15,4	71,0	9,5
Conditions of work				
1994	38,5	33,7	64,5	11,3
1995	38,0	32,0	58,1	14,6
Conditions for displaying skills and faculties				
1994	38,5	28,0	59,2	14,7
1995	33,3	36,9	47,7	15,8
General job satisfaction				
1994	38,3	22,7	28,7	9,6
1995	29,7	36,3	23,1	14,6

Note: The sum is not equal to 100% due to missing answers "Difficult to say".

Table 9. T-test Comparison of Managers' Job Satisfaction in "Troubled" (a) and "Successful" (b) Companies

Job Facet¹	N of cases a) b)	Means a) b)	Mean Difference	2-tailed Probability of Equality of Means²
Payment	a) 61 b) 95	a) 2.20 b) 2.66	-.46	.018
Regime of Work	a) 61 b) 94	a) 3.75 b) 4.13	-.38	.047
Conditions of Work	a) 61 b) 93	a) 3.49 b) 3.81	-.32	.084
Prestige of Workplace	a) 60 b) 90	a) 3.11 b) 3.42	-.31	.144
Conditions for Displaying Skills and Faculties	a) 59 b) 95	a) 3.27 b) 3.53	-.26	.144
Level of Independence in Work	a) 61 b) 94	a) 3.56 b) 3.84	-.28	.092
Career Possibilities	a) 59 b) 90	a) 2.85 b) 3.00	-.15	.489
Possibilities of Benefits' Receiving	a) 59 b) 90	a) 2.29 b) 2.86	-.57	.012
Personal Relations at the Workplace	a) 59 b) 94	a) 3.68 b) 3.76	-.08	.639
Job Security	a) 61 b) 94	a) 2.30 b) 3.11	-.81	.000
Overall Job Satisfaction	a) 58 b) 91	a) 2.90 b) 3.45	-0.55	.003

Notes: 1) the scale used: 1 = "completely dissatisfied"; 5= "completely satisfied"

2) Equality of Variance was assumed is the level of significance of Levene's Test for Equality of Variance was above .10.

Table 10. General Job Satisfaction of Workers and Managers in Different Industries

	Textiles	Food-processing	Chemicals	Construction	Machine-building
<u>Not satisfied (%)</u>					
managers	37,0	6,5	15,5	14,5	33,4
workers	19,6	22,0	21,1	32,3	47,0
<u>Satisfied (%)</u>					
managers	37,0	51,6	53,4	32,8	20,8
workers	39,3	42,2	38,2	38,0	17,5

Note: The sum is not equal 100% due to missing answers "Difficult to say."

Table 11. Estimated Mobility of Workers and Managers (in the Case of the Possible Bankruptcy of their Companies) in Relation with their Present Adaptation

Type of Behavior	Workers			Managers		
	Low adapted	Meduim Adapted	Well Adapted	Low Adapted	Meduim Adapted	Well Adapted
I would accept any job	13,3	22,6	26,5	3,1	8,9	15,8
I will search for better job	38,1	26,4	33,2	28,1	28,9	28,9
I prefer to stay at my place	34,5	33,0	22,1	37,5	42,2	36,8
I have not thought about that	14,2	17,9	18,1	31,3	20,0	18,4

69

Table 12. Main Characteristics of Clusters in Socio-Economic Adaptation

Variable	No. of Clusters		
	1	2	3
Change in employment	1.79	3.10	2.71
Job Satisfaction	2.58	3.51	2.88
Top Managers' Actions	2.78	3.60	3.54
Changes in Living Conditions	2.33	2.63	1.99
Financial Situation of Company	1.67	3.15	2.50
DEA-FIN	55.07	74.04	76.64
Export Orientation (EXP95)	1.75	1.4	1.75
Social Orientation of Corporate Policy (SOC95)	3.5	3.6	4
Intensity of contacts with Local Authorities (LOC95)	4	3.8	3.75
Involvement into Shadow Transactions (MAF95)	3.25	1.8	3.25
Share of the Relevant Markets (MARK95)	2.75	3.6	1.5
Current Adaptation of Managers	11.64	12.35	9.89
Current Adaptation of Workers	11.48	11.76	10.64

		CONTROL IN 1995					No. of companies
		Disperced	Concentrated	Director's	Unclear	Outsiders'	
CONTROL IN 1994	Disperced	* *	*	*			7
	Concentrated		* *	* *			6
	Director's		*		*		3
	Unclear				*	* *	4
No. of companies		4	6	4	3	3	Total 20

Note: Number of * corresponds to the number of companies of each type

Figure 1. Changes in Control Arrangements in 1995 by Comparison to 1994

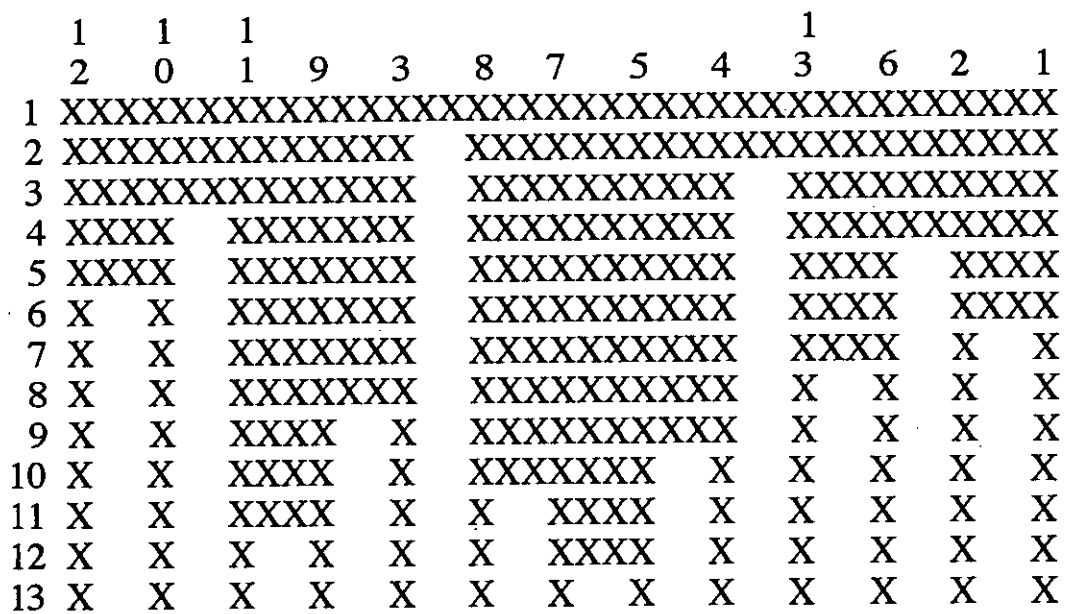


Figure 2. Vertical Icicle Plot using Complete Linkage

Note: (Down) Number of Clusters

(Across) Case Label and Number

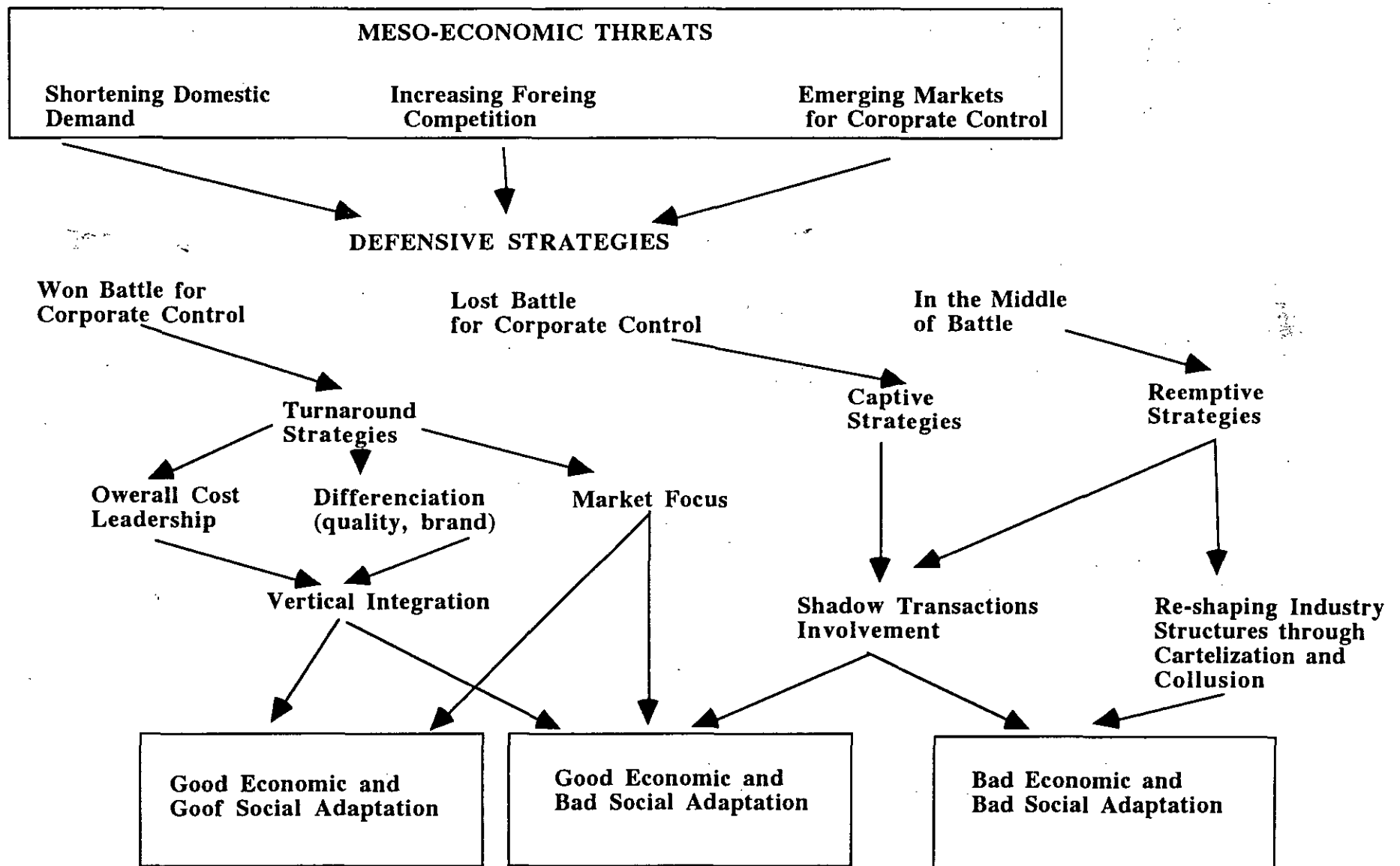


Figure 3. Conceptual Model of Russian Enterprises' Adaptation (A Managerial Perspective)

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**THE ORGANIZATION OF MARKETS AND ITS ROLE IN
MACROECONOMIC STABILIZATION DURING TRANSITION**

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The Organization of Markets and Its Role in Macroeconomic Stabilization During Transition*

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Abstract

In the paper, we explain the ways in which the organization of markets influences the process of macroeconomic stabilization in countries in transition. First, we argue that aspects of market organization cause economic policies to have persistent effects over time. As a consequence, market organization influences the response of enterprises to macroeconomic policy and, so, the change in macroeconomic conditions that a given type of stabilization policy is likely to produce. In turn, these changes in macroeconomic conditions affect the ability of the government to sustain the policy, as well as introduce new policies to promote reform.

We focus in great detail on the way in which market organization causes policies to have persistent effects. We examine the role of market organization in stimulating investment and growth, and, ultimately, in improving a country's fiscal balance. We use an *option-value* approach to understand the process of investment, and find that market organization affects the investment process by influencing, primarily, its sunk costs, its downside risk, and profits foregone while waiting to invest. When incentives to invest are not adequate to stimulate growth, fiscal imbalances increase, and the likelihood of future macroeconomic instability rises. In this environment, excessively tight monetary policy can exacerbate the difficulty of stabilization. Instead of signaling "toughness," such policy might simply be viewed as not credible.

At the core of our more narrow argument are empirical questions concerning the relationship between market organization, investment, and growth. Therefore, we follow our theoretical analysis with an empirical analysis of this relationship. First, we provide cross-country evidence that market infrastructure in countries in transition is very underdeveloped and, in some aspects, might be deteriorating. The absence of adequate infrastructure suggests that the spatial structure of industry determines the types of investment that can most easily take place. Hence, we provide a cross-country comparison of patterns of industry location, with their implications for investment and job growth. All else equal, we expect inter-industry reallocation to be more sensitive to problems in investment than intra-industry reallocation. Finally, we demonstrate, using data from a recent survey of Russian enterprises, that market organization, in fact, has led to a pattern of growth in which intra-industry reallocation is the dominant determinant of growth.

We conclude by discussing the implications of this relationship for stabilization and reform. The clear result of our analysis is that shock therapy programs are less likely to be successful when the incidence of vertical dependence among firms is great and market infrastructure is highly underdeveloped.

The Organization of Markets and Its Role in Macroeconomic Stabilization During Transition

1. Introduction

One of the most interesting features of the transition is the attention that has been paid to macroeconomic stabilization. Many economists expected that stabilization would be one of the least complex aspects of transition. Liberalization of prices and other barriers to free trade would lessen the need for the government to provide enterprises with subsidies. As a consequence, the government's budget deficit would fall and inflationary expectations would be reduced. Hence, macroeconomic stabilization could be achieved quite naturally if the government could make a credible commitment to tight monetary policy. In this context, stabilization should have been a relatively straightforward prelude to the real problems of structural adjustment and privatization.

In fact, macroeconomic stabilization has been problematic in many economies experiencing transition.¹ Some countries have managed the stabilization process quite well, such as the Czech Republic and Estonia. In many other cases, however, the stabilization process has proved much more problematic.

Why has stabilization proved so difficult to achieve in some countries, like Russia, while in other countries stabilization has been relatively more successful? Many economists argue that differences in the experiences of these countries can be attributed to a lack of credibility on the part of reformers. While this argument is clearly suggestive, it begs the question of why reformers were more credible in some countries than in others. One cannot appeal to the reputation of the policy makers to explain variations in credibility. In all of the countries of transition, the policy makers were new to their positions, and there had been a (policy-) regime change of staggering proportions.² Why then the differences in credibility? To some extent, the form of the policies themselves might have affected credibility: the imposition of a currency board in Estonia naturally comes to mind. One might also point to the use of a fixed exchange rate as a nominal anchor.³ But, this raises the question of what accounts for policy design.

To understand the relative success of stabilization, it is therefore crucial to inquire into why these differences in credibility arise. Credibility is an issue because stabilization requires the implementation of policies that are costly to sustain. Recognition of these costs leads agents to doubt whether these policies can be sustained. This suggests that, to understand variations in credibility, it is useful to focus on what determines the costs of carrying out such policies. The argument we present in this paper is that the organization of domestic markets plays a critical role in enhancing or weakening credibility. Market organization affects credibility because it determines the cost of carrying out the policies necessary to stabilize the economy.

¹For example, see Gelb and Balcerowicz (1994) and De Melo, Denizer, and Gelb (1995).

²Although policy makers might all have been new, there might have been other differences that affected relative credibility. One factor would be the nature of political institutions. It is clear that in Russia, where Gaidar was never confirmed by the Parliament as Prime Minister, the radical stabilizers had less credibility than, say, Klaus in the Czech Republic.

³Jeffrey Sachs, in particular, has emphasized the role of the exchange rate as a nominal anchor.

Our argument that credibility is affected by the organization of markets takes on even greater force during transition than at other times. The intensity of the restructuring process, and the associated reallocation of resources that this entails, has important macroeconomic consequences. Economic recovery requires that enterprises *invest* in the opportunities that transition makes available. The problem is that uncertainty over the durability of reform might cause investors to postpone such activity until some of this uncertainty is resolved. If many investors act the same way, the consequent effects on the government's budget constraint endanger stabilization. Market organization is intrinsic to this uncertainty and to other incentives that govern the investment process.

We define the organization of markets to include both market structure and market infrastructure. Market structure is the set of horizontal, vertical, and spatial relationships between enterprises. Market infrastructure is the set of institutions that support transactions between enterprises, including those that provide information, physical infrastructure, finance, and the legal framework. The quality of market infrastructure determines the ease with which a transaction between a producer and customer in two randomly chosen sites in a country can take place. Underdeveloped market infrastructure often exacerbates problems in market structure by segmenting markets into smaller, more isolated regions.

In the remainder of this paper, we explain the ways in which the organization of markets influences the process of macroeconomic stabilization in countries in transition. First, we argue that aspects of market organization cause economic policies to have persistent effects over time. As a consequence, market organization influences the response of enterprises to macroeconomic policy and, so, the change in macroeconomic conditions that a given type of stabilization policy is likely to produce. In turn, these changes in macroeconomic conditions affect the ability of the government to sustain the policy, as well as introduce new policies to promote reform.

Next, we narrow our argument, focussing in more detail on the way in which market organization causes policies to have persistent effects. We examine the role of market organization in stimulating investment and growth, and, ultimately, in improving a country's fiscal balance. We use an *option-value* approach to understand the process of investment, and find that market organization affects the investment process by influencing, primarily, its sunk costs, its downside risk, and profits foregone while waiting to invest. When incentives to invest are not adequate to stimulate growth, fiscal imbalances increase, and the likelihood of future macroeconomic instability rises. In this environment, excessively tight monetary policy can exacerbate the difficulty of stabilization. Instead of signaling "toughness," such policy might simply be viewed as not credible.

At the core of our more narrow argument are empirical questions concerning the relationship between market organization, investment, and growth. Therefore, we follow our theoretical analysis with an empirical analysis of this relationship. First, we provide cross-country evidence that market infrastructure in countries in transition is very underdeveloped and, in some aspects, might be deteriorating. The absence of adequate infrastructure suggests that the spatial structure of industry determines the types of investment that can most easily take place. Hence, we provide a cross-country comparison of patterns of industry location, with their implications for investment and job growth. Finally, we demonstrate, using data from a recent survey of Russian enterprises, that market organization has significant consequences for investment and growth. We conclude by discussing the implications of this relationship for stabilization and reform.

2. Credibility and Stabilization

The importance of credibility in policy implementation is well understood in the literature on stabilization. The effects of stabilization programs depend crucially on how expectations are affected, and this in turn depends on how credible the policies are. When policies are not credible, they often result in outcomes opposite to what was intended.⁴ Credibility can, however, become a crutch with which all failures of stabilization are explained. Thus, many observers argue that the key difference between the Polish and Russian stabilization attempts was that the former was more credible. This begs the basic question: "*How does a government that plans to do all the right things and, indeed, puts them on paper secure the credibility that makes it possible to live with the policies?*" (Dornbusch 1988: 426, italics in the original).

Most of the literature on policy credibility focuses on the *credibility of policy makers*. In these models, agents attempt to infer the policy maker's type from observed performance.⁵ Policy makers always desire that agents view them as "tough," as this improves the tradeoff they face. Thus, "weak" policy makers will attempt to obtain a reputation as being "tough," so that this can be exploited at some future date. These models focus on the signaling that takes place when policy makers choose policies. They do not, however, consider the effects of the *choice of the policy itself on credibility*. It might be that some policies are more credible than others.

To make the choice of policies interesting, it is important that policies have *persistent effects*. In most models in the credibility literature, policies do not have persistent effects. Usually, the models consist of a one-period game, which is repeated over time. There is no effect of policy choice on credibility because the state of the economy in period $t+i$ is independent of the choice of policy in period t . Thus, for example, tough anti-inflation policy in the current period is assumed not to affect the level of unemployment in the next period. But, when the policies have persistent effects, the economic states in the two periods are no longer independent. For example, tough anti-inflation policy might create high levels of unemployment. This is important because even the toughest policy maker might choose to renege on, say, an anti-inflation policy in the wake of a severe enough shock, such as a war. With persistence, current policies can affect the policy maker's room to maneuver in the future. Four periods of tight monetary policy, with its consequent unemployment effects, might affect popular tolerance for anti-inflation policy in the fifth. Hence, committing to the tough policy today might make the commitment to future anti-inflation policy less credible. Or, as we argue later, a policy of monetary tightening today might ultimately increase government debt, and this might make inflation more likely in the future.⁶

⁴An excellent example would be the announcement by the Romanian government that its cancellation of inter-enterprise arrears would be a one-time event, and that in the future hard-budget constraints would be imposed. Evidence that this policy regime was not credible is apparent in the subsequent growth in inter-enterprise arrears. Agents clearly did not believe the government policy announcement (Clifton and Kahn (1993)).

⁵For example, as in Barro and Gordon (1983).

⁶Drazen and Masson (1994) offer a perfect example. Suppose that someone tells you they wish to lose weight, and so they are skipping dinner. If he adds the statement that he has skipped dinner for the last three days, does that increase his credibility? In the signaling literature, the answer would be yes; by acting tough, he has enhanced his credibility. But with persistence, skipping meals makes him hungrier, reducing the likelihood that he skips the next one.

An example of this problem might be the pledge to stick to a fixed exchange rate. Suppose that the stabilization program causes unemployment to grow to a high level during the period. Does this enhance the commitment to stick with the peg? Investors might demand a larger interest premium when unemployment has been high for several periods because they believe the government is more likely to introduce policies to combat unemployment; hence, they might believe that the likelihood of devaluation is greater. The signaling model, on the other hand, would predict that credibility is enhanced in this case because the policy maker is more likely to be tough.

The essence of policy credibility⁷ is that agents believe that the policies announced will in fact be implemented. Two factors play a key role in creating such a belief. First, the policies must be dynamically consistent.⁸ That is, it must be the case that policies announced in period t for period $t+i$ must be optimal for the policy maker when period $t+i$ arrives. Otherwise, the policy maker will not implement the announced policy. For example, the government might announce that it will shut down all enterprises that cannot cover their operating costs in the hope that enterprises will adjust so that their costs are indeed covered. If, however, it turns out that many enterprises cannot cover their costs, the government might prefer not to impose the threatened action.⁹ The policy is not dynamically consistent. Rational agents will foresee this, however, and therefore will not adjust. Dynamically inconsistent policies are not credible because agents know that the threats implied are empty.

The second factor that affects credibility are the nature of the economic costs attendant to carrying out the policies.¹⁰ The credibility of stabilization policy is enhanced when the economic costs of carrying out the government's announced policies are low.¹¹ The incidence of the costs is also important. When the costs impose externalities on third-parties, the credibility of policy is more likely to be tested. Suppose that implementing a hard-budget constraint results in a chain reaction of enterprise closures. Closing down a key enterprise in a vertical chain of production might have deleterious effects on customers or suppliers. These "third-parties" might be innocent in the sense that they were not violating their budget constraints.¹² Yet, the loss of a key supplier might make it impossible to continue production. In cases where such

⁷With or without persistent effects.

⁸Time consistency is analogous to subgame perfection in game theory. A strategy is subgame perfect if it remains a player's optimal strategy when each of the relevant subgames is reached.

⁹Ickes and Ryterman (1994a) discuss the credibility of stabilization programs when the authorities are uncertain over how many enterprises cannot adjust as opposed to will not adjust. If the latter pool, then the costs of carrying out threats multiply. Hence, it becomes critical for the government to undertake actions that induce separation.

¹⁰As well as side effects. In medicine, an appropriate therapy can still have side effects. The problem with the shock therapy-gradual stabilization debate is that it focuses attention away from thinking about appropriate policies to cope with the side effects. The analogy with medicine is apt.

¹¹Although this point seems obvious, it should be noted that the government obtains a reputation for being tough, a reputation that enhances its credibility, by undertaking policies that are costly.

¹²Of course, the "third-party enterprises" might have been able to obey their budget constraints only because the other enterprises were violating their own budget constraints. Consider a vertical chain of production where the demand for the final good does not cover the cost. Shutting down the production of the final good might result in shutting down all of the upstream suppliers (this is an extreme example, of course). If there is no other demand for the outputs of these upstream enterprises, then carrying out the policy is efficient. Nonetheless, even in this case, the fact that the incidence of costs is dispersed over "third parties" must have some impact on the resolve of policy makers.

strong vertical dependence exists, it might be harder for policymakers to carry out the threats implied by their policies. Hence, when policies have large third party costs, they might be less credible than when the costs fall directly on the "offending enterprises."

The economic costs of carrying out macroeconomic stabilization policies are associated with idle resources that result from an enforcement of hard-budget constraints.¹³ These costs are greater when the penalties applied to a transgressing firm (i.e., liquidation of an insolvent enterprise) has large effects on other enterprises, either through employment effects or through effects on the demand or supply for the outputs of other enterprises. If market institutions are present to facilitate the reallocation of resources, then these downstream effects will be lessened, and hence the cost of carrying out the policy will be as well. When markets are well organized, the costs of pushing enterprises into bankruptcy are reduced. This, in turn, limits the extent to which the threats necessary to enforce the stabilization policy spillover to other enterprises. The smaller is the spillover, the greater is the credibility of stabilization policy.

Thus, while it is commonplace now to explain the success or failure of macroeconomic stabilization on the credibility of the reform program, it is evident that credibility depends on more than the backbone of policy makers or the coherence of the reform program.¹⁴ Credibility is enhanced by favorable circumstances, and market organization is an important determinant of these. Next, we analyze in more detail the mechanism by which market organization causes policies to have persistent effects. These effects potentially undermine the credibility of stabilization policies.

3. Investment and Stabilization

Macro stabilization is usually viewed as a problem of monetary stabilization. In a direct sense, this view is correct because excessive money growth is the proximate cause of inflation. Excessive money growth is, however, typically the response to unsustainable fiscal deficits, and this is certainly the case in transition economies. This point is crucial for understanding the success of stabilization policies; monetary tightening that does not attack the fundamental source of the problem is not credible because agents know that money growth will be higher in the future.

Governments print excessive amounts of money when they are spending more than they can borrow or receive in direct taxes. In a sense, the budget is always balanced: the *inflation tax* replaces other sources of taxation. Governments in transition economies resort to the inflation tax for three reasons. First, the fall in output that accompanies transition leads to a decline in tax revenues. Second, the weakness of many transition governments reduces tax compliance. Finally, liberalization threatens the survival of state-owned enterprises, and governments in transition economies are typically slow to end the implicit fiscal subsidies that are a legacy from the previous regime.

¹³The *political* costs might be far greater than the *economic* costs. Cutting production at value-subtracting enterprises reduces economic costs, but might have significant political costs if important parties are affected.

¹⁴"The central weakness of the Sargent position is to present 'credibility' as some objective, unquestionable fact -- as if passing a budget law or instituting an independent central bank is by itself enough to ensure that these institutions will in fact become what they represent on paper. Even though a government might intend or even initiate all the right measures...there remains still the problem of making these measures work once the costs of implementation become apparent (and hence actually being able to sustain them). This is of course the central issue in the transition to accomplishing a successful stabilization" (Dornbusch 1988: 410).

High inflation only ends when the government either finds other sources of (current or future) revenue, or lowers expenditures. Without resolving the *fiscal* problem, advocating monetary restraint is pointless. At best, the government can reduce money growth temporarily, financing a part of expenditures by borrowing at home or abroad, by delaying payments (many state workers have not been paid in months) or other expenditures, by getting advance and usually discounted payment of taxes or other revenue, or by selling assets sooner. *But, sustainable, macroeconomic stabilization requires that the implied fiscal-sector deficits, which are really the contingent liabilities of state-owned and privatized enterprises that receive state credits, must be reduced.*

In order to cut fiscal-sector deficits, transition governments must harden budget constraints, which implies that some enterprises will contract. These deficits cannot be cut without real effects. These real effects will result in plant expansion and contraction, flows of capital and employment across sectors, and enterprise restructuring.¹⁵ There is no effective means of correcting the fiscal situation without such real effects. What is crucial for our argument, however, is that, for the most part, *these processes cannot occur without investment*. Investment is a critical component for labor reallocation, and it is critical for enterprises that contemplate entering new lines of production.

The market response to a stabilization program thus depends on the willingness of firms to invest in the opportunities created by liberalization. When investment opportunities are clear and institutions are present to facilitate investing, then resources flow easily from those sectors over-developed under planning to sectors where goods were undersupplied. This supply response will ease the pressure induced by tight money programs; job creation associated with the former will offset contraction created by the latter. What makes transition difficult, however, is that there are costs of adjustment. In the presence of adjustment costs, the central issue is: how much delay in growth will they create? If adjustment costs are too great, then the supply response might arrive too late to alleviate the pain from tight monetary policy. In such cases, the side effects from stabilization might weaken credibility and lead to unsuccessful stabilization.

3.1 Investment as an Option¹⁶

The essence of economic restructuring is investment, in the broadest sense: inducing economic agents to take actions that are costly or painful today, but will pay off in a future market economy. This not only involves physical investment -- building new plants or installing new machinery -- but restructuring enterprises, moving to new areas, setting up new institutions, and so on. Each of these activities involves current sacrifice against future reward. Future rewards are uncertain, however. This uncertainty is present in any investment problem, where firms are uncertain over future demand and cost shocks, but it is especially important in transition. In transition, there is an additional component to uncertainty over that which is normal to firms in market economies: *regime uncertainty*.

¹⁵The fact that stabilization cannot proceed without real effects might seem commonplace, but recall that in most analyses of stabilization the key problem is that of influencing inflation expectations. In these models, a credible policy makes all agents expect lower inflation and in that case there is no real adjustment. The contrast here is clear because in the transition case even if the policy is fully credible there will be real adjustment.

¹⁶Cochrane and Ickes (1995) and Ickes, Ryterman, and Tenev (1995b) first suggest that investment in transition can be viewed as an option.

A key characteristic of uncertainty in transition is that much of the uncertainty facing firms will be reduced as the transition proceeds.¹⁷ Firms are uncertain over future rewards precisely because the regime is undergoing rapid institutional change. Firms are not sure of their own survival and that of their trading partners¹⁸, and because rules concerning their treatment, such as taxation of profits¹⁹ or the implementation of bankruptcy statutes, are being developed. This type of uncertainty generally declines over time, as the institutional and market setting begins to take shape and agents learn the rules of the new regime. Hence, with respect to regime uncertainty, much can be learned by waiting.

Greater uncertainty, by itself, is not problematic. With greater uncertainty, there are greater rewards as well as greater losses. Mean-preserving increases in uncertainty do not necessarily reduce investment.²⁰ The issue is very different, however, when there are *sunk* (or irreversible) costs associated with investment. When there are sunk costs²¹ and uncertainty over future outcomes, there is an *option value to waiting*. Because of the sunk costs, it might pay to delay investment until more is known about the likely outcomes. When there are no sunk costs, investments can be undone; hence, delay involves only costs – deferred profits – but no benefits. With sunk costs, however, *timing* is crucial. It might pay to delay an investment until more is learned about some key parameters of the decision. Investment opportunities are like an option. Investors can decide to invest, not to invest, or to wait and see if conditions will improve, in the meantime keeping any wealth they can hidden or abroad.

Thus, potential investors must always weigh the returns to waiting (so that one can learn more) with the opportunity cost of delayed investment. The major cost of delaying investment is that of not being the first one in an activity. In a rapidly changing environment, there might be once-in-a-lifetime opportunities that will accrue to the first entrant.²² While this might be important in some activities, it is less true in others. For many activities, especially those that are associated with restructuring, haste is often not essential; in fact, it might be deleterious to survival in the long term.

The option value of waiting depends on two forces, the sunk costs and uncertainty associated with the investment on the one hand, and the profits foregone while waiting on the other. The greater the sunk costs and the more uncertain the future, the better it is to wait and see how the uncertainty is resolved. However, the more current profits are foregone by waiting, the better it is to get on with the investment project. Thus, in an uncertain environment with large sunk costs, investors may choose to wait to invest, even if the *expected* rewards are high.

¹⁷A second key characteristic is that uncertainty in transition is endogenous. We discuss this below.

¹⁸For an analysis of the survival-oriented firm in transition, see Ickes and Ryterman (1994b).

¹⁹For an analysis of tax uncertainty on firm behavior in Russia, see Litwack (1993).

²⁰The last statement ignores risk aversion, of course. Adding risk aversion would only increase the force of our argument. The option value of waiting, however, does not depend on risk aversion.

²¹An investment is fully irreversible when it cannot be undone, in other words, when negative investment is impossible. When sunk costs are present, investment is at least partially irreversible, since one cannot recover the sunk costs associated with investment. It might be possible to sell a machine tool, for example, but even in a competitive industry the sale price will be less than the purchase price, since the machine tool will be excess capacity to another firm. The literature on irreversible investment has grown rapidly in recent years. See Dixit and Pindyck (1994) for a detailed survey, and Abel and Eberly (1994) for a unified approach to investment with adjustment costs and irreversibility.

²²This seems likely to be true in banking, for example, in Russia.

Uncertainty with respect to returns is a central feature of transition. The policy and regulatory environment, the availability and prices of inputs, what markets will be good opportunities -- all these are much more uncertain in transition economies than in western economies. The fact that all other enterprises are *simultaneously* restructuring adds to the uncertainty.²³ Since the economy is in transition, immediate profits might be relatively small compared to future profits if reform succeeds. Under such circumstances, it might be of considerable value to delay investing until more is known.

This simultaneity in decision making brings out attention to the second key characteristic of uncertainty in transition, that there is a large *endogenous* component. The outcome of the transition process depends on the decisions made by actors. Consider, for example, the problem of the state budget. If enterprises undertake active investment policies, the contraction in output is reduced, and a regime of low tax rates is consistent with fiscal balance. If, enterprises delay investments, however, then the same tax rates and expenditure programs imply large public sector deficits and monetization. Thus, uncertainty over future tax rates depends, to a large extent, on the decisions made by other actors.²⁴

The tax problem is an important example of endogenous uncertainty in transition, especially with respect to stabilization. But, this is not the only type of endogenous uncertainty. Sachs (1994) develops several other examples, among them the willingness to hold domestic currency. Another critical example is enterprise adjustment itself, for, as we have noted above, if all enterprises are adjusting, then the side effects associated with stabilization are reduced, and the likely success of the program increased.

What is crucial is that this endogenous uncertainty -- the "reform conundrum"²⁵ -- further complicates the stabilization problem. The possibility of multiple equilibria enhances the importance of credibility, because credibility can coordinate expectations. Thus, factors which enhance credibility are crucial to the success of stabilization.

3.2 Market Organization and Investment

Understanding the organization of markets in a country is critical to understanding the incentive for firms to restructure and invest. Market structure and infrastructure play an integral role in determining the sunk costs and uncertainty of investment as well as the profits foregone while waiting to invest.

First, market infrastructure is a key determinant of the sunk costs associated with plant expansion and resource reallocation. Market infrastructure influences the costs of finding new suppliers and customers. In the search for new trading partners, firms must expend resources to alter pre-existing arrangements. These are investments in new arrangements; they cannot be recovered once the expenditure is made. When market infrastructure is poor, potential trading partners might be located across the street, yet be difficult, if not impossible, to identify.²⁶

²³For a discussion of simultaneous restructuring, see Ickes and Ryterman (1994b).

²⁴In this sense then, investment in the transition exhibits *strategic complementarity*. Sachs (1994) discusses several stylized models where multiple equilibria result from strategic complementarity of the decisions of agents in transition, leading to multiple equilibria.

²⁵This term was introduced by Cochrane and Ickes (1995).

²⁶In 1994, we interviewed the director of a firm in Voronezh, Russia, who said that he searched all of Russia for months for a supplier for a particular input, and found it quite accidentally through casual conversation at a party: the supplier was located across the street!

Many institutions are involved in the identification of trading partners. Firms might use wholesale and retail dealers, marketing firms, or advertising firms to attract new customers or identify potential suppliers. Physical infrastructure, such as telecommunications and information technology, are also integral. For many countries in transition, even simple technologies, such as telephone directories, might not be present.

Once potential trading partners are identified, a relationship must be forged. In developed economies with advanced legal systems, the relationship often can be based on impersonal criteria, such as the cost and quality of the product exchanged. Lawyers assist in negotiating and drafting the contract that defines the conditions of exchange, drawing on a well-developed and well-tested body of contract law. If disputes arise, a system of courts and other, more informal institutions are present to facilitate their resolution.

But, in most countries in transition, the legal system is not well-functioning; institutions are overburdened and underdeveloped.²⁷ The consequences of this underdevelopment are potentially quite serious. In the absence of a well-functioning system of law, more informal and more costly arrangements are needed to make agreements enforceable. Williamson (1975) provides many examples of these arrangements, including the investment of firms into transaction-specific assets ("hostages").²⁸ *But, this self-enforcing mechanism is predicated on the willingness of firms to incur sunk costs -- the very type of investment firms are least willing to make in a transition environment.* In the extreme, this problem is so serious that we expect that many potential transactions simply will not take place.²⁹ And, when they do, they often take place at very high cost.

Market structure is also linked to the downside risk that firms face when making investments. The risk of an investment is lower when the investor faces a strong pool of potential suppliers and customers in the *new* activity. If the entrepreneur enters into an activity in which it is very dependent on particular trading partners, then its success is closely tied to the success of those partners. Bad decisions by those trading partners, even if those decisions concern unrelated activities, could have adverse consequences for the entrepreneur. On the other hand, if the entrepreneur can easily replace its suppliers or customers, then the risk of bad decision making by the trading partner on the firm is reduced.

A separate, but related, argument concerns the willingness of firms to enter into a new activity, given the structure of its *traditional* market. According to this view,³⁰ the decision for a firm to enter a new activity is dependent on the downside risk of the activity, specifically, on its ability to continue traditional activities if the new activity fails. When a firm is very dependent on particular trading partners, it might be very reluctant to experiment with new activities, if such experimentation requires a reduction in the production of the traditional good or otherwise encourages important partners in the production of that good to stop producing inputs for or using the good. This is a subtle, but important argument.

²⁷For example, see Hendley (forthcoming) and Pistor (1995).

²⁸Firms will integrate, if they cannot identify mechanism to ensure contract compliance. However, during the transition, integration might be difficult because of the underdevelopment of institutions to facilitate the exchange of private property rights.

²⁹This problem is particularly acute for transactions in which one firm must incur sunk costs long before the final product is exchanged.

³⁰See Ickes, Ryterman, and Tenev (1995b).

Finally, high distribution costs lower profitability and, hence, the profits foregone while waiting to invest. In many countries in transition, the quality of physical infrastructure, such as transport vehicles, highways, and warehouses, is poor. Problems in the quality or utilization of physical infrastructure are further aggravated by problems of crime, which is often linked to corruption. With the breakdown of the central planning apparatus, crime has increased and the security of goods in transport has been jeopardized. Firms complain that the police often contribute to the problem by informing the "mafia" of the contents of trucks and rail cars they inspect.³¹

Problems with the quality or utilization of physical infrastructure are also exacerbated by the fact that the location of enterprises in many countries in transition does not conform to the pattern that might have emerged had the economy been market based in the preceding decades.³² In fact, given that transport costs were often external to the location decision under central planning, there is no assurance that the historic trading partners are economically the most sensible. But, in the face of difficulties in finding new trading partners, these historic relationships are likely to persist.

Problems in market organization can also aggravate problems of market infrastructure. When a small number of firms controls a large share of the market, these firms can use a variety of techniques to lower the expected profits from investment. For example, dominant firms might sell products below cost for a short period to drive smaller firms out of the market.³³ Or, dominant firms might prevent potential entrants from gaining access to strategic inputs, customers, or distribution services.³⁴ Limited access to critical resources are a real threat to the job creation process in countries in transition. Markets tend to be highly segmented and wholesale, retail, and other distribution services tend to be highly concentrated, so that suppliers, customers, and distributors can be easily captured by existing firms. All these factors work together to lower the profitability of potential investment projects.

3.3 Financial Constraints

Unlike in economies with well-functioning capital markets, firms in transition economies cannot be assured that good investment projects will necessarily attract financial capital. In economies in transition, long-term finance is typically not offered by banks due to structural problems in capital markets and high levels of uncertainty in product markets. Therefore, investment is typically financed using the savings of the individual or firm.

In the absence of regulation, firms in imperfectly competitive industries might have an advantage over other firms in financing their investment projects. Monopolies and oligopolies often have greater profits than firms in more competitive industries. Hence, these firms attract investors. In addition, these firms can choose to allocate their profits to retained earnings, providing them with an important source of self-finance. Whether they will choose to do so will depend on the internal incentives within the firm.

³¹Based on interviews with Russian firms, 1994.

³²See Ickes, Ryterman, and Tenev (1994a) for more detail.

³³However, these practices might be difficult to sustain in the long term.

³⁴In market economies, integration often involves the merger of two corporations into one. However, in many cases, integration involves more informal relations. For example, Kodak recently accused Fuji of using its long-standing relationship with large Japanese distributors as a means for persuading them not to sell Kodak products. Given the immaturity of property rights and problems in capital markets in countries in transition, we expect that much of the integration of firms will take place using more informal mechanisms.

Earlier, we argue that competition in input markets fosters investment by reducing its downside risk. However, this competition could produce an opposing force. Imagine, for example, two firms that are historic trading partners: firm A is a monopolist and has sold firm B a critical input for the past five years. Since the beginning of transition, firm B has experienced some uncertainty in the demand for its product. Unfortunately, because institutional problems in capital markets prevent banks from collecting good firm-level financial data, banks are not willing to finance firm B in periods of low demand based on B's expected future earnings. But, firm A, who knows B is creditworthy, is willing to provide firm B with trade credit during periods of low demand³⁵. Now, suppose that there is substantial new entry in the upstream industry, so that firm B can now buy the input from a new firm, say firm C. In the absence of a binding long-term contract, firm A might not be willing to finance firm B during periods of low demand because, in better times, firm B might defect and trade with firm C.³⁶ Under these circumstances, firm B is less likely to invest. Thus, *unless capital markets develop more quickly than product markets, competition in product markets might produce financial constraints on investment.*

4. Empirical Evidence

The theory in section 3 provides a framework for understanding the connection between the organization of markets in a country and its macroeconomic performance. In general, the lower the sunk costs of the investment, the higher the foregone profits while waiting to invest, the lower the downside risk of the investment, and the fewer the financial constraints on investment, the greater the volume of investment by the firm into new activities in the near term. When this investment leads to job growth, fiscal pressures lessen, and the macroeconomic performance of the country improves. The better the prospects for investment, the greater the credibility for the stabilization program.

Market organization plays a dominant role in this process. First, when infrastructure is poor, the search costs -- which are sunk costs -- associated with investing in relationships with new trading partners are very high. Second, high distribution costs lower profitability and, hence, the profits foregone while waiting to invest. Third, vertical dependence on other firms in new and traditional activities increases the downside risk of investing in new activities. Finally, firms in monopolistic industries, in the absence of regulation, often have greater profits than firms in more competitive industries. Hence, these industries attract investment as well as provide its firms with profits which can be used to finance investment in new activities.

In this section, we provide empirical evidence to test our view. In most countries in transition, imperfect competition arises because problems in market infrastructure and other barriers to trade segment markets.³⁷ Thus, we begin by providing cross-country evidence that market infrastructure in countries in

³⁵Firm A might be willing to provide firm B with credit at below-market rates of interest because firm A sells the input at the monopoly price.

³⁶A related argument, for a different context, is made by ?? . They argue that the introduction of civil law in 19th century India resulted in decreased investment by farmers because it led to increased competition among village moneylenders.

³⁷See, for example, Brown, Ickes, and Ryterman (1994).

transition is very underdeveloped and, in some aspects, might be deteriorating.³⁸ The absence of adequate infrastructure suggests that the spatial structure of industry determines the types of investment that can most easily take place. Hence, we provide a cross-country comparison of patterns of industry location, with their implications for investment and job growth. Finally, we demonstrate, using data from a recent survey of Russian enterprises, that market organization has significant consequences for growth.

4.1 The State of Market Infrastructure

We can think of the quality of market infrastructure as measuring the ease with which a transaction between a supplier and a customer in two randomly chosen locations in a country can take place. This process includes, first, identifying one another, second, forging the relationship that is necessary for a contract to be negotiated and production to take place, and, finally, physically moving the products from the production site to the consumption site. It is a complex process, which uses a variety of institutions, including, potentially, wholesale or retail firms, telecommunications, warehouses, transport, the legal system, and banks and other financial institutions.

Market infrastructure influences investment by affecting its cost. The process of searching for and forging a relationship with trading partners creates sunk costs. Typically, these costs are not recoverable if the project fails and related assets must be sold. Distribution costs are variable costs of production, which lower the profitability of the venture.

To claim that market infrastructure in countries in transition is underdeveloped is neither new nor controversial. Under the system of central planning, the identification of production goals and the distribution of products from producers to customers were generally functions carried out by centralized institutions. In some of the countries, certain aspects of these processes were decentralized even prior to transition, so that nascent market institutions could begin to form. For example, the adoption of the more flexible system of market socialism in Poland provided it with the opportunity to develop a cadre of small cooperative firms to assist in the distribution of goods and the provision of services. Thus, at the onset of liberalization, Poland was better prepared institutionally than, say, the former Soviet Union to launch a system of private trade.

Unfortunately, statistics concerning the adequacy of some of the most important aspects of market infrastructure are not available.³⁹ For example, cross-country statistics concerning the *quality* of wholesale and retail services, legal counsel for commercial transactions, and financial services prior to reform are not available. However, we do have important information on several important aspects of the process, the *quantity* of retail services, media access, the quality of telecommunications, and the cost of transport.

Table 1 contains information on the quantity of retail services in former socialist and selected lower-income Western European countries.⁴⁰ The statistics clearly indicate that the quantity of services,

³⁸Comparable cross-country data on the extent of imperfect competition are not available. Until very recently, most countries in transition computed measures of imperfect competition based on very narrow – too narrow – product categories, resulting in exaggerated estimates of the degree of imperfect competition. Although these narrow measures were useful for the purposes of central planning, they are not useful in understanding the nature of competition in more broadly defined industrial categories.

³⁹In fact, one could argue that their absence indicates the very underdevelopment of the infrastructure!

⁴⁰Finland was included because of the close ties between its markets and those of the former Soviet Union.

measured by the number of outlets per capita, are less in transition than in comparable economies. This difference can be attributed to the fact that the share of consumer goods in GDP in former socialist countries is lower. But, the demand for consumer goods and services is rising rapidly. Unfortunately, constraints on retail space⁴¹ is limiting the flexibility with which economies can respond to this increase in demand.

Unfortunately, we do not have complete information on the quality of the services that the retail outlets in the two regions provides to its suppliers and customers. As a proxy, we provide statistics on the number of retail workers per capita and the number of scanning stores in each country to indicate the level of technology that the outlets use. We find no difference between the number of workers per capita, despite the larger share of consumer goods in GDP in Western Europe. One might be tempted to interpret this statistic to suggest that retail services per dollar expended in former socialist countries is higher than in comparable Western European countries. However, we point out that the services provided by each worker in transition economies is unlikely to be as high quality as those provided by workers in Western European countries. We do find that the technology used in Western Europe far exceeds the technology used in transition countries.

Table 2 presents comparative statistics on media access in former socialist and low-income Western European countries. We include these statistics to provide some insight into the potential for advertising that might be available to firms. We find that the number of consumer publications and percent of homes equipped with radios is greater in low-income Western European countries than in former socialist countries. The number of national newspapers and percent of homes equipped with TV's are the same.

Table 3 contains statistics comparing the quality of telecommunications in countries in transition to low-income Western European countries. These statistics suggest, in general, that telephone services in countries in transition are generally poorer than in low-income Western European countries. But, they also suggest that the variation in quality within both regions is large. We urge care in the interpretation of these data, particularly in the case of Russia. The percent of unsuccessful local calls in Russia is measured as seven percent in 1990 and eight percent in 1991. Yet, from many Russian cities,⁴² it was and currently is impossible to call even Moscow. Hence, the number of uncompleted calls does not accurately measure the lack of communications capacity because many calls are simply not made at all.

Table 4 compares the total cost of road, rail, and water transport in 1988 across a wide range of countries. Again, we see that transport costs are much higher in countries in transition than elsewhere. Moreover, we see that transport costs are substantially higher in the former Soviet Union than in other countries in transition.

The essence of transition is the building of market institutions to facilitate trade. Yet, this process has not been smooth. The introduction of markets required the dismantling of many socialist institutions, including those that coordinated trade. But, the building of new market institutions requires a significant amount of time as agents slowly acquire the skills and resources necessary for these institutions to grow. In the interim, the coordination of trade has faltered, and output has declined. To make matters worse, this coordination failure has occurred precisely at a time when the central feature of recovery must be the

⁴¹See Harding (1995).

⁴²For example, in Saratov.

introduction of new products and new production methods suited to markets. In fact, *part of the coordination failure can be attributed to the increase in demand for market infrastructure that is already overburdened and underdeveloped.* Hence, in many countries in transition, we expect the dynamics of improvements in market infrastructure to approximate a J-curve, declining prior to improving.

Table 5 presents statistics to test this view. These statistics are based on data we collected during a survey of Russian enterprises in 1994; we describe this survey in more detail later. The statistics suggest that, in many respects, the quality of market infrastructure in Russia has deteriorated since 1992. This deterioration is clearest for physical infrastructure – telephone service and transport by air, land, and water. Part of the deterioration might be associated with the increased incidence of goods stolen during transport. We also find that all the firms that currently pay bribes for "road protection" to the police or mafia say that the problem of corruption and crime in transport has increased. We note however, that the data are censored; only firms that are currently paying bribes responded to this question. Firms (if any) that previously paid bribes, but currently do not, are not represented in the statistic. Thus, the severity of this problem might be overstated.

Financial services appear to have deteriorated as well. Since 1992, the incidence of barter has increased for almost half of the enterprises. Part of this increase might reflect an attempt by enterprises to escape the consequences of the tax system. Effective tax rates on net income of enterprises often approach (and sometimes exceed) 100 percent. Moreover, for enterprises that must cope with a decline in viability, tax avoidance might be an essential survival strategy. Also, the share of inter-enterprise debt in arrears in sales has increased for more than half of the enterprises. This statistic is remarkable, given mid-1992 is often considered to be the height of the arrears crisis in Russia.

The perception of deterioration is more ambiguous in the case of other aspects of infrastructure. Roughly a third of enterprises each said, respectively, that the number of trading enterprises interested in selling their products increased, decreased, and remained the same. Of course, these statistics could reflect differences in the demand shock of transition for their industries. Also, almost half of the enterprises said that it would be harder to find storage space of similar quality than in 1992, but a third said that it would be easier. In both these cases, we observe substantial variation across enterprises in the perception of the change in the quality of infrastructure since 1992. These perceptions do not appear to be correlated with the location or branch of operation of the firms.

Potentially, the most optimistic perception concerns the change in the importance of contracts. Despite the regular use of contracts during the period of central planning, more than half of the enterprises said that the importance of contracts has increased since 1992. However, we do not know precisely why this change has taken place. Contracts might have increased in importance because firms now believe contract execution is supported by reasonably well-functioning legal institutions. Or, it might be due to the absence of institutions, such as *obkorm* and other party officials, that enterprises could turn to when suppliers failed to make deliveries. Alternatively, their importance might have increased simply because transactions are now decentralized; written contracts might facilitate the process of negotiating agreements. Yet, once these negotiations are complete, the contracts might never be referenced again.

4.2 The Role of Industry Location in Investment and Growth

Given the problems of market organization we have discussed, a concern is raised regarding the abilities of countries in transition to restructure and grow. If the investment process is delayed by

problems in market organization, can restructuring take place? In this section, we argue that some restructuring can take place, but that it will be greatly affected by the location of industry in a country.

4.2.1 *The Nature of Restructuring During Transition.* Restructuring is not a process that is restricted to countries in transition. In market economies, a tremendous volume of restructuring is a normal occurrence. Gross flows of labor are so large that jobs created and jobs destroyed swamp the net change in jobs. Moreover, gross flows are greater within sectors than across sectors. The picture one gets from an examination of the U.S. data on job flows⁴³ is that of constant churning, a dynamic process where the aggregate net numbers mask the more voluminous changes below.

In the standard literature on job creation and destruction, the forces that drive these processes are typically sector-specific rates of exogenous technical change and differences in firm productivities. These changes leads to the creation of new plants and the destruction of old ones. Job destruction occurs when, given the equilibrium path of prices, a plant can no longer cover its variable costs.

In an economy in transition, the driving forces of job creation and job destruction include other factors beyond the normal churning that is a response to technical change. The creation of a market economy involves special processes that affect job creation and destruction. One of the most important processes in the transition is the change in the economic structure from a command system to a market system. The former system concentrated resources in heavy industry. The transition witnesses a shift to consumer goods and services. This shift can be considered as induced by an exogenous supply shock (like the oil shocks of the 1970's) that alters relative prices. In the wake of such a shock, inter-sectoral flows become uncharacteristically important.

The second critical process in the transition is the shake-down of inefficient enterprises. The inherited industrial structure in planned economies derives from a regime under which there was an absence of exit. Thus, at the outset of transition, there was a backlog of inefficient plants that needed to be shut down, even in industries for which the shock of transition was positive.

These two types of restructuring differ in the extent to which they depend on investment. First, the downsizing and liquidation of inefficient plants can take place quite independently of the investment process.⁴⁴ This downsizing and liquidation frees resources that can be purchased, often at relatively low cost, by other firms. We expect that most of the firms that are able to take advantage of these opportunities are other, more efficient, firms in the same industries.

The more complex type of restructuring is inter-industry restructuring. This type of restructuring often requires substantial investment, not only in assets but in organizational re-engineering and in the retraining of workers. In many cases, the expansion of growing sectors takes place because of the entry of new firms. Thus, all else equal, we anticipate that *the process of inter-industry restructuring will be more sensitive than intra-industry restructuring to the problems of market organization we discuss.*

4.2.2 *Industry Location.* But, some restructuring can and will take place. Given problems in market organization and, in particular, market infrastructure, we predict that resources are most easily reallocated between firms in the same location.

⁴³For example, see Dunne, Roberts, and Samuelson (1989) and Davis and Haltiwanger (1992).

⁴⁴Except when the government, in fear of unemployment, intervenes to prevent it from taking place.

In this context, the question, then, is what is the pattern of industry location in countries in transition? If firms in different industries are located in the same place, then, inter-industry restructuring, which is at the heart of the transition, is facilitated. But, if firms in the same industries are located in the same place, then intra-industry flows of resources are more likely.

Table 6 compares the geographic concentration of industry in Russia, China, Western Europe, and the US. The statistic we use is based on a statistic devised by Krugman (1993), and measures on a scale of zero to one⁴⁵ the similarity of industrial structures of pairs of regions.⁴⁶ A value of zero indicates that two regions have identical industrial structures, while a value of one indicates that the two regions have no industry in common. Thus, the greater the value, the greater the geographic concentration of industry. Table 1 presents an unweighted average of these statistics for each of the countries.

The statistics reveal that industry in Russia is geographically concentrated to a much greater degree than in either the U.S. or China and to roughly the same degree as in Western Europe.⁴⁷ In part, this ranking reflects differences in labor mobility between countries. Labor mobility tends to be much greater in the U.S. than either in Russia or between the countries of Western Europe, making geographic concentration of industry in the U.S. somewhat less integral to the process of job creation and destruction than elsewhere.

But, differences in labor mobility do not fully explain differences in geographic concentration. Why, for example, is industry in Russia so much more concentrated regionally than in China? Both countries had centrally planned economies during their most intense periods of industrialization, with legal and cultural restrictions on labor mobility.⁴⁸ In theory at least, central planning should have fostered regional concentration. Regional concentration simplified planning by facilitating the monitoring of

⁴⁵The statistic developed by Krugman (1993) using an interval of zero to two. For this paper, we have rescaled the statistic by dividing Krugman's statistic by two. Hence, our statistic has an interval of zero to one.

⁴⁶The statistic is equal to:

$$\sum_i \frac{|s_i - s_i^*|}{2}$$

where s_i is the share of industry i in total manufacturing employment and s_i^* indicates the share is for a second region or country.

⁴⁷This analysis is somewhat sensitive to the level of aggregation used in the comparison. Krugman (1993), for example, divides the U.S. into four regions (northeast, midwest, west, and south) and compares their degree of specialization to specialization between U.K., Italy, France, and West Germany. Using a more aggregate definition of industry (two-digit SIC), he finds that the U.S. is slightly more specialized than these European countries.

⁴⁸However, rural-urban migration in both China and the former Soviet Union was significant during the process of industrialization.

enterprises,⁴⁹ the allocation of labor,⁵⁰ and the smoothing of supply uncertainties among firms in an industry⁵¹. In addition, the traditional limits to regional specialization in market economies -- high local rents and problems of pollution and congestion -- were either not relevant or were external to the location decision under planning.

The question, then, is why is industry in China so diversified at the local level compared to industry in Russia. Leadership preferences clearly play a role. It is well known that the fear of invasion led Mao to adopt a policy of regional self-sufficiency. In the Soviet Union, on the other hand, fear of invasion had the opposite effect, as Stalin chose to locate industry in the Urals. Hence, the republics and provinces of the former Soviet Union are more regionally interdependent than the provinces of China.

Although we have not conducted this type of analysis for Eastern European countries, several factors suggest that the pattern of industry location in Eastern Europe bears greater similarity to the patterns in Western Europe and Russia than in China. Location decisions in Eastern Europe are the mixed outcome of market and socialist forces. Much of industry in Eastern Europe was created prior to the introduction of socialism, and, as a consequence, reflect market-based criteria. More recent location decisions were made during the socialist period, under regimes ranging from strict central planning to liberal forms of market socialism. But, these decisions were heavily influenced by product specialization agreements that came out of trade coordination with the former Soviet Union.

If, in fact, regional concentration of industry was integral to the absorption process under socialism, then a question is raised concerning the capacity of countries in Eastern Europe and the former Soviet Union to meet the critical challenge of *inter*-industry job reallocation. If a significant share of restructuring during transition involves transfers of resources between firms in different locations, then we wonder whether these countries possess the institutions necessary to meet this challenge.⁵²

⁴⁹From a planning perspective, it was important to distinguish factors under the enterprise director's control (such as his or her effort) from those that were not. When such distinctions were possible, the planner could reward a director who was working effectively despite adverse technological or local conditions. But, when enterprises were located in different cities, location-specific shocks were often difficult to separate from other types of shocks. This information problems created a moral hazard for the enterprise director, providing him or her with an incentive to reduce effort and to masquerade this reduction as location-specific problems. For more analysis of this problem, see Ickes, Ryterman, and Tenev (1995a).

⁵⁰Geographic concentration of industry created large pools of workers with similar skills in the same location.

⁵¹Uncertainty in the quality and delivery of inputs was a persistent problem under central planning. Regional concentration of industry reduces the adverse consequences of this problem to the extent that it facilitates the trading of input reserves by enterprises. For more analysis of this problem, see Ickes, Ryterman, Tenev (1995a).

⁵²The empirical literature (for example, Granick (1987), Boeri and Keese (1992), IMF-The World Bank-OECD-EBRD (1991)) on job creation and destruction suggest that labor turnover during the socialist period was only slightly less than turnover in Western European market economies. This is a remarkable feature, given the conventional view of socialist industry as fairly stagnant. The question, then, is how socialist economies could have achieved this level of change.

Part of the answer lies in the fact that, even in socialist economies, firms in an industry differed in their abilities to achieve high levels of productivity. Even in the absence of exit, this difference suggests that firms grew at different rates, as planners allocated more productive firms with more investment resources and higher output targets. To achieve this dynamic pattern of growth, the processes of job creation and job destruction were essential, almost as essential as they are to industrial dynamics in a market setting. Part of the explanation might also lie in the

4.3. The Effect of Market Organization on Growth in Russia

Our central argument is that market organization influences macroeconomic performance by affecting growth. If this argument is correct, then a process of economic selection is in place which enables firms with particular types of market structure and access to particular types of market infrastructure to invest and grow. To test our view, we estimate a model that relates employment growth in a firm to changes in its rate of investment. To derive this model, we begin with a labor demand function for a given industry.

$$L = f(w, K) \quad (1)$$

where L is the number of workers in the firm, w is the real wage per worker in the industry, and K is the stock of capital in the firm. Next, we take the total derivative; manipulating the expression, we find:

$$\dot{L} = \varepsilon_{LW} \dot{w} + \varepsilon_{LK} \dot{K} \quad (2)$$

where \dot{L} , \dot{w} , \dot{K} , are the growth rates of labor, real wages, and capital, respectively, and ε_{Li} is the elasticity of labor with respect to i ($i=w, K$). Let \dot{K}^* be the average rate of investment in the industry. Then, (2) can be rewritten as:

$$\dot{L} = \varepsilon_{LW} \dot{w} + \varepsilon_{LK} \dot{K}^* + \varepsilon_{LK} [\dot{K} - \dot{K}^*] \quad (3)$$

geographic organization of industry. If firms in an industry are located in the same city, then problems in labor mobility will not seriously constrain gross labor flows.

More recent research by Rutkowski and Sinha (1995) suggest that employment reallocation at the beginning of transition exceeds the levels found in industrialized and developing countries. It is important to note, however, that the authors compare gross hires and fires in the former Soviet Union with net jobs created in the U.S. and Colombia (taken from Dunne, Roberts and Samuelson (1989) and Roberts (forthcoming)). That is, the authors (and, implicitly, others who make similar comparisons) are comparing the turnover of workers in the former Soviet Union with the turnover of jobs in market economies. But, the latter turnover far less than the former, since many workers can hold the same job. To make this point clear, suppose, in a given period, a firm hires 100 workers and separates 25 workers. In the computations for the former Soviet Union, this firm would account for 100 hires and 25 separations in the aggregate data. However, in the computations for the U.S. and Colombia, the firm would account for 75 net jobs created, that is, 75 hires and no separations. Calculations based on U.S. data suggest that this problem leads to an overstatement of hiring and separation rates in the case of the former Soviet Union by at least 100 percent and turnover rates by at least 200 percent. Moreover, these statistics might be further exaggerated due to peculiarities in the restructuring process in the former Soviet Union; when parts of an enterprise "spin-off" into a new venture, the workers in the new venture are included both as separations (from the old enterprise) and hires (by the new enterprise), despite the fact they might be producing the same product using the same assets for the same wage. Hence, we do not believe that the hiring and firing rates in the former Soviet Union, in fact, exceed those in the U.S. and Colombia.

This form of the equation is meant to emphasize that many of the factors leading to investment are industry specific, rather than firm specific, particularly those related to market structure and access to market infrastructure. This form allows us to distinguish, when present, the firm from the industry effects.

We assume that some portion, α , of employment growth, is constant across all firms in all industries. This portion of employment growth is a consequence of the change in economic system. In general, we expect that α is negative, as firms begin to shed the labor they hoarded during the period of central planning. We also assume that some portion, α_j , is constant across firms within a given industry. The direction of this effect will depend on the nature of the demand shock of transition for the industry. Because the system of central planning favored heavy industry at the expense of consumer goods and services, we expect, in general, the demand shock for heavy industry to be negative and the shock for consumer goods and services to be positive. We express these assumptions in the following way.

$$\alpha + \alpha_j = \varepsilon_{LW} \dot{w} + \varepsilon_{LK} \dot{k}^* \quad (4)$$

Let:

$$\beta_j = \varepsilon_{LK} \quad (5)$$

Substituting (4) and (5) into (3), we find:

$$\dot{l} = \alpha + \sum_j [\alpha_j I_j + \beta_j I_j \dot{k}^* + \beta_j I_j (\dot{k} - \dot{k}^*)] \quad (6)$$

where I_j is a dummy variable equal to one when the firm is in industry j .

Unfortunately, we do not have direct measures of investment to estimate this equation. However, we do have measures related to the firm-specific factors that the theory in section 3 suggests influence investment. These measures, which generally describe a firm's market structure and access to market infrastructure, can be used to test our view.

The data we use to estimate the model were collected during interviews in Russia with enterprise directors and other top managers during 1994. In collaboration with the Central Economics and Mathematics Institute (CEMI) in Moscow, we surveyed more than 150 enterprises in five Russian oblasts -- Barnaul, Novosibirsk, Saratov, Voronezh, and Yekaterinburg. Enterprises in our sample tend to be slightly larger than in Russia as a whole, but similar in terms of their distribution across heavy and light industry.⁵³ We also supplement this data set with data from the *1989 Census of Soviet Industry*.⁵⁴

Because of the limited number of useable observations in this data set, we make the further assumption that the ε_{LK} are the same for all industries, so that $\beta = \beta_j$ for all j . The effect of this

⁵³For a more detailed comparison of our sample to all Russian enterprises, see Ickes, Ryterman, and Tenev (1995b).

⁵⁴This data set was translated and provided to us by PlanEcon.

assumption is to weaken our ability to distinguish the role of market structure and infrastructure on employment growth. Hence, we believe we that, to the extent we are able to identify the role of markets on employment growth, we underestimate the full impact of these variables.

To specify the model, we begin with our theory which identifies four sets of firm-specific variables that determine the timing and quantity of investment: its sunk costs, the profits foregone while waiting, its downside risk, and financial constraints limiting access to capital. While we cannot directly observe each of these attributes for every potential investment project, we do know that investment projects that are undertaken will tend to have lower sunk costs, higher profits foregone, lower downside risk, and fewer financial constraints than other projects. Our survey contains information that enables us to measure at least some of these attributes.

First, investments tend to have low sunk costs when the search costs associated with the project are low. In the absence of adequate market infrastructure, this occurs when local conditions facilitate the creation of new projects. Specifically, we expect that *search costs are low when potential suppliers are located in the same oblast as the investing firm*. We assume that firms take advantage of their specialized skills and assets and tend to invest in projects related to their current activity. Thus, we anticipate that firms with local suppliers tend to have better opportunity to discuss and develop new projects than firms with trading partners elsewhere. Hence, they face lower search costs.

We also assume that *search costs are low when many firms in a branch are located in the same city*. Regional specialization of industry provides firms with several distinct advantages, including a larger local pool of skilled labor and other specialized inputs into production as well as the opportunity for technological spillovers between firms. These features of the local economy reduce the costs of searching for new investment opportunities and finding the resources to enable the project to be realized. To implement this feature, we use two variables. First, we calculate the number of firms in the city that are also in the same branch⁵⁵ in which the firm currently operates. Second, we compute the share of workers in the city and branch that are employed by the largest firm in the branch. When a branch is dominated by a single firm, we assume that many of the other firms in the branch produce complementary goods;⁵⁶ we believe spillovers between these types of firms are especially likely.

The next set of variables we consider concern profits foregone while waiting, if the investment had been delayed or did not take place. Again, we assume that firms tend to invest in their own branches, and that the profitability of projects selected tend to be the same across all firms in the branch. Therefore, we do not expect that foregone profits affect firms within a branch differentially.⁵⁷ Thus, we include no firm-specific variables related to foregone profits in the regression. However, we do expect their effect to be included in the industry dummy variables, which we describe later.

⁵⁵We define a branch as an industry measured at the two-digit SIC level. A branch may consist of many related industries.

⁵⁶Imagine, for example, a city with a large automotive producer and firms that supply automotive parts.

⁵⁷We expect that a branch might include one or more industries that are monopolies. Investment in these industries might be more lucrative than investment in the more competitive industries in the branch. However, we assume that firms in a branch are potential, if not actual, competitors and can make investments, if they choose, in the industries with the monopolies.

Next, we consider the set of variables related to the downside risk of investment. In general, we expect that the *downside risk of investment increases when firms are very dependent on their trading partners in new or traditional activities*. Therefore, we include as regressors two variables: a dummy variable equal to one when more than 50 percent of a firm's sales are to one customer and a dummy variable equal to one when a firm knows of alternative suppliers for its most critical input. We expect that the first variable has a negative effect on investment, while the latter has a positive effect.

Privatization might also increase the downside risk of investment. Boycko, Shleiffer, and Vishny (1994) argue that privatization severs the relationship of the state with the firm. If this is true, then the financial consequences of bad investment decisions must be worse for private firms than state-owned ones. Thus, we include a dummy variable equal to one when a firm has been privatized.

Finally, we consider variables related to financial constraints. First, we presume that *new firms are less likely to face financial constraints, given they recently obtained the investment to enable them to start their operations*. Therefore, we include as a regressor a dummy variable equal to one if the firm was created after 1990. Second, we suspect that *large firms might have better access to subsidies than smaller firms, given the political cost of liquidating large firms*. We measure the size of a firm based on its number of workers on March 31, 1992. Third, we suspect that *monopolists might have a greater ability to self-finance investment projects, given they tend to have higher profits than firms in competitive industries*. Therefore, we include as a regressor a dummy variable equal to one if the firm is currently identified by an anti-monopoly committee as a monopolist. Finally, we understand that *oblasts might differ in their fiscal policies and their access to federal resources*. Therefore, we include dummy variables to identify firms in four of the five oblasts.

To complete the specification, we include dummy variables to identify the branches in which the firm operates and a constant, which measures the effect of economic system on employment growth. To increase the degrees of freedom in the regressions, however, we include only those industry and regional dummy variables with a significance⁵⁸ of .50 or more. All the regressors in the model are described in Table 7.

We recognize that there might be some controversy concerning the way in which we classified the regressors into the various sets. For example, we classified the dummy variable identifying whether a firm has been privatized as related to the downside risk of investment because private ownership confers greater downside risk for the firm than state-ownership. However, we also could have classified this variable as related to financial constraints, for two reasons. First, most privatized firms have used at least some of their financial resources to purchase their assets, thereby reducing the pool of funds they have for investment. Second, some economists believe that privatized firms are less likely to receive subsidies than state-owned firms. Ultimately, however, how we classified this variable is not important because it is not statistically significant nor central to our main arguments concerning the importance of market organization in employment growth.

We also choose to classify the dummy variables identifying dedication in production and availability of alternative suppliers as related to risk, despite the fact that earlier we note that firms facing little competition in input markets might have better access to credit for investment. These two effects are

⁵⁸The significance is the (two-tailed) probability of observing a t-statistic greater than the observed value.

opposing; our belief that the first effect will dominate is confirmed by the sign of relevant parameters in the regression.

A more important judgment concerns the way in which we classified the variables measuring the number of firms in same city and branch as the investing firm and the share of employment captured by the largest firm in the branch in the city. Although we classified them as related to the sunk costs of investment, we also recognize that one could interpret them as measuring the importance of a branch to an oblast. The more important the branch, the greater the potential willingness of the oblast government to seek subsidies from the federal government or to use their own fiscal resources (that is, if they have any, given an important branch is facing a negative demand shock) to rescue firms in the industry. Hence, we could have classified these variables as related to financial constraints.

However, we think this interpretation is not likely to be true. First, we do not include farms and military enterprises in our sample, which are the institutions most likely to have received subsidies from 1992 to 1994. Second, we control for the size of an enterprise, given we expect that larger enterprises are more likely to receive subsidies than smaller ones. Finally, even if oblast governments work to subsidize large declining branches, it is not clear that all the large branches will need subsidies. Not all branches are facing a negative demand shock. We expect, for example, that consumer goods and services are facing increases in demand. Thus, while a decline in demand for products of important branches might encourage the oblast government to work to rescue the industry, the increase in demand for products of other important branches should provide local governments with a financial cushion to pursue reform.⁹⁹ The local governments are not likely to seek or provide subsidies for these profitable branches. Statistically, then, the net effect of this process will depend on the relative importance of growing and declining sectors to the oblast administration and the ability of local governments to extract subsidies from the federal government.

We measure employment growth over a two year period, from March 31, 1992 to March 31, 1994. On average, firms in the sample shrunk by 16 percent over the two-year period. We also point out that our sample is representative of the oblasts we surveyed, and is not troubled by the censorship problems that normally plague this type of analysis for market economies. That is, unlike most studies of firm dynamics, our estimate of mean employment growth is not biased upward by the exclusion of firms in the survey frame that might have exited during the period. First, we selected most of the firms for our sample in 1992, as part of an earlier survey effort. Second, very little exit occurred during this period, as exemplified by the fact that less than 20 percent of firms were aware of other firms in any sector in any part of Russia that had been closed.

Table 8 presents our regression results. For our discussion, we assume that ε_{LK} is positive. That is, we assume that *firms tend not to invest in labor-saving technologies*, partly because of social constraints limiting firing, but mostly because of the low economic cost of using labor as an input. Thus, we expect that investment leads to job growth.

In general, the statistical evidence supports our view of the process of investment and growth. First, the constant term, which measures the effect of systemic change on employment growth, is negative and statistically significant. This confirms that the impact of the introduction of the market system has been to increase separations of workers by firms. Second, three of the industry dummy variables are

⁹⁹Stoner-Weiss (1994) conducted a case study of four oblasts in Russia, in which she confirmed this view.

statistically significant, for apparel, chemicals, and primary metal products. These results suggest that the demand shock of transition for apparel and chemicals is positive, while the demand shock for primary metals is negative.

The heart of our analysis concerns the importance of variables related to investment. The variables related to the sunk costs and downside risk of investment (other than the variable indicating that a firm has been privatized) are of the appropriate sign and are statistically significant. However, the variables related to financial constraints are not statistically significant. This suggests that market organization has a significant and important impact on the process of growth. But, to the extent that financial constraints inhibit the growth process, they are not firm specific.

Two of these results warrant further discussion. First, for the reasons we cite above, we expected that privatization might inhibit investment and, thus, employment growth. However, we found that, statistically, privatization has no significant effect on growth. Part of the explanation might lie in the fact that, as part of their strategy for privatization, managers of many state-owned enterprises promised not lay-off workers in exchange for worker support in the privatization process. Yet, because of the option-value of waiting, they might not have made the investments needed to stimulate growth. Thus, on balance, privatization is observed not to play an important role in employment growth.⁶⁰

For the reasons we cite above, we also expected that imperfect competition might stimulate investment and, thus, employment growth. Again, we found this attribute to have no effect on growth. Part of the explanation might lie in the incentive problems in monopoly firms. Even if they have the opportunity and resources to make investments, they might not do so, consuming their supra-normal profits rather than investing them. Alternatively, many of these monopolies face some type of regulation, which reduces their profitability and their ability to invest. Thus, we observe that imperfect competition in product markets does not play an important role in growth.

The regression results suggest that market structure and market infrastructure -- by affecting the sunk costs and downside risk of investment -- play an important role in enterprise growth. To evaluate its importance relative to other types of characteristics of the enterprise, we follow a methodology developed by Schmalensee (1985) and used by Korsun and Murrell (1994) and Ickes, Ryterman, and Tenev (1995b). This methodology uses the adjusted R^2 ⁶¹ to set plausible bounds for the amount of variance explained by different groups of variables.

To calculate these bounds for a particular set of variables, we estimate three models. The first model is the full model, which includes every variable in all sets. We use the model to estimate the percent of total variance in employment growth that is explained by our full set of regressors, as measured by the adjusted R^2 . Next, we estimate the model, restricting the coefficients for the given set of regressors to zero. By subtracting the adjusted R^2 associated with this regression from the R^2 associated with the first regression, we compute one measure of the amount of total variation explained by the variables.

⁶⁰However, in other work (Ickes, Ryterman, and Tenev (1995b)), we did find that privatization inhibited *adjustment*, which is a more broadly defined measure of restructuring than investment.

⁶¹Our methodology requires us to estimate some of the regressions without constants. Following Judge, *et al.* (1985), we use an alternative measure of the R^2 , which uses the uncorrected sum of squares in place of the corrected sum of squares in the calculation of the R^2 .

Finally, we estimated the model, restricting the coefficients *not* in the given set to zero. Its adjusted R^2 provides a second measure of the amount of total variation explained by the included variables.

Results of this procedure are presented in Table 9. We find that the economic system explains from 24 (55) to 37 (84) percent of the total (explained) variance, that industry characteristics explain from zero (zero) to seven (16) percent of the total (explained) variance, and that variables related to investment explain from nine (20) to 20 (44) percent of the total (explained) variance. Of the groups of variables related to investment, sunk costs explain the most variation, while financial constraints explain the least. Variables related to market structure and market infrastructure explain from 12 (28) to 22 (49) percent of the total (explained) variation. Given our estimation method understates the importance of variables related to investment, we consider this role significant.

4.4 Interpretation of Results

In the absence of problems with market structure and market infrastructure, we expect that the reallocation of resources both within and across industries would be equally likely to stimulate growth.⁶² Given the structural problems, however, we expect that intra-industry reallocation will be easier and less costly, and, thus, more likely to stimulate growth. Although preliminary, our results confirm this view. Problems in market organization -- by influencing the incentives to invest -- have resulted in a pattern of growth in which intra-industry reallocation becomes the paramount determinant of growth.

We note that this result strongly differs from the results of Glaeser, Kallal, Scheinkman, and Schleifer (1992), who empirically investigate the determinants of employment growth in 170 U.S. cities between 1956 and 1987. They find that employment growth was greatest in cities with diverse industrial structures, and in industries that were *not* overrepresented compared to the national average.

Why these different results? Again, we argue strongly that they reflect differences in market organization between the two countries. Inter-industry reallocation is much more intensive in investment than intra-industry reallocation and is particularly prone to the problems that especially characterize a transition environment. In the absence of these problems, firms can take better advantage of opportunities that arise as a consequence of spillovers between industries.⁶³

5. Conclusion

The capacity of a transition economy to successfully implement macroeconomic stabilization depends on the organization of its markets. Successful macroeconomic stabilization requires that policy regimes are credible. But, credibility is not an innate characteristic of reformers, or of the programs themselves. The same stabilization program might be more credible in some economies than in others

⁶²We expect more intra-industry reallocation, but, *a priori*, we do not expect it to lead to more growth. A sizeable literature debates the role of intra- versus inter-industry effects in growth. For example, see Jacobs (1969) and Romer (1986).

⁶³China might be an example of such a country. The gradual pace of economic reform has led to much less regime and endogenous uncertainty than in Russia and many other countries in transition. More diversified local economies have reduced the sunk costs of investment. All else equal, this context makes investment, and its consequent growth, more likely.

based on characteristics of the two economies. In this paper, we have explored the role of market structure and infrastructure in determining the credibility of a stabilization program.

Macroeconomic stabilization programs in economies in transition impose side effects. These side effects -- enterprise insolvency and unemployment -- occur in any stabilization. But, but they are more important in this case because transition economies are initially in a state of structural disequilibrium, so that the adjustment to tight money policies are combined with the response to price liberalization. And, it is the pressure on policy makers caused by these side effects that induce policy makers to renege on tight money policies. Hence, the credibility of a stabilization program depends on the magnitude and distribution of these side effects.

The side effects of therapy, in our case tight monetary policies, depend on the health of the patient. In our case, the health of the economy is of issue, and we identify this with the state of market structure and infrastructure. The reason why market structure and infrastructure are so important is that they affect the process of restructuring, mainly via investment, which is the key to absorbing resources rendered unemployed by stabilization. If problems in market structure are present and if market infrastructure is underdeveloped, then costs of undertaking investment increase, and the restructuring process is delayed. Hence, in this case, the side effects of stabilization persist.

The effect of market structure and infrastructure on investment is magnified in transition because of the particular types of uncertainty associated with transition. When sunk costs are present, there is an option value to delaying investments so that more information can be acquired. Lack of market infrastructure and dependence on trading partners raises the sunk costs and the uncertainty that enterprises face. This further delays investment, delaying restructuring further, and exacerbating the side effects of stabilization.

The story does not end here, however. If investment is delayed, then recovery in the fiscal situation of transition governments is delayed. Yet, fiscal recovery is critical to a credible stabilization policy because fiscal deficits are the underlying cause of the inflation that stabilization is designed to cure. A tight money program that results in increased uncertainty and delayed investment might result in delayed restructuring. This would induce rational agents to expect that fiscal deficits are likely to persist, despite the claims made by policy makers. Credibility of the policy is attenuated by the inconsistency of the program.⁶⁴

Our results clearly suggest the importance of developing infrastructure in the restructuring process. The critical policy implication for understanding transition is that *credibility will be tested in different countries to different degrees. Where market infrastructure is more underdeveloped, macro stabilization is more costly*. There might, in fact, be a J-curve in infrastructure development. This, in turn, suggests that (assuming that J-curve is independent of stabilization!) stabilization programs will be especially tested early on. If programs are implemented that are extremely tough initially, then a lack of market infrastructure might make the program too costly to maintain.

The clear result of our analysis is that shock therapy programs are less likely to be successfully maintained in countries with high degrees of vertical dependence among firms and underdeveloped market

⁶⁴This argument suggests a role for foreign aid in the early stages of transition, since it would ease the fiscal burden on the government. This might allow the government to avoid raising tax rates that further inhibit investment.

infrastructure. If the effects of market structure and infrastructure are ignored, then an uninformed observer might conclude that a lack of credibility is the significant determining variable of the success of stabilization.⁶⁵

⁶⁵Many observers, for example, argue that the key difference between Poland and Russia is that policy was more credible in the former case (e.g., Granville (1995)). What we have argued, however, is that this credibility difference can be explained by underlying fundamentals.

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Table 1. Retail Services in Former Socialist and Selected Western European Countries

Country	Year	Retail Workers Per 1,000 Persons	Outlets Per 1,000 Persons	Retail Workers Per Outlet	Consumer Expenditure (\$) Per Outlet ¹	Number of Scanning Stores ¹
Former Socialist:						
Albania	1978	--	5	--	--	--
Bulgaria	1990	31	4	7	175	--
Czechoslovakia	1989	17	4	4	211	--
Hungary	1991	33	11	3	174	83
Poland	1989	--	7	--	225	1
Romania	1990	12	2	5	333	2
Soviet Union	1989	23	3	9	1,108	73
Yugoslavia	1990	17	4	4	1,742	--
Former Socialist, Mean		22	5	5	882	40
Selected Western European:						
Austria	1992	33	5	6	2,591	1,200
Finland	1990	31	8	4	1,526	1,940
Greece	1985	30	16	2	353	--
Ireland	1988	25	9	3	820	101
Italy	1990	--	18	--	733	3,690
Portugal	1992	21	11	2	436	269
Spain	1989	--	23	--	380	5,039
Turkey	1989	3	7	0	213	1
Selected Western European, Mean		24	12	3	882	2,040
Test for Difference of Means						
		Not different	Different**	Different*	Not different	Different*

¹Data for total consumer expenditures and number of scanning stores are for 1990.

²Two-tailed test; *, **, *** indicate that the probability of observing a t-statistic greater than the observed value is between 5 and 10 percent, between 1 and 5 percent, and less than 1 percent, respectively.

Source: *European Marketing Data and Statistics*, 1994.

Table 2. Media Access in Former Socialist and Selected Western European Countries

Country	Number of National Newspapers 1990	Number of Consumer Publications 1990	Percent of Homes (in 1991) Equipped With:	
			Radios	TV's
Former Socialist:				
Bulgaria	2	7	--	--
Czechoslovakia	8	16	75	98
Hungary	8	12	40	--
Poland	9	20	79	--
Romania	4	--	45	--
Soviet Union	11	10	96	98
Yugoslavia	8	16	86	61
Former Socialist, Mean	7	14	70	86
Selected Western European:				
Austria	5	32	95	97
Finland	11	25	96	98
Greece	2	28	98	94
Ireland	4	11	98	95
Italy	24	60	99	99
Portugal	12	17	75	95
Spain	15	47	95	98
Turkey	14	22	75	96
Selected Western European, Mean	11	30	91	97
Test for Difference of Means	No difference	Different**	Different**	No difference

¹Two-tailed test; ** indicates that the probability of observing a t-statistic greater than the observed value is between 1 and 5 percent.

Source: European Marketing Data and Statistics, 1994.

Table 3. Telecommunications in Former Socialist and Selected Western European Countries

Country	Telephone		Percent of Unsuccessful Local Calls ²			
	Mainlines Per 1,000	Faults Per 100				
	Persons ¹	Mainlines Per Year ¹	1990	1991	1992	1993
Former Socialist:						
Albania	—	27	15	13	13	—
Bulgaria	—	50	36	75	45	—
Cuba	—	—	51	51	47	—
Estonia	—	—	—	20	36	55
Georgia	—	39	—	—	—	—
Hungary	96	55	55	55	55	46
Latvia	—	—	29	30	34	38
Lithuania	—	46	—	30	—	—
Moldova	—	43	—	48	48	54
Mongolia	—	57	—	—	—	—
Poland	86	—	7	—	—	—
Romania	102	102	—	—	3	—
Russia	—	—	7	8	—	—
Turkmenistan	—	61	—	—	—	—
Ukraine	—	—	—	28	—	—
Former Socialist, Mean	95	53	29	36	35	48
Selected Western European:						
Austria	418	35	2	1	—	—
Finland	535	12	3	3	3	—
Greece	391	—	—	—	—	—
Ireland	281	40	—	—	—	—
Italy	388	21	44	42	42	—
Portugal	241	—	2	—	4	—
Spain	323	10	—	—	—	—
Turkey	123	1	5	5	5	—
Selected Western European, Mean	338	20	11	13	14	—
Test for Difference of Means³						
	Not different	Different***	Not different	Different*	Different*	—

¹Source: *World Development Report 1994*, pp. 224-225²Source: International Telecommunications Union (ITU)³Two-tailed t-test; *, **, *** indicate that the probability of observing a t-statistic greater than the observed value is between 5 and 10 percent, between 1 and 5 percent, and less than 1 percent, respectively.

Table 4. Total Cost of Road, Rail, and Water Transport in Ton-Kilometers per Dollar of GDP in 1988

Country	Area in thousands of square kilometers	Total Cost	Cost as a Percent of the Cost in the Soviet Union
Soviet Union	22,272	3.59	100.00
Poland	305	0.86	23.96
CFSR	126	0.82	22.84
China	9,597	0.78	21.73
Canada	2,305	0.74	20.61
Bulgaria	111	0.72	20.06
USA	9,167	0.64	17.83
Hungary	92	0.68	18.94
India	2,973	0.51	14.21
Yugoslavia	255	0.48	13.37
Spain	499	0.37	10.31
Holland	34	0.34	9.47
Sweden	412	0.32	8.91
Belgium	30	0.32	8.91
W. Germany	244	0.28	7.80
U.K.	242	0.26	7.24
Italy	294	0.23	6.41
France	546	0.22	6.13
Austria	83	0.21	5.85

Source: Jane Holt (1993), p. 27.

Table 5. Change in the Quality of Market Infrastructure in Russia Since 1992

Type of Infrastructure	Measure of Quality	Percent of Responding Firms that Said Quality is:			Number of Firms for Which Data Were Missing or Not Applicable ¹
		Better	Worse	Same	
Wholesalers and Retailers	Number interested in selling firm's types of products	37	34	28	3
Telecommunications:	Quality				
Telephone, standard:					
Domestic calls		4	40	56	3
International calls		14	28	58	3
Mail		3	53	44	3
Storage	Ease of finding similar space	36	48	16	21
Transport:	Reliability				
Trucks		18	26	56	4
Rail		2	50	48	16
Plane		0	24	76	34
Boat		0	14	86	38
Finance:					
	Importance of barter	15	41	44	14
	Receivables in arrears as a percent of sales (compared to July 1992)	13	57	30	15
	Receivables in arrears as a percent of sales (compared to January 1993)	19	65	16	9
	Payables in arrears as a percent of sales (compared to July 1992)	16	50	34	20
	Payables in arrears as a percent of sales (compared to January 1993)	15	52	32	12
Law					
	Importance of contracts	55		45	4
	Fees/bribes for "road protection" ²	0	85	15	131

¹Total number of firms in survey is 157.²This measure is biased downward because only firms that currently pay for road protection were asked to respond to this question.

Table 4. A Cross-Country Comparison of Regional Specialization

Country	Average Coefficient ¹
Russia	0.46
Western Europe	0.34
US	0.26
China	0.20

¹Based on data from Ickes, Ryterman, and Tenev (1995) and Kumar (1994).

Table 7. Definition of Variables

Variable	Description	Source
System:		
Constant	Dummy = 1	N/A
Industry:		
Apparel	Dummy = 1 if SIC = 23	Survey
Chemicals	Dummy = 1 if SIC = 28	Survey
Crafts	Dummy = 1 if SIC = 39	Survey
Furniture	Dummy = 1 if SIC = 25	Survey
Electronics	Dummy = 1 if SIC = 36	Survey
Primary metals	Dummy = 1 if SIC = 33	Survey
Stone, clay, and glass	Dummy = 1 if SIC = 32	Survey
Transport equipment	Dummy = 1 if SIC = 37	Survey
Firm-level Investment:		
Sunk Costs:		
Importance of local suppliers ¹	Importance of suppliers in oblast relative to all suppliers	Survey
Number of local firms in branch ¹	Number of firms in branch in city	Census
Local concentration of employment in branch ¹	Share of workers in branch in city employed by largest firm	Census
Risk:		
Dedicated in production ¹	Dummy = 1 if firm sells more than 50 percent of its output to one customer	Survey
Alternative suppliers ¹	Dummy = 1 if firm knows of alternative suppliers for most critical input	Survey
Privatized	Dummy = 1 if enterprise is privatized	Survey
Financial Constraints:		
New	Dummy = 1 if enterprise was created in 1991 or later	Survey
Size	Number of workers	Survey
Monopolist ¹	Dummy = 1 if firm is currently identified by an anti-monopoly committee as a monopolist	Survey
Barnaul	Dummy = 1 if firm is located in Barnaul	Survey

¹Variables describing market organization.

Table 8. The Role of Sunk Costs, Risk, and Financial Constraints in Enterprise Growth, 1992 to 1994¹

Regressor	Parameter Value	Significance ²
System:		
Constant	-0.77	0.00
Industry: ³		
Apparel	0.28	0.01
Chemicals	0.24	0.04
Crafts	0.43	0.12
Electronics	0.13	0.16
Furniture	0.18	0.37
Primary metals	-0.45	0.09
Stone, clay, and glass	0.14	0.31
Transport equipment	0.31	0.23
Firm-level Investment: ³		
Sunk Costs:		
Importance of local suppliers	0.93	0.09
Number of local firms in branch	4.90×10^{-3}	0.00
Local concentration of employment in branch	0.36	0.02
Risk:		
Dedicated in production	-0.18	0.06
Alternative suppliers	0.14	0.04
Privatized	0.07	0.22
Financial constraints:		
New	0.16	0.2
Size	3.22×10^{-6}	0.83
Monopolist	0.03	0.68
Barnaul	0.06	0.43
R-square	0.43	
Number of Observations	81	
Mean of Dependent Variable	-0.16	

¹Employment growth is measured as employment at the end of the quarter 1, 1994, less employment at the end of quarter 1, 1992, divided by employment at the end of quarter 1, 1992.

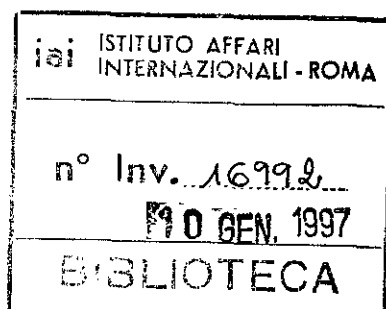
²Significance is measured as the (two-tailed) probability of observing a t-statistic greater than the observed t-statistic.

³Industry and regional dummy variables with significance of .50 or less are not included in this regression.

Table 9. Estimates of the Explanatory Power of Systemic, Industrial, and Investment-Related Characteristics¹

Set of Regressors	Percent Explained of:	
	Total Variance	Explained Variance
System:		
Minimum	24.4	55.0
Maximum	37.2	83.8
Industry:		
Minimum	0.0	0.0
Maximum	7.2	16.2
Firm-level Investment:		
Sunk Costs:		
Minimum	14.9	33.6
Maximum	19.2	43.2
Risk:		
Minimum	4.8	10.8
Maximum	12.1	27.3
Financial Constraints:		
Minimum	0.0	0.0
Maximum	5.2	11.7
All firm-level Investment:		
Minimum	8.8	19.8
Maximum	19.6	44.1
Market organization only:		
Minimum	12.3	27.7
Maximum	21.6	48.6
All:		
Max = Min	44.4	100.0

¹Based on adjusted R-squares.



*Very Preliminary
Comments Welcome*

**On Your Marx, Get Set, Go:
The Role of Competition in Enterprise Adjustment***

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Abstract

The purpose of the paper is to explore the role of market structure in the choice of adjustment strategies adopted by Russian enterprises. Our central proposition is that market structure affects the decision to adjust by altering the costs and benefits to enterprise managers of adjusting. The critical problem that inhibits adjustment, in our view, is that enterprises cannot evaluate the effects of adjustment strategies independently of the decisions of other enterprises. The problem is that the former state-owned sector was a network of enterprises organized to operate together. The costs and benefits of adjustment change radically if other enterprises are adjusting. As constituents of a complex chain of producers, the incentive to deviate will depend on what others do. We argue that mutual dependence operates as a force that naturally makes enterprises conservative. The extent of this dependence, however, depends on the nature of the market in which the enterprise operates. When alternative trading partners are present and when adequate market infrastructure is available to support creating relationships with these trading partners, the extent of interdependency is lessened, and the forces inducing conservative behavior are reduced.

We contrast this role to the conventional view of market structure, which focusses on the importance of competition to adjustment. Most economists interpret the theory to suggest that competition will foster the adjustment of enterprises from socialist institutions to capitalist ones. First, competition creates an incentive for firms to adjust because firms that do not adapt to markets are unlikely to survive in the market place. Second, competition provides information that facilitates adjustment. By comparing their production strategies and techniques to firms that have successfully adapted to markets, firms can imitate and, ultimately, learn to innovate strategies for success.

Our view and the conventional view of market structure are not mutually exclusive. In our view, the competition that a firm faces in the market for its goods provides its trading partners with alternate opportunities for trade. These alternatives reduce their risk of adjustment. Hence, the firm facing competition can perceive that its trading partners are not dependent on it, and might adjust in anticipation of or in response to their defection from the trading network.

The limit to this confluence of effects occurs only when competition becomes very intense. Adjustment entails a cost, which often includes a decline in short-term performance. In the absence of long-term bank loans, this cost must be financed out of retained earnings. As competition becomes more fierce, firms must price their products more competitively; hence, they have less internal resources to finance adjustment. Under these circumstances, adjustment might not be a feasible strategy for the firm.

To test our view, we analyze the results of a survey conducted with more than 150 enterprises in five provinces. We test a model of firm behavior, in which the

decision to adjust is a function of managerial, enterprise, industry, market, and ownership characteristics. We classify strategies for adjustment based on the degree to which they focus on changing relationships within the firm and with other firms. We assume that decisions to change external relations are more radical than decisions to change internal relations because external changes often require or induce internal changes.

We find strong empirical support for our view of the role of market structure in the decision to adjust. Specifically, we find:

- + **Dependence on trading partners reduces the likelihood that an enterprise decides to adjust.**
- + **Competition with Western imports increases the likelihood that an enterprise decides to adjust.**
- + **Intense competition -- measured as competition from imports from both the West and from formerly socialist economies -- decreases the likelihood that an enterprise decides to adjust.**

The negative effect of intense competition on the decision to adjust might be the consequence of one of two institutional features of the Russian economy. First, the institutions of bankruptcy and liquidation are very underdeveloped. As a result, many firms that would fail in a developed market economy simply fail to adjust in Russia. If exit in a market economy is greater in industries in which competition is intense, then this result suggests that the government facilitate the reorganization of enterprise assets by making bankruptcy and liquidation more efficient.

Alternatively, the negative effect of intense competition on the decision to adjust might be the consequence of the low level of development of market infrastructure in Russia. Market infrastructure consists of the set of institutions that support relations between firms by providing the information, legal foundation, finance, and physical infrastructure necessary for trade. Problems in market infrastructure explain why many Russian firms are unable to identify and forge relationships with alternative trading partners, despite empirical evidence that potential alternatives do exist. They also explain why enterprises join organizations that help coordinate trade. In fact, we find:

- + **Membership in enterprise associations increases the likelihood that an enterprise decides to adjust.**

If problems in market infrastructure are preventing enterprises from undertaking appropriate adjustment, then these results suggest that the development of the systems of wholesale and retail trade, telecommunications, transport, storage, finance, and law is essential to further restructuring. The primary role of the government is to ensure that no policy barriers block the proper development of these institutions. A more

active role for government depends on the degree to which the private sector is willing to invest in the development of these institutions. In addition, the government should consider maintaining a positive attitude toward enterprise associations, while monitoring them for cartel-like and other forms of anti-competitive behavior. Most likely, the associations now combine both pro-adjustment and anti-competitive behaviors. At this stage of the transition, it might be true that the positive effect dominates, but this situation might change as the transition progresses.

Our results do not suggest, in general, that advances toward the imposition of hard-budget constraints and free trade should be reversed. For the most part, competition has stimulated the decision to adjust. To the extent that the competition has been intense, its cost has already been borne by enterprises; it cannot be reversed by an easing of conditions. In fact, such a reversal of policy would punish firms that have successfully adjusted and undermine the credibility of government policy in the future. But, our results do suggest that the speed of future advances in reform be aligned with the capacity of the economy to support needed restructuring.

We also find:

- + **Larger enterprises are less likely to decide to adjust than smaller enterprises.**

This result might arise because adjustment is more difficult for larger, more complex organizations. However, it would also arise if larger enterprises have greater access to subsidies than smaller enterprises. Under these circumstances, larger enterprises might be using the subsidies to avoid the painful costs of adjustment.

Finally, we find:

- + **Privatized enterprises are less likely to decide to adjust than state-owned enterprises.**

We do not interpret this result to suggest that the introduction of private property in Russia has been a failure. Rather, we believe it suggests that an insufficient amount of time has elapsed since privatization for its positive effects to be felt. Privatization requires an investment of time and resources of senior managers into developing a strategy for privatization, leaving these managers with less time to invest in other activities, such as developing strategies for adjustment. Thus, privatized enterprises will initially lag behind state-owned enterprises in the adjustment process. In addition, the strategy for privatization might include a temporary delay of some forms of adjustment, such as firing workers, that might jeopardize the control of managers over their enterprises. Hence, our results might measure the short-term costs, but not the long-term benefits of the new ownership regime.

Alternatively, our results might reflect the fact that state-owned enterprises have better access to important resources for production and distribution than privatized enterprises. For example, other research indicates that state-owned enterprises have greater access to long-term bank loans than privatized enterprises. This interpretation suggests that barriers might be present that undermine the ability of privatized enterprises to adjust. To the extent that these barriers are created by government policies or practices, the government can stimulate adjustment simply by changing these policies and practices to remove the barriers.

A final possibility is that private ownership simply induces enterprises to be more risk averse than public ownership. This risk aversion might arise because directors of privatized enterprises are more likely to expect the government to let them fail than state-owned enterprises. If this is the case, then some aspects of the adjustment strategies adopted by state-owned enterprises might exceed the optimal level of risk.

On Your Marx, Get Set, Go: The Role of Competition in Enterprise Adjustment

1.0 Introduction

A crucial aspect of the transition to the market in Russia is the transformation of formerly state-owned enterprises into private firms adjusted to the market. The magnitude of this transformation is immense, both in scale and substance. Soviet-era enterprises were organized to produce rather than to compete. The transition to the market requires not only that they alter their techniques of production, but, much more importantly, their methods of organization and behavior as well. Privatization is naturally seen as an important means of inducing adjustment and improving performance. Nonetheless, most economists would also argue that privatization is not a sufficient condition for improved performance.¹ Something else is needed as well, a competitive market environment.

The role of competition in producing efficient outcomes is well understood. The same cannot be said for the connection between competition and adjustment. The conventional welfare costs of monopoly are higher prices and lower output -- an inefficient allocation of resources. Monopolists, however, maximize profits. Hence, they should, in principle, minimize costs just like a firm in a competitive market. If there is any role for competition in fostering adjustment, it must lie in the maxim that "the sweetest return to a monopolistic position is an easy life." Thus, it is thought, in transition economies, competition will enhance adjustment.

The purpose of the paper is to explore the role of market structure in the choice of adjustment strategies adopted by Russian enterprises. Our approach, however, departs a bit from the conventional view of this link. Market structure affects the decision to adjust by altering the costs and benefits to enterprise managers of adjusting. The critical problem that inhibits adjustment, in our view, is that enterprises cannot evaluate the effects of adjustment strategies independently of the decisions of other enterprises. The problem is that the former state-owned sector was a network of enterprises organized to operate together. The costs and benefits of adjustment change radically if other enterprises are adjusting. As constituents of a complex chain of producers, the incentive to deviate will depend on what others do. We argue that mutual dependence operates as a force that naturally makes enterprises conservative. The extent of this dependence, however, depends on the nature of the market in which the enterprise operates. When alternative trading partners are present and when adequate market infrastructure is available to support creating relationships with these

¹Privatization might not be a necessary condition for improved performance either, but we do not analyze this question.

trading partners, then the extent of interdependency is lessened, and the forces inducing conservative behavior are reduced.

Our view and the conventional view of market structure are not mutually exclusive. In our view, the competition that a firm faces in the market for its goods provides its trading partners with alternative opportunities for trade. These alternatives reduce their risk of adjustment. Hence, the firm facing competition can perceive that its trading partners are not dependent on it, and might adjust in anticipation of or in response to their defection from the trading network.

The limit to this confluence of effects occurs only when competition becomes excessive. Adjustment entails a cost, which often includes a decline in short-term performance. In the absence of long-term bank loans, this cost must be financed out of retained earnings. As competition becomes more fierce, firms must price their products more competitively; hence, they have less internal resources to finance adjustment. Under these circumstances, adjustment might not be a feasible strategy for the firm.

To study the linkages between competition, market structure, and adjustment, we analyze the results of a survey of more than 150 Russian enterprises in five provinces, or oblasts. Our approach is to study the factors that explain the strategic choices made by enterprises. In the midst of the transition, it is unlikely that we can observe the effects of strategic choices on performance. Instead, we choose to analyze the forces that affect the strategies enterprises pursue. We test a model of firm behavior, in which the decision to adjust is a function of managerial, enterprise, industry, market, and ownership characteristics. We find strong support for our view.

This paper contains five sections in addition to this introduction. In section 2, we elaborate on our view of the role of market structure in the decision to adjust. In section 3, we discuss our choice to focus on strategies, not outcomes. In section 4, we present tests of our theory and other theories of the determinants of adjustment. In section 5, we present evidence of the importance of different classes of variables on adjustment. We conclude with a set of policy recommendations.

2.0 A Theory of Enterprise Adjustment in Transition

The key aspect of the transition that inhibits adjustment is that the environment is "noisy". Institutional change is rampant both within the enterprise and external to it. Ickes and Ryterman (1993, 1994) develop a theory of the survival-oriented enterprise (SOE) that operates in such conditions. It will be useful for what follows to review the basic features of the model.²

²Parts of this text are taken directly from Ickes and Ryterman (1994).

The primary distinguishing characteristic of the SOE is that it operates in an *environment in flux*. The enterprise in a planned economy and the firm in a market economy each operate in a relatively stable environment. By a stable environment, we refer to the status of the other "players" in the economy and to the rules that govern the survival of organizations. In a planned economy, the enterprise takes the survival of other enterprises as given, since enterprises are not permitted to fail. In a market economy, entry and exit occur, but the number of enterprises that enter or exit an industry in any period is small compared to the size of the industry as a whole.³ Thus, in both cases, the industrial structure can be taken as given for the purposes of short-term decision-making on the part of the organization.

In the transition economy, on the other hand, the industrial structure is in a state of flux. The rules that govern the survival of the organization are no longer evident. The transition from a system with no exit to a system with exit entails a period of uncertainty as directors of SOE's learn how bankruptcy criteria will be implemented. Moreover, impending privatization might alter the picture as well, as the director might find himself or herself no longer in control of the enterprise. But these uncertainties are compounded by the fact that they apply to all enterprises in the economy. It is this potentially simultaneous restructuring that makes decision-making at the enterprise level so complex.

The degree of external uncertainty that faces the SOE greatly complicates its decision-making problem. The enterprise in the planned economy and the firm in a market economy can take the identity, if not the strategies, of their customers, suppliers, and competitors as given.⁴ The SOE, on the other hand, operates in an environment where the viability of other enterprises is highly uncertain. The structure of demand and the structure of industry is in flux. The SOE cannot take the viability of suppliers and customers as given. This uncertainty should induce enterprises to search out new customers and suppliers.⁵ However, most enterprise directors believe

³Especially if measured in terms of value added or employment.

⁴ In a socialist setting, enterprises do not compete for customers, but they do compete for resources. This competition is true not only for labor, but also for capital. They also compete for scarce material inputs.

⁵In fact, adjustment is a potential equilibrium in this model. It arises when enterprises believe that the uncertainty induces their trading partners to adjust. A second equilibrium is also possible, in which enterprises believe that the uncertainty drives their trading partners to preserve existing relationships. We argue that the second equilibrium is more likely to be obtained because the actions it requires on the part of firms are less of a break with history. Thus, we argue that evolution of behavior is path dependent.

that there are few alternatives to their current customers and suppliers (see below). Hence, they seek to preserve their current relationships. This is an important paradox of the transition. Given that historic trading relationships and production patterns evolved based on central planning and not market criteria, an important part of the SOE's investment must be in developing new products, thus identifying and creating linkages with new trading partners.

The network of relationships that an enterprise builds over time -- its *network capital* -- is one of its most important assets. The value of this capital is manifested in the reduction of search and transaction costs that it entails. The presence of the network frees decision-makers in the network from the need to worry about inter-enterprise coordination. In effect, it turns the production decision for the enterprise away from a general-equilibrium problem in which decision-makers consider the actions of all actual and potential suppliers, customers, and competitors. The network allows the decision-maker to focus on existing relationships, and hence to evaluate decisions in a more partial-equilibrium setting.

The deterioration of network capital occurs when some enterprises in the network choose to deviate from the old patterns of trade. Most enterprises continue to receive and deliver as under the old regime. They try to preserve the network to avoid the search costs needed to find new suppliers and customers. Some enterprises, however, perceive that they can gain by deviation. If the legacy of central planning is limited flexibility in forming new relationships, then these deviations can initiate a process in which the web of historic relationships begins to unravel in dramatic and potentially unpredictable ways. This unraveling can threaten the survival of all enterprises in the network, *even the enterprise that was the first to defect*. If that first enterprise is unsuccessful in its new venture, then it will not be able to return to its old network to resume its former pattern of production.

The effect of this unraveling on the survival of the network depends on the precise configuration of the trading network and the alternative networks that can evolve. That is, it is very dependent on *market structure*⁶ and related *market infrastructure*⁷. When an enterprise is part of a network in which there are few substitutes for any given enterprise, then an adverse outcome for one enterprise can have dire consequences for the entire network. Thus, *enterprises choose to adjust only when their own viability does not depend on the survival of trading partners*.

⁶We define market structure to include the set of horizontal, vertical, and spatial relations between enterprises.

⁷We define market infrastructure as the set of institutions that support inter-enterprise relations, including the systems of wholesale and retail trade, telecommunications, transport, storage, finance, and law.

To better understand this point, consider two networks that produce a single final good. In the first case, the good is simple, requiring only a few stages of production. Each stage is produced by many competitors and no stage is an input into more than one final good. Hence, the network can be represented by a short linear chain of enterprises, in which there are many substitutes for each link in the chain. In the second case, the final good is complex, requiring many stages of production. Each stage of production is produced by only one firm and goods produced by every stage of production are inputs into all other goods. Thus, the network is best represented as a multi-dimensional web of production in which there is no real distinction between upstream and downstream firms, other than for the one good that is consumed, in part, by individuals.

Now consider the effects of the random elimination of a single firm in each network. In the first network, eliminating the firm does not jeopardize the survival of the network. The production of that enterprise will be immediately replaced, either by a competitor or another enterprise that alters its production to produce the needed good. Entry is easy for two reasons. First, there are a number of producers at each stage of production. Second, products in this economy are simple and can be easily produced by firms in other sectors. Although the shift of a small number of producers into the lost activity might induce changes in relative prices and quantities, it is unlikely that these changes will create persistent effects. Thus, profit opportunities created by the lost activity will successfully attract new entrants into this type of production.

In the second economy, the reaction is more problematic, for three reasons. First, because each stage of production is produced by only one firm, the shift of one or more producers to the lost activity will not eliminate the shortage, but simply move it to a different part of the chain of production. Second, because the goods produced are very complex, identifying and establishing trading relationships with new trading partners will be time-consuming and very costly. Finally, the new producer will be both a monopolist and a customer of monopolists. In many of its trading relationships, then, the firm will likely face a situation of bilateral monopoly. Bargaining in this situation is highly complex and very costly. Thus, eliminating a single firm is likely to create a chain reaction of failures that will necessarily spread throughout the entire network, causing it to collapse.

The key difference between the two networks is the flexibility in their responses to economic shocks. The network with a greater degree of mutual dependence between members is more fragile; a shock leads to greater network-wide effects. The simple network is more robust in response to the shocks. This difference in flexibility might be attributed, at least in part, to the fact that the complex network faces a technological constraint on adjustment, while the simple network does not. Consequently, resources are more difficult to move across firms within the complex network. Hence, for a given economic shock, these enterprises are less likely to adjust.

The purpose of economic reform is to create new relationships, both between and within enterprises. But these relationships will take time to form. In the meantime, these two aspects of systemic change mean that the enterprise will operate in an environment of great uncertainty. Following Tirole (1992), we refer to this period as the *noisy phase* of transition.⁸ This period is characterized by extreme uncertainty over questions of coordination between enterprises and over control rights within the organization. It is precisely this increased uncertainty in the noisy phase that leads to the characteristic form of behavior of the SOE.

Directors in SOE's face two critical problems. The first we refer to as the *appropriability problem*. Because of the ambiguity over control rights in the enterprise, directors might not be able to appropriate the gains that might accrue in the *mature* phase from actions that are taken in the noisy phase.⁹ This occurs for two reasons. First, the director might no longer be at the enterprise when the gains accrue, because of a loss in the competition for control. Second, in the absence of a developed capital market, the current value of the enterprise does not contain information about the true net worth of the enterprise. Thus, the compensation of the director cannot be linked to his or her enterprise's net worth.¹⁰

The second problem facing directors is the *information problem*. Because of the noise, it is extremely difficult for agents to assess the consequences of any actions taken in this phase on performance in the mature phase. Directors understand that the current economic environment is likely to undergo dramatic change as the noisy phase is traversed. Although the environment of the mature phase is relatively stable (compared with the noisy phase), directors do not know *what* that environment will be like.

⁸Tirole introduced the notion of the *noisy phase*, which is characterized by "the extraordinarily high amount of uncertainty not controlled by the enterprises and the nonstationarity in its level" (Tirole 1992: 232). The period that follows the noisy phase Tirole refers to as the *mature* phase. He emphasizes that the noise comes in the form of demand uncertainty, cost uncertainty, financial uncertainty, legal uncertainty, and political uncertainty.

⁹In part, the underdevelopment of the capital market is also responsible for the absence of a managerial labor market. In the absence of adequate capital markets, it is impossible to evaluate the tenure of a director on the net worth of his or her enterprise.

¹⁰"...high noise will weaken *all* forms of management evaluation and oversight because we can never know the characteristics of all states of the world well enough to separate out the management inputs." (Gelb 1991: 260).

The consequence of the appropriability and information problems is that *all actions that have consequences only, or primarily, in the mature phase of transition are of no utility to the director*. Therefore, enterprise directors focus on the immediate rewards of decisions. In this case, the time horizon of the director is essentially limited to the noisy phase.¹¹

Notice that the noisy phase does not automatically end when control rights are assigned. Assignment of control rights reduces uncertainty *internal* to the enterprise. Uncertainty that arises due to *external* flux might still remain. Suppose, for example, that an enterprise is privatized and the battle for control rights is resolved.¹² The presence of the information problem implies that the consequences of actions that have consequences in the future are still impossible to assess. Hence, the decisions of managers of privatized enterprises will still be governed primarily by their expected payoffs in the noisy phase.

Notice also that, during the noisy phase, enterprises cannot provide banks and other financial institutions with adequate information about their future stream of earnings to secure long-term loans. As a consequence, firms cannot use future earnings to finance current investment. This feature of the noisy phase further limits the horizon of the firm to the short-term.

The SOE represents one extreme of enterprise behavior. At the other extreme, enterprises operate in markets in which there is no concern for short-term survival. This situation might arise because the enterprise produces goods in high demand (such as *Gazprom*). Or, it might arise because the market structure in which they operate lessens their dependence on other enterprises, and, hence, lowers their costs of adjustment. Thus, some enterprises might choose strategies that radically alter their situation. The focus of our empirical analysis is to explain why some enterprises choose survival-oriented strategies, others choose radical adjustment strategies, and some choose a moderate middle ground.

¹¹It is the same as the problem for the cowboy trying to ride a bronco (never before ridden a horse) from Moscow to Paris. At first, the cowboy does not care whether the bronco is going north, south, east, or west. All he cares about is not being thrown off the horse. Only after the horse is under control does the cowboy turn the horse towards the sunset.

¹²Although privatization resolves uncertainty over ownership form, it does not necessarily resolve uncertainty over the assignment of control rights, particularly if the institution of ownership is weak.

3.0 Empirical Methodology

The goal of research into firm behavior is to understand the link between the environment, behavior, and economic outcomes. One would like to study, for example, whether Russian enterprises have adjusted to the changes in their environment, asking, for example, whether increases in competition have caused changes in the product mix. It is possible to obtain their data on production characteristics and then to measure the frequency of changes. The problem is to distinguish changes that are the result of active managerial decisions from those that are passive responses to supply problems. Thus, an enterprise might reduce its employment by 8,000 workers in one year (as one of our Saratov enterprises did). Does this mean that the enterprise is adjusting to the market or that its lack of adjustment is leading to its implosion? Thus, the question is one of strategy and requires a different approach.

It is useful to think of these linkages in terms of a reduced form model $\mathbf{o} = f(\mathbf{e}, \mathbf{b}, \mathbf{p})$, where \mathbf{o} is the vector of economic outcomes, \mathbf{e} is the vector of characteristics describing the environment firms in which firms operate, \mathbf{b} is the vector of firm behaviors, and \mathbf{p} is the vector of policy variables. The goal of research is to evaluate the effect of behavior on outcomes. At present, however, the adjustment period is too short to expect to see that changes in behavior have produced systematic changes in economic outcomes.¹³ Hence, an alternative strategy must be employed that focuses on explaining the set of behaviors that firms choose. Here the goal is to explain what determines the choices that enterprises make. For example, is market power conducive to aggressive adjustment strategies or does it make them more passive? The results of such a study can help us to understand the first stage of the ultimate research agenda: to explain how environmental factors and policies lead to choices of behavior. Later in the transition, when observations on outcomes are apparent, we can use our analysis to obtain $\frac{\partial \mathbf{o}}{\partial \mathbf{b}}$.

4.0 Empirical Results

In this section, we test the theory of the survival-oriented enterprise. Although we believe that most Russian enterprises are survival oriented, we recognize that the conditions fostering survival orientation vary within the Russian economy. Thus, some enterprises exhibit survival orientation to a greater degree than others. Our approach

¹³Korsun and Murrell (1994) also point out that adjustment often produces short-term costs in the hope of long-term gains. Given that adjustment is a relatively recent phenomenon, measures of behavior and outcomes might not be strongly correlated.

is to test whether the factors that we predict to be at the root of survival orientation, in fact, lead to survival-oriented behavior. We explain our approach in more detail below.

4.1 Data

For our tests, we use data that we collected during interviews with enterprise directors and other top managers during 1994. In collaboration with the Central Economics and Mathematics Institute (CEMI) in Moscow, we surveyed more than 150 enterprises in five Russian oblasts -- Barnaul, Novosibirsk, Saratov, Voronezh, and Yekaterinburg. We stratified our sample by oblast for three reasons. First, it enables us to study (in future work) the role of local conditions and institutions in enterprise behavior. Second, by surveying at least 30 enterprises in each oblast, we reduce the risk of sample bias. Third, stratification enables us to focus on provincial experience (outside of Moscow and St. Petersburg). As shown in Table 1, enterprises in the oblasts in our sample tend to be larger than in Russia as a whole. However, they tend to be similar in their distribution across heavy and light industry. Our goal is to monitor these enterprises over the course of the transition to learn about the causes and consequences of adjustment.

4.2 Measurement of Survival Orientation

To identify the degree of survival orientation of the enterprise, we asked each director to rate the importance of different types of strategies to the survival of the enterprise. The directors were given three degrees of importance from which to choose: very important, somewhat important, and not important. Then, we classified the strategies based on the degree to which they potentially create organizational uncertainty. Strategies classified as survival oriented strategies (SOS) are typically taken by enterprise directors to increase the probability that the enterprise will survive in the short-term almost intact. In general, they do not seriously disturb internal relations (relations among workers in the enterprise) or external relations (relations with the enterprise's network of trading partners). A special feature of many of these decisions is that they are only effective when similar decisions are taken by other enterprises.

Strategies that focus on changing internal relations we classified as internal adjustment strategies (IAS). Similarly, strategies that focus on changing relations with trading partners we classified as external adjustment strategies (EAS). Note that these groups of strategies are nested. Enterprises focussing on internal adjustment might also use some of the strategies that we identified as SOS. Similarly, enterprises focussing on external adjustment are likely to find that external changes necessitate or induce internal changes. Thus, they might choose to use some of the strategies identified as either IAS or SOS. The list of strategic decisions classified as SOS, IAS, and EAS are presented in Table 2.

To identify the primary orientation of an enterprise, we measured the relative intensity with which it chooses from the sets of strategies SOS, IAS, and EAS. Unfortunately, a simple comparison of these measures of intensity does not properly identify which enterprises have a greater propensity for a particular type of orientation. Because the strategies are nested and because each set contains a different number of strategies, there is a risk that some firms will be misidentified. Thus, we measure the intensity of preferences of a given enterprise relative to the average choices of enterprises.

This procedure required four steps. First, we assigned a numeric value to the importance of decisions to survival. Very important decisions were assigned a value of two, somewhat important decisions were assigned a value of one, and unimportant decisions were assigned a value of zero. Second, we calculated the following set of statistics for each enterprise.

$$\frac{\sum_{i \in S} s_i}{\sum_i s_i} \quad (1)$$

where s_i is the importance to survival of strategic decision i and S is the set of strategies SOS, IAS, or EAS. Each statistic measures the relative importance of a particular set of strategies to the importance of the set of all the strategies the enterprise has implemented.¹⁴ Third, we standardized the statistic for each set of strategies, so that the mean is zero and the standard deviation is one. Thus, the statistic for a given set of strategies now measures the intensity with which the enterprise draws on strategies from the set relative to all the enterprises in the sample. Finally, we identify the primary orientation of the enterprise based on these standardized statistics, assigning it the orientation for which the value of the standardized statistic is highest.

4.3 Model

The model we test is a simple one in which we relate the probability of a given strategic orientation to the set of internal characteristics of the enterprise and the set of environmental conditions in which it operates. Specifically,

$$\text{Prob}[Y=S \mid S \in \{\text{SOS}, \text{IAS}, \text{EAS}\}] = g(N, E, I, M, O) + \mu \quad (2)$$

¹⁴This statistic follows the approach taken by Korsun and Murrell (1994), in which they examine the role of new governance structures on enterprise behavior using ordinal data on the degree of influence of these structures.

where Y is the strategic orientation of the enterprise, N is the vector of managerial characteristics, E is the vector of enterprise characteristics, I is the vector of industry characteristics, M is the vector of market characteristics, and O is the vector of ownership characteristics. We assume that the error term, μ , is distributed normally with mean zero. The particular set of characteristics we chose to implement is provided in Table 3.

4.4 Hypothesis Tests

In this section, we specify and test hypotheses that focus on the role of internal and external characteristics of enterprises on adjustment. The regressions are based on the model in equation (2). We estimate the effects of the characteristics listed in Table 3 on the probability that an enterprise is oriented primarily to survival, internal adjustment, or external adjustment. The model is estimated as an ordered probit. The marginal effect of each variable on the probability of each type of orientation is presented in Table 4.

Our central proposition is that the dominant role of market structure on adjustment is in the way it influences risk. When an enterprise is part of a network of enterprises in which there are few substitutes for important trading partners, then an adverse outcome for one enterprise can have dire consequences for the entire network. Under these circumstances, enterprises will be reluctant to adjust.

We contrast this role to the conventional view of market structure, which focusses on the importance of competition to adjustment. Although there is a question of the applicability of neoclassical theory to an economy in transition (Murrell 1991), most economists interpret the theory to suggest that competition will foster the adjustment of enterprises from socialist institutions to capitalist ones. First, competition creates an incentive for firms to adjust because firms that do not adapt to markets are unlikely to survive in the market place. Second, competition provides information that facilitates adjustment. By comparing their production strategies and techniques to firms that have successfully adapted to markets, firms can imitate and, ultimately, learn to innovate strategies for success.

Our view and the conventional view of market structure are not mutually exclusive. In our view, the competition that a firm faces in the market for its goods provides its trading partners with alternate opportunities for trade. These alternatives reduce their risk of adjustment. Hence, the firm facing competition can perceive that its trading partners are not dependent on it, and might adjust in anticipation of or in response to their defection from the trading network.

The limit to this confluence of effects occurs only when competition becomes intense. Adjustment entails a cost, which often includes a decline in short-term

performance. In the absence of long-term bank loans, this cost must be financed out of retained earnings. As competition becomes more fierce, firms must price their products more competitively; hence, they have less internal resources to finance adjustment. Under these circumstances, adjustment might not be a feasible strategy for the firm.

A related argument is presented by Murrell [1992], who states, "...it seems that there is a highly non-linear relation between adversity and declines in performance. Whereas moderate amounts of adversity might be salutary, inducing productive reactions, extreme adversity appears to produce highly dysfunctional response, enhancing crisis rather than diminishing it." Elsewhere,¹⁵ Murrell likens the response of large enterprises confronting enormous changes to an animal transfixed by the headlights of an approaching car. According to this view, firms under intense pressure are paralyzed by it, unable to marshal the information and resources necessary for productive adjustment.

To identify the role of market structure in adjustment, we test three hypotheses, beginning with a test of our central proposition.

Proposition 1: Membership in a trading network in which there are few substitutes for important trading partners increases the likelihood of survival orientation.

To identify networks with few substitutes, we examine the trading relationships of enterprises. If the enterprise sells 50 percent or more of its output to a single customer or if it knows of no alternative suppliers for its most important input, then we assume that an enterprise does not possess ready substitutes for its most important trading partners. The variables that capture these attributes are DEDPROD and DEDSUP, respectively.

Let β_j be the coefficient of regressor j on the probability that an enterprise is survival oriented. Then, based on theory, we test the following.

Test 1.1 $H_0: \beta_{\text{DEDPROD}} \leq 0$
 $H_1: \beta_{\text{DEDPROD}} > 0$

Test 1.2 $H_0: \beta_{\text{DEDSUP}} \leq 0$
 $H_1: \beta_{\text{DEDSUP}} > 0$

To test the statistical significance of these and other coefficients, we compute the Chi-Square statistic and calculate the (one-tailed) probability, p , of observing a larger

¹⁵Lecture, University of Maryland, May 10, 1995.

value. If the p-value is five percent or less, then we reject the null hypothesis in favor of the alternative hypothesis.

Both coefficients have the signs predicted by the alternative hypotheses. The p-values are 0.3 percent and 0.02 percent, respectively. Thus, we reject the null hypotheses in favor of the alternative hypotheses.¹⁶

The marginal impact of dedication in production and in supply on strategic orientation is quite large. If the dummy variable DEDPROD is increased from zero to one, then the probability of survival orientation increases by 44 percent, the probability of internal adjustment decreases by 24 percent, and the probability of external adjustment decreases by 19 percent. The marginal effect of the variable DEDSUP is to increase the probability of survival orientation by 42 percent, decrease the probability of internal adjustment by 19 percent, and decrease the probability of external adjustment by 23 percent.

These two tests provide strong support for our theory. Next, we test the role of competition in adjustment.

Proposition 2: Competition decreases the likelihood of survival orientation.

We test the proposition using three variables. The first, MON, is a dummy variable equal to one if the enterprise has no direct competitors. The second, WSTCOM, is a dummy variable equal to one if the enterprise faces import competition from the West. The final variable, EECOM, is a dummy variable equal to one if the enterprise faces import competition from Eastern Europe, China, or other formerly socialist economies outside the former Soviet Union. Thus, we test the following.

Test 2.1. $H_0: \beta_{MON} \leq 0$
 $H_1: \beta_{MON} > 0$

¹⁶We note that a bias might be introduced by including DEDPROD as a regressor when one of the strategies classified as EAS is finding new customers. A similar bias might be introduced by including DEDSUP as a regressor when one of the strategies classified as EAS is finding new suppliers. To test for this bias, we ran two additional regressions. The first one excludes both DEDSUP as a regressor and the "Importance of Finding New Customers" in the computation of strategic orientation. The second one excludes both DEDPROD as a regressor and "Importance of Finding New Suppliers" in the computation of strategic orientation. DEDPROD and DEDSUP continue to be statistically significant in the respective regressions, suggesting that the biases, if present, are not important in a statistical sense.

$$\begin{array}{ll} \text{Test 2.2} & H_0: \beta_{\text{WSTCOM}} \geq 0 \\ & H_1: \beta_{\text{WSTCOM}} < 0 \end{array}$$

$$\begin{array}{ll} \text{Test 2.3} & H_0: \beta_{\text{EECOM}} \geq 0 \\ & H_1: \beta_{\text{EECOM}} < 0 \end{array}$$

All three coefficients have the signs predicted by the alternative hypotheses. The p-values for the coefficients are 21 percent, 0.3 percent, and 19 percent, respectively. Thus, we can only reject the second null hypothesis in favor of the alternative hypothesis that import competition from the West decreases the likelihood of survival orientation.

The marginal impact of import competition from the West on strategic orientation is quite large. If the dummy variable WSTCOM is increased from zero to one, then the probability of survival orientation decreases by 51 percent, the probability of internal adjustment increases by seven percent, and the probability of external adjustment increases by 45 percent.

Competition from Eastern European imports does not appear to increase the likelihood that an enterprise decides to adjust. This condition might arise if Eastern European imports are close to Russian products in terms of quality. If the price of imports is higher than the price of domestically produced goods (which is likely with import tariffs), then competition from Eastern European products might not adequately pressure firms to adjust.

However, this interpretation is not fully consistent with the importance of Western import competition in adjustment. Imports from Eastern Europe are likely to be closer substitutes -- in terms of both quality and price -- than imports from the West. Thus, it is surprising that only Western imports stimulate adjustment. In contrast to the prior argument, one explanation might be that imports from Eastern Europe provide excessive pressure on at least some firms.

To explore this argument further, we test the following.

Proposition 3: Intense competition increases the likelihood of survival orientation.

We test the proposition using the dummy variable INT, which is equal to EECOM*WESTCOM. Thus, INT is equal to one when an enterprise faces competition from both formerly socialist economies and the West. Formally, we test the following.

$$\begin{array}{ll} \text{Test 3.1} & H_0: \beta_{\text{INT}} \leq 0 \\ & H_1: \beta_{\text{INT}} > 0 \end{array}$$

The coefficient has the sign predicted by the alternative hypothesis. The p-value is 0.4 percent. Thus, we reject the null hypotheses in favor of the alternative hypothesis.

The marginal impact of intensive import competition is quite large. If the dummy variable INT is increased from zero to one, then the probability of survival orientation increases by 60 percent, the probability of internal adjustment decreases by 33 percent, and the probability of external adjustment decreases by 27 percent.

The tests of Propositions 1-3 suggest that market structure influences the decision to adjust, primarily via dedication in production and supply and via import competition. A question arises why market power does not have a significant effect on the decision to adjust. One possibility is that enterprises do not possess adequate marketing skills to accurately identify their competition. For example, seven firms in the sample identified themselves as having no direct competitors, but also indicated that they faced import competition.¹⁷ Also, Russian firms tend to define markets very narrowly, based on highly specialized definitions of product groups.¹⁸ Both of these problems suggest that firms tend to overstate their degree of market power.

Alternatively, market power might not have an effect on adjustment because of institutional problems in the economy. These same problems might also explain why greater degrees of competition undermine the incentive to adjust. The view of competition as a stimulant to adjustment is predicated on several important assumptions. First, the view presumes that firms face hard-budget constraints. In the absence of hard-budget constraints, the effect of competition is ambiguous. Soft-budget constraints mitigate the downside risk of not adjusting. But, they also mitigate the downside risk of adjusting. Thus, while some enterprises use the presence of soft-budget constraints to avoid the painful process of adjustment, others might use it as an opportunity to pursue adjustment strategies that are relatively risky.

Second, the view presumes that viable firms are able to obtain credit for good projects. If firms face prohibitive credit constraints, then they will not be able to finance organizational changes or invest in the development of new or improved products. Similarly, the view presumes that institutions to support the development of relationships with new trading partners are adequate. These institutions include the

¹⁷Often, Russian firms do not consider foreign firms to be "direct" competitors. To address this problem, we reclassified the seven enterprises as having direct competitors and reestimated the model. There are no substantive differences in the regression results.

¹⁸See Brown, Ickes, and Ryterman [1994] for an elaboration of this problem.

systems of wholesale and retail trade, telecommunications, transportation, storage, and law.

Finally, the ability of competition to stimulate adjustment by providing information is predicated on the assumption that the economy is rich in institutions to facilitate observing and understanding competition. Such institutions include individuals skilled in the analysis of firm behavior and markets. They also presume the availability of information and telecommunications technologies, which facilitate the flow and analysis of information. In the absence of these institutions, the information effect of competition on adjustment will be limited.

To the extent that these problems are present, an opportunity is created to increase the role of competition in adjustment. First, we test whether the effectiveness of competition is undermined because some firms do not face hard-budget constraints. If a sufficient number of firms expect subsidies and if these expectations encourage enterprises to avoid the painful costs of adjustment, then competition might not stimulate adjustment. Thus, we test the following proposition.

Proposition 4: Soft-budget constraints increase the likelihood of survival orientation.

Unfortunately, we do not have explicit measures of the degree to which enterprises receive subsidies. However, anecdotal evidence suggests that three enterprise characteristics might be correlated with the expectation of subsidies. First, some enterprises might believe they are too large to fail. The variable SIZE measures the number of workers the enterprise employs. Formally, we test:

$$\begin{array}{ll} \text{Test 4.1} & H_0: \beta_{\text{SIZE}} \leq 0 \\ & H_1: \beta_{\text{SIZE}} > 0 \end{array}$$

The coefficient has the sign predicted by the alternative hypothesis, and the p-value is four percent. Thus, we reject the null hypothesis in favor of the alternative hypothesis. A one-person increase in the number of workers in the firm increases the probability of survival orientation by 0.004 percent, decreases the probability of internal adjustment by 0.002 percent, and decreases the probability of external adjustment by 0.003 percent.

The role of size in adjustment is also explained by an important theory developed by Murrell (1991). This theory states that the cost of adjustment increases with an enterprise's size. The internal equilibrium within a large organization is a consequence of many explicit and implicit agreements among workers. When that equilibrium is disrupted, those agreements might be nullified. Time is required for new

ones to form. And, there is no assurance that the new agreements will be superior to the old. Thus, large organizations are not likely to risk the high cost of adjustment.

Like large enterprises, enterprises selling goods to the government might expect that the government will not let them fail. To identify the importance of the government as a customer, we asked enterprises to identify the degree of importance (very important, somewhat important, and not important) of different types of customers: industrial enterprises, wholesale trade enterprises, retail trade enterprises, individuals, and the government. Then, we assigned a numeric value to each level of importance (2=very important, 1=somewhat important, and 0=not important) and computed the importance of the government relative to all customers. This share, which we label GOVCUST, is a measure between zero and one of the extent to which sales to the government account for an enterprise's revenues. Formally, we test:

$$\begin{array}{ll} \text{Test 4.2} & H_0: \beta_{\text{GOVCUST}} \leq 0 \\ & H_1: \beta_{\text{GOVCUST}} > 0 \end{array}$$

The coefficient has the sign predicted by the alternative hypothesis, but the p-value is nine percent. Thus, we do not reject the null hypothesis.

Finally, state-owned enterprises might expect the government to provide subsidies in the event they face extinction. A later test (see test 5.1) examines the role of privatization on adjustment. By implication, the test suggests that state-ownership does not facilitate survival orientation. In contrast, it appears to increase the likelihood that enterprises will decide to adjust.

The previous three tests provide mixed evidence regarding the potential role of soft-budget constraints in the decision to adjust. While larger enterprises might be using the security of soft-budget constraints to avoid adjustment, state-owned enterprises might be using the security to experiment with adjustment. The difference in the experience of these types of firms might arise because the cost or complexity of adjustment increases with size, but not with public ownership. As a consequence, larger firms might not have adequate resources to finance the cost of adjustment.

Alternatively, state-owned firms might have better access to important inputs into production and distribution or to forms of subsidies that larger firms do not have. Recent evidence suggests that large enterprises continue to receive traditional types of subsidies,¹⁹ while only state-owned enterprises are systematically receiving long-term bank loans.²⁰ Long-term loans are critical to financing many types of adjustment.

¹⁹Alfandari, Fan, and Freinkman [1995].

²⁰Fan and Schaffer [1995].

The next test investigates the possibility that problems in market infrastructure are undermining the potential impact of competition. Specifically, it explores the potential role of an unlikely institution -- enterprise associations -- in creating a bridge for enterprises to surmount the information, financial, and other difficulties they face.

Many observers of Russian industry are concerned that associations of enterprises provide their members with a forum for the type of collusive behavior that underlies survival orientation. Many associations include as members suppliers, customers, and competitors within the same network of firms. By facilitating communication among these enterprises, they provide enterprises with the opportunity to cooperate, working collectively to undermine policies that might threaten the viability of their members.

An alternative view is that associations provide enterprises with an instrument to overcome problems in market structure and infrastructure. In the absence of well-developed systems of wholesale and retail trade, telecommunications, transportation, storage, finance, and law, enterprises must struggle to find efficient ways to identify and penetrate new markets.

To overcome these constraints, members of associations might come together to share ideas, information, and other scarce resources. By including banks as members, associations might enable enterprises to overcome credit constraints in as many as three ways. First, the banks might work on behalf of association members to capture credit provided by the government at low rates of interest. Second, banks might use the association to identify creditworthy customers. Finally, associations might provide a vehicle for cross-subsidization, so that cash-rich members finance the production and investment of cash-poor members.

Both of these views of associations -- as mechanisms for collusion or for collectively overcoming problems with market structure and infrastructure -- are compatible with our theory of survival orientation. But, confirmation of the alternative view would suggest that competition could potentially play an important role in fostering adjustment when market infrastructure becomes more developed. Thus, we choose to test the alternative view of associations, testing the conventional view by implication. Thus, we test the following proposition.

Proposition 5: Membership in enterprise associations decreases the likelihood of survival orientation.

We test this proposition using the dummy variable ASSOC, which identifies whether the enterprise is a member of an association. Formally, we test:

$$\begin{array}{ll} \text{Test 5.1} & H_0: \beta_{\text{ASSOC}} \geq 0 \\ & H_1: \beta_{\text{ASSOC}} < 0 \end{array}$$

The coefficient does have the sign predicted by the alternative hypothesis. The p-value is four percent. Thus, we reject the null hypothesis in favor of the alternative hypothesis.

Associations appear to have an important, significant, and positive impact on the decision to adjust, suggesting they are an instrument to overcome limitations imposed by market structure and problems in market infrastructure. Membership decreases the probability of survival orientation by 20 percent, increases the probability of internal adjustment by seven percent, and increases the probability of external adjustment by 13 percent.

The issue that permeates most discussions of enterprise behavior in transition is the role of private property rights on adjustment. Most economists expect that privatization fosters adjustment by providing owners with the incentive to maximize residual returns. This proposition is summarized below.

Proposition 6: Privatization decreases the likelihood of survival orientation.

One of the more subtle implications of our theory is that privatization is not a sufficient condition for adjustment. Privatization resolves only one type of uncertainty -- uncertainty over the ownership form of the enterprise. Other types of uncertainty continue to persist, including uncertainty over control of the enterprise post-privatization and uncertainty from the external environment. We expect these types of uncertainty to dominate in importance. Hence, we do not anticipate the effect of privatization on adjustment to be strong.

To test the proposition, we assign the dummy variable PZ a value of one when the enterprise is privatized. Formally, we test the following null hypothesis.

$$\begin{array}{ll} \text{Test 6.1} & H_0: \beta_{\text{PZ}} \geq 0 \\ & H_1: \beta_{\text{PZ}} < 0 \end{array}$$

The coefficient does not have the sign predicted by the alternative hypothesis. Thus, we do not reject the null hypothesis.

Despite the fact we concur with the outcome of this test, it is not clear to us that this test confirms our view. The evidence ($\beta_{\text{PZ}} > 0$, with p-value equal to four percent) suggests that privatization not only does not foster adjustment, it actually encourages survival orientation. At the margin, privatization increases the probability of survival orientation by 20 percent, decreases the probability of internal adjustment by seven

percent, and decreases the probability of external adjustment by 13 percent. The interesting question is, why does privatization lead to survival orientation?

One possibility is that an insufficient amount of time has elapsed since privatization for its positive effects to be felt. Privatization requires an investment of time and resources of senior managers into developing a strategy for privatization, leaving these managers with less time to invest in other activities, such as developing strategies for adjustment. Thus, privatized enterprises will initially lag behind state-owned enterprises in the adjustment process. In addition, the strategy for privatization strategy might include a temporary delay of some forms of adjustment, such as firing workers, that might jeopardize the control of managers over their enterprises. Hence, our results might measure the short-term costs, but not the long-term benefits of the new ownership regime.

Alternatively, our results might reflect the fact that state-owned enterprises have better access to important resources for production and distribution. A final possibility is that private ownership simply induces enterprises to be more risk averse than public ownership. This risk aversion might arise because directors of privatized enterprises are more likely to expect the government to let them fail than state-owned enterprises. If this is the case, then some aspects of the adjustment strategies adopted by state-owned enterprises might exceed the optimal level of risk.

Still another possibility is that privatized firms tend to be less viable than other firms. This problem could arise if the government is allowing less viable firms to be privatized before highly viable firms. In this case, our sample of privatized firms would include firms that are less able or less willing to adjust to markets than other firms. This possibility is important to consider, because it affects our interpretation of the importance of ownership over decision-making.

We attempt to control for differences in the underlying viability of firms by including in the regressions variables measuring important supply and demand shocks. These variables include POSH (a dummy variable equal to one if the introduction of markets is viewed as a positive shock),²¹ DNCUST (which measures the importance of

²¹Measuring the direction of the shock is difficult. To a certain extent, the perception of the direction of the shock depends on the success of an enterprise's strategies for coping with the shock. An enterprise whose strategic choices have been unsuccessful is more likely to claim that the shock was negative. To avoid this problem, we measure the shock based on the interest of trading enterprises in the products of the firm. We asked enterprises whether the number of wholesale and retail trade enterprises that are interested in their products increased, decreased, or remained the same. We assume that, in general, trade enterprises tend to enter industries in which the shock was positive. Thus, the variable POSH was assigned a

retail trade enterprises and individuals relative to all customers), SOVSUP (which measures the importance of the suppliers located in the non-Russian countries of the former Soviet Union), and LEASE (a dummy variable equal to one if the enterprise leased its assets from the government in 1992 or earlier)²². None of these variables are statistically significant.

One of the common assertions of many economists studying enterprise behavior is that managerial characteristics dominate other characteristics in explaining the decision to adjust. As part of our survey, we collected a small set of managerial attributes, two of which we include in the present regressions.

The first attribute is the number of years the director has been working in his or her current position. We might expect that managers with good relations with trading partners and other organizations that support trade, such as banks or government institutions, will tend to use those relations to support survival orientation. We assume that the longer a director's tenure in his or her current position, the greater his or her opportunity to develop the external relationships conducive to survival orientation. Thus, we test the following proposition.

Proposition 7: Long job tenure for directors increases the likelihood of survival orientation.

We test this proposition using the variable MANTEN, which is equal to the number of years the director has worked in this position. Formally, we test:

$$\begin{array}{ll} \text{Test 7.1} & H_0: \beta_{\text{MANTEN}} \leq 0 \\ & H_1: \beta_{\text{MANTEN}} > 0 \end{array}$$

The coefficient has the sign predicted by the alternative hypothesis. But, its p-value is 16 percent. Thus, we cannot reject the null hypothesis.

value of one when the number increased and zero otherwise.

²²Prior to the formal introduction of privatization in 1992, some enterprises were given the opportunity to retain their profits by leasing their assets. Many enterprises used this institution as a mechanism to raise the funds necessary to later purchase their assets. Although only a limited number of firms were given permission to pursue this option, firms self-selected to participate in this program, presumably based on their assessment of their own profitability. Thus, we expect that the set of firms that were leasehold to be more viable, and thus more prone to adjustment, than the general set of privatized enterprises.

The second attribute is the degree of labor management. Opponents of labor management argue that workers resist layoffs and other painful types of adjustment. Proponents of labor management argue that job security provides an environment in which workers feel sufficiently safe to experiment with organizational change.²³ We test the latter view, testing the former by implication. Thus, we test the following proposition.

Proposition 8: Labor management increases the likelihood of survival orientation.

To measure the degree of employee management in the firm, we asked the director to tell us the degree of influence (a lot of influence, a little influence, or no influence) of non-managerial workers in wages and other compensation decisions, level of employment of the enterprise, and hiring and firing of managers. We assigned a numeric value to each degree of influence (2=a lot of influence, 1=a little influence, 0=no influence) and calculated the total influence of non-managerial workers over these decisions. Then, we assigned a value of one to the variable EMP if the total amount of influence exceeds the sample mean plus one standard deviation.

Formally, we test:

$$\begin{array}{ll} \text{Test 8.1} & H_0: \beta_{EMP} \geq 0 \\ & H_1: \beta_{EMP} < 0 \end{array}$$

The coefficient does have the sign predicted by the alternative hypothesis. However, the p-value is 10 percent. Thus, we do not reject the null hypothesis. These two tests suggest that neither a director's tenure nor employee management play a significant role in explaining the decision to adjust.

5.0 Importance of Market Structure in Adjustment

The preliminary results presented in this paper suggest that market structure plays a potentially important role in enterprise adjustment. To evaluate its importance relative to other types of characteristics of the enterprise, we follow a methodology developed by Schmalensee (1985) and used by Korsun and Murrell (1994). This methodology uses the adjusted R^2 to set plausible bounds for the amount of variance explained by different groups of coefficients. We adapt this methodology to the present case using a procedure developed by McKelvey and Zavoina (1975). This procedure

²³For a good discussion of the potential role of labor management on adjustment, see Earle and Estrin (1994).

enables us to estimate the R^2 despite the fact that only ordinal measures of the dependent variable are observed.

To calculate these bounds for a particular set of characteristics, we estimated three models. The first model is the full model, which includes every characteristic in all the sets as regressors. We use the model to estimate the percent of total variance in strategic orientation explained by our full set of regressors, as measured by the adjusted R^2 . Next, we estimated the model, restricting the coefficients for the given set of regressors to zero. By subtracting the adjusted R^2 associated with this regression from the R^2 associated with the first regression, we compute one measure of the amount of total variation explained by these characteristics. Finally, we estimated the model, restricting the coefficients *not* in the given set to zero. Its adjusted R^2 provides a second measure of the amount of total variation explained by the included characteristics.

Results of this procedure are presented in Table 5. We find that characteristics related to market structure best explain the strategic orientation of enterprises. These regressors account for 67 to 74 percent of the variation in strategic orientation that is explained by the model. Other variables are much less important. Ownership characteristics account for 10 to 15 percent of the variation, industry characteristics for seven to nine percent of the variation, enterprise characteristics for five to 10 percent of the variation, and managerial characteristics for zero to one percent of the variation.

6.0 Policy Implications

The results in this paper suggest that both market structure and market infrastructure are central to the process of adjustment. Market structure influences the decision to adjust via two mechanisms. First, dependence on trading partners reduces the likelihood that an enterprise decides to adjust. This effect arises because dependence increases the risk of adjustment. Firms respond to this risk by avoiding actions that might threaten the stability of their trading network.

Second, competition with Western imports increases the likelihood that an enterprise decides to adjust. However, intense competition -- measured as competition from imports from both the West and from formerly socialist economies -- decreases the likelihood that an enterprise decides to adjust. The negative effect of intense competition on the decision to adjust might be the consequence of one of two institutional features of the Russian economy. First, the institutions of bankruptcy and liquidation are very underdeveloped. As a result, many firms that would fail in a developed market economy simply fail to adjust in Russia. If exit in a market economy is greater in industries in which competition is intense, then this result suggests that the

government facilitate the reorganization of enterprise assets by making bankruptcy and liquidation more efficient.

Alternatively, the negative effect of intense competition on the decision to adjust might be the consequence of the low level of development of market infrastructure in Russia. Market infrastructure provides the information, legal foundation, finance, and physical infrastructure necessary for trade. Problems in market infrastructure explain why many Russian firms are unable to identify and forge relationships with alternative trading partners, despite empirical evidence that potential alternatives do exist.²⁴ If problems in market infrastructure are preventing enterprises from undertaking appropriate adjustment, then these results suggest that the development of the systems of wholesale and retail trade, telecommunications, transport, storage, finance, and law is essential to further restructuring. The primary role of the government is to ensure that no policy barriers block the proper development of these institutions. A more active role for government depends on the degree to which the private sector is willing to invest in the development of these institutions. In addition, the government should consider maintaining a positive attitude toward enterprise associations, while monitoring them for cartel-like and other forms of anti-competitive behavior. Most likely, associations now combine both pro-adjustment and anti-competitive behaviors. At this stage of the transition, it might be true that the positive effect dominates, but this situation might change as the transition progresses.

Our results do not suggest, in general, that advances toward the imposition of hard-budget constraints and free trade should be reversed. For the most part, competition has stimulated the decision to adjust. To the extent that competition has been intense, its cost has already been borne by enterprises; it cannot be reversed by an easing of conditions. In fact, such a reversal of policy would punish firms that have successfully adjusted and undermine the credibility of government policy in the future. But, our results do suggest that the speed of future advances in reform be aligned with the capacity of the economy to support needed restructuring.

In addition, our results do not suggest that progress in privatization should be reversed. To the contrary, we suggest that an insufficient amount of time has elapsed for the benefits of privatization to be observed. However, our results might suggest that state-owned enterprises have better access to important resources for production and distribution than privatized enterprises. To the extent that these barriers are created by government policies or practices, the government can stimulate adjustment simply by changing policy and practice to remove these barriers.

We close by remarking that, although a significant amount of restructuring is needed in the Russian economy, we do not know the quantity and mix that is optimal

²⁴See Brown, Ickes, and Ryterman [1994].

for efficiency. Adjustment is like investment²⁵ – too much can reduce both short-term and long-term viability. However, we argue that there are two important economic externalities to the adjustment decision by the firm. First, not adjusting is most likely to succeed as a strategy when many firms do not adjust. It is difficult to design an institution (such as bankruptcy and liquidation) that punishes a firm for not adjusting when implementation of that punishment produces a social cost (such as unemployment). But, when many firms adjust, isolating and punishing firms that do not adjust becomes a credible policy. The firm does not take this externality into account. As a consequence, firms are not likely to adjust to an adequate degree. However, when at least some firms are receiving subsidies, this inference is no longer valid. For this reason, some of the restructuring we observe might not be efficient.

Second, our results confirm that the decision of one firm to adjust affects the adjustment decision of its trading partners. This externality implies that the government can influence many firms by influencing key firms in each trading network to adjust. We do not recommend targeting specific enterprises with special programs because of the difficulty in identifying which enterprises, in fact, are key. A better method might be to provide general incentives for investment, for example, by allowing more liberal tax deductions for capital investment by firms and banks.

²⁵As opposed to profits, of which more is better.

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Table 1. Percentage Distribution of Small, Medium and Large Enterprises in Russia (1992) and in Sample

Industry Group	Russia				Sample			
	Percent of Enterprises, Small	Medium	Large	Industry as % of total	Percent of Enterprises Small	Medium	Large	Industry as % of total
Electric Services	29	16	55	1	50	0	50	1
Metal Working	20	16	64	2	40	20	40	7
Chemicals	23	18	59	2	40	20	40	7
Ind M&E	26	25	50	20	24	10	67	30
Instruments	17	23	60	1	50	0	50	3
Transport Equip	13	17	70	0.3	14	14	72	5
Electronics	11	26	63	1	50	5	45	14
Lumber	50	26	24	15	0	100	0	1
Building Materials	40	36	24	8	0	20	80	4
Food	71	20	10	21	20	30	50	7
Light Industry	40	20	40	4	52	10	38	15
Printing	91	6	3	6	0	0	0	0
Rubber	51	25	23	17	17	17	67	4
Total	49	23	28	100	33	14	53	100

* Small - up to 200 employees
Medium - 201-500 employees
Large - 501 employees and over

Source: Goskomstat, 1992

Table 2. Classification of Strategies and Their Importance to Survival

Strategies	Number of Enterprises that Identified Strategy as:			Total*
	Very Important	Somewhat Important	Not Important	
Survival-Oriented Strategies (SOS)				
Delaying payments to suppliers	46	36	17	99
Delaying payments on loans to banks	39	17	43	99
Delaying payment of taxes to government	33	33	33	99
Not increasing production	40	26	33	99
Changing the level of inventories	22	36	41	99
Decreasing investment	14	5	79	98
Selling assets	6	11	82	99
Internal Adjustment Strategies (IAS)				
Reorganization	23	34	42	99
Discontinuing unmarketable products	42	24	33	99
Changing product quality	51	25	23	99
Increasing investment	5	9	84	98
Hiring workers	10	27	62	99
Firing workers	17	37	45	99
Changing number of workers' hours	18	33	48	99
External Adjustment Strategies (EAS)				
Finding new suppliers	47	29	23	99
Finding new customers	76	18	5	99
Developing new products	51	34	14	99
Creating links with foreign firms	28	25	46	99

*Total number used in regression explaining determinants of strategic orientation.

Table 3. Determinants of Strategic Orientation

Characteristics	Variable Name	Type	Description
Managerial Characteristics:			
Director's tenure	MANTEN	Continuous	Number of years director has been in current position
Degree of employee management	EMP	Dummy	EMP=1 if influence of workers in hiring, firing, and compensation decisions is greater than the mean response + one standard deviation
Enterprise Characteristics:			
Size	SIZE	Continuous	Number of workers in the firm
Age	NEW	Dummy	NEW=1 if enterprise was created in 1987 or later
Industry Characteristics:			
Degree downstream	DNCUST	Continuous	Importance of retail enterprises and individuals relative to all customers
Importance of government as a customer	GOVCUST	Continuous	Importance of government relative to all customers
Shock of introducing market system	POSH	Dummy	POSH=1 if the number of wholesale and retail enterprises interested in enterprise's products increased since January 1992
Market Characteristics:			
Monopoly power	MON	Dummy	MON=1 if enterprise has no direct competitors
Dedicated in production	DEDPROD	Dummy	DED=1 if 50 percent or more of revenues are from sales to one customer
Availability of alternative suppliers	DEDSUP	Dummy	DEDSUP=1 if there are no alternative suppliers for most critical input
Competes with imports from the west	WSTCOM	Dummy	WSTCOM=1 if enterprise must compete with imports from west
Competes with imports from former socialist economies outside the FSU	EECOM	Dummy	EECOM=1 if enterprise must compete with imports from former socialist economies (outside the FSU)
Competes with imports from the West and from former socialist economies outside the FSU	INT	Dummy	INT=1 if EECOM=1 and WSTCOM=1
Member of enterprise association	ASSOC	Dummy	ASSOC=1 if enterprise is a member of association
Importance of suppliers located outside of Russia, but in FSU	SOVSUP	Continuous	Importance of non-Russian FSU relative to importance of all countries for supplies
Ownership Characteristics:			
Privatized	PZ	Dummy	PZ=1 if the enterprise is privatized
Leasehold 1992 or before	LEASE	Dummy	LEASE=1 if the enterprise was leasehold in 1992 or earlier

Table 4. Regression Results on Determinants of Strategic Orientation

Marginal Effect of Regressor on the Probability an Enterprise Primarily Uses :				
Regressor	SOS	IAS	EAS	P-value*
MANTEN	0.010	-0.004	-0.007	0.31
EMP	-0.168	0.046	0.121	0.19
SIZE	0.00004	-0.00002	-0.00003	0.08
NEW	-0.159	0.044	0.115	0.29
DNCUST	0.036	-0.014	-0.022	0.17
GOVCUST	0.040	-0.016	-0.025	0.18
POSH	-0.101	0.036	0.065	0.35
MON	0.122	-0.054	-0.069	0.42
DEDPROD	0.435	-0.241	-0.193	0.006
DEDSUP	0.418	-0.191	-0.227	0.0003
WSTCOM	-0.512	0.066	0.446	0.006
EECOM	-0.128	0.046	0.082	0.37
INT	0.597	-0.331	-0.266	0.008
ASSOC	-0.200	0.069	0.131	0.08
SOVSUP	-0.019	0.007	0.012	0.57
PZ	0.196	-0.066	-0.130	0.08
LEASE	0.106	-0.046	-0.059	0.49
	SOS	IAS	EAS	Model
Predicted Probability	0.46	0.38	0.16	
Actual Frequencies	0.46	0.30	0.25	
R ²				0.495
Adjusted R ²				0.392

* The p-values are based on the chi-square statistics for the individual parameter values

Table 5. Estimates of the Explanatory Power of Managerial, Enterprise, Industry, Market, and Ownership Characteristics

Measure of Explanatory Power for Sets of Independent Variables	Management		Enterprise		Industry		Market		Ownership		All variables max=min
	min	max	min	max	min	max	min	max	min	max	
Percent of <i>total variance</i> in strategic orientation explained by set	0.0	0.5	2.0	3.8	2.6	3.7	26.4	28.8	3.8	6.0	39.2
Percent of <i>explained variance</i> in strategic orientation explained by set	0.0	1.3	5.1	9.7	6.6	9.4	67.3	73.5	9.7	15.3	100.0

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Industrial Enterprises in the Markets. New Marketing Relations, Status and Perspectives of Competition (*)

1. Introduction

Establishment of competitive environment is one of the intermediate objectives of liberal reforms undertaken in the countries with transitional economy. The final objective is to increase the efficiency of the economy. However the experience of many countries shows that it is impossible under present conditions to achieve noticeable and stable increase of the economic efficiency without development of competition.

At the same time it is obvious that development of competition is a complex integrated process. The rates of competitive environment formation are predetermined by a broad range of factors, revealing themselves at both micro- and macroeconomy levels. Nevertheless presence or absence of a competitive environment becomes obvious only at the market, in concrete forms of relations between the sellers and the purchasers, in inclination or disinclination of enterprises to meet the needs of customers.

In this respect it is very typical that the research interest in market behaviour of enterprises in the USSR and later on in Russia has been stipulated by the in "producers diktate" as enterprises achieved more and more independence and the sphere of strict administrative regulation narrowed. Partial re-engineering of economic mechanisms resulted in the increase of disbalance within the framework of the old economic system, which revealed itself most obviously in the sphere of economic relations [1,6,25 etc]. Attempts to introduce a so-called "wholesale trade" only aggravated those trends. During this experiment carried out in 1987-1988 a significant part of products nomenclature (about 8000 positions) previously distributed by the State Committee of the USSR for Supply and its bodies was transferred to direct economic relations. Suppliers and purchasers were empowered to find their contracting parties, but the prices for

these products remained fixed. As a result many "client" enterprises faced mass refusal of their former suppliers to conclude new contracts, requirements of scarce resources counter deliveries, performing payments in hard currency, etc.

It was mentioned in the majority of researches performed at that time [12,17,19 etc] that the two main reasons for monopoly behaviour of enterprises were described as a high degree of concentration and monopolisation in the industry and administrative restrictions of the market in form of rigid hierarchical system of national economy management, the system of fund supplies with attaching purchasers to certain suppliers, fixed prices for the majority of products.

(*) The present report was prepared on the basis of researches accomplished by the author in the Higher School of Economics within the framework of integrated scientific project "Monitoring of Situation and Behaviour of Enterprises" financed by the Ministry of Economy of Russia.

The first thesis proved to be wrong (at least in the part of evaluation of the level of concentration). Calculations accomplished by the author on the basis of groups of industrial enterprises in 23 aggregated industries in the USSR in 1975-87 [22] proved that the level of concentration in the USSR industry was significantly lower than in Germany. In the trends of concentration indices (CR, IHH and other) prevailed lowering since the middle of the 1970s. An even more thorough analysis performed by the specialists of the World Bank [3] proved that degree of concentration in the Soviet industry was also significantly lower than in the USA.

Further developments showed that the second thesis explained the reasons for monopoly effects only partially as well. During the radical market reforms initiated in 1992 by Gaidar government, prices and foreign trade were liberalised, the system of centralised resource distribution was abolished (including abolishment of corresponding ministries) privatisation processes were started. However, up to now, all these developments have not resulted in formation of a competitive environment. Many researches still offer the reasons for monopoly or non-market behaviour of enterprises [4,7,13,18 etc].

It may be partially stipulated by specific market structures [5,22] . In particular, high degree of specialisation and simultaneous absence of opportunity

to change the profile of equipment were typical in highly technological branches of the Soviet and Russian industry. In branches oriented to local and regional markets historically formed attachment of territories to certain manufacturers may be observed. It is overlapped by the trend to restricting economic relations to certain regions stipulated by dramatic increase of transportation tariffs during the last few years. As a result enterprises may behave as monopolists at the local markets even deconcentrated branches.

At the same time, many researches performed in 1992-93 mention undeveloped market infrastructure as one of the main reasons for existence of monopoly effects at the Russian market [3,15,24]. Absence or undevelopment of informational, legal, financial and material trade support institutions creates additional restrictions at the entrance of the markets, makes inter-branch movement of capital difficult. Under such circumstances even appearance of competition may gain negative results, as enterprises suffering competition pressure may consider re-structurisation too expensive [9].

We do not undertake to solve all the listed problems in the present report. Our objective is to provide empirical description of certain important aspects of market behaviour of enterprises and provide general description of competition in the industry with a degree of precision which can be provided by a rather broad survey of the heads of enterprises, carried out via questionnaires sent by mail.

2. Research Methodology

The behaviour of industrial enterprises in the markets has been accomplished on the basis of conjuncture surveys performed by the Centre for the Economic Analysis (the CEA) under the Government of the Russian Federation. The CEA has been performing conjuncture surveys in which participated the heads of enterprises for several years already using the "non-quantitative" methodology worked out by the ifo-Institute for Economic Researches (Munich, Germany). According to this methodology the respondents are asked to evaluate the actual and the expected change of several indices of their enterprises' activities in "more-less" "better-worse" terms. The results obtained from such surveys are interpreted

on the basis of balance evaluations. These evaluations are understood as the difference between the share of respondents marking improvement (increase) of an analysed index and the share of respondents stating that the same index has got worse (decreased) at their enterprises. Besides the CEA questionnaire originally includes several "qualitative" questions, asking the respondents to evaluate the economic situation of the enterprise or single out the factors restricting the manufacture growth and investment activities at the time of the study. In order to provide the feedback, the respondents receive a new questionnaire with the attached brief summary of the results of the previous survey.

The methodology of conjuncture studies and the experience of performing them are described in [14] at greater length. Some results of the CEA surveys are described in [10,11].

Obviously the given type of studies is used mainly for revealing the trends in the industrial conjuncture and has a number of objective restrictions. In particular, the standard questionnaire must contain very few questions, the questions themselves must be simple enough, otherwise the return of questionnaires may reduce significantly. Besides the subjective character of answers shall be taken into account. Accordingly, it will be reasonable and correct to interpret the contents of the questionnaires only if the number of the respondents is large enough (it is especially important when the sample is divided into groups according to certain criteria).

Nevertheless, from the point of view of enterprises' behaviour analysis, the given type of studies have the advantage of broad scope of respondents and regularity of surveys. As a result the heads of enterprises "get used" to answering questions from standard questionnaires and become prepared to answer some additional, special questions. The latter may have qualitative form and deal with some concrete fields of the enterprises' activities. All this enables to amplify (and partially check) the official statistics data, the quality of which has been receiving numerous claims in Russia recently.

Directly for the purposes of the present research 5 combined questions about the share of different channels of distribution and their dynamics,

competitiveness of the main products of enterprises, prevailing directions of development of the economic activities of enterprises, as well as factors restricting sales of manufactured products (the precise wording of special questions asked is provided in the appendix 1) have been added to the standard questionnaire of the survey performed by the CEA and concerning the results of the IIIrd quarter of 1995.

Later we accomplished preliminary analysis of the results obtained on the basis of different linear and cross distributions. Due to delays in transmitting the initial information the results obtained are analysed in the present report only by branch, as well as using the distribution according to the number of employees. Regional differences and the impact of the legal status of enterprises on their market behaviour will be analysed later.

3. Characteristics of sample

The sample of quarterly surveys carried out by the CEA during the last three years seems to be the most representative among all currently existing in Russia samples of enterprises on the basis of which regular conjuncture surveys are performed. According to the data provided, 1843 industrial enterprises participated in the CEA survey dedicated to the results of the IIIrd quarter of 1995. Their distributions by branch and according to the number of employees are shown in the appendix 2 (table 1).

Relative accent of the given sample on processing industry may be singled out as one of its characteristics. In particular almost 96% of all enterprises considered belong to 6 branches, among which only one, namely chemical and petrochemical, may partially be referred to primary goods branches. Branches like fuel industry, ferrous and non-ferrous metallurgy, are represented only by 37 enterprises.

Comparison with the data of the Goskomstat [8], shows that on the whole the CEA sample corresponds to the average industrial proportion between small, middle-size and large enterprises.

A rather broad scope of regions is also typical for the CEA surveys. In particular, in the IIIrd quarter of 1995 enterprises from 39 kraia, oblasts and republics within the Russian Federation took part in the survey and the share of Moscow and Moscow oblast is only 2.38% of all enterprises. Nevertheless the majority of respondents is located in the European part of the Russian Federation. Siberia and the Far East are represented only by 201 enterprise or by 11% of the sample.

Thus the results of the further analysis will refer to the marketing relations and market behaviour of processing enterprises situated mostly in the European part of Russia.

4. Description of the results obtained

Before describing the results it should be stressed that the present research was performed on commission of the Ministry of Economy of Russia. Its main objective was to receive the opinion of the heads of enterprises about certain economic processes and phenomena, especially in the fields where objective statistics data is missing or unobtainable. This objective pre-determined significantly the character and the wording of the questions asked, which had been co-ordinated with the representatives of the Department for Economic Reform and the Department for Commodity Markets Analysis of the Ministry of Economy.

Due to the above mentioned peculiarities we deliberately confined ourselves to purely empirical analysis at the present stage of the research and only tried to describe the trends observed. It concerned directly the role of the wholesale brokers in organisation of industrial products sales, evaluation of the products' competitiveness and influence of competition upon sales, directions of development of the investigated enterprises, as well as evaluation of significance of factors restricting the sales of products.

4.1. Role of wholesale brokers in organisation of industrial products sales

The researches performed in the beginning of the 1990-s [2,15] proved dramatic loss of importance of the wholesale level and reduction of the volumes of industrial products sold under brokerage of specialised supply and sales organisations. The mentioned negative trend was stipulated by a number of objective reasons.

First of all should be mentioned a historically formed artificial monopoly of former state-owned supply and sales organisations [23]. Liberalisation of prices, which significantly eased the problem of shortages, as well as the increase of the trade extra charge to 25% from the previous 7-9% in 1992 resulted in abrupt reduction of demand on services of wholesale bases and decrease of their cargo turnover.

At the same time a group of small and middle-sized clients, who could not give up the services of wholesale bases due to certain technological reasons (primarily, non-transit volumes of deliveries) appeared in 1992 already. Such clients provided only 40-50% of the previous cargo turnover, but their demand was not elastic to the tariffs for the "opttorg" (wholesale trade organisations) services as no one could provide at that time a similarly broad range of products for manufacture and technological purposes and guarantee stable uninterrupted deliveries. The existing inelastic demand based on the absence of the real competition enabled the "opttorgs" to retain the trade extra charges at the maximum level.

Another factor of no smaller importance is the shift of accents from supply to the sale of products. The maximum importance acquired the problem of finding a solvent buyer and the quickest sale of products. But the system of wholesale enterprises of the former State Committee for Supplies was designed especially for supply - wholesale bases purchased a broad range of products of industrial and technical purposes and sold it to their clients, situated in the region. In turn suppliers wanted to have a broker capable of buying much larger volumes of their products and sell them in more than one region or even in the whole territory of the Russian Federation.

The resulting situation compelled enterprises to look for contacts with private broker structures which would undertake selling their products or establish

supply and sale subsidiaries. The data obtained during the CEA study (tables 2 and 3) show that the first variant was put into practice.

The structure of the wholesale market has noticeably changed during the recent years. In particular the share of former state-owned wholesale brokerage organisations has reduced significantly and continues reducing, in the end of 1995 their share in the total sales of products was only 6.4%. Simultaneously the share of new brokerage structures has increased significantly and is still increasing (it equalled 11.6% in the end of 1995). The share of supply and sale subsidiaries remains insignificant and stable, namely 2.2%.

At the same time the data obtained enable to state that the ratio of products deliveries through direct contacts and through wholesale organisations has relatively stabilised on the level 80/20. The latter value is higher than the official data of the State Committee for Statistics of the Russian Federation, according to which about 9% of industrial products have been sold through wholesale brokerage organisations in the beginning of 1995 [16]. This fact can be explained by the fact that, according to the estimates of the CEA respondents, more than a half of the total turnover of the brokerage organisations is provided by private commercial firms, which data is traditionally badly taken into account by the official statistics.

The shares of products sold through different channels change rather unexpectedly as the enterprises become larger. In particular, the share of direct deliveries of small and middle-size enterprises is more than 80%, but their share is less at large and very large enterprises, it is 76% and 64% respectively. Besides, the share of the former state-owned brokerage organisations remains almost unchanged, and volumes of sales through private commercial structures and supply and sales subsidiaries increase dramatically.

If considered by branch, the smallest share of wholesale level is observed in construction materials manufacture and timber processing, it is the largest in chemical and petrochemical branches, as well as in light industry. Supply and sales subsidiaries are of more importance in machine construction and in chemical industry. The proportion between former State Committee for Supply structures

and private brokerage structures are relatively similar in all branches, almost everywhere the market share of the former is 1.5 - 2 times less than of the latter.

As it has already been mentioned earlier, one of the factors pre-determining a very low share of the wholesale level in the sales of industrial products are very high prices of brokerage organisations' services. It might be of interest that this factor is more important for the smallest (less than 200 employees) and the largest (more than 5000 employees) enterprises. At the same time on the whole the influence of this factor upon sales is evaluated on the average as moderate which enables us to state that the main reason for preserving an excessive share of direct contact deliveries is not the level of prices for the brokerage organisations services, but the quality and the range of the services provided.

4.2. Competitiveness of the products and competition influence upon sales

Analysis of answers to the specialised question about competitiveness of the main products of respective enterprises and evaluation of influence of competition upon sales of products (see tables 4 and 5) enables to draw the following conclusions:

1. In all branches considered, represented by a sufficient amount of respondents competitiveness of the main products of the enterprises is the highest at the domestic market, a bit less at the CIS market and significantly less at the international market according to the evaluations of the directors. It should be mentioned that 2/3 of the respondents has not applied themselves to evaluation of competitiveness of their products except in Russia.

2. It should be stressed that all competitiveness evaluations are significantly higher at large enterprises with no exceptions. The larger is the enterprise, the higher its managers evaluate competitiveness of its products.

3. On the average the evaluations of the influence of competition upon sales vary between "moderate" and "low" which indicates a very insignificant role of competition at the current Russian market. And the competitiveness of products is evaluated as average at the Russian market and as rather low at the international market. The strongest influence upon sales is provided by

competition on the part of the Russian manufacturers, it is followed by competition on the part of foreign manufacturers, and the last position is occupied by competition on the part of the CIS manufacturers and manufacturers from the former USSR republics. The only exception is light industry where the competition with the imported commodities is the most significant.

4. The larger are the enterprises the evaluation of influence of competition on the part of the Russian manufacturers reduce, and of competition on the part of foreign manufacturers, quite on the contrary, increase. Competition with the CIS commodities turns out to be more important for small enterprises (51-200 employees).

5. When considered by branch the highest evaluation of the products competitiveness is typical for chemical industry and machine construction. These branches belong to the middle of the list if the branches are rated according to the evaluation of competition influence upon sales. Construction materials manufacture and timber processing are outsiders in both cases, on the average the competitiveness is rather low here and competition is hardly noticeable. The only exception is rather high evaluation of influence of competition on the part of the Russian manufacturers of construction materials. In our opinion, all this can be explained by significant regional differentiation of sales markets in these branches.

The situation in the light and food-stuffs industries, facing strong competition, is a bit different. Managers of light industry enterprises evaluate competitiveness of their products as rather high, which probably reflects higher adaptation to the new economic conditions. On the contrary, the highest evaluation of competition is combined in the food-stuffs industry with the lowest evaluation of competitiveness. This branch obviously preserves itself only due to the presence of significant barriers restricting access to the regional markets.

4.3. Directions of development of the enterprises considered

The proposed variants of answers were based on different strategies of market behaviour of enterprises, from the most conservative extending of the range of traditional products to a radical change of the previous specialisation and

development of other types of production and non-production activities. The results of the analysis of the answers received are as follows (see table 6):

1. Despite extremely unfavourable conditions of economic activities absolute majority of enterprises try to preserve their traditional specialisation, extending the range of products manufactured, looking for new sales markets, as well as manufacturing new types of products within the framework of the existing specialisation. The share of enterprises developing or intending to develop non-typical manufacture facilities or new types of activities does not exceed on the average a 1/5.

2. The efforts taken by management of enterprises and aimed at development of the manufacture facilities vary noticeably in different branches. In particular, judging by the answers received, more attention is paid to improvement of manufacture facilities in machine construction, chemical and petrochemical industry, and light industry. It should be mentioned that the heads of chemical and petrochemical enterprises associate development of their facilities with manufacture of new types of products and establishing new sales markets. Machine construction enterprises concentrate on issue of new types of products. Among the total amount of answers, provided by the heads of enterprises of these two industries, there is a large share of answers "change of specialisation, development of new types of production activities" and "development of new types of non-production activities". In three other branches, namely light industry, food stuffs industry, wood industry, timber processing, and pulp and paper industry, extending of the range of products manufactured is considered as the main direction of manufacture development. And finally, in construction materials manufacture (where the fewest number of managers answered the questions from this section of the questionnaire) the stress is laid upon development of new sales markets.

3. The interest of the CEA respondents towards the issues of development of their enterprises is proportionate to the size of their enterprises. In particular, twice as much heads of large and very large enterprises (more than 1000 and 5000 employees respectively) responded to this section of the questionnaire as the directors of small enterprises with less than 200 employees. Besides large

enterprises pay more attention to manufacture of new types of products and more often announce development of new types of production and non-production activities. On the contrary, small enterprises mostly concentrate upon extending the scope of products, and middle-sized enterprises (with 200 to 1000 employees) pay more attention to establishing new markets for the products manufactured already.

On the face of it, these data prove that market strategy of small and middle-sized enterprises is relatively conservative, which does not agree with the traditional image of small and middle-sized businesses that are usually considered to start all innovations. This contradiction is explained, in our opinion, by generally unfavourable conditions of development of small and middle-sized enterprises. Such enterprises have not enough resources for development especially in comparison with industrial giants. It compels them to concentrate upon current survival, counting on short-term arrangements which do not require significant investments.

Thus, as it has been already mentioned earlier, in the section dedicated to competition and competitiveness, the existing economic conditions result in reproduction of the former disproportion between large, middle-sized and small Russian industrial enterprises.

4.4. Sales restricting factors

Before we actually summarise the results of this block of questions, we shall take into consideration several specific restrictions inherent to questionnaire-based surveys in large selections. The issue considered below, namely sales restricting factors, is deliberately multi-dimensional. Different experts could suggest different combinations of such factors. The best way under these circumstances would be to obtain respective evaluations from respondents themselves asking them an "open" question, containing no prompts. However practice shows that in such conditions the amount of answers received reduces significantly (it is difficult for many respondents to give an answer), on the other hand, data processing becomes more complicated.

That is why within the CEA study the heads of enterprises have been offered only the choice of 10 factors which could be evaluated according to a 4-point scale (see question 5 in appendix 1). Analytic possibilities of revealing the level of significance and rating of separate factors, as well as of comparing by branch and by size of enterprises change. Results of such analysis are shown in tables 5 and 7. Interpreting the data obtained the following conclusions can be drawn:

1. The first four positions are consequently occupied by customers' insolvency, high transportation tariffs, high manufacture expenses and termination of old economic contacts. Average evaluation of influence of the first and the second factors vary around "high", for the third and the fourth factors the evaluation vary between "high" and "moderate". State regulation of prices, tariffs, sales terms, as well as competition on the part of manufacturers from the CIS and the former USSR republics are mentioned as the least important in the list provided (impact is evaluated as "low").

2. Branch differences are expressed by slightly different rating of factors. For example, customers' insolvency and high transportation tariffs exchange positions in evaluations made by the heads of wood industry, timber processing, and pulp and paper industry, as well as of construction materials manufacture. The rating and the absolute value of influence of competition on the part of foreign manufacturers have turned out to be extremely variable: from the 10th position (construction materials manufacture, 0.40 points) to the 5th position (light industry, 2.31 points). The influence of state regulation of prices, tariffs and terms of sale turns out to be more significant for food stuffs industry than for other industries: 1.44 points against 0.74 - 0.96 points.

3. Results of analysis of evaluations provided by enterprises of different sizes are more obvious. In particular, as the enterprises get larger negative impact of customers' insolvency receives higher evaluation, although this is one of the most important factors in any case. The absolute negative impact of high transportation tariffs upon large enterprises becomes relatively stronger, and for small enterprises this factor occupies the first position. It can also be observed that competition on the part of Russian manufacturers becomes a less significant factor

for large enterprises with simultaneous (but less noticeable) increase of influence of competition on the part of foreign manufacturers. High level of prices for brokerage organisations services is mentioned as sales restricting factor by either the smallest or the largest enterprises. Finally, it should be mentioned that the evaluation of all factors provided by small enterprises is rather homogeneous and less dispersed.

5. Conclusion

After performing the analysis of data obtained during the CEA study we may draw the following general conclusions in respect of market behaviour of enterprises and the state of competition environment of Russian industry:

1. The share of direct economic contacts is still very large, they account for about 4/5 of the total volume of industrial output. In general it agrees with the thesis of undeveloped trade infrastructure and means that there are high additional expenses incurred by enterprises by exercising market interaction.

Nevertheless the share of products sold through wholesale and brokerage companies (about a 1/5) is higher according to the estimates of the directors of enterprises than according to the official statistics data. One of the possible reasons for existence of such a discrepancy may be traditionally poor accounting of turnover of private trade and brokerage companies by the state statistics.

We may mention high degree of activity of private trade companies at the wholesale market of domestic products among positive trends in this sphere. It should be mentioned that private companies have always prevailed at the wholesale market of imported goods). During the last two years the share of private companies has been expanding their participation in the market in all branches. According to the directors' estimates, currently their turnover is twice as large as the turnover of the former state-owned supply and sales structures. Previous researches enable us to assume that the reasons for it are acuteness of sales problems and incapability of the former "gossnab" structures for performance of these functions.

2. No essentially new results have been provided by analysis of evaluation of impact produced by various sales restricting factors. Almost all respondents mark extremely negative role of non-payments and high transportation tariffs. The latter factor results in the situation when more and more sales and purchases are performed within restricted regions (which is mentioned in many researches [7,15 etc]) and the existing market structure becomes dormant.

The impact of high prices for wholesale and brokerage organisations services upon sales is evaluated as moderate. In conjunction with the above mentioned large share of direct economic relations it enables us to assume that services of trade brokers and wholesale bases are not used rather due to their poor quality and not to high prices. At the same time it is marked that termination of old economic relations still produces serious impact upon sales. It also confirms the thesis of trade infrastructure weakness.

Direct administrative influence upon the enterprises' activities in form of establishing prices, tariffs, terms of sale does not seriously affect sales at present time. It is noticeable at least to some extent only in the food stuffs industry, but it has the lowest rating even within this industry.

3. Competition

Although evaluations of competition established by other surveys [20,21] tends to increase, its general impact upon sales is considered as "moderate" or "low". The main rivals of the enterprises are Russian manufacturers of similar products. The only exception is the light industry in which competition on the part of imported goods is more significant. If we compare it with evaluations of competition impact upon sales, it could be observed, that it never occupies a position beyond the fifth. This is also an indirect confirmation of a relatively insignificant role of competition at the current Russian market.

4. We can make some forecasts of competition development on the basis of evaluations of competitiveness and answers provided by the respondents in respect of directions of development of their enterprises. In both cases there is

almost no difference between the branches. On the contrary, significantly more information is provided by distribution according to the size of enterprises.

The data obtained prove that competitiveness evaluations (especially at external markets) and marketing activities increase as the enterprises get larger. In particular, the heads of large and very large enterprises (more than 1000 and 5000 employees respectively) were twice as active in answering the question about the directions of their enterprises' development, as the directors of small enterprises with less than 200 employees. It should also be mentioned that large enterprises pay more attention to manufacture of new types of products and they mention development of new types of production and non-production activities more often. On the contrary, small enterprises mostly concentrate upon the range of products, and middle-sized enterprises (from 200 to 1000 employees) concentrate upon establishment of new markets for the products they manufacture already.

The data provided prove that market strategies of small and middle-sized enterprises are rather conservative and inert, which does not comply with the traditional image of small and middle-sized businesses that are usually considered to generate all innovations. In our opinion, this contradiction can be explained by preserving generally unfavourable conditions for development of small and middle-sized enterprises.

Thus, a preliminary analysis of the results obtained proves on the whole the presence of certain positive changes in the market behaviour of enterprises. At the same time the conditions of a competitive environment development are still rather unfavourable and it can be assumed that development of competition processes will be slow enough without taking proper state regulation arrangements (primarily in the part of incentives for development of market infrastructure and institutional changes).

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Appendix 1

1. Competeability evaluation of an enterprise main type of production.

	High	Average	Low	Production is not competitive
On the home market				
On the CIS member-states and near abroad market .				
On the foreign market.				

2. Enterprise's production development direction in the current year.

	Yes	No	No, but is planned	No answer
Assortment expansion in own traditional products				
Mastering of new markets for own traditional product				
Production of new products within the existing specialization				
Change of specialization, development of new types of productive activity				
Development of new types of non- productivity activity				

3.Enterprise's main type of product's share, realized in the current year.						
	not more than5%	6-15%	16-30%	31-50%	51-70%	more than 70%
Through direct ties with consumers						
Through the former state wholesale-mediatory firms						
Through new, including private, mediatory firms						
Through filial purchasing-selling enterprises						

4. Change of an enterprise's main type of product's share, realized in previous and current year.

	Increased	No substantial changes	Decreased
Through direct ties with consumers			
Through former state wholesale-mediatory firms			
Through new, including private, mediatory firms			
Through filial purchasing-selling enterprises			

5. Factors, limiting sale of an enterprise's main product.

	Degree of impact on sale				
	Very high	High	Average	Low	Absent completely
Insolvency of consumers					
Competition on the side of: -russian producers -producers of the CIS member-states and near abroad -producers of the far abroad					
High cost of production					
High level of prices on wholesale-mediatory firm services					
High transportation tariffs					
Lack of information on prices and demand					
Breach of old economic ties					
State regulation of prices, tariffs, term of sale					

Appendix 2

Table 1

Some characteristics of investigated enterprises' data

Agregated branch of industry / measure groups (by number of employees)	Number of enterprises- respondents	Branch share (measure group) in CEA's sample (% %)	Branch (measure group) share in the number of enterprises in the all industry(Data of Goscomstat)(%%)
Total:	1843	100,00	100,00
fuel	10	0,54	2,0
non-ferrous metallurgy	16	0,87	1,0
ferrous metallurgy	11	0,60	1,4
chemical and petro-chemical	46	2,50	2,7
machine-building and metal-processing	547	29,68	25,5
forest and wood-processing	212	11,50	12,5
construction materials	208	11,29	10,1
light	269	14,59	13,0
food	485	26,32	23,7
cereal,flour-milling and combbi-fodder	30	1,63	1,9
polygraphic	9	0,48	2,1
other	—	—	4,1
not more than 50 people	154	8,36	7,6
51-200 people	586	31,80	43,3
201-1000 people	747	40,53	36,3
1001-5000 people	294	15,95	10,6
more than 5000 people	62	3,36	2,2

This and the following tables are done on the data base, received while investigation of CEA in the 3rd quarter of 1995.

Evaluation of realization share in different sale's channels

Table 2

Branches/ measure groups	Through direct ties with consumers	Through former state wholesale-mediatory firms (percentage of the production volume)	Through private mediatory firms	Through filial purchasing-selling firms
total	79,8	6,4	11,6	2,2
chemical & petro-chemical	70,5	9,5	16,2	3,8
machine-building & machine-processing	79,8	7,2	10,5	2,5
forest and wood-processing	83,0	5,8	10,7	0,5
construction materials	89,9	4,4	5,0	0,7
light	76,7	7,7	14,5	1,1
food	77,9	8,5	13,1	0,5
not more than 50 people	80,0	8,1	9,5	2,4
51-200 people	81,0	7,2	10,0	1,8
201-1000 people	82,2	7,2	10,0	0,6
1001-5000 people	76,0	6,2	15,3	2,5
more than 5000 people	63,9	8,8	19,6	7,7

Table 3

Balance evaluations of industrial production realization share in different sale's channels in 1994-1995

Branches/ measure groups	Through direct ties with consumers	Through former state whole- salemediatory firms (percentage of the production volume)	Through private mediatory firms	Through filial purchasing-selling firmsorganizations
total	1	-11	9	0
chemical & petro-chemical	0	-15	9	-2
machine-building & machine- processing	1	-13	12	0
forest and wood-processing	5	-13	7	0
construction materials	0	-4	4	1
light	-1	-17	9	-1
food	2	-10	11	0
not more than 50 people	-3	-7	5	-3
51-200 people	-3	-9	8	-2
201-1000 people	4	-11	8	1
1001-5000 people	5	-18	15	2
more than 5000 people	-7	-13	22	6

Table 4

Competitive evaluation of the main product.

Branches/ measure groups	Number of envestigated enterprises	Integral evaluation of competability*		
		on the home market	on the CIS-states and near abroad market	on the foreign market
total	1843	2,01	1,92	1,33
chemical & petro-chemical	46	2,23	2,03	1,64
machine-building & machine- processing	547	2,11	2,08	1,35
forest and wood-processing	212	1,90	1,80	1,50
construction materials	208	2,08	1,85	0,63
light	269	1,99	1,86	1,35
food	485	1,93	1,67	1,25
not more than 50 people	154	1,81	1,47	0,75
51-200 people	586	1,88	1,61	1,00
201-1000 people	747	2,03	1,92	1,14
1001-5000 people	294	2,26	2,18	1,49
more than 5000 people	62	2,44	1,26	1,69

(*) Integral evaluations were received by way of new calculation of data using the 3-mark scale. The variants of "high competability " were given mark 3, "average"-2, "low"-1, "non-competable product"-0

Table 5

Evaluation of competition impact on the main product sale.

Branches/ measure groups	Integral evaluation of competition impact on sale on the side of:		
	russian producers	producers of the CIS member-states and near abroad	producers of the far abroad
total	1,89	1,32	1,58
chemical & petro-chemical	2,02	1,09	1,58
machine-building & machine-processing	1,69	1,20	1,36
forest and wood-processing	1,67	0,93	1,02
construction materials	2,02	0,64	0,40
light	2,02	1,64	2,31
food	2,24	1,94	2,03
not more than 50 people	2,07	0,50	1,52
51-200 people	2,00	1,54	1,59
201-1000 people	1,92	1,33	1,51
1001-5000 people	1,79	1,29	1,73
more than 5000 people	1,80	1,29	1,62

(*) Integral evaluations were received by way of new calculation of entering data using a 4-mark scale. The variants were evaluated as follows: "very high impact"-4;"high"-3;"average"-2;"low"-1;"complete absence of impact"-0.

Table 6

Evaluation of prevailing productive development directions of an enterprise in 1995.

Branches/ measure groups	Variants of answers (*)									
	1		2		3		4		5	
	a)	b)	a)	b)	a)	b)	a)	b)	a)	b)
	percentage of the gross number					of the respondents				
total	46	12	43	11	45	11	13	8	13	6
chemical & petro-chemical	41	9	54	9	52	4	22	9	11	2
machine-building & machine-processing	50	11	49	11	58	11	19	8	16	8
forest and wood-processing	38	11	31	15	31	12	7	7	9	5
construction materials	32	12	40	7	33	12	9	7	10	6
light	54	9	49	9	49	10	12	9	13	7
food	49	18	39	14	43	13	10	9	12	6
not more than 50 people	35	21	26	14	32	14	8	10	14	10
51-200 people	38	15	33	14	34	13	9	8	10	7
201-1000 people	50	10	47	10	49	11	14	9	13	5
1001-5000 people	55	10	53	10	57	10	18	7	18	6
more than 5000 people	70	5	68	7	79	2	32	3	15	7

(*) 1- Assortment enlargement of own traditional product;

2-Mastering of new markets for own traditional product;

3-Issue of new product within the former industrial specialization;

4-Change of specialization,development of new production types;

5- Development of non-productive activity.

Variant a) means that this direction is already being implemented on the enterprise at the moment of i

b) - at present-no, but is planned for the next year.

Table 7

Evaluation of the impact of some factors, limiting an enterprise's main product's sale.

Branches/ measure groups	Factors (*) and integral evaluations ,their impact on production sale (**)						
	1	2	3	4	5	6	7
total	2,97	2,65	2,00	2,94	1,59	2,45	0,95
chemical & petro-chemical	3,17	2,67	1,67	3,01	1,33	2,47	0,96
machine-building & machine-processing	3,18	2,69	2,02	2,84	1,61	2,52	0,83
forest and wood-processing	2,60	2,85	1,74	3,18	1,48	2,29	0,96
construction materials	2,91	2,54	1,83	3,28	1,68	2,39	0,84
light	2,97	2,71	2,15	2,82	1,49	2,49	0,74
food	2,85	2,63	2,13	2,73	1,59	2,28	1,44
not more than 50 people	2,74	2,54	2,29	2,77	1,75	1,93	1,20
51-200 people	2,78	2,69	2,08	2,91	1,51	2,42	0,97
201-1000 people	2,98	2,66	1,95	2,93	1,60	2,47	1,00
1001-5000 people	3,18	2,66	1,83	3,03	1,54	2,57	0,87
more than 5000 people	3,30	2,71	2,27	3,02	1,54	2,43	1,04

(*) 1- Insolvency of consumers;
 2- high production cost;
 3- high price level on wholesale-mediatory firms services;
 4- high transportation tariffs;
 5- lack of information on prices and demand;
 6- breach of old economic ties;
 7- state regulation of prices,tariffs,terms of sale.

(**)- see notes to table 5

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The Institutional Framework for Enterprise Social Asset Divestiture in Russia

Theory and Practice

Enterprise Restructuring and Social Asset Divestiture

- Privatization -- creation of owners who are motivated to use assets efficiently
- Some 5 percent of assets in the enterprise sector *not* subject to privatization
- Divestiture -- the assignment of property rights over assets not subject to privatization by the enterprise
- Unclear divestiture -- confuses the incentives facing the new and potential owners

Divestiture of Social Assets: Theory

- Divestiture will relieve enterprises of financial and managerial burdens
- Divestiture mandated by law to take place within 6 months after corporatization
- 1.5 % of GDP -- Rb 12 trillion -- allocated to finance divestiture in 1994
- About 1% of GDP in foregone tax revenue to finance assets yet to be divested from enterprises

Divestiture of Social Assets: Practice

- By 1994, only 30 percent of enterprise housing stock had been divested -- meanwhile, 2/3 of large and 80% of small enterprises had been privatized

Why has divestiture lagged?

- Enterprise managers *prefer* to continue supply social benefits?
- But enterprise situations vary, not all enterprises can afford to do so, nor do they need to do so to retain or reward their labor force

Why has divestiture lagged?

- Cities cannot *afford* to accept divested housing?
- The net cost of divestiture is not as high as might be thought -- data at the macro level suggest that city expenditures across the country would be increased by 3-4 %
- City fiscal situations vary far more than rates of divestiture -- wealthy cities not accepting social assets much faster than poor ones

Divestiture has lagged because

- Enterprise managers find significant institutional obstacles to divestiture
- In recent years, the financial benefits to divestiture have been moderated in the context of the tax regime
- All things being equal, cities prefer not to accept divested social assets, and they can control the negotiated outcomes

How cities influence the outcome of divestiture

- Cities are the legal authorities which record the act of divestiture -- as a final measure, city officials can refuse to record the balance transfer
- City departments determine "acceptable" levels of capital repair
- Cities determine levels of credit and exemption allowed for direct enterprise expenditures on social assets

The Game: City v. Enterprise

- Enterprise's highest payoff might be divestiture
- But city has ways to refuse divestiture, and moreover can threaten to lower the tax credit and exemption thresholds for the enterprise, which leaves the enterprise *worse off* than when it started the game
- Unless the enterprise is determined or desperate, likely to opt for the medium payoff of the highest allowed tax credit/exemption

Federal transfers for divestiture

- Federal budget allocation for transfers in 1994 (Rb 12 trillion) *exceeded* the hypothetical cost of full and immediate divestiture (Rb 10 trillion)
- Federal government does not have a way of determining potential cost of divestiture to a city, or whether divestiture actually takes place
- Perverse incentives not to raise cost recovery in housing sector, while holding divestiture to minimal levels

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The Dynamics of The Russian Industrial Enterprises'
Financial Situation (1992-1994)¹

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Abstract

This paper reports on an attempt to understand tendencies of Russian enterprises' financial situation on the base of an in-depth analysis of aggregated financial data for the 1992-1994. We have studied the enterprises of three Russian industries: textile industry (22 companies), chemicals (4 companies) and machinery (10 companies). An important part of the study was the gathering of the complete financial accounting and sociological data for these companies. This made it possible to evaluate their performance during three years, using various statistical and applied financial methods and models and comparing financial and sociological data to receive more complex picture. At the first step we analyzed the whole group of enterprises belong to the same industry to create a common picture. Then we studied each enterprises' financial situation combining financial data

¹ Sponsored by Ford Foundation, USA.

with the results of sociological questionnaires. It was discovered that there is a profound divergence in business policies between enterprises in terms of planning horizon, risk aversion, subjective interest rates, etc. This in-depth analysis gives reason to believe that some managers of Russian enterprises are now adapting to the new economic conditions in the country. But the financial situation of large share of enterprises is now so bad that it is difficult to expect rapid and large-scaled transition of newly privatized firms from the stage of stagnation to the stage of economic growth.

Introduction

Current models of Russian management can be understood only at the basis of a comprehensive study of individual companies. Only this can make it possible to get the picture of industry as a whole. That is why, for a few years, the Expert Institute of Russian Union of Industrialists and Entrepreneurs has been conducting such research. The last stage of this work, devoted to three industries (textile industry, chemicals and machinery), enabled us to deepen our understanding of the situation and to create clearer and more correct models of managers' behavior and changes of the financial situation in these leading sectors of Russian industry.

The results of our study show that many Russian managers have begun to adapt to the sometimes extremely difficult new business environment. This process, however, is making slow progress now and is marked by a distinct trend towards a differentiation of enterprises with increasing polarization at two opposite ends: on one hand, companies that make good headway, notwithstanding all the difficulties; and, on the other hand, companies that have reached the brink of bankruptcy.

Overview of the previous publications

During the last years different problems of Russian enterprises' transformation were studied by numerous researchers.

For example G.Alfandari, Q. Fan and L.Freinkman in their report "Governmental Financial Transfers to Industrial Enterprises and Restructuring" for the Joint Conference of the World Bank and The Ministry of Economy of The Russian Federation "Russia: Economic Policy and Enterprise Restructuring" (June 12-13, 1995, St.-Petersburg, Russia) have argued that Russian industry as a whole still faced rather soft budget constraint. However the scale of transfers from the state budget is decreasing and now for most of surveyed firms don't exceed six percent of their output. Naturally government transfers of such a size are not able to provide recipients with the necessary funds for a genuine restructuring.

The role in financing of enterprises restructuring which earlier belonged exclusively to state budget or state banks (what was in fact one and the same) has not transfer till now to the new Russian commercial banks. So Q.Fan and N.Lee in their report "Bank-Enterprise Relations and Credit Allocation in Russia" for the Joint Conference of the World Bank and The Ministry of Economy of The Russian Federation "Russia: Economic Policy and Enterprise Restructuring" (June 12-13, 1995, St.-Petersburg, Russia) have argued that now in Russia most of the bank loans are short-term. It is not surprising due to high inflation and low financial discipline of enterprises: about one-quarter of firms' total liabilities to banks is overdue. In this situation even banks could not play the role of market controller. From the enterprise managers' point of view , banks as creditors in general do not have much influence on major enterprise decisions and do not usually hold shares in enterprises.

Such a situation of course do not promote the increasing of investment activities of banks and other financial intermediaries. As L.Halligan and P.Teplukhin note in their report "Investment Disincentives in Russia" for the Joint Conference of the World Bank and The Ministry of Economy of The Russian Federation "Russia: Economic Policy and Enterprise Restructuring" (June 12-13, 1995, St.-Petersburg, Russia) the rate of domestic investment is very low. Moreover, state investment still accounts for a high share of domestic investment decreasing the real impact of privatization and revitalizing the ties between newly privatized firms and the State.

However without private investments in real assets and marketing activities Russian enterprises can't overcome their difficulties and restore competitiveness. As M.Boycko and A.Shleifer point out in their paper "What's Next? Strategies for Enterprise Restructuring in Russia" even those enterprises that do want to restructure often lack the capital to move aggressively.

Taking these opinion into account let us examine the dynamics of enterprises' financial positions more thoroughly.

The Liquidity of Property Dynamics

Such as one of the main signs of Russian economic situation now are arrears it seems logical to start analysis of enterprises' financial situation from assessment of changes in their liquidity position.

For this purpose it is most suitable to compare three ratios: current ratio, cash ratio and acid-test ratio.

Current ratio is a most general indicator of solvency and it shows the sufficiency of firm's working capital for covering it's short-term liabilities. We could argue about the rational upper limit for this ratio in

the nowadays Russian situation but no doubts that it must be higher than 1.0.

As we can see at the fig. 1 the chemicals and even textile industry which faced the largest decreasing in production had during 1992-1994 suitable levels of current ratio although during the 1994 the level of this indicator decreased a little (from 1.59 to 1.50 for surveyed enterprises of textile industry and from 1.50 to 1.45 for enterprises in chemicals). The most dangerous situation has formed till the beginning of 1995 in machinery: for surveyed group of enterprises the level of this indicator substantially decreased during 1994 - from 1,34 to 1.07. So the whole group of enterprises of machine-building, being in survey have began 1995 not far from the level of full insolvency.

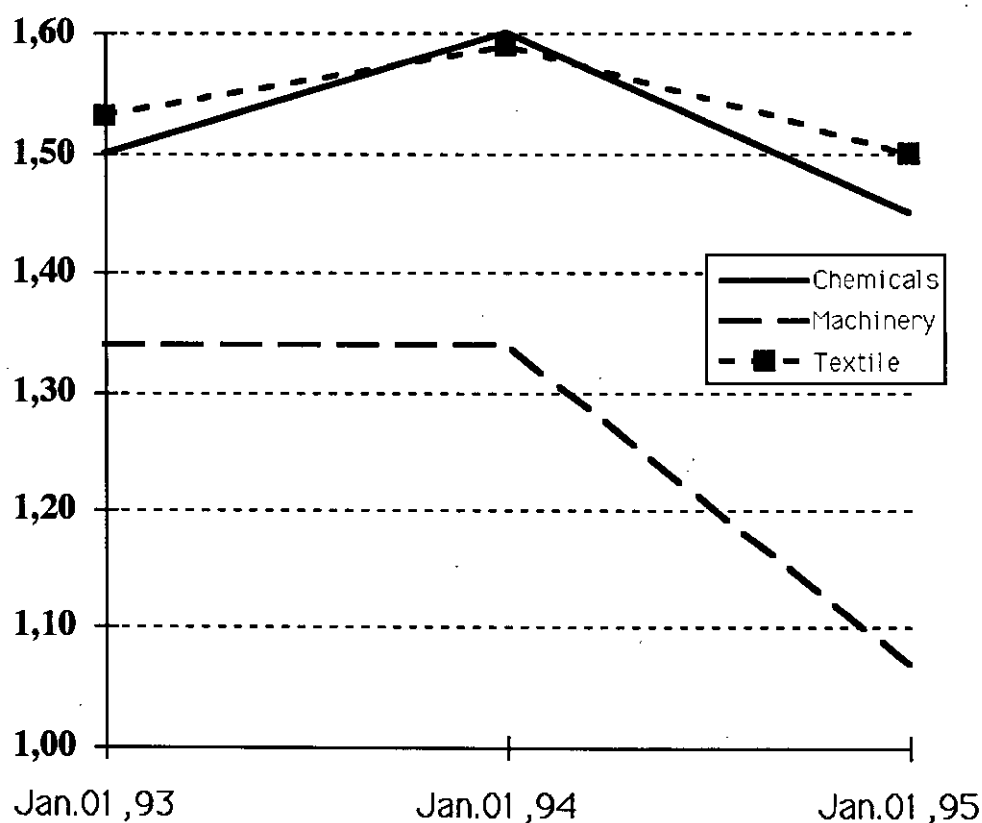


Fig. 1. The dynamics of current ratio in 1992-1994 for enterprises of machinery, chemicals and textile industry.

It will be easier to understand the meaning of this information if we compare it with the data concerning other ratios: cash ratio which is calculated as a sum of cash and short-term securities divided by short-term liabilities and acid-test ratio which is calculated as a sum of cash, short-term securities and receivables from customers divided by short-term liabilities.

As we can see from the table 1, during 1992-1994 chemicals' enterprises (as well as textile enterprises in 1994) increased a little their cash ratio although their levels were still lower than minimal standard (about 0.2). At the same time enterprises of machinery which had in 1992 the highest level of this ratio have faced with it's substantial decreasing and finished the 1994 in the situation which could be described as "no cash, no securities".

TABLE 1
DYNAMICS OF CASH AND ACID-TEST RATIOS

Industries	Ratios	1.01.93	1.01.94	1.01.95
Chemicals	Cash ratio	0.05	0.08	0.10
	Acid-test ratio	0.60	0.43	0.53
Machinery	Cash ratio	0.13	0.07	0.02
	Acid-test ratio	0.54	0.64	0.62
Textile	Cash ratio	0.11	0.05	0.09
	Acid-test ratio	0.73	0.61	0.54

As far as at the same time acid-test ratio for enterprises of machinery was almost stable we can resume that there was a process of current assets restructuring: enterprises of machinery have lost assets with high degree of liquidity and instead of it have got larger sums of receivables.

It is worth mentioning that in the textile industry we can see quite opposite situation: increasing cash ratio and decreasing acid-test ratio. It could be considered as a sign of the more advanced stage of textile enterprises managers' adaptation for a difficult situation of present Russia's economic crisis (see "Russian Industry: A Portrait in the Interior of Crisis". Moscow: Expert Institute. 1995).

In attempts to evaluate the dynamics of Russian enterprises' financial stability we have examined the property coefficient (fig.2) which shows the share of equity in the whole sum of firm's assets.

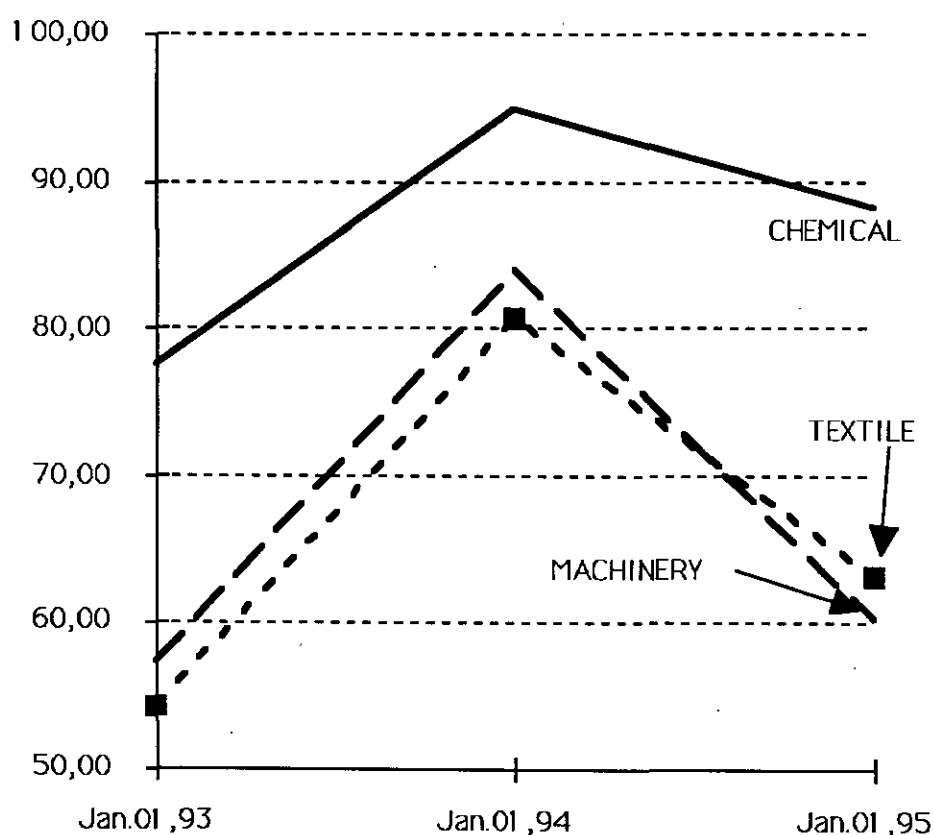


FIG.2. Property coefficients' (%) dynamics for Russian chemicals, machinery and textile industry in 1992-1994

While the financial management theory recommends that this coefficient be maintained stable and at the level no less than 0.6 (so an enterprise should not be too much dependent on borrowed recourses) we can see that for all groups of surveyed enterprises this indicator of financial stability was completely unstable. Moreover both textile

industry and machinery till the beginning of 1995 have nearly reached the lowest suitable level of this indicator.

Some important conclusions we can make analyzing the levels of net working capital (calculated as a difference between all working capital and short-term liabilities) and their dynamics. This indicator shows the share of net working capital (NWC) in all assets. So it indicates the share of working capital which could be used by enterprises more free and which forms the base for their more stable financial policy.

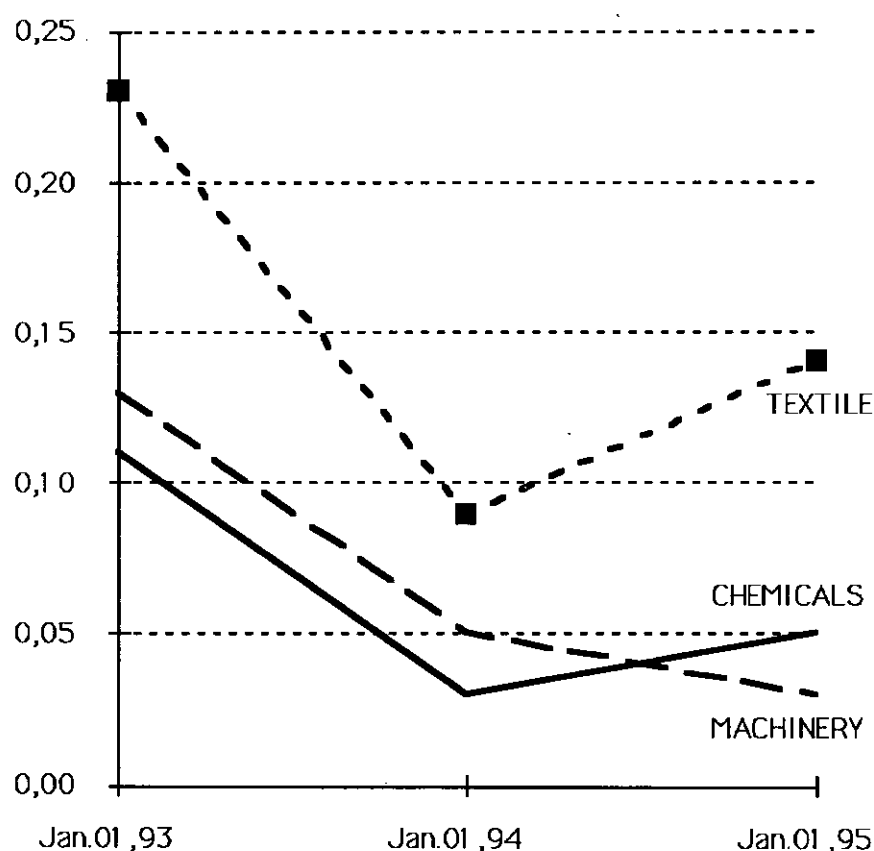


FIG. 3. The dynamics of levels of net working capital (%) in chemicals, machinery and textile industry in 1992-1994

As it is shown at the Fig. 3 the substantial decreasing of this indicator in 1993 was typical for the enterprises of all three industries, especially for the textile industry. In 1994 both textile industry and chemicals slightly improved their situation, as soon as enterprises of machinery now in fact don't have the working capital of their own.

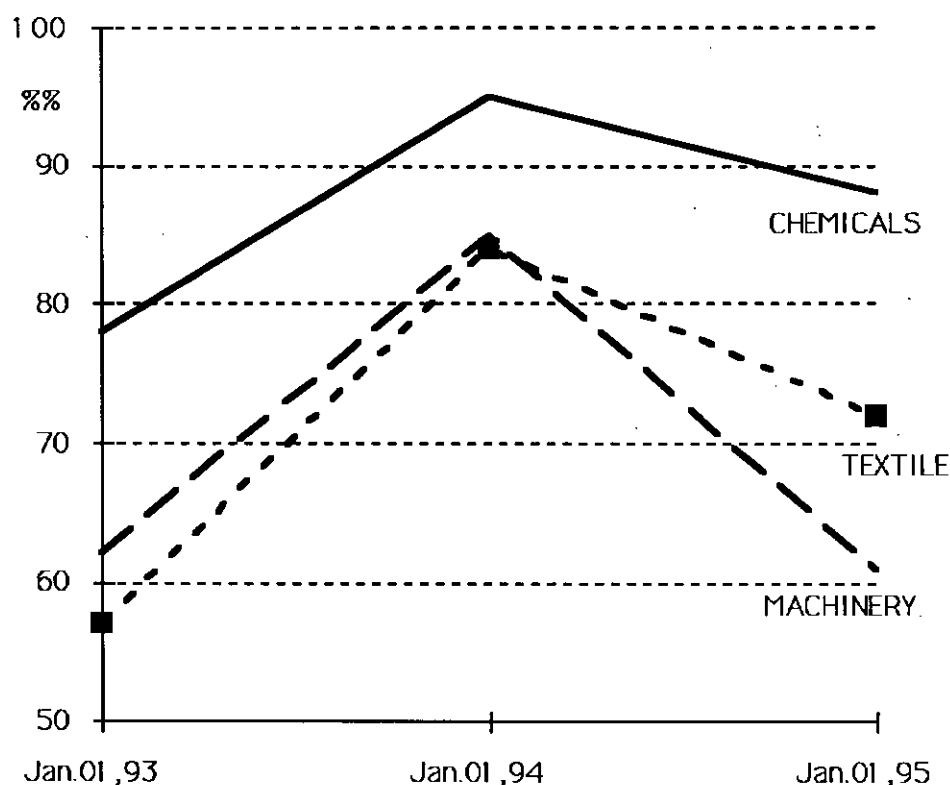


FIG. 4. The dynamics of long-term assets' level (%) in chemicals, machinery and textile industry in 1992-1994

Not too optimistic conclusion we can also make while analysis of long-term assets levels. This ratio shows financial reliability of enterprise in the long term as it determines the share of entire long-term capital (equity + long-term liabilities) in the enterprise's assets.

As it is shown in fig. 4 for all three industries year 1994 was connected with the decline of this share. And again the lowest position belongs to machinery - long-term assets form here only about 60% of all assets. It means that enterprises of machinery are now in a very unstable position and depend to a great extend on a current capital fluctuations.

The general picture for surveyed enterprises' financial stability dynamics we could receive using an Altman's coefficient which shows

the "likelihood of bankruptcy"³ . This complex indicator takes into account both the structure of assets and the dynamics of sales.

Of course the absolute levels of this coefficient can say us not too much about the likelihood of real bankruptcy for the surveyed Russian enterprises - Altman's criterial scale was developed for quite another economic conditions. However the comparative analysis for different industries as well as the studying of this coefficient in dynamics gives us some useful information (fig. 5).

³ The computation of the "likelihood of bankruptcy" (Z) , according to Altman's method, is as follows:

$$Z = (\text{Current Assets/Total Assets}) \times 1.2 + (\text{Retaining Earnings/Total Assets}) \times 1.4 + (\text{Shareholders' Equity/Total Liabilities}) \times 0.6 + (\text{Gross Sales/Total Assets}) \times 3.3 + (\text{Net Operating Profit/Total Assets}) \times 0.99$$

The likelihood of bankruptcy: $Z < 1.80$ - very high $2.71 < Z < 2.99$ - perhaps
 $1.81 < Z < 2.70$ - high $3.00 < Z$ - very low

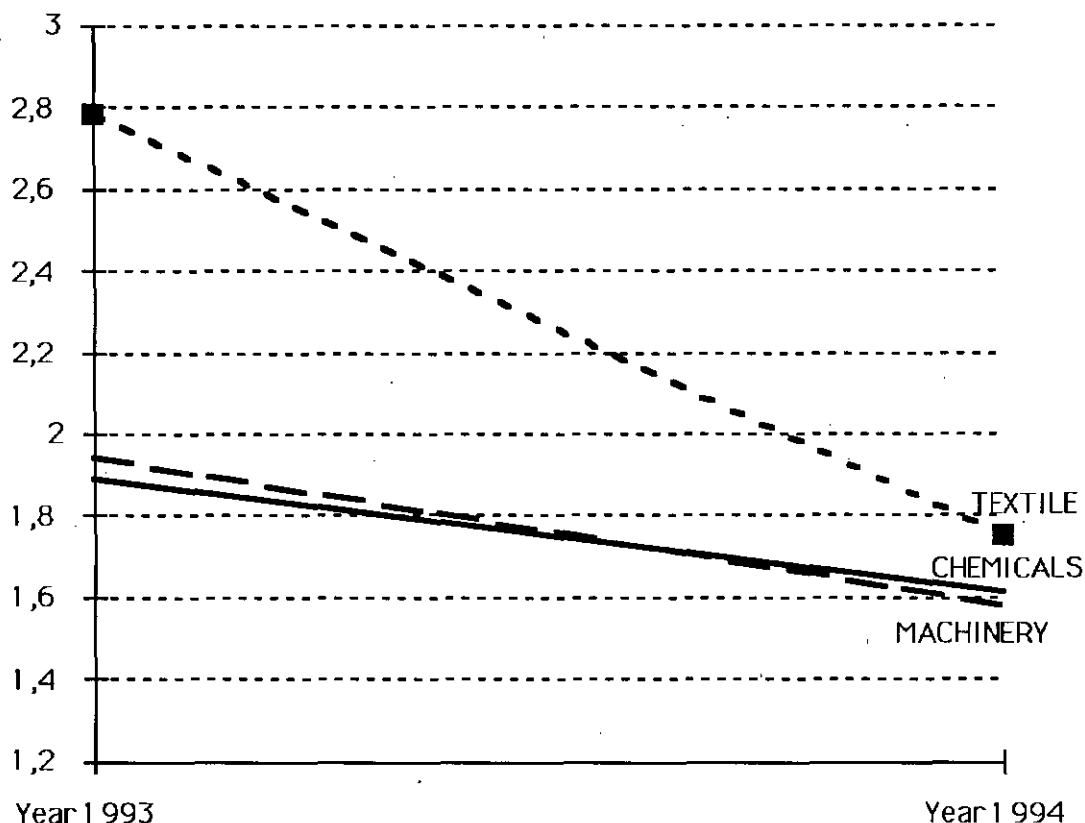


FIG.5. The dynamics of bankruptcy possibility (Altman's coefficient).

As one can see the levels of Altman's coefficient of all groups of enterprises substantially decreased in 1994 indicating the increasing risk of bankruptcy. It is worth mentioning that in spite of the fact that in some aspects enterprises of textile industry look a little bit more adapted for the new economic situation, Altman's coefficient shows that they are also in a very dangerous zone.

We suppose that it is connected first of all with rapid decreasing of sales in textile industry, because the most considerable part of Altman's coefficient is the ratio of sales to total assets. During 1994 textile industry lost 44.5% of output and now produce only less than a 1/4 in comparison with 1990.

This hypothesis is verified by analysis of sales to total assets ratios. The fig. 6 shows that the textile industry enterprises have faced with greatest - 3.5-fold decreasing in total assets turnover.

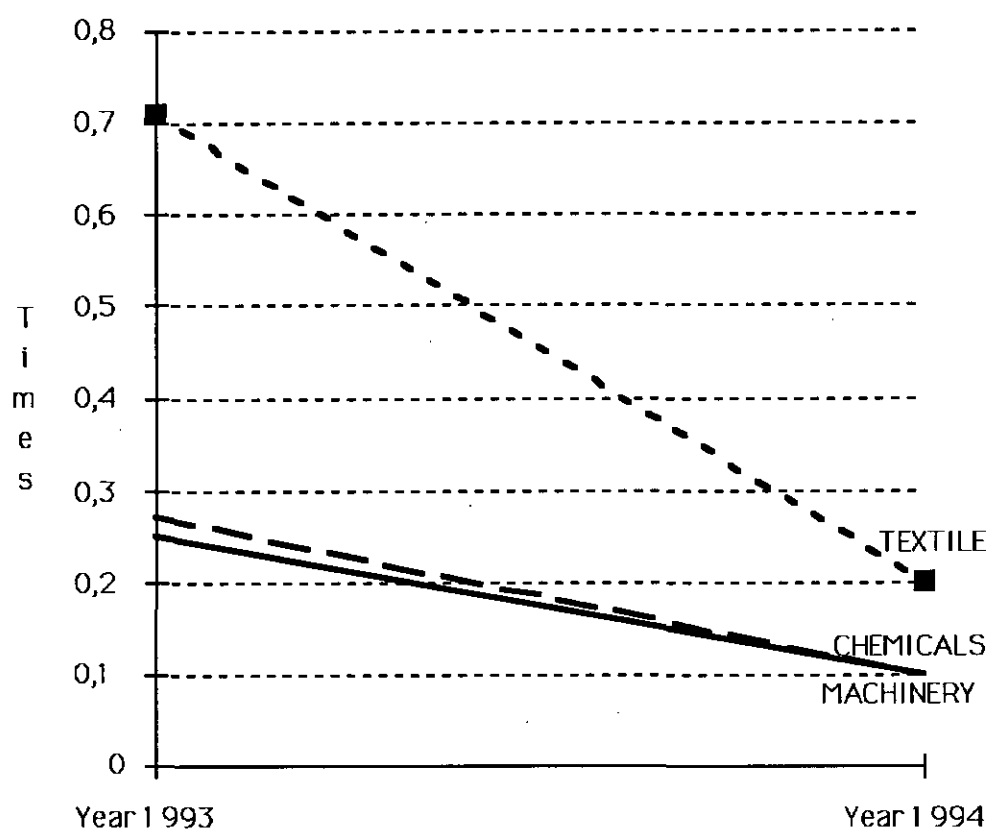


Fig. 6. The dynamics of total assets turnover (times) in chemicals, machinery and textile industry in 1993-1994

Even more dramatic was the decreasing in capital assets turnover: during 1994 it declined in textile industry 14.38 times comparing with 2.70 times decline in machinery and 2.50 times decline in chemicals.

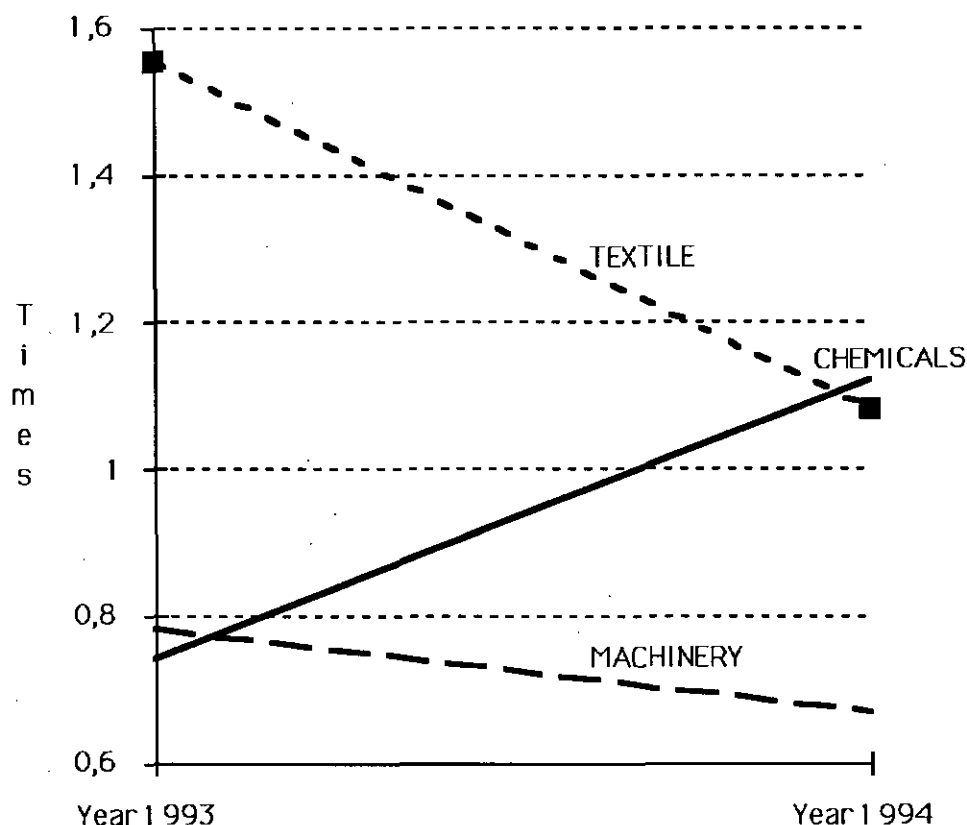


FIG. 7. The dynamics of inventory turnover (times) in chemicals, machinery and textile industry in 1993-1994

However more complex picture give us an analysis of inventory turnover for surveyed enterprises of these three industries. At the fig. 7 it is shown that in chemicals 1994 have brought substantial increasing of inventory turnover. It means that these enterprises have obtained better performance in sales but the result was reached on a very low level of capital assets utilization.

Naturally such tendencies finally lead to profitability changes.

As the fig. 8 shows enterprises of all three surveyed industries during 1994 have faced the decline of the most general profitability index - the profitability of all assets in the gross profit. Till the beginning of 1995 average profitability of all enterprises did not exceed 5%. Especially rapid fall down was typical for the surveyed enterprises of textile industry (from 20.03% to 4.20%).

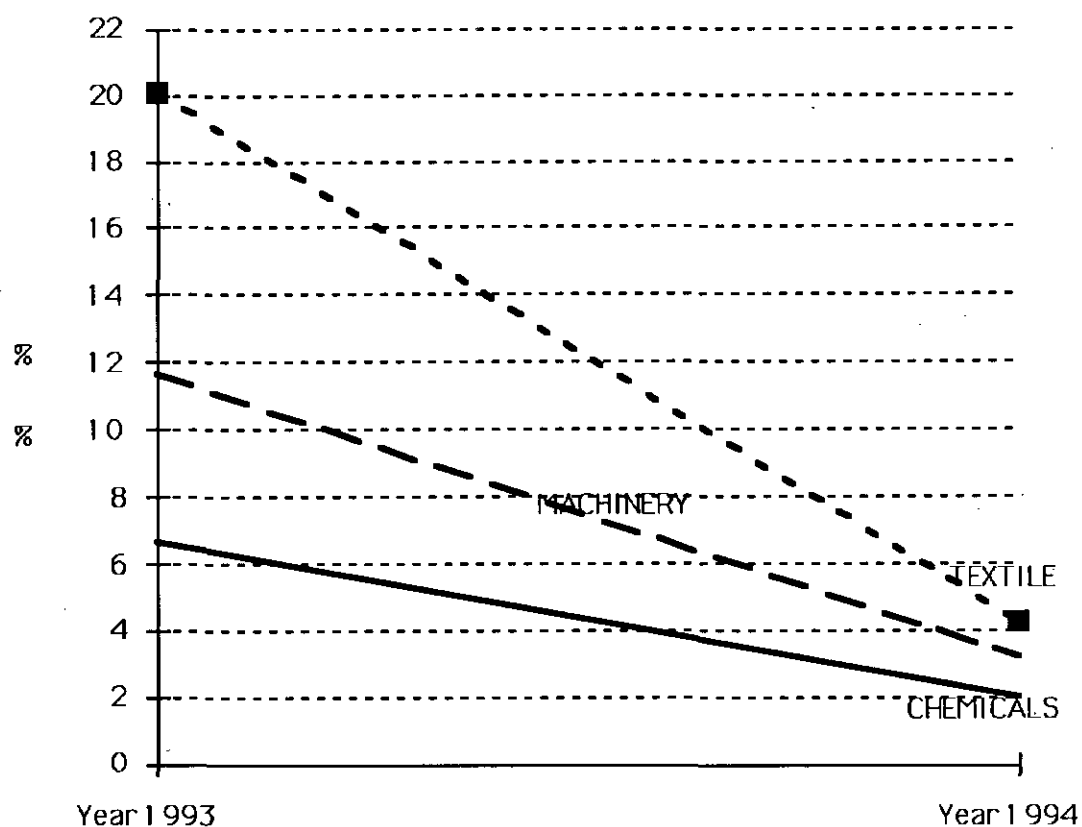


FIG. 8. The profitability of all assets in the gross profit (%) for the enterprises of chemicals, machinery and textile industry in 1993-1994

It is important to compare profitability of all assets and the profitability of equity to understand the influence of borrowed money on financial effectiveness of enterprises. As one can see in the table 2 the profitability of equity for enterprises of all three industries was substantially higher than for all assets although the tendency of changes was just the same.

TABLE 2

PROFITABILITY OF EQUITY IN GROSS PROFIT

Industry	1993 (%)	1994 (%)	1993/1994 (times)
Chemicals	11.74	2.16	5.44
Machinery	33.37	4.53	7.37
Textile	51.08	5.96	8.57

However the decline of equity profitability in gross profit have substantially higher scale than the decline of all assets' profitability: for chemicals they are 5.44 and 3.35, for machinery 7.37 and 3.60, for textile industry - 8.57 and 4.77.

If we include to our analysis the data concerning work capital profitability (fig. 9) also, the following conclusions can be made:

firstly, for none of surveyed groups of enterprises the borrowing in present Russian situation was not effective. The only result was the enterprises' general profitability decline;

secondly, the decreasing share of equity in all enterprises assets (see fig. 2) forms a base for more and more rapid decline of the total profit;

thirdly, even in those industries where enterprises have achieved some improvements in operative management displaying in the growth of working capital profitability (in our survey we found such situation in chemical enterprises - see fig. 9) it can not changes the whole situation. The main reason - the existence of excessive capital assets which form a heavy burden for enterprises in conditions of more narrow market.

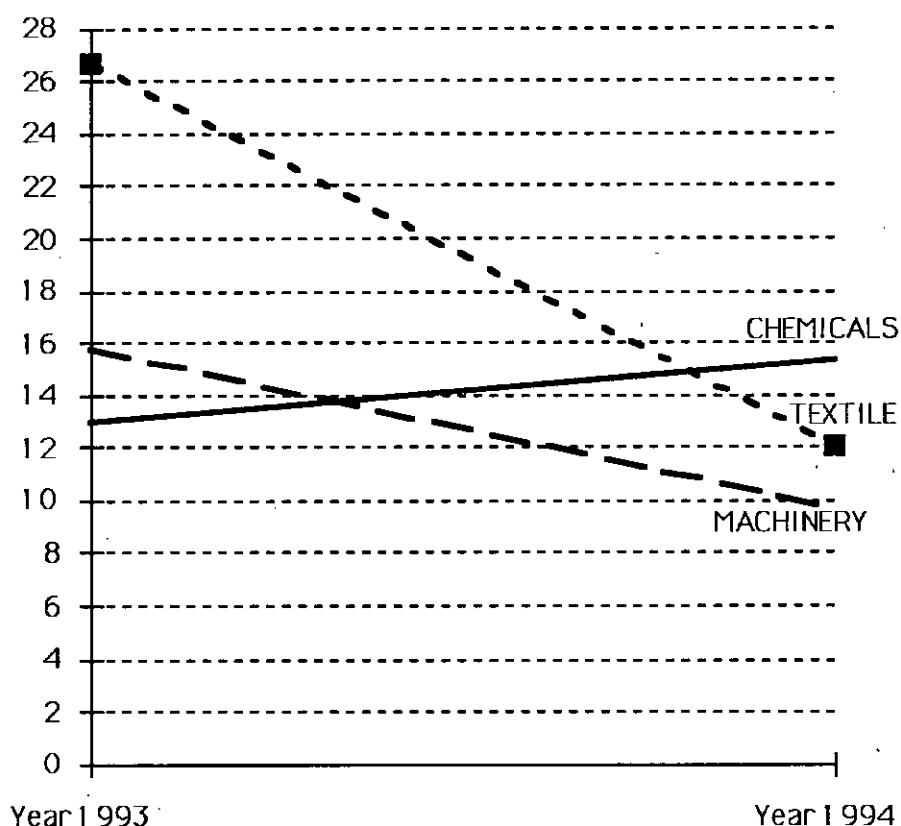


FIG. 9. The dynamics of working capital profitability in the gross profit (%) in chemicals, machinery and textile industry

These conclusions are confirmed by the analysis of operating cost ratio calculated as a ratio of the gross profit to the total costs.

As one can see at the fig. 10 those ratios also declined in 1994. However the rates of decreasing (in chemicals in 5,87, in machinery - 1,22, in textile - 1,63 times) were much more lower than in profitability of all assets and in machinery and textile industry - even lower than the equity profitability decline.

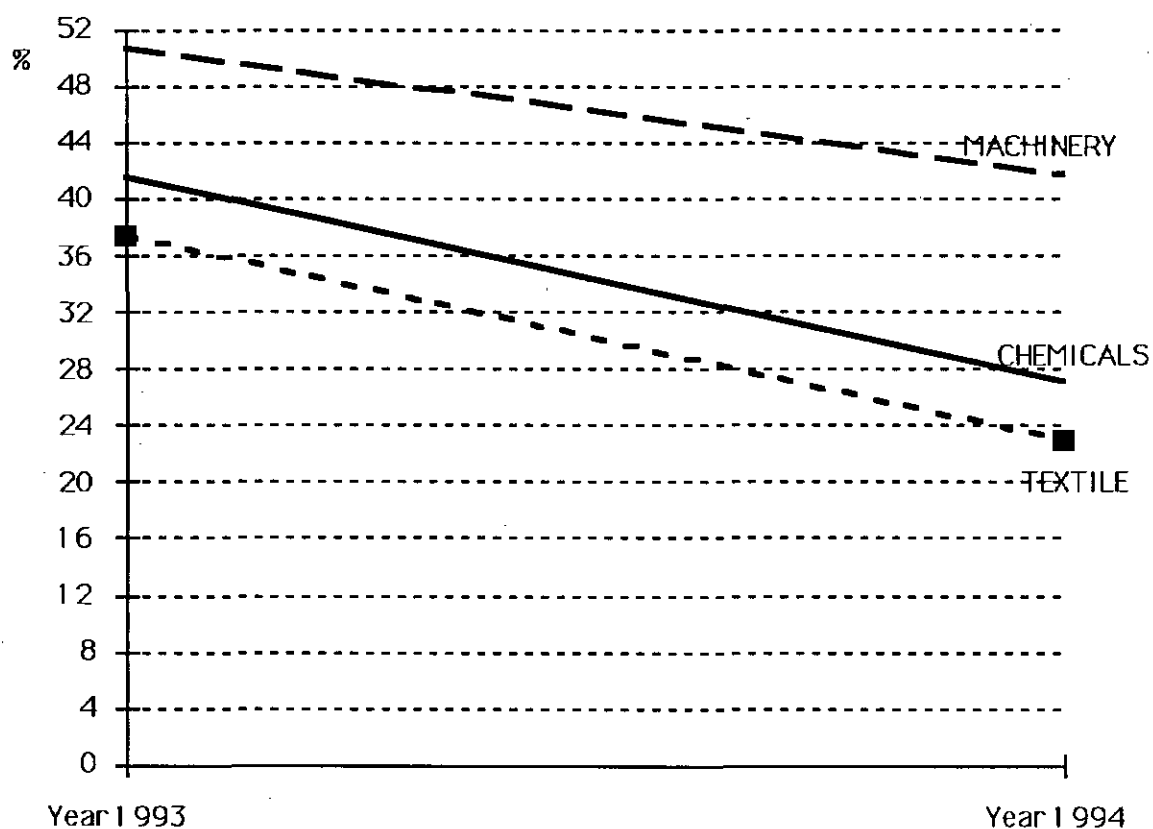


FIG. 10. The dynamics of operating cost ratios in chemicals, machinery and textile industry in 1993-1994

As we would try to find more complex indicator of enterprises behavior it is suitable to use coefficient of business activity. It is calculated by multiplying of inventory turnover by profitability of main business operations. The dynamics of this coefficient shows if the enterprise increase or not it's business activity.

As it is shown at the fig. 11 enterprises of chemical industry can be described from this point of view as the most active - in this branch group the value of coefficient even increased from 0.14 in 1993 to 0.16 in 1994. However it can't compensate the loses connected with the existence of excessive capacities.

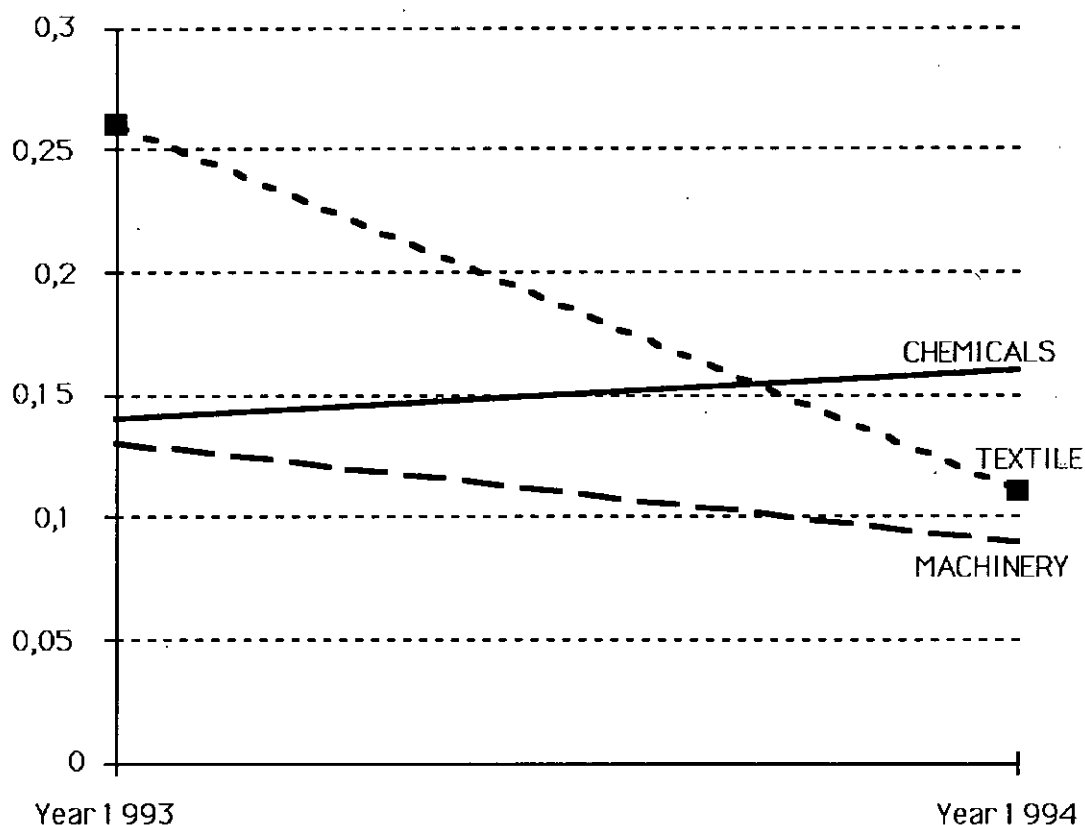
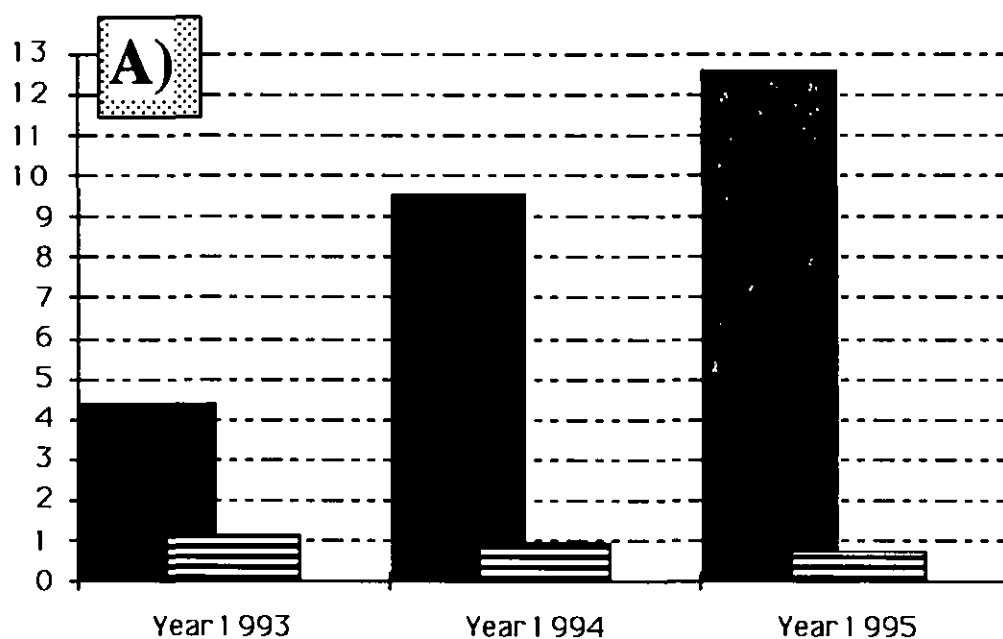


FIG. 11. The dynamics of business activity coefficients in chemicals, machinery and textile in 1993-1994

Of course the analysis based only on average values is not comprehensive enough. So we investigated also the scale of differences between enterprises using the data on current ratios and coefficients of business activity for most numerous group of surveyed enterprises - the textile industry.

SCALE OF CURRENT RATIOS DIFFERENCIES IN TEXTILE INDUSTRY



SCALE OF BUSINESS ACTIVITY COEFFICIENTS DIFFERENCIES IN TEXTILE INDUSTRY

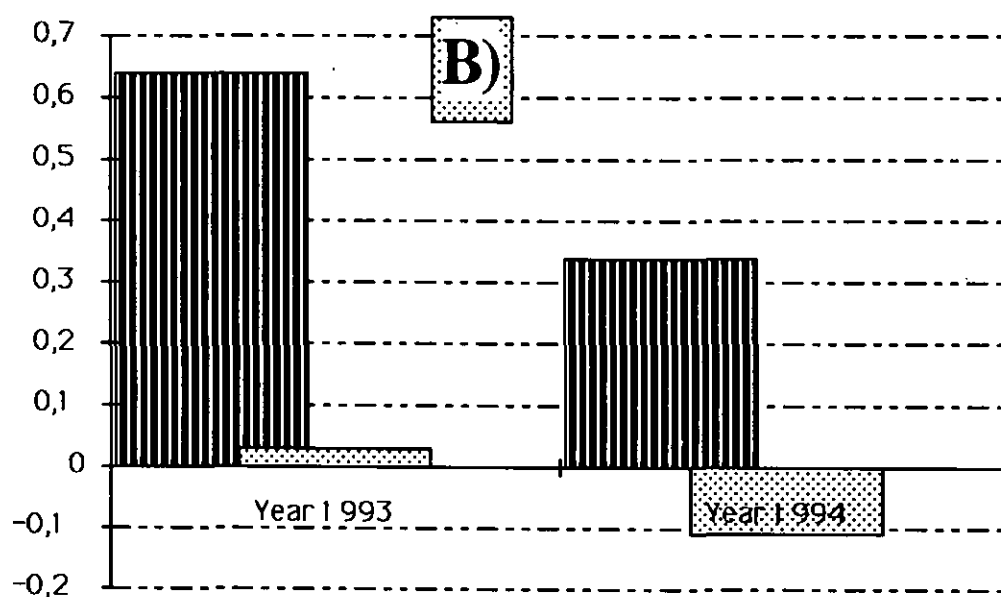


FIG. 12. The scale of differences in business indicators for enterprises of textile industry

As we can see at the fig. 12, the difference between minimal and maximal values is very large and for current ratios it is increasing

during the years. The most interesting is that in all presented at the fig. 12 comparisons we have the same enterprises: in all cases the best results have the joint-stock company "TAON" situated not far from Moscow and the lowest levels are the results of commercial activity for the joint-stock company "Borovchanka" from Kaluzhckaya oblast.

Both companies were founded in the middle of 30ths and both produce knitted wear. They are also very close in size: in 1993 number of employees in "TAON" was 212 person and in "Borovchanka" - 389 person. The volumes of sales in 1993 were near the same: for "TAON" - 1320 ml rubles and for "Borovchanka" - 1299 ml rubles. So what are the reasons of such great difference in financial results of these companies?

The first meaning point is the equipment. "TAON" has more new and modern equipment: the average period after the installing - 5 years in comparison with 10 years for "Borovchanka". Moreover "TAON" has 15% share of imported equipment as soon as "Borovchanka" has only domestic equipment.

But not only technical aspects are important. For example "TAON" has more significant achievements in the seeking for customers. During 1994 this company have signed 170 contracts including 90 with new ones. At the same time "Borovchanka" has signed 80 contracts and only 30 - with new customers.

Managers of "TAON" took part in inter-regional wholesale fairs. Managers of "Borovchanka" did not use this instrument - they rely more on personal ties with customers.

Worth mentioning that although "TAON" is the joint-stock company of closed type and "Borovchanka" is open joint-stock company in fact the last one is more under the control of narrow group of top managers. In "TAON" the top group of managers owes 17% of shares and in "Borovchanka" - 51%. In "TAON" shares were distributed between employees free of charge, in "Borovchanka" - 25% of shares were sold to

employees. So it depicts that not in all cases even most advanced procedures of privatization can all by themselves guarantee the success in activity.

It is significant that "TAON" don't have any problems with arrears as far as "Borovchanka" have a debt before employees. The more stable financial position allowed "TAON" to invest in capital assets 4,49 times more than "Borovchanka" did. All investments were financed by "TAON" from their own profits as soon as "Borovchanka" used external sources.

We also realized that "TAON" did not use loans for the increasing of working capital unlike "Borovchanka", which have made such a borrowing with rate 190% per year. Of course we understand, that credits are very important for the enterprises' development. But in nowadays Russia the fact is that only company, that has an opportunity to do without such expensive credits, can facilitate it's financial situation.

This example gives us opportunity to make a conclusion that even in textile industry, which is now in the most difficult macroeconomic situation, the financial situation of enterprises to great extend depends on possibilities and qualifications of their top managers.

Final remarks

The in-depth analysis of the enterprises of chemicals, machinery and textile industry gives us reason to believe that Russian managers have really began to adapt their business to the new economic conditions. This is a difficult and sometimes painful process. The decline in total demand, the appearance of a large number of competitive foreign products at the domestic market, galloping inflation and the necessity of investments in social sphere (workers housing, rest camps,

hospitals) have also contributed to the general crisis in the surveyed industries (especially in textile industry).

Under the influence of these factors the further stratification of the Russian industries into successful companies and companies close to bankruptcy is going on. If the process of bankruptcy really start it can cause serious social problems especially because of the fact that many textile companies are located in small towns, where they are often the only place to work, and what is even more serious, they also support and finance the social infrastructure (housing, road maintenance, central heating etc.).

It is obvious that the ultimate causes of the successful adaptation of some companies to the requirements of a market economy are the individual efforts of each particular company, the correct assessment by their managers of the business environment and of their companies' own production and human resources, the result of optimal solutions of various business problems. But making an optimal choice in the conditions of uncertainty is not an easy job. That is why a clear-cut and stable state economic policy is the principal condition for the survival and progress of Russian companies.

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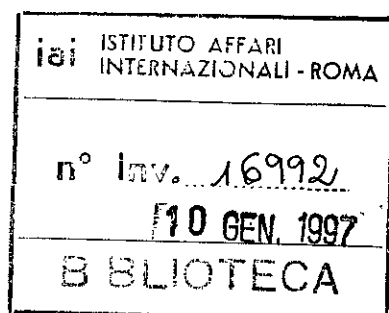
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Determinants of Financial Characteristics of the Enterprises under Transformational Crisis



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Heading

Abstract	3
1. Enterprise under Transformation Crisis.....	4
2. Budget Constraints Become Harder: Changes in Structure of Active and Passive Operations of the Enterprises	6
2.1. Relative Separation of Financial Capital from the Productive One.....	6
2.2. Forced self-financing and insolvency.	8
3. Main Trends of Enterprises Behaviour In Stabilisation Environment	10
4. Types and Models of Production Activities.....	15
5. Principal Results of Econometric Analysis of Production Activities	19
References	24
Appendix	31

Abstract

The purpose of this paper is to analyse the specific features of financial behavior of Russia industrial enterprises under transformational crisis. The main idea is that the transformation of state-regulated enterprise into market-oriented firm leads to stable financial disequilibrium. The features of it are the shortage of earning both for capital investments and for keeping production level. The enterprises adapt to "new deficit economy" by decline of output, reduction of employment and growth of arrears.

Financial shortage is reproduced under conditions of the price competition for the share of national incomes between various industries, intensive cost inflation and structural changes in favor of industries with low level of added value.

In 1994-95 the transformation crisis came into new stage: the majority of enterprises knew how to survive under crisis conditions, their behavior was determined by efficient demand and financial conditions. In general, the transition from the state-regulated system to market and financial regulation is almost finished but macroeconomics equilibrium is not reached yet and suppose sufficient changes of macroeconomics conditions.

1. Enterprise under Transformation Crisis

The financial and productive behavior of Russian enterprises in 1992-95 is determined by combination of various crisis processes:

- 1) transformation of a state enterprise functioning in the economy of shortage into capitalistic (market) firm; it is one of the aspects of transformation crisis and connecting with them decline of output [3;4;12;13];
- 2) Soviet industrial model characterized by high level of resources utilization, miniaturization and underdevelopment of consumer sector cannot be used any more;
- 3) decline of demand and output as a result of financial stabilization policy (decrease of government expenses and money supply, growth of real interest rates);
- 4) devaluation of assets and decline of propensity to invest as a result of high inflation (inflation of costs rather than inflation of demand) [6;10].

Under traditional cyclic crisis firms sale inventories, decline external debts and increase own capital despite decreasing profitability. In the phase of depression inventories and liquidity assets increases.

The dynamics of assets-liabilities structure of Russian enterprises under the transformation crisis seriously differs from this picture. In spite of the trend to stabilization of output the profitability and liquidity of production continue to decline in 1994-95. It shows that the depressive stabilization process is not finished yet. Thus it would be better to say about stagnation rather than about stabilization of financial and economic state of industrial enterprises in 1996.

The concept of transformation decline supposes output decline resulted from the stoppage of unprofitable productions. The refuse from non-economic behavior should lead to financial stabilization after the period of adaptation to price liberalization and decline of government financing. However, in 1992-95 we can see reproduction of disbalance of financial and resource flows.

The existing of disequilibrium in the form of the huge number of enterprises being

close to bankruptcy could be explained by continuation of transformation processes, absence of sanation mechanisms and too soft government's deflation policy [9;12].

However, all these factors need to be explained too. At the microlevel the changes in the enterprise behavior (more financial-oriented behavior) becomes the source of crisis process because it requires changes in assets structure (larger share of financial assets), increases the role of budget constraints.

Unstable contract relations, structural disproportion, non-adequate financial policy and high cost inflation contributed to forming of specific type of adaptation. The enterprises adapt to demand and financial constraints not by the price and cost decrease but by the decline of output and investments, low liquidity and large arrears. One can say not about the monetary but about the debt economy [10;11]. Arrears become the main factor of surviving, the means to maintain productive and R&D potential, social infrastructure, etc.

One can speak about two stages of the transformation crisis in Russian economy:

1) the first one (1992-93) consisted in destruction of state-regulated system, transition from the supplier market to the consumer one under sharp decrease of efficient demand and unregulated and unbalanced prices;

2) the second one (1994-1996?) is characterized by adaptation of enterprises to crisis, the growing role of intimidate demand and financial shortage in regulation of production, more taught budget constraints.

The trend to depressive stabilization and lower rate of inflation corresponds to the second stage of the crisis. But it is impossible to say about economic growth and finishing of transformation (in the sense of reaching of macroeconomics equilibrium and forming of effective firms which can not only survive but also develop) in 1996. It is possible that the end of transformation crisis in Russia will lead not to existing of managerial firm with financial priorities but to forming of the firm-family the main aims of which is keeping its own face, its human, network and productive capitals [2;8].

2. Budget Constraints Become Harder: Changes in Structure of Active and Passive Operations of the Enterprises

Under economic reforms budget constraints became harder not only quantitatively but also qualitatively. Chronicle shortage of working capital and bureaucratic exception of profits in state-regulated economy became weaker at the end of 1980s. The profit share excepted to budget declined from 60% in 1980 to 49% in 1988. The soft budget constraint became even softer but the enterprise behavior became more financially-oriented.

In 1992-95 financial constraints became harder in spite of arrears. These constraints could be divided into two groups:

- earnings: cash flow, value added, net profit;
- budget constraints in a strong sense: own capital, possibility to obtain external financing, etc.

The criteria of financial constraint rigidity are not only the costs of obtaining external financing or amount of bankruptcies [4]. The more adequate criterion is the costs of surviving on the base of self-financing. The factors taking into account are uncertainty of surviving conditions, high risks of receiving external resources, deformation of time structure of enterprises' assets in favor of short-time investments.

2.1. Relative Separation of Financial Capital from the Productive One.

The disbalance of the capital turnover has some specific features. Suppose, that the indicator of financial resources shortage is acceleration of its turnover comparing with some level estimated as an equilibrium one. For the monetary sphere such equilibrium was reached at the middle of 1991 when there was relative equilibrium on commodity markets after partial liberalization of prices (Pavlov's reforms) [11]. Ratio money supply M1 to gross domestic product increased from 64% in 1985 to 74-76% in 1990-1991. For industrial working capital the equilibrium state was in 1989-91. On the basis of the self-financing policy enterprises had increased working capital on 50% from the average level of 80-e (Tab. 3)..

Price liberalization led to sharp acceleration of money turnover (5-6 times) but the velocity of industrial capital turnover fall. At the output decline about 50% the velocity of working capital turnover decreased (from 78 days in december 1991 to 130 in the autome of 1995 (Table 4) but net working capital velocity increased by 50% . To reach the before-crisis level of output require acceleration of output turnover or growth of its volume. But one has to take into account the structural changes in working capital. In Soviet-type enterprises about 70% was material inventories. In transitional economy about 70% of assets are financial one (Table 3).

By the opinion of Federal Agency for Bankruptcies, the main reasons of solvency were inefficient use of credits and own working capital by general managers of large industrial enterprises. By our opinion, it is not correct. Radical changes in the structure of working capital is the fact. But the main reason for that the objective trends of transformation of state-regulated enterprise into market firm in the crisis situation.

Normal functioning of the firm needs not only material components but also money. The growth of material inventories is the way to slow down turnover and to increase costs. The level of inventories was 56 days in desember 1991, became 72 at the middle of 1994 and stabilized at 56-60 days in 1995. The structure of inventories changed too. The ratio of final goods inventories to raw material inventories increased from 26% in 1991 to 50% in 1992 which had transformation character (Kornai effect of transition to market behavior). In 1994 this figure was 90% which resulted from demand shortage and use of the barter. Thus, in fact a significant part of the working capital did not use in production. The growth of working capital resulted from increasing financial assets (cash, debts, etc.). In 1989 financial assets were 15% of the working capital, in 1992 it was 56% and in 1995 - 60%. Thus, industrial enterprises sometimes worked as a quasi-bank.

But financial assets play the sufficient role in maintaining of production process. That includes:

- debts compensate shortage of own funds and efficient demand;
- monetary factor is very important in capital turnover in market economy

comparing with the planned one;

- the liquidity level becomes the criterion of surviving and regulator of production.

Summing up, there is no total shortage of working capital but the shortage of liquidity assets (especially money) and shortage of own funds. The money inventories decreased from 18 days in 1991 to 5 days in the first half of 1995. The lack of high-liquidity assets corresponds to general monetary crisis but it has its own specific. The liquidity was maintained by currency savings thus, enterprises hardly depend on exchange ratio and exports. The development of KO and GKO markets led to increase the share of short- and long-term investments comparing with monetary assets.

2.2. Forced self-financing and insolvency.

At the transformation crisis enterprises transit from self-financing to use borrowed funds (the share of own capital in liabilities declined from 60 to 30-35%). High inflation devaluated accumulated debts but the total growth of seignorage was limited by decline of current account balances (Table 6). Since the second half of 1994 the opportunities for mutual insolvency decline and attraction of debt financing decreased together with slowing up of inflation.

Disbalance between liquid assets and debts is indicated by the fall of liquidity ratios. If in 1992 the current liquidity ratio was higher than unsafe level (more than 2:1) than in the middle of 1995 almost all industries formally became bankrupts (current liquidity ratio less than 1.2). The absolute liquidity ratio was 0.07 in the middle of 1995 (comparing with recommended level 0.2-0.3)(Table 5). Thus, the debts become not supporters but obstacles for maintaining of output.

Insolvency and the growing number of formal and real bankrupts is resulted from the conflict between Russian economic realities and price liberalization:

a) the lack of profit and other own funds - by A.Belousov estimations the shortage of gross profits in real sector was in 1994 about 15% of GDP.[6/N4-5] This shortage is contributed by increasing material costs (especially energy costs), excess tax burden and so on. The huge amount of profit has the false inflation character .

b) the profit structure was changed in favor of energy and fuel industries and export-oriented metallurgy which become involuntary donors for other industries;

c) the transition to self-financing was to a great extent involuntary because of decrease of external financial support (Table 1). The mutual unpayments were stimulated by expensive bank credits (Table 2). In 1995 it was impossible the further use of mutual unpayments and enterprises have to borrow from outsiders. But the high costs of bank credits made impossible to attract private saving into industry and led to growing arrears to budget.

3. Main Trends of Enterprises Behaviour In Stabilisation Environment

Production and demand. The stabilisation of industrial production in the latter half of 1994-1995 is closely related to the slowdown of decline in domestic and the expansion of external demand. The surveys show that enterprises largely assess the domestic demand (and the stock of orders) as deficient (the negative appraisal balance). Beginning mid-1994, the demand situation showed signs of improvement (Chart 1.). To a large degree, this resulted from the money infusion in mid-1994 and the stabilisation of real money supply in 1995.

The effect of monetary policies on production at enterprises is becoming increasingly indirect, for not all the fluctuations of the money issue are transformed into change in demand and the replenishment of enterprises liquid resources. In addition to that, industrial enterprises only account for about 22% of money in the settlement accounts of enterprises and organisations (or nearly 4% of M2). Demand has a positive effect both on production and prices for manufactured products. In 1995, with relatively tight monetary policy and the acceleration of cost-push inflation (primarily on the part of natural monopolies), the price movements were becoming less sensitive to change in demand (Chart 2).

1994-1995 saw a number of new trends in the production to demand relation:

- 1) Enterprises did their best to get rid of excess finished products inventories, and that markedly limited the self-sufficiency of production. According to the Gaidar Institute's surveys, in the fourth quarter of 1994 the balance between enterprises with excess and deficient inventories was virtually reduced to zero. In the second half of 1995, the negative effect of decline in demand was mitigated by the inventory increase above (the general managers' assessment) the normal level (the stabilisation of the aggregate appraisal of demand and inventories, Chart 1.) Enterprises' shift to the policy of accelerated inventory turnover was caused both by the generally increasing financing constraints on enterprises' operations and the pressure of high real interest rates. With the increasing financing constraints and expensive credits, "the freezing" of the working capital in the excess inventory became unaffordable.

- 2) Disequilibrium of demand and supply. While in 1993-1st quarter of 1994, according to the general managers' appraisals (Russian Economic Barometer - REB), production was above the level of normal demand, beginning mid-1994 output was steadily lagging behind normal demand (about 15%). The Gaidar Institute's surveys also indicate the disappearance of excess production by early 1994 and the convergence of the normal demand and output levels in 1995. Subjective appraisals of the ratios of normal to actual values of supply and demand corroborate a) the data of the surveys indicating that the major production bottlenecks are accounted for by other factors than demand, largely financial ones; b) the existence of the production growth potential with the current demand pattern.

In the fourth quarter of 1995 this ratio turned out to be disturbed (according to the Gaidar Institute's estimates) due to the sharp demand squeeze which threatens with a new wave of production decline. Moreover, this excess supply runs counter to the output and demand convergence expected by enterprises and discernible at the moment. (Chart 3.). All this makes the demand-encouraging policy very relevant.

- 3) Surveys inadequately reflect demand generated by exports (the Gaidar Institute has been monitoring those since 1995) which gave a boost to the raw materials sector and promoted the stabilisation of the industrial output index. As the rouble appreciated, the appraisals of export demand started decreasing (in the 4th quarter of 1995 they were 12% lower than in the 1st quarter), while the overall index of enterprises' dissatisfaction with export demand is three times as low as the values related to home demand.

Financial condition. Enterprises' short-term financial condition is represented by their earnings and expenses pattern, the availability of the working capital and their ability to pay on debt obligations. The main trends of the financial condition during stabilisation are:

- 1) The stabilisation in 1995 of the availability of the working capital, especially highly liquid, along with the acceleration of stock turnover. This stabilisation was perpetuating the lag between output and potential demand.

2) With the slowing inflation and the long-standing production crisis, enterprises' financial condition depends on the availability of funds in their accounts rather than the profitability and earnings dynamics (Chart 4). One should also note the sharp increase of competition for liquidity between payments to suppliers, to the budget and wage payments. Unfortunately, the surveys do not capture changes in enterprises' liquidity.

3) The adjustment of depreciation charges for inflation and profits growth in 1995 notwithstanding, a trend towards the decrease in the availability of net working capital to enterprises persisted, which triggered the growth of payables (especially to the budget system) (Chart 5.). While in late 1993 - early 1994 the tax arrears were about 24% of overdue payments to suppliers, by late 1995 they rose to 40-45%, with the absolute amounts of tax arrears steadily outrunning the amounts of bank loans to industrial enterprises (though compared to the budget, banks provide more liquid resources).

The surveys of the Centre for Economic Analysis provide appraisals by enterprises of the availability of internal financial resources which is closely related to the appraisals of enterprises' financial and economic condition. The drop of the balance of internal funds availability from -17% in June to -26% in October was accompanied by the declining appraisal of industrial enterprises financial condition from -47 to -49.

Factors restraining growth. As enterprises' behaviour is getting more commercially motivated and their monetary policies are tightening, their production activities increasingly depend on their financial shape (though in late 1995 the relative significance of demand has somewhat grown). As potential demand failed to be realised, what was causing the trouble was liquid financial resources rather than inventories ("production assets", using the terminology of the Federal Agency for Bankruptcies). Arrears, because of their low liquidity and toughening of the terms of inter-enterprise settlements, turned from an output-supporting (1992) to an output-restraining factor, thus enhancing the negative effect of cost-push inflation. Their role was reversed in mid-1994, when the arrears, instead of propping up production, started to keep afloat enterprises which were at a standstill. Econometric calculations corroborate the negative effect of the growth of receivables and the receivables to payables ratio on output in terms of volume in 1994-95.

The demarcation line between demand and financial factors is not clear-cut. Current assets are themselves a demand-forming factor with respect to inventories, their level is linked to the prices for enterprises' products and thereby - to the demand situation. At the same time, financial assets (especially accounts payable and financial investments) have their own movement pattern which is significantly different from the production and demand movement which results in the gap between the production level corresponding to potential demand and financial resources available.

According to the Russian Economic Barometer (REB) estimates, in 1992 enterprises thought demand deficit to be the principal cause of the production decline (the ratio of demand appraisal to the appraisal of financial resources as the output-constraining factors exceeded 1). In 1993 - early 1995, the biggest production bottleneck was the working capital. In the structure of causes of industrial enterprises stoppages, financing constraints became prevalent, though this shift only occurred in late 1994.

Enterprises differentiation. What characterises the stabilisation period is the expansion of the group of enterprises that are steadily increasing output, have growing inventories and are in a relatively healthy financial condition (they appraise it as "good" or "normal"). On the other hand, this group represents the minority of industrial enterprises including, in all likelihood, those who have learned how to survive rather than those who displayed the ability to develop production and attain good financial and economic condition.

While during the period of the accelerated fall of output the share of relatively successful enterprises (data of REB surveys) was declining at the same pace as the industrial output index, in 1994 - first half of 1995 this group of enterprises was growing against the background of the stabilisation of general industrial trends.

It should be noted that the discrepancies between the dynamics of general industrial output indicators and financial indicators shown by the surveys might be due to the fact that the sample included mostly medium-size enterprises, while the financial problems are more serious with big-size enterprises, which accounts for the lower average output figures. The surveys practically failed to cover the "flops" while losses and stoppages are typical of those. According to the GOSKOMSTAT (the State

Statistics Committee) data, in 1994-95 the average of about 5,000 enterprises had stoppages and sustained losses, i.e., about 25% of all industrial enterprises. Thus, the unsuccessful group is only slightly smaller than the successful one which, according to the REB estimates, included 29% of enterprises in 1995 (up from 24% in 1994 and down from 36% in 1993), with a sharp growth of both groups having occurred almost simultaneously in mid-1994.

Surveys conducted by the Centre for Economic Analysis show a higher share of enterprises satisfied with their financial and economic condition: about 50% of the sample (or about 2% of big-size and medium-size industrial enterprises), but the share of those that assess their position as "good" is only 1-2%. The gap between the data of the above surveys probably reflects both the structural element (the survey conducted by the Centre for Economic Analysis better represents raw materials producers) and the appraisal gradation (satisfactory/good).

It is evident that the factors making for the success of these enterprises are specific to individual enterprises and related to the style of management, labour relations, the specific features of production and the market niche found. At the same time, the surveys show that the dynamics of the successful group agree with other trends. The Centre for Economic Analysis' surveys indicate that the share of enterprises satisfied with the level of output is practically the same as the share of those satisfied with their financial condition, which confirms a close relationship between financial activities and production. An increase in the share of enterprises that are in good and normal financial condition depends both on the ability of enterprises to expand the stock of orders and output and the pace of price rises (consequently, the profitability level). At the same time, the number of enterprises increasing output has been steadily outrunning the number of those who are in a financially sound condition (by about 20% in 1995) which testifies to a certain conflict of financial and production priorities.

4. Types and Models of Production Activities

The classical theory of the firm views the operations of an enterprise primarily from the standpoint of the maximisation of the firm's objectives (output or the market share - for a competing firm; profit for a capitalist firm; value added for an enterprise with strong representation of employees in management), given resource limitations. For an enterprise operating in a transition economy (in approaches developed by Kornai), what comes to the fore instead of the optimisation problem is the problem of tightening budget constraints and changing the comparative role of factors limiting output, with the main role played now by demand and financing factors, as opposed to the factor of material resources. If the establishment of a relationship between demand/financing constraints and industrial output is the imperative of the transition period, then the comparative effect of these factors and the structure of demand and financial parameters are to a large extent determined by the behavioural elements of microeconomics.

In 1992-1995, four principal types of production behaviour can be identified in the Russian economy. The main difference between them lies in the relation of factors limiting output and the structure of financial parameters rather than in the objectives which enterprises seek to attain. We do not claim that these types cover the whole variety of enterprise behavioural patterns. They group production activities from the perspective of tightening enterprises budget constraints and the related change in the production decline factors. We are not examining behaviour based on the monopolistic price rises. It is not predominant in the final manufacturing industries oriented towards internal demand. In 1993-95 (unlike 1992) enterprises' freedom of price-setting was quite restricted here. The movements of prices are determined by the cost-push inflation generated by fuel and raw materials sectors and natural monopolies. For this reason, what is becoming the main adaptive variable is output, inventory fluctuations and related changes in the working capital.

- R) *Resource-oriented type* - output is limited by the availability of production resources. This type was predominant in the centralised economy of shortages, but the production distortions due to the unprecedented production decline for many years provoked a new increase of resources constraints (the increasing

contribution of which in the output fall was also shown by the surveys).

- D) *Type oriented towards demand and the flow of current revenues.* Output is determined by effective demand or receipts (value added), or - in more capitalised enterprises - by profits). An enterprise adapts to the gap between potential demand and real receipts through the output and barter drop along with holding on to other enterprises' financial resources. Payables are determined by the dynamics of receivables and are the price that has to be paid for excess production.
- F) *Type oriented towards self-financing and maintaining the needed level of liquidity.* Output is adapted to the financing potential of an enterprise, i.e., the real receipts, the availability of liquidity for supporting turnover and the pressure of cost-push inflation.
- S) *Type oriented towards survival in the sense of retaining its identity (type of operations, employees or the control of an enterprise by the managerial "technostructure".* This type of production activities corresponds to the so-called company-family (typical both of Japan and the Soviet system). On the other hand, there is a structural rather than a behavioural aspect to it. In sectors hit by the structural crisis (the defence industry, production of sophisticated durable consumer goods) running at 20-30% of capacity and less, many enterprises are in the state of "hidden bankruptcy". Though output "matches" effective demand, the retention of the production apparatus and survival of a company as such is only possible through funds provided by creditors (those are primarily suppliers and the budget). Receivables are no more directly related to payables. As the specifically oriented surveys show, companies in a "bad" financial condition (having losses) are characterised by an increased share of budget and extrabudgetary funds arrears.

Difference between the above types (especially between types D and F) is quite relative, for enterprises' reorientation to effective rather than potential demand and the decrease of payables should restore the relationship between output and liquidity. From the financing standpoint, type D is characterised by the leading role of enterprises' active operations and financing mostly through debt. At type F enterprises production is

typically subordinate to the structure of assets, and an emphasis is put on self-financing.

It is impossible to measure the actual correlation of the above types of behaviour in the industrial sector (individual sectors) based on surveys. This calls for the use of different analysis techniques. At the same time, it may be suggested that on the microlevel the predominant occurrence of the F and S types of production activities corresponds to the macroshift of decline factors from demand to the working capital deficit. In industrial capitalist countries, a shift towards similar behaviour is characteristic of the periods of market crises. It sounds unlikely that in the Russian economy enterprises consciously adapt output to liquidity-determined constraints. It is more likely that what counts here is the availability of liquid resources along with material ones to production and marketing facilities.

At the same time, the toughening of relations with suppliers (hampering crediting through arrears or stopping it altogether) makes for a lasting objective relationship between output and the ratio of the availability of funds in enterprises' accounts to the amount of short-term debt. On the other hand, the development of the bankruptcy procedures, the slowdown of settlements, a system of advance tax payments and a drastically growing need to cover risks, make for an additional accumulation of liquidity that is not directly related to production.

Let us draw up balances corresponding to the above types of production behaviour:

D is a model of demand-oriented production.

- 1) $pQ = S - IZ$ Q - output in terms of volume;
- 2) $S = DP = aD$ S - sales; p - product price;
- 3) $S - M = VAD$ IZ - change in inventories;
- 4) $S = cPR$ DP - effective demand;
- 5) $F = S + ED$ D - potential demand

M - materials costs; VAD - value added; PR - balance profit (expected or current); earnings/price inverse ratio (?); a - demand effectiveness ratio measured by

change in arrears and the scale of barter; F - financial assets; ED - growth of external debt.

Enterprises' freedom of choice (the behavioural aspect proper) under this model (when prices are determined by the dynamics of prices for the purchased raw materials) is manifest in the trade-off between change in output and inventories, as well as the amount of receivables (i.e., parameter - a) bridging the gap between effective and potential demand and external debt (ED) needed to keep output up with demand.

F is a finance-oriented model.

$$1) \quad pQ = FV \quad F - \text{financial assets (or current assets in general)}$$

V is the rate of capital turnover which depends both on macroregulators (interest rate, inflation rate) and the structure of assets and liabilities of an enterprise, the methods of settlements with customers and suppliers. F is supposed to be determined based on mostly internal funds (debt is minimised), whereas V depends positively on the profitability and the share of money in the structure of financial assets.

The freedom of choice is primarily displayed through the actions aimed at bringing about change in the velocity of financial and production capital turnover.

C is a combination model showing the relationship between the financing and demand factors.

$$1) \quad pQ = [DF], [FF], [IN]$$

FD is a factor of demand (potential, effective) and income from the products sale;

FF is complex assessment of enterprises' financial conditions (availability of working capital and the critical funds; level of solvency);

IN is an indicator of decline inertia or output autonomous dynamics determined by other than financing and other demand factors.

5. Principal Results of Econometric Analysis of Production Activities

Equations of the models of production activities identified above produce similar results. The assessment period was 10.1992 - 9. 1995. At the moments of sharp changes in the behavioural patterns (5.1994 - a surge of stoppages and arrears, and 5.1995 - 9.1995 - domestic demand squeeze and the rising role of external demand), the quality of regression assessments deteriorates with respect to both demand and financing factors.

Relation of production to demand. Econometric calculations corroborate a close relationship between the dynamics of output in terms of volume in manufacturing industries (without the fuel and energy sector) and changes in demand. As far as the demand factor is concerned, the best results for the reviewed period were obtained with respect to the volume of paid shipments (which serve as a current revenues indicator), and the balance assessment of demand (the Gaidar Institute). All the demand factors within the reviewed period show rather high stability of the regression coefficients.

$$D1) \quad IQT = .68 IQT [-1]^{-.7} Dbal^{.07}$$

standard error - 3.2%, $R^{*2} = .93$

IQT - index of output in final industries in terms of 1990 prices by 12.1991 (trend); demand factor Dbal - the balance of demand assessments (above normal - lower than normal), according to the Gaidar Institute surveys, increased by the constant of 100. The introduction of the constant is caused by the negative balance of demand assessment. As the balance assessment of demand pertains to the beginning of a month, the equation shows the anticipating (+1 month) influence of demand on production. The use of the demand indicator with a 1 month lag slightly increases the average error.

Econometric analysis confirms the relation of demand dynamics (assessment in surveys) to money supply (M2 in real terms, with a 2 month lag) on the macrolevel and to profitability (or real profit) on the microlevel.

The use of finished products inventory as the indicators of demand (effect of

inventories on demand and output is assumed to be negative) deteriorates statistical estimates, as the regression coefficients show a drastic change in mid-1994 - early 1995. The instability of relation of output elasticity ratios to the inventory size results from enterprises shifting to the acceleration of inventory and receivables turnover. At the same time, the surveys data relating to the finished products inventories may be used for forecasting the dynamics of manufacturing enterprises inventories and current assets in general (in 1993, the correlation of survey estimates, - with a 4 month lag - , with the data provided in a monthly reporting form was .7).

The index of capacity utilisation has proved to most closely correlate with the index of output in terms of volume (REB) in the assessment of production represented in the surveys (for one factor dependence) with a free term $R^{*2} = .85$, standard error - 8%. It should be noted that in the surveys conducted by the REB enterprises show the so-called normal (economical) rate of utilisation of about 60% which includes a certain level of normally idle capacities (20%). As a result, the rate of utilisation capacity is assessed as 45-50% which is comparable to the official data.

Dependence of production on enterprises' financial condition. Output depends on the flow of current revenues and the availability of money (financial assets. Profit is supposed to have a multiple function. It is an objective of a capitalised enterprise operation (current or expected profit) and a most important source of financing of working capital (and other types of activities). Among the indicators of an enterprise's financial condition, the figure of real amounts in enterprises' accounts was shown to be most closely related to production. This suggests that it is the availability of funds that has become the main limiting factor in the current economic situation (thus decreasing the importance of inventory and debt).

It is noteworthy that the reliable estimates of the dependence of output on financing parameters were only based on the GOSKOMSTAT data, for the surveys do not provide sufficient financial information. The assessment of "the share of enterprises appraising their financial condition as normal or sound" (REB) based on those surveys have no visible relation either to the dynamics of industrial production or solvency ratios. The statistically relevant positive dependence (after smoothing) was only found

to be found to be true with respect to the industrial sector profitability.

$$F) \quad \text{IQT} = .94 \text{ IQT}[-1]^{.65} \text{IL}^{.08}$$

standard error - 3.7%, $R^{*2} = .93$

IOT - the trend of output in terms of volume in the final industries; IL - an index of amounts in enterprises' accounts (as of the middle of a month) in 1.92 prices. The results practically do not deteriorate if the index of amounts is used with a 2 month lag. The regression ratios are stable over the entire period.

Such indicators as profit (in comparable prices), the absolute liquidity ratio or the complex index of an enterprise's financial condition (including the indexes of profitability, turnover of financial assets and ability to pay off debt) used as a factor of financial condition yield the estimates R^2 of about .9 -.92 and a standard error of 3.8-4%. At the same time, the elasticity of production index based on the above factors was steadily declining in 1994-1995. The peak of output sensitivity to profit occurs in the first half of 1993, which corresponded to the period of high inflation-induced profitability, while with respect to the complex financial assessment it was late 1993-early 1994.

It might well be that thanks to the high sensitivity of production to these financial parameters their sharp drop in the second half of 1993 played a key role in the acceleration of the recession and production drop below the level determined by demand constraints as such. As the economy was moving over to the state of stabilisation and slower inflation, new conditions for financing production were formed which was reflected in the lower sensitivity (elasticity) of output to profitability and solvency bringing to the fore the availability of highly liquid resources and orders. Let us test this hypothesis by assessing the relation of output to the combined effect of demand and financial conditions.

Relation between demand and financing factors of production

Consider the two types of relations below:

$$C1) \text{IQT} = .722 \text{IQT} [-1]^{.55} \text{IL}^{.057} \text{Dbal}^{.059}$$

Standard error - 3.2%, $R^{*2} = .94$

IQT is a trend of output in terms of volume in final industries; IL is an index of funds in industrial enterprises' accounts; Dbal is an estimate of demand (surveys)

$$C2) \text{IQT} = .76 \text{IQT} [-1]^{.58} \text{IK}^{.135} \text{Dbal}^{.06}$$

Standard error is 3.2%, $R^{**} = .94$

The average quality of the statistical estimates of the two equations coincides, but the dynamics of ratios over the reviewed period are different. The sensitivity of the issue to the complex estimate of financial condition decreases, and in the second half of 1995 this factor is no longer relevant. The strongest relationship and the financing factor supremacy over the demand factor (with respect to the elasticity level) occurs in the second half of 1993 - early 1994, i.e., during the sharp acceleration of production decline and the establishment of tougher payment relations rules (Chart . 10). The use of money supply (M2 in real terms) as a demand factor produces a similar picture.

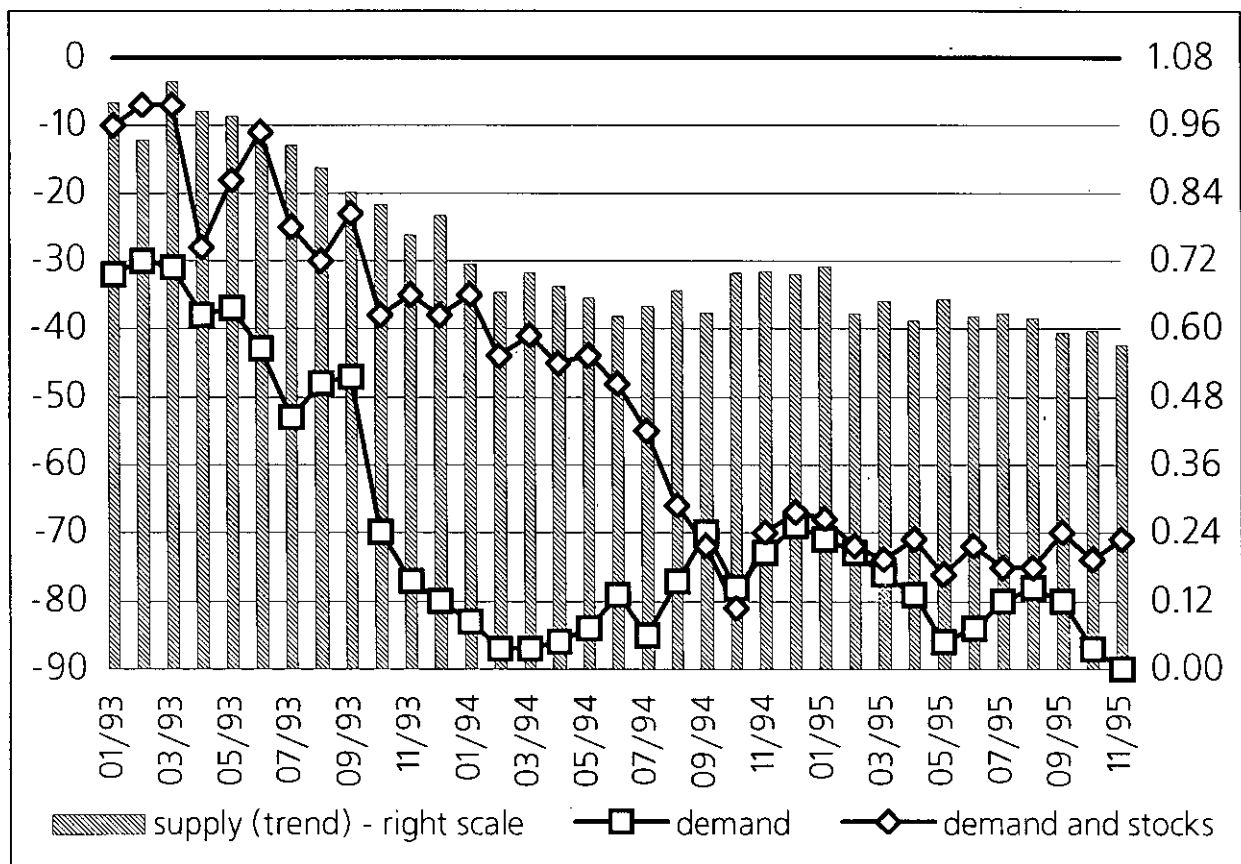
In contrast to that, the elasticity of production with respect to enterprises' funds is rather stable; in 1995 it is not much different from demand elasticity (Chart .11). Behind the difference between the dynamics of elasticity ratios there may well be two landmarks representing the toughening of enterprises financing constraints. The first one (beginning mid-1993) is related to the establishment of a close relationship between production activities and the levels of enterprises' revenues and debt (the structure of debt, the rate of turnover and balance of payables and receivables). The second of them (beginning mid-1994) is characterised by highly-liquid assets (money) turning into the greatest bottleneck of production and the decrease of the shock-absorbing role of current revenues (swallowed by arrears) and enterprises mutual arrears. The symptom of

moving on to the second landmark was a surge of enterprises' stoppages in the summer of 1994 followed by a qualitative change of stoppages: the leading role was now played by the stoppages caused by the lack of current assets as opposed to stoppages induced by the lack of demand.

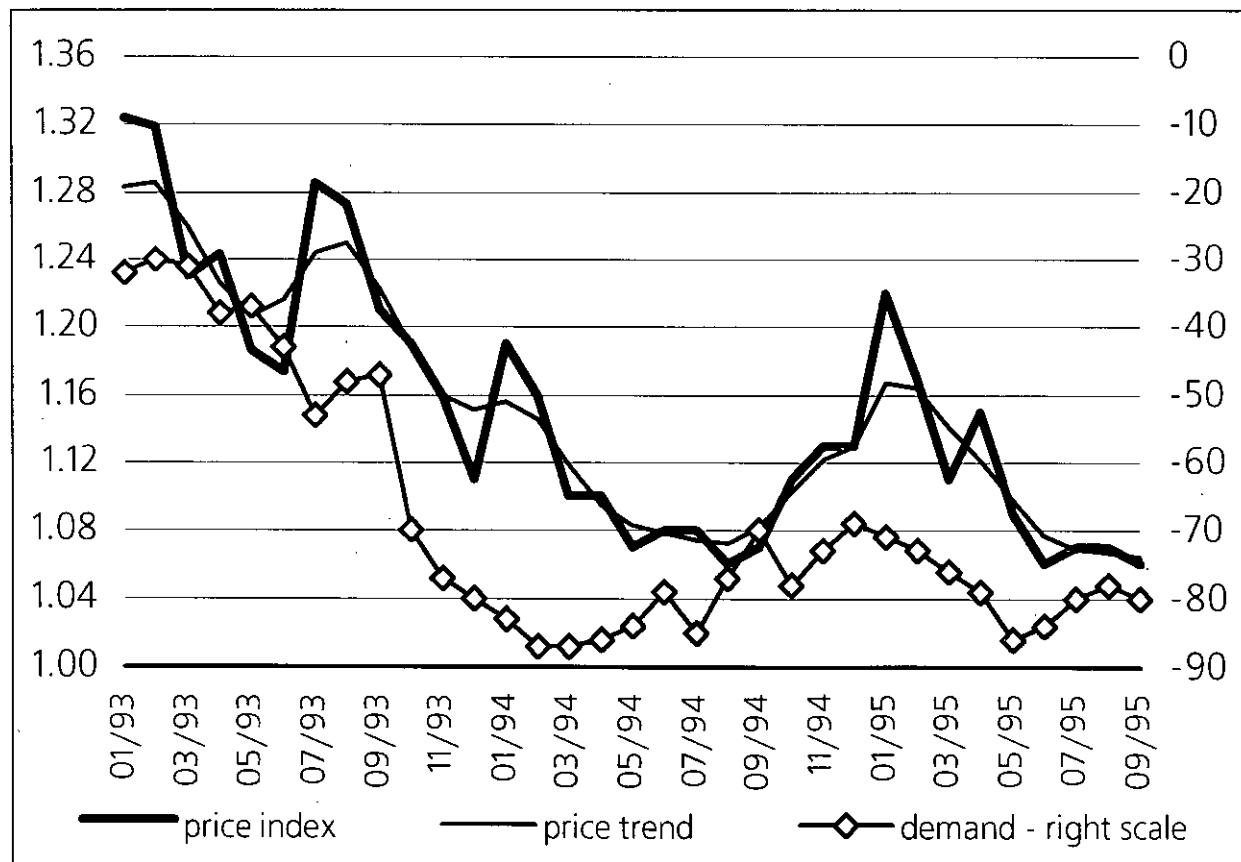
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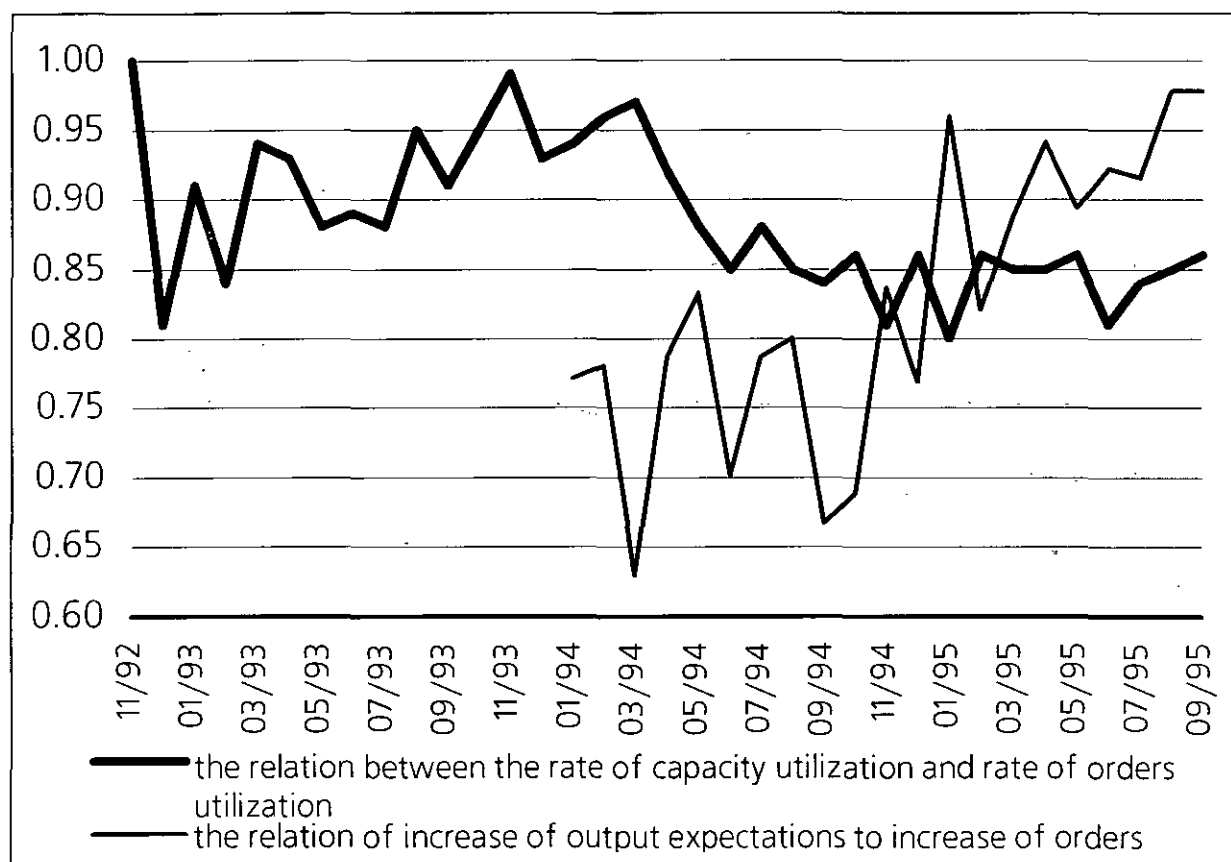
1. Dynamics of supply and demand



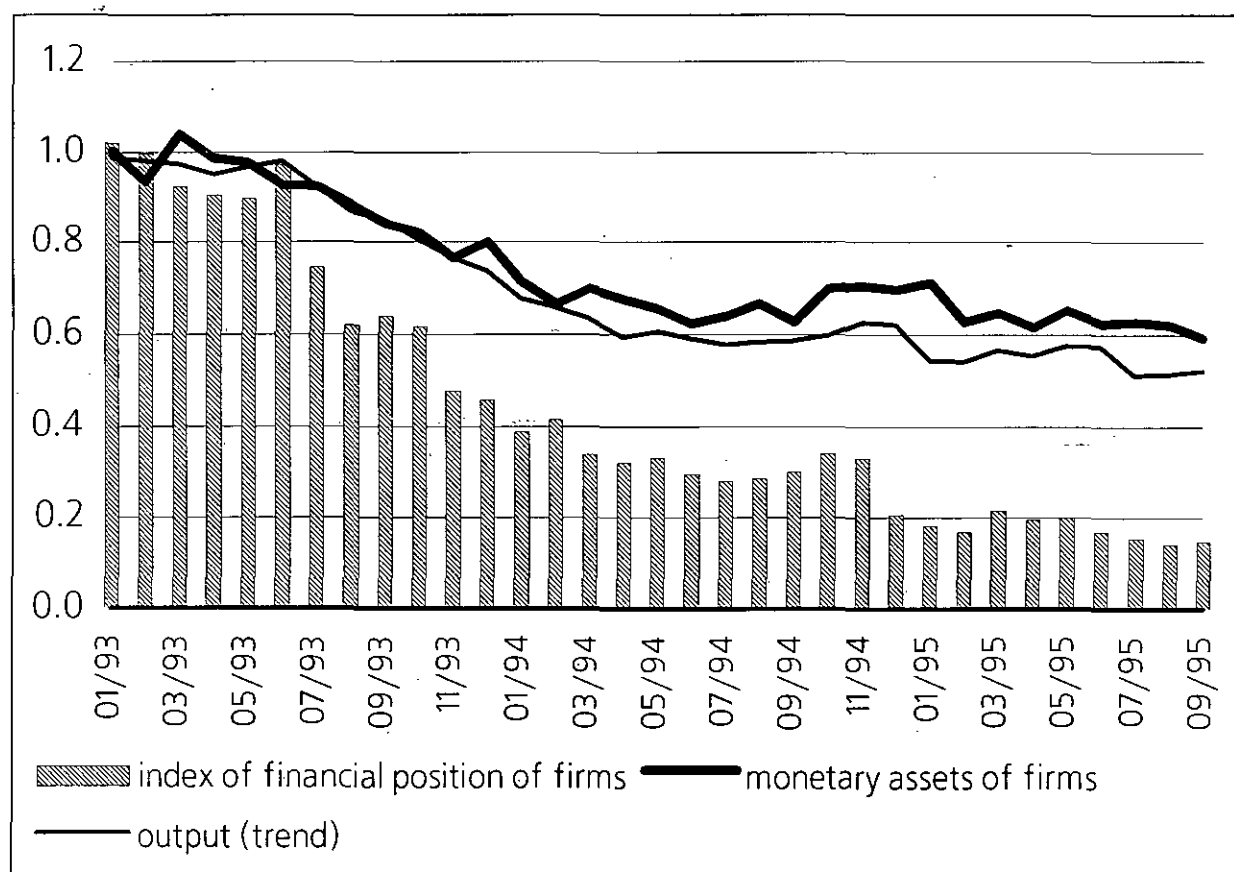
2. Dynamics of prices and demand



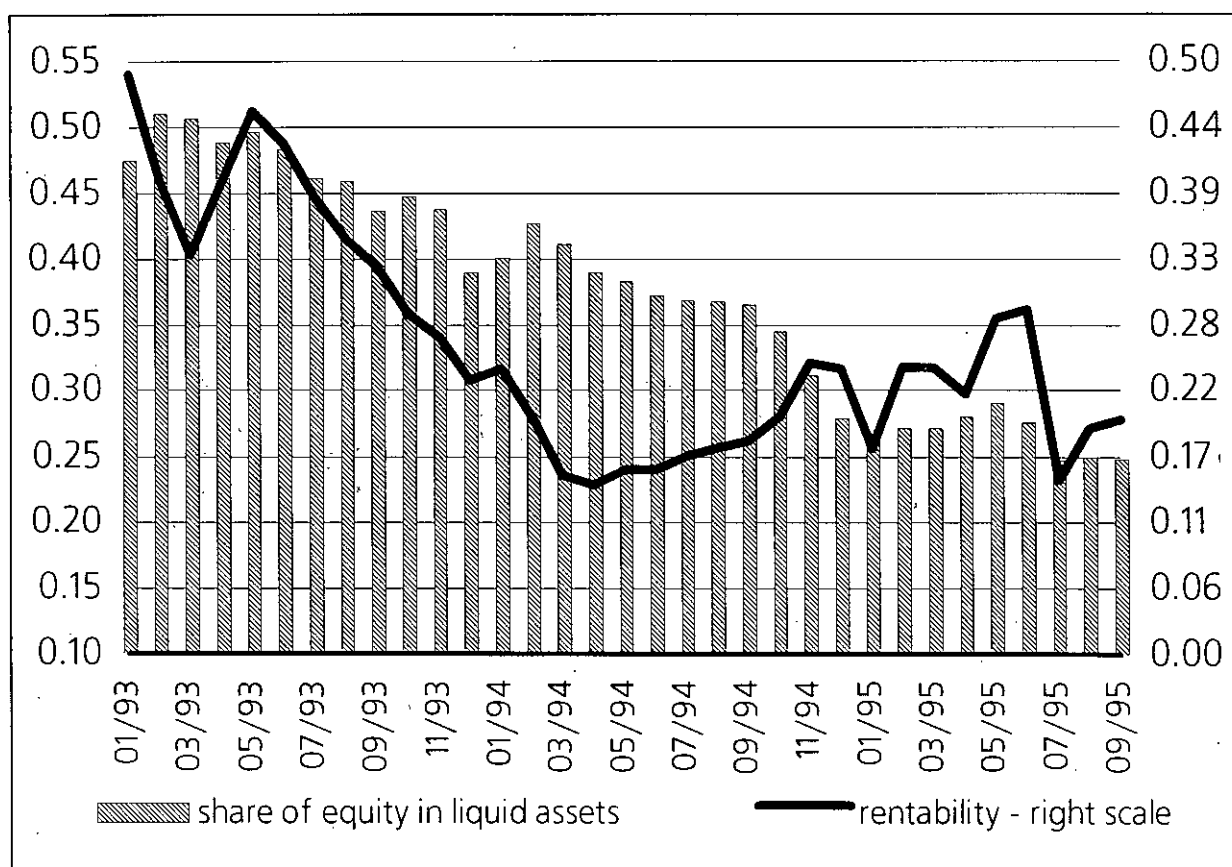
3. Adjustment of supply to demand



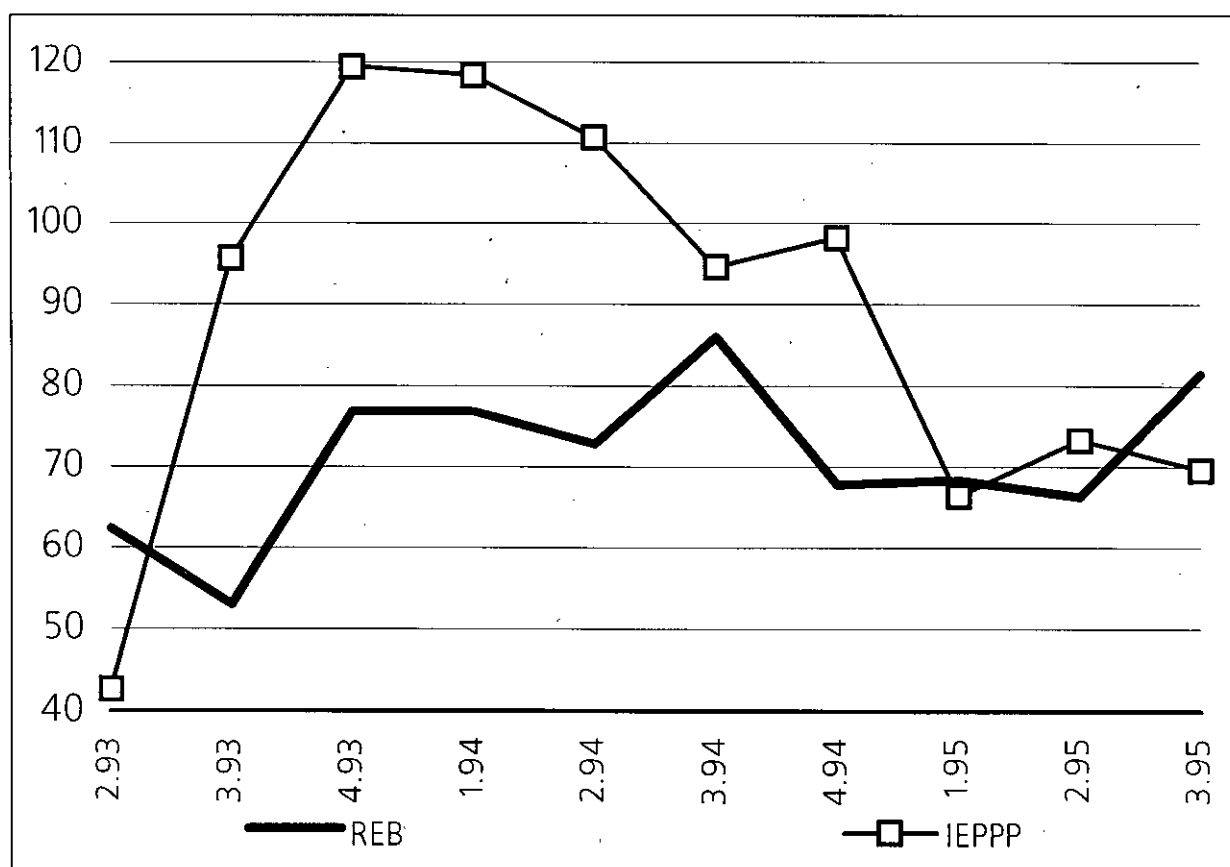
4. Dynamics of supply and financial state



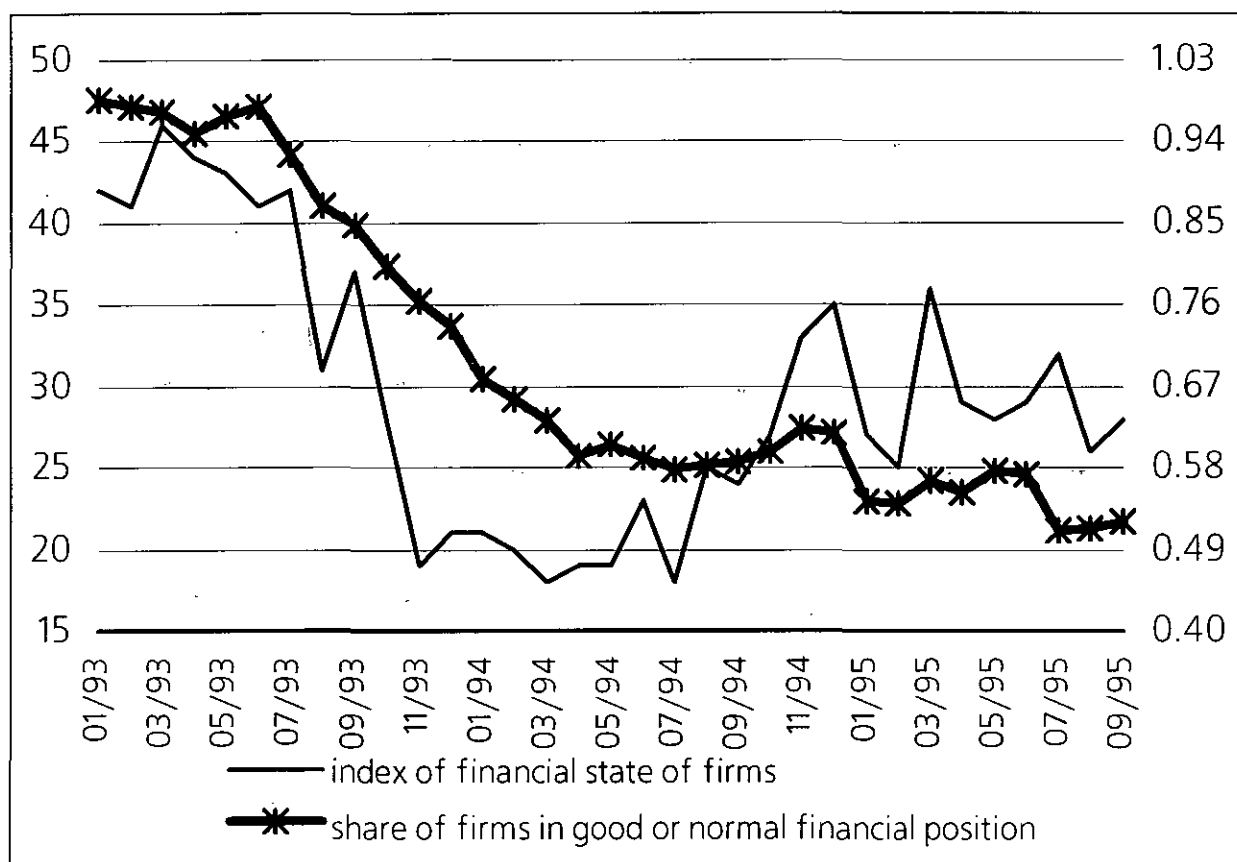
5. Own funds (equity)



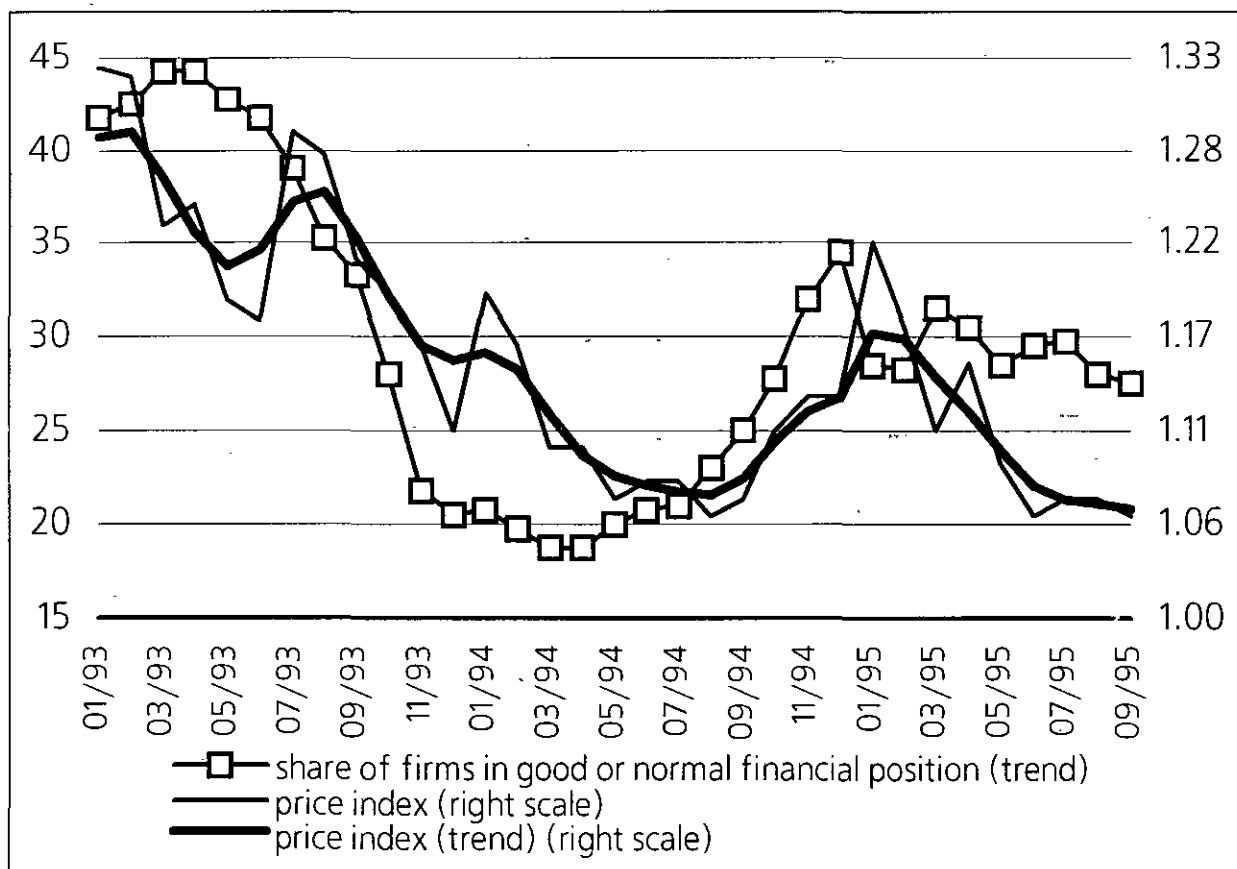
6. The relation between demand and financial limits of output (on results of survey, financial factor = 100 %)



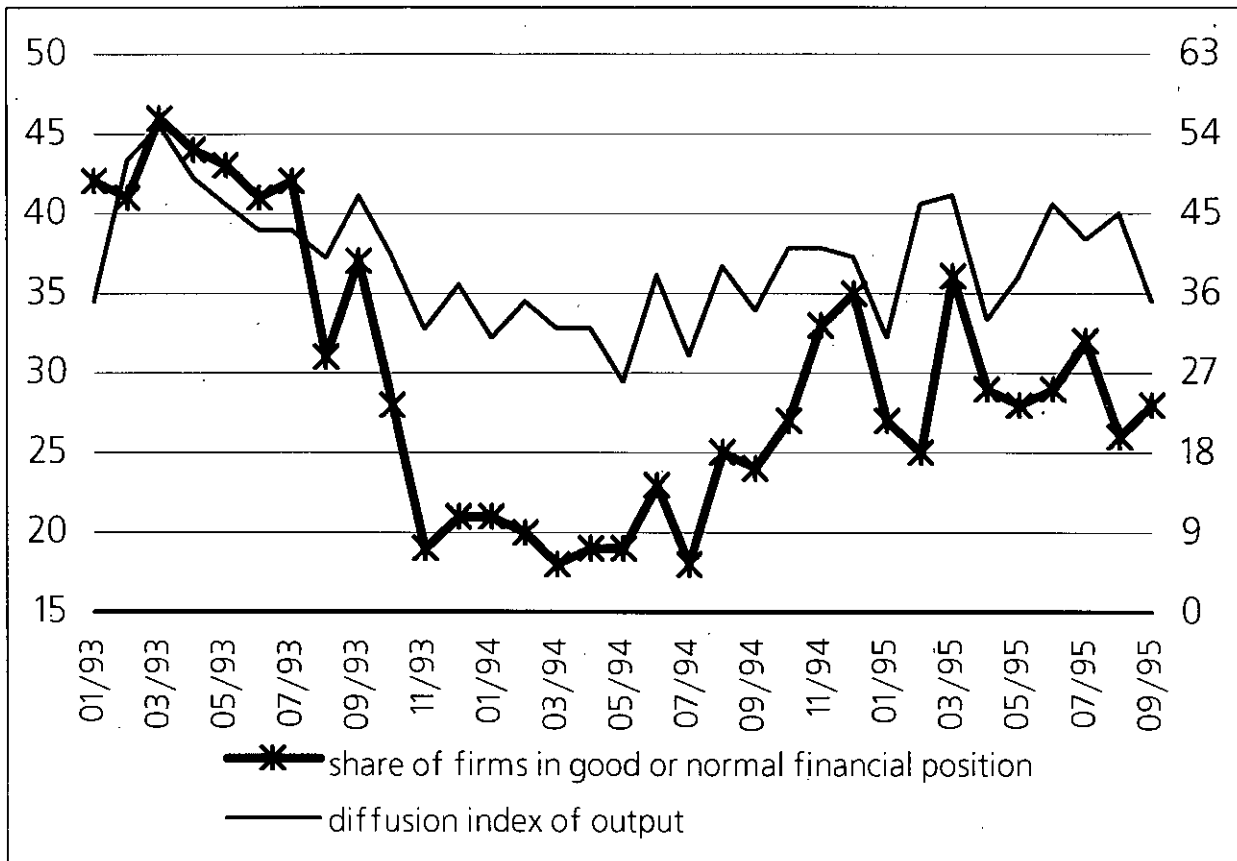
7. Dynamics of financial state of firms and share of firms in good or normal financial position



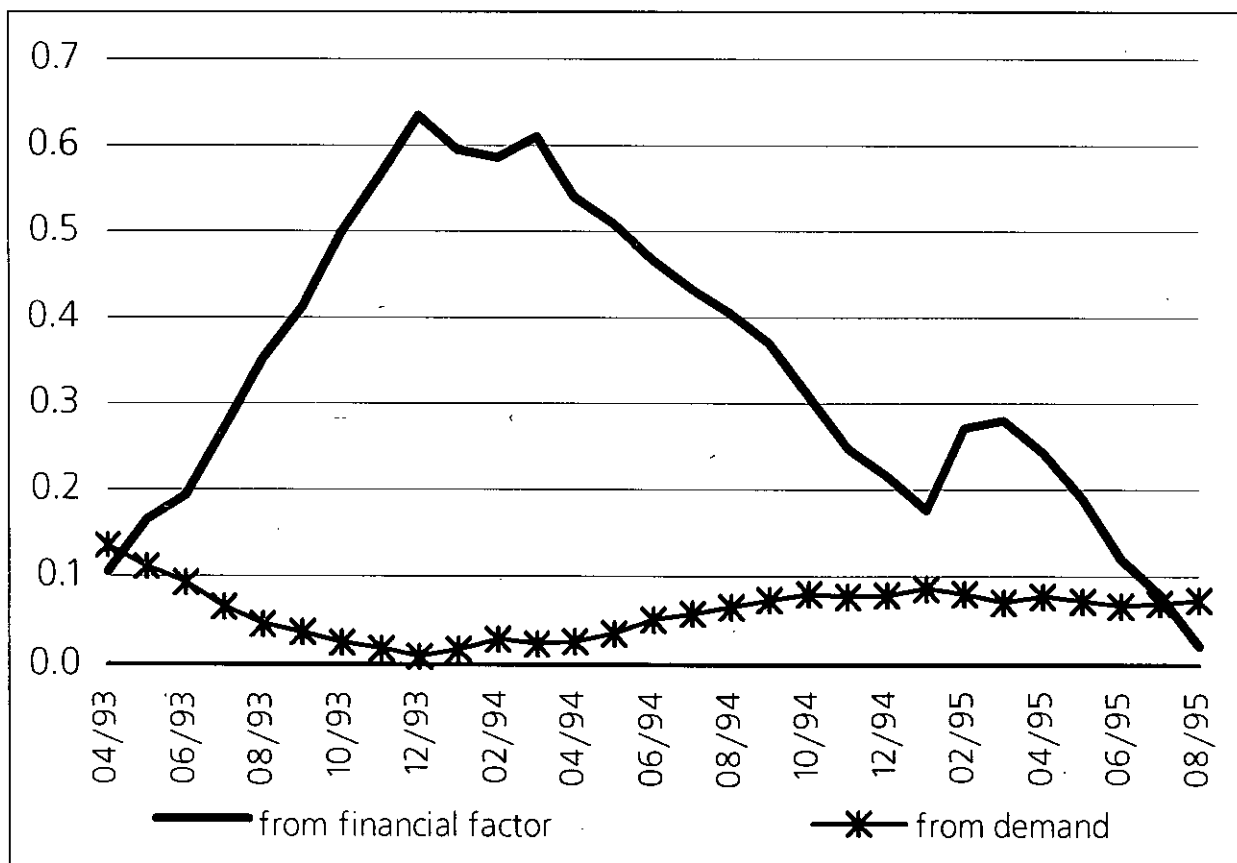
8. Dynamics of share of firms in good or normal financial position and prices



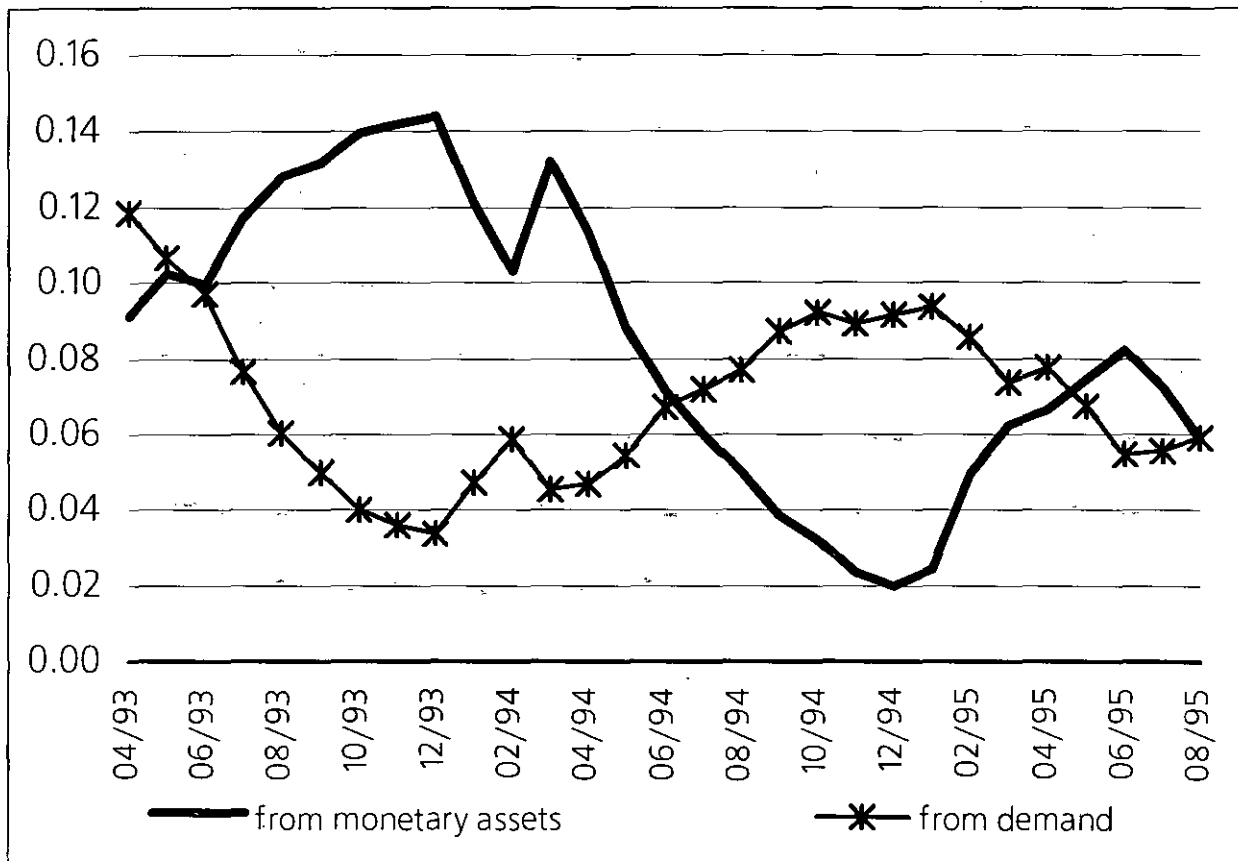
9. Dynamics of shares of firms in good financial position and firms with increasing output



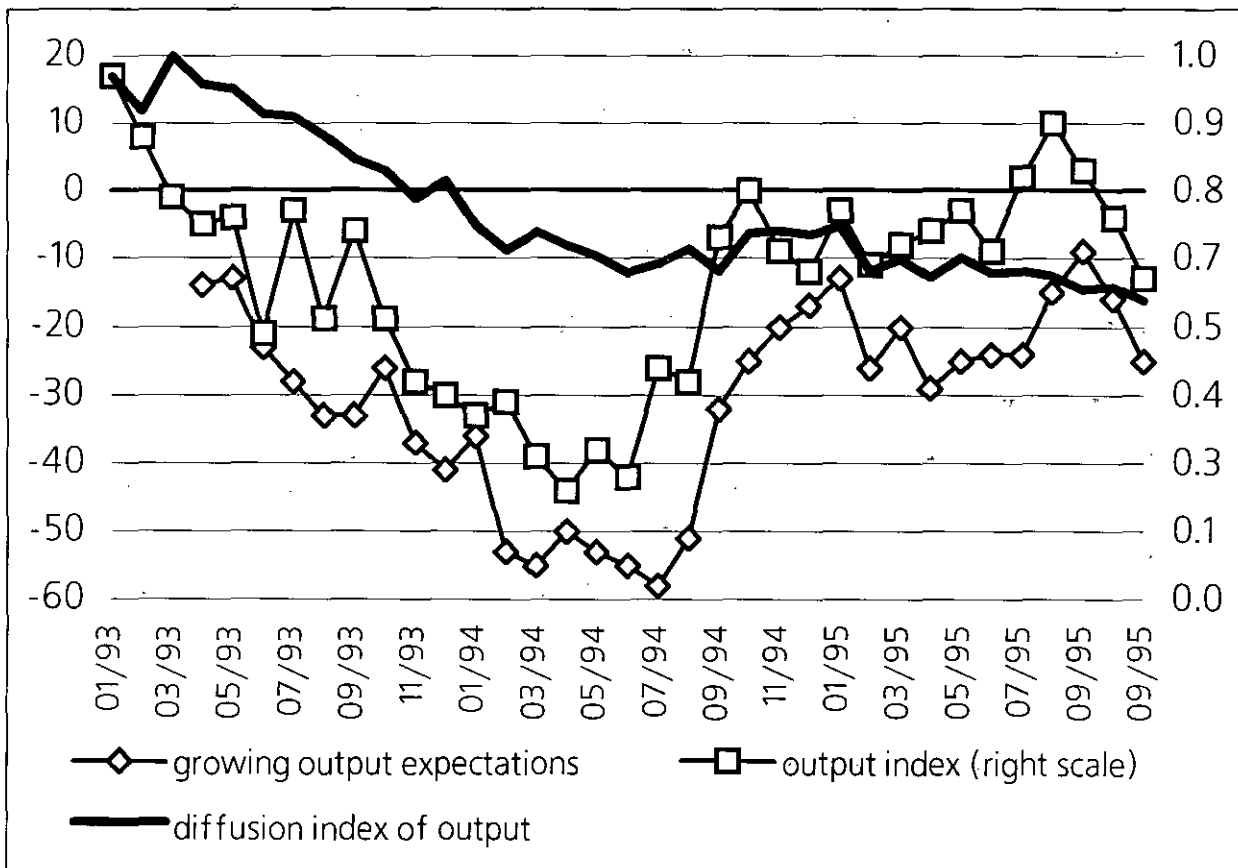
10. Output elasticity from financial and demand factors



11. Output elasticity from financial and demand factors



12. Dynamics of output and expectations



Appendix

Source: Goskomstate data, database of A. Belousov group, and N. Kozlov from Institute of Economic Forecasting

Table 1. Financial flow of industrial enterprises (cumulative, in % to proceeds)

	1993	1994	1 Q1995
State budget			
- tax burden	-25	-22	-18
including debts to state budget	-20	-17	-11
- budget financing	6	4	2
- saldo	-14	-13	-9
Credits	12	15	11
net profit in % to total profit	68	59	78

Table 2. Structure of current capital (at the end of the period)

	1990	1991	1992	1993	1994
Profitability (% to costs)	12	23.7	40.4	32	18.3
Annual profitability *		639.6	314	156.6	52.9
Wasteful enterprises **	13			7.8	22.5
Profit rate of current capital***		8.8	10.8	9.8	5.2
Balance profit % ****		100	115.4	63.9	23.3

* annual profitability (taking into account of capital turnover velocity) to interest rate of 3 month credits

** in % of total amount of enterprises

*** monthly relation of balance profit to net current capital (without credits)

**** in December, 1991 prices.

Table 3. Structure of current capital (at the end of the period)

	1988	1990	1991	1992	1993	1994
Assets(100%)						
- production stocks	75	71	69	35.1	33	36
- financial assets	25	29	31	65	67	64
debtors	16	12	19	35	41	50
short-term loans				1	1	4
money	9	17	12	14	7	5
currency				7	4	2
Liabilities						
- own capital	50	67	65	48.2	38	18
- bank debts	24	18	12	7.8	8	11
- credit debts	26	15	23	44	54	72

Table 4. Turnover (in days of sales)

	4 Q 93	1 Q 94	2 Q 94	3 Q 94	4 Q 94	1 Q 95
Current capital	133	201	200	211	135	149
- production stocks	43	67	65	62	48	55
- financial assets	68	105	110	111	86	94
debtors	55	81	82	87	68	73
money	9	11	10	10	6	6
own current capital	51	57	59	68	24	33
production assets*	37	91	50	36	26	76

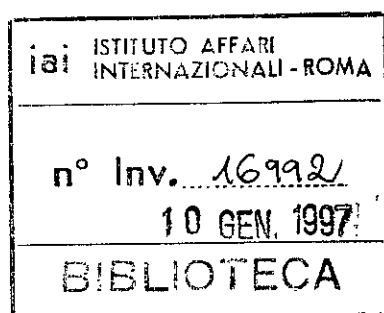
* productional assets - production stocks (without finished ctocks) and money

Table 5. Solvency (%).

	4 Q 92	4 Q 93	4 Q 94	1 Q 95
Current liquidity	155	161	121	128
Time liquidity	70	77	78	80
Absolute liquidity	22	12	10	11
for money	21	11	6	5
Debtors/creditors	75	76	71	71

Table 6. Inflationary tax and income (% to output)

	4 Q 93	1 Q 94	2 Q 94	3 Q 94	4 Q 94	1 Q 95
seigniorage	-1.4	-0.7	-0.6	-0.4	-0.5	-0.7
in % to money	-10.9	-5.9	-4.9	-3	-5.5	-8.9
inflationary income	3.6	5.6	1.9	5.4	5.1	2.6
- including unpayments	42.7	60.5	46.4	40.6	35.4	39.3



Privatization Versus Competition: Changing Enterprise Behavior in Russia¹

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and

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"There is no point in liberalizing prices before the monopolies have been dismantled."

G. Yavlinsky (January 1994).

"Privatization is useless with a monopolistic market structure."

V. Klaus (1990).

"More important in many cases than changing the 'ownership' is changing the market structure - subjecting these enterprises to competition."

J. Stiglitz (1994, p. 136).

1. Introduction

The dramatic program of privatization and liberalization in Russia offers an exceptional opportunity to test the relative efficacy of corporate governance and product market competition as mechanisms for disciplining the behavior of firms. Previous research concerning the effects on firm behavior of ownership change and exposure to competitive markets has been somewhat inconclusive, for a number of reasons. To begin with, most studies have analyzed firms or industries in developed capitalist economies and undertaken static, cross-section comparisons of "performance" (usually defined as profitability) across observations with fixed ownership structures and market environments (e.g., Vining and Boardman (1992)). Given the difficulties of adequately controlling for heterogeneity and the possible endogeneity of ownership and market structure, however, it would perhaps be more persuasive to examine the effects of changes in these conditions on a given set of firms. Yet, in the stable economies of the West, there have been few opportunities to analyze firms which have undergone significant changes in their ownership and environment.

Furthermore, if one accepts the basic premise of most prior studies that the units of observation are in some kind of long-run equilibrium (or at least that disequilibrium can be adequately controlled for), then it is likely that the possible behavioral changes or potential efficiency gains which could be observed by the researcher are rather small. This is particularly so in light of the fact that most of the economies where such studies are undertaken are dominated by private ownership and "workably competitive" markets, so that the

general environment may still exert a disciplining force even if the particular conditions facing the firm do not. State-owned monopolies in the West, after all, usually operate in competitive markets for managers, labor, and most other factors; they can avail themselves of the latest technologies, organizational innovations, and managerial techniques; their performance can be compared, according to a common set of standards, with neighboring privately owned, competitive firms; and instances of gross malfeasance can be publicly evaluated and remedied through a democratic process: all of these factors (at least in principle) would seem to go quite some distance towards mitigating inefficiencies associated with state ownership and monopoly power.

The situation in Russia (and other transition economies) stands in stark contrast. Concerning ownership change, the privatization program has transferred shares in more than 12,000 companies from state to private hands, resulting in a wide variety of new ownership structures, including the participation of insiders, outsiders, and in many cases still the state. Simultaneously, policies have been enacted to liberalize prices, foreign trade, and the entry of new businesses; yet many highly concentrated sectors remain. In a few short years, a large number of firms have been privatized and experienced a rise in competition, but the outcomes are quite heterogeneous.

Moreover, regardless of their current ownership or of the conditions in the product markets which they presently face, all Russian enterprises which are more than a few years old have assets -- including plant and equipment, labor forces, managerial skills, organizational capital, and modes of operating -- which were built up for the most part during a period when there was nothing approaching a competitive market environment and essentially no private ownership. The consequence is the manifest need of Russian enterprises for large-scale restructuring along many dimensions and for a drastic re-orientation towards the market and away from the state. For the researcher, the situation holds out the possibility for observing substantial differences in behavior.

This paper employs evidence from a recent, in-depth survey of 394 Russian manufacturing firms to examine the association between ownership, market structure, and firm behavior. We exploit the rich variation across firms in the extent of privatization, in the identity of the dominant new owners (managers, workers, or outsiders), and in the degree to which product markets have become competitive, as measured by several indicators including concentration ratios, import penetration ratios, location, the geographic scope of markets, and the subjective reporting of the enterprise managers themselves. We use information on behavior of the firms "pre-reform" and more recently to measure several dimensions of restructuring and performance, including changes in product lines, layoffs, and labor productivity. We then relate these behavioral indicators to the variables measuring ownership and competition.

The enterprise data set on which we focus is particularly appropriate for this purpose. Organized by the World Bank, the survey was conducted by VTsIOM (the All-Russian Center for Public Opinion Analysis) on a sample drawn from a complete list of all Russian industrial firms in 1991 with employment greater than 15. The population was first stratified by size and region, and then an initial sample was randomly drawn. Sample replacement (of firms on the initial list which declined to participate) was implemented on the basis of industrial branch in addition to size and region.⁴ Severe problems of missing data run throughout the survey data, and our usable set for the purpose of assessing ownership is reduced to 321 observations. Fan and Lee (1995) and the appendix to Commander, Fan, and Schaffer (forthcoming) contain detailed descriptions of the survey.

The rest of the paper is organized as follows. Section 2 contains a brief summary of ownership change in Russia, defining the variables which we use in our empirical analysis. Section 3 pulls together

⁴The survey also included 45 firms in the new private sector, drawn from separate regional lists. We have excluded these new start-ups from the current analysis, because we cannot observe them "before" and "after" the reform (since by definition, they did not exist prior to the reform, at least not legally). Moreover, they are fundamentally different from the "old" firms in that they do not face the same set of restructuring problems.

information about market structure in Russia, drawing on official statistical data and other researchers' estimations, in addition to our calculations from the enterprise survey. We pay particular attention to variation across firms in the geographic scope of markets. Section 4 describes our approach to measuring restructuring and performance, we describe the several indicators we use in this paper. Section 5 contains the estimation results for equations relating the restructuring and performance variables to ownership, market structure, and other covariates. Section 6 concludes.

2. Ownership Change in Russia

The pace and magnitude of ownership change in Russia in the early 1990s dwarf any contemporary or historical comparisons. From an initial condition of nearly 100 percent state ownership in the manufacturing sector in 1990, most enterprises had been mostly privatized by mid-1994. Excluding *de novo* firms, Table 1 shows the percentage of shares held by the state and by the private sector, as well as the percentage of firms more than 50 percent privatized as of July 1994, for broad industry groups and roughly 2-digit branches of industry for the sample of firms in the World Bank survey data.⁵

Table 1: Privatization By Sector of Russian Industry

Overall, 62 percent of formerly state-owned shares were privately owned, and 67 percent of former state enterprises were subject to the potential control of private owners (defined as greater than 50 percent ownership). The pattern differs quite significantly by branch, however: rates of privatization are highest in consumer goods sectors and lowest in energy and fuel.

As we have discussed elsewhere (1995a), the potential for new private owners to gain control, undertake restructuring, and improve performance of privatized companies is likely to depend on the type of

⁵These patterns and the privatization program which gave rise to them are analyzed in greater detail in our 1995b paper, together with the legal setup and functioning of corporate governance institutions at the level of enterprises.

new owner who dominates. To summarize briefly, it may make a difference if the dominant owner-group consists of outsiders or of insiders (firm employees), but we have also argued that different types of insiders - managers versus non-managerial employees -- may be likely to exhibit different objectives and face different constraints as dominant owners; and the same may be true for the various types of outsiders -- banks, foreign companies, domestic partner companies, or citizens (for instance, as the result of a voucher program). To summarize briefly, insider-owners are less likely to be successful at restructuring and improving performance, compared with some types of outsiders.⁶ Insiders, particularly workers, may have greater difficulties in raising capital (due to lenders' fears of expropriation, aggravated by a poorly functioning bankruptcy regime) and in making decisions which may have distributional implications, that is which create losers as well as winners among them.

Indeed, the Russian privatization program resulted in insider domination in the vast majority of cases, as shown in Table 2. Of the average 62.4 percent of private shareholdings for all the companies in the sample, more than three-quarters, or 48.2 percentage points are owned by insiders, of which more than two-thirds belong to workers. Once again, the patterns differ significantly by sector. For instance, although insiders dominate overall, there are nonetheless significant pockets of outside ownership in the Russian economy. Outsiders are especially prevalent in heavy industry. We exploit the large variations in ownership patterns in our estimation of the determinants of restructuring and performance below.⁷

Table 2: Types of Owners

⁶That is, under the counterfactual that the program had been designed to facilitate greater outside ownership, particularly controlling stakes by large foreign or institutional investors. It is difficult to dispute Chubais' contention that Russian policymakers in 1992 faced a severely constrained set of politically feasible programs.

⁷Here we have reported information only on the overall pattern of shareholding, while in our earlier (1995b) paper we presented estimates of the incidence of nonvoting shares. Because most nonvoting shares are held by insiders and the state, counting only voting shares raises quite significantly the relative stake of outsiders. The results reported below concerning the relationship between behavior and ownership, however, are robust to this change of specification.

3. Competition Measures and Policy

This section describes alternative measures of concentration and competitiveness in Russian markets, drawing on information from the survey of Russian firms and from secondary sources. Our purpose is not to evaluate the aggregate or average degree of concentration in the Russian economy, but merely to establish the fact of significant variation across product markets within Russia, variation which we hypothesize could account for some of the differences among firms in the extent of restructuring.⁸ Means for the variables by industry groups are shown in Tables 3.1, 3.2, and 3.3.

Table 3.1: Measures of Market Structure in Russia

Our first set of indicators draws upon two studies of concentration in Russia: Brown, Ickes, and Ryterman (1994, henceforth BIR) and Joskow, Schmalensee, and Tsukanova (1993, henceforth JST). BIR present 4-firm sales concentration ratios calculated by PlanEcon for 2-digit branches in 1989; we have labelled this variable CR4B. JST present 4-firm sales concentration ratios at a more disaggregated level (approximately 4-digit industries) in 1991, but for a limited number of sectors: only 101 firms. Given the substantial arbitrariness in defining levels of disaggregation across heterogeneous classes of products, and assuming there was little change in market shares from 1989 to 1991 (since the major reforms started in 1992), we have also combined the two variables, using CR4J when it is available, and otherwise using CR4B; the new variable is called CR4BJ. The variables show quite a high variance in concentration: CR4BJ has a mean of .27 and a range from .03 to 1.

The second set of indicators uses the information in the survey to estimate Herfindahl-Hirschman indices for 2-digit sectors. To minimize the number of missing values, we use employment as the base

⁸Ickes, Ryterman, and Tenev (1995) argue that "very intense" competition may have a negative effect on enterprise adjustment (because of short-run adjustment costs), and examine qualitative indicators of adjustment.

variable. To calculate appropriate weights, we use data from 1993, when aggregate employment figures by sector are available. HIRAW is simply the sample index for each sector:

$$HIRAW = \sum_{j=1}^m S_j^2,$$

where S_j = share of firm j in sectoral employment in the sample of m firms in the sector. Our sample was stratified by size (as well as region), and if we maintain the assumption that the size distribution is also representative for each sector, then it is possible to estimate the index for the population quite simply as follows:

$$HIADJ = (m/n) * HIRAW,$$

where m/n is the ratio of the number of firms in the sample to the number in the population for each sector.⁹

HIRAW also displays quite significant variation with a range from .09 to .87, but HIADJ achieves a maximum of only .05.

Although the potential for foreign competition to exert some disciplinary effect in Russia is frequently discounted (for instance, in JST, p. 303), we have gathered data on imports and computed import penetration ratios to allow an explicit test of the hypothesis.¹⁰ IP0 (derived from Roskomstat data) is import penetration from the "far abroad," which excludes the former Soviet Union; while IP1 (from the World

⁹To demonstrate this, define HI = population Herfindahl-Hirschman index = $\sum_{i=1}^n P_i^2$ where P_i = proportion of employment of firm i in the population of the given sector. Say the sample contains m firms (as above) drawn from the n firms in the population in a size-wise representative fashion, in which case $S_i = (n/m)P_i$ for any firm i in the sample. Further suppose that the population can be decomposed into K groups of equally sized firms, where groups are indexed by k , the k th group containing l_k firms. Then HI can be written $\sum_{k=1}^K l_k P_k^2$, since each element of group k has an equal share P_k . The sample can be similarly decomposed into K groups, each of size $(m/n)l_k$ and the sample index can then be expressed as $HIRAW = \sum_{k=1}^K \left(\frac{m}{n}\right) l_k \left(\left(\frac{n}{m}\right) P_k^2\right)$, substituting $S_i = (n/m)P_i$ from above. Simplifying the equation yields the formula for HIADJ (the approximation to HI).

¹⁰The "import discipline hypothesis" originated in Esposito and Esposito (1971), was continued with Geroski and Jaquemin (1981), and has been tested on a data set of Czech industries by Earle and Woergoetter (1993).

penetration from the "far abroad," which excludes the former Soviet Union; while IP1 (from the World Bank) includes all imports. Both variables take output+imports-exports for each sector as the denominator, and the two variables are highly correlated. Both vary significantly across sectors.¹¹

The next group of indicators in Table 3.1 adjusts the concentration ratios above for import penetration. We multiply each concentration ratio by $(1-IP1)$ which represents the share of domestic sales accounted for by domestic producers; where import penetration is greater, the sales concentration ratio is correspondingly reduced.¹² In fact, this adjustment has a significant impact on measured concentration, reducing both its mean and its variance. But there is still significant variation across sectors, for instance from .03 to .77 in CR4BJIP1.

The final indicator in Table 3.1 comes from the survey: PRICONT is a dummy equal 1 if the firm reports that the prices for its major products are subject to state control. The 1991 Law "On Competition and Limitation of Monopolistic Activity in Goods Markets" defined dominant market position as 35 percent or more (to be set annually by the State Committee on Anti-Monopoly Policy), and the 35 percent definition was used in the "anti-monopoly lists" which the government ordered local anti-monopoly committees to compile in early 1992. According to JST (p. 339), "[I]n August 1992, the Gaidar government ordered federal and regional price committees to regulate the prices of most goods produced by firms on the monopoly registers." Although this authority was supposed to expire at the end of 1993, it seems that much of the regulation continued. Thus, the existence of price controls may reflect market power, at least as perceived by local anti-monopoly committees (although one cannot preclude a variety of other motivations).

¹¹It might be useful to try to construct variables measuring the extent of effective protection, which were found to have high explanatory power in Carlsson (1972) and Saunders (1980), although it should be noted that those studies were conducted at the industry rather than the firm level.

¹²This adjustment is suggested in Scherer and Ross (1990), p. 79.

Table 3.2 contains a group of subjective indicators of the extent of market power based on responses to questions on the survey of firms. Managers were asked to report whether they had "major competitors for [their] major products" and, if so, how many. "Major competitors" is not precisely defined in the survey question, and no doubt it would have been difficult to do so in economically meaningful terms. On the other hand, given the difficulties in choosing the appropriate size of the market for any given firm and of measuring the strength of actual and potential competitors in it, the managers' subjective evaluation may be an indicator worth investigating. We define MAJCOMP_D as a dummy variable equal to 1 if the manager reports that the firm faces a major competitor, and 75 percent (the mean of MAJCOMP_D) of firm managers report that they do. Taken literally, this would imply that one quarter of the sample firms are monopolists or dominant firms in their industry. MAJCOMP_# is the number of major competitors, equal to zero if MAJCOMP_D is, and the average is 21 with a range from 0 to 1100.

Table 3.2: Subjective Indicators of Market Structure

The managers were also asked to report the geographic breakdown of the competition they face; under the presumption that foreign competition may be a particularly powerful disciplinary device, we have computed the variables MAJFORD and MAJFOR_#, measuring whether the firm reports any foreign competitor (= 1 if so; = 0 otherwise) and the number of foreign competitors, respectively. In fact, a surprising number of Russian firms - 51 observations, or 20 percent of the valid sample -- report that they face foreign competition. The average number of foreign competitors is 9 (including zeroes), with a maximum of 1000.

Transportation and infrastructural deficiencies probably act as a barrier not only to foreign competition, but to domestic producers located in other regions as well. To provide some assessment of the geographic dimension in which firms operate, we provide, in Table 3.3, a summary of the firms' reports on the extent to which revenue is generated locally (RAYON), regionally (OBLAST), nationally

(NATIONAL), and from 3 different categories of countries importing Russian goods (former Soviet Union (FSU), former CMEA (CMEA), and non-FSU, non-CMEA markets (WEST)). While on average 50 percent of revenue is derived from markets which the firms describe as national, there is considerable heterogeneity. The hypothesis for these variables is that the wider the geographic scope of the market, the more competition faced by the firm; thus, concentration ratios should be adjusted accordingly.

Table 3.3: Geographic Scope of Markets

It is an issue of ongoing (and perhaps ultimately unresolvable) controversy as to which measure of concentration is most appropriate, or, indeed, whether the choice makes any difference.¹³ The appropriate specification of foreign competition and, more generally, of geographic scope is also unresolved. The basic problem is that the relevant concept -- how near the market approaches perfect competition -- is simply not measureable (short of a Lerner index). For instance, in principle it is possible for a market with one seller to be perfectly competitive nonetheless, if it is also perfectly contestable; all observable indicators would imply a monopoly situation, but behavior would be otherwise. It is not our purpose to try to resolve these controversies here, but merely to put forward a set of variables which may be proxies for potential determinants of enterprise behavior. We allow the variables to enter and interact in a variety of alternative specifications in our estimations below:

4. Indicators of Restructuring and Performance

The transition underway in Russia and other East European countries provides a particularly interesting quasi-experimental setting within which to investigate (among a number of topics) the effects of changes in corporate governance and in the economic environment upon the behavior of firms. As is well-

¹³See Kwoka (1981) for a summary of the issues and the argument that high correlation among alternative measures does not imply that the choice is immaterial. Also see Sleuwaegen and Dehandschutter (1986), who argue in favor of the Herfindahl-Hirschman index.

recognized in both earlier work on soviet-type economies and in the new literature in transition economics, the behavior and organization of state-owned enterprises within socialist economic systems are fundamentally different compared to conventional firms in market economies. The speed and magnitude of change in the objectives and constraints of firms in the transition would thus imply that one may observe large changes in their behavior as they adjust from one system to another.¹⁴

The different context has implications not only for the magnitude of change which may be observed, but also for the types of behavior which are interesting to measure. Analyses of the effects of privatization or of concentration in developed capitalist economies are frequently conducted under the implicit assumption that the firms are observed in a steady-state equilibrium, so that it is appropriate to focus directly on measures of performance, particularly profitability. In the transition situation, by contrast, what is perhaps more interesting is the ability of firms (under the influence of new owners and a new economic environment) to change their behavior in desirable directions. Profitability may be a particularly poor measure of behavioral change, certainly so in the short run, because many types of restructuring may impose higher short-run costs and only increase profits in the longer run (even leaving aside the accounting problems which are multiplied in a situation where the accounting system is itself undergoing a transition and few firms are subject to rigorous outside audit).

For these reasons, we find it use to examine behavioral variables which may capture some of the major dimensions of the restructuring process: product market, employment, compensation, unbundling (changing boundaries), and investment. Elsewhere (1995c), we have provided some defense of each of these categories as well as put forth the argument that restructuring is a process of overall change which cannot be

¹⁴Indeed, the changes over 1991 to 1994 are at an order of magnitude seldom if ever seen in most "normal" situations: for instance, the mean change in real output for the firms in our sample is -52.2 percent, the mean change in nominal output is 16585.7 percent (the difference due to the near-hyperinflation in Russia over this period), and the mean change in employment is -25.2 percent.

captured by any one variable and instead requires the construction of an aggregate index or set of indices; these we shall not repeat here. This paper instead describes a few individual indicators of change in the conduct of firms over the 1990 to 1994 period: product lines, layoffs, and labor productivity.

Summary statistics for the restructuring indicators are shown in Table 4. CORPROD is the simple correlation coefficient between the structure of a firm's production in 1994 with that in 1990 (each firm provided the percentage of the value of its output obtained from each of 3 major products in 1994 and from the same 3 in 1990). Some firms changed the composition of their outputs dramatically, but on average there was only moderate adjustment: the mean correlation is .56. LAYOFF is the firm's layoff rate from the beginning of 1992 until the time of the survey in July 1994 (defined as the ratio of number of workers laid off to the mean of employment in 1991 and employment in 1994).

Table 4: Indicators of Restructuring and Performance

We also investigate labor productivity as an indicator of the performance of different firms. Here we are interested in the effects of privatization and increased competition on the level rather than the change in the dependent variable. But to control for the fact that labor productivity may vary systematically for a variety of reasons (for instance, different capital/labor ratios) across firms, we include the lagged (pre-reform) level on the right-hand side. These equations may also be interpreted as restructuring equations, where the firm has managed to reduce employment while keeping output up, or to raise output while keeping employment down. Two versions of labor productivity, defined as nominal sales per employee (S/EMP), and real output per employee (RX/EMP), are shown in Table 4, both for 1994 (subscript 4) and the lagged value in 1990 (subscript 0).

5. Estimation Results

Our estimating equations take the following general form:

$$RI_i = f(OWN_i, COMP_i, X_i),$$

where RI = an indicator of restructuring (described above), OWN is a vector of ownership variables which varies across specifications, $COMP$ is a vector of variables measuring the extent of competition in the firm's product market which also varies across specifications, and X is a vector of other covariates, usually including regional dummy variables. The productivity equations are similarly specified, but X includes the (4-year) lagged dependent variable.

The differences in our approach from the conventional one in much of the literatures on ownership and market structure deserves some emphasis. In the previous section, we tried to justify our use of left-hand side measures which also differ from the conventional focus on profitability: what fascinates in the transition is how firms adjust to the rapid changes in and around them more than their short-run performance. In our productivity equations, we also evaluate performance, but these equations also differ from those in the small literature on the "x-inefficiency" of monopolies and state ownership. In those literatures, the typical unit of observation is a firm (or industry) with unchanging ownership and facing unchanging product market conditions; variation exists only in the cross-section and therefore includes any unmeasureable idiosyncratic components.¹⁵ By contrast, many of our firms were privatized and most of them faced some change in the degree of competition which they faced. Using information from before and after the reforms, we hope to be able to control for the idiosyncratic component of variation.

¹⁵See Vining and Boardman (1992) for a summary of literature and the results of such an analysis using data on a sample of Canadian firms. Information on firms which have experienced a change in ownership (state to private) or in product market conditions seems to be largely anecdotal; see, for instance, the discussion in Scherer and Ross (1990), Chapter 18, and the studies cited therein.

We have investigated a wide variety of specifications of the general model described above, and we report only representative results here. Here we report results for the four indicators discussed in the previous section: two version of labor productivity (S/EMP and RX/EMP), extent of changes in the product mix (CORPROD), and the layoff rate (LAYOFF).

In the estimation results below, we allow for 2 alternative specifications of ownership and 3 alternative specifications of competition. OWN1 is simply PSH, the percentage of shares in the firm which are privately held. OWN2 includes WSH, MSH, and OSH, a disaggregation of PSH among workers, managers, and outsiders, respectively.

The competition specifications are as follows:¹⁶

COMP1: CR4BJ, CR4BJ*IP

COMP2: INVMC# (1/(MAJCOMP+1)), MAJFORD

COMP3: PRICONT

Combined, the 2 OWN specifications and 3 COMP specifications make 6 total for each dependent variable. In addition, to control for the hardness of budget constraints, GOVSUP, a dummy variable equal to 1 if the firm reports receiving any kind of state support in 1992-94, is included in all specifications. The lagged dependent variable is included in productivity equations, for reasons discussed in the previous section. Among a number of other specifications, we also estimated equations which included regional dummies and the measures of the geographic scope of the firm's markets (from Table 3.3), entered separately, as well as interactively with CR4BJ, with CR4BJ*IP, and with IP. None of these additions materially affected the results from the simpler specifications, shown in Tables 5.1 to 5.4.

Table 5.1: Labor Productivity (S/EMP)

¹⁶We tried a number of other specifications, including the Herfindahl-Hirshman indices calculated from our sample, and various interactions of a number of competition variables, but they were either insignificant, or (to say much the same thing), they did not substantially affect the conclusions we present here.

The results in Table 5.1 demonstrate a clear positive effect of privatization on productivity, measured as S/EMP in 1994. The magnitude of the coefficient is large, suggesting between 3 and 5 percent increase in productivity for each additional percentage of shares which are privately owned. The result holds across all specifications which include PSH, although when ownership is disaggregated among workers (WSH), managers (MSH), and outsiders (OSH), the results are significant only for MSH and OSH together with COMP2. Competition variables show up as significant only in COMP1, where sales per employee is increased by concentration (CR4BJ), but the effect is lowered by import penetration (CR4BJ*IP). Because sales are defined in nominal terms, it is difficult to know if these results, taken alone, imply that monopoly raises productivity and that import competition reduces it, or (more likely) that monopoly raises prices and import competition reduces monopoly power, since revenue can be increased by increasing price as well as quantity. The specifications with other definitions of market power (COMP2 and COMP3) return no significant affects of the market environment on firm productivity.

The estimations with real output per employee (RX/EMP), shown in Table 5.2 strongly confirm the positive effect of privatization, and most particularly of managerial share ownership, on productivity. The complete lack of significance for any of the competition variables in these specificants (and all others which we tried, also including our measures of the geographic scope of markets and regional dummies) suggest market power may have enabled firms in Russia to raise prices, but increased competition is not associated with increased efficiency.

Table 5.2: Labor Productivity (RX/EMP)

The results of estimating equations with CORPROD as the dependent variable appear in Table 5.3. The coefficient on PSH is positive, but nowhere precisely estimated. Because a positive coefficient would imply less product market restructuring on the part of privatized firms, it is especially worth investigating. Elsewhere (1995a), we have hypothesized that firms with predominant worker ownership would be less

likely to engage in much internal re-organization insofar as such restructuring creates losers as well as winners inside the firm. In specifications 2 and 6, where OWN2 is used so that the effects of different types of new share-owners can be disentangled, WSH is positive and significant. Only MSH is always negative, and only in conjunction with COMP2 (specification 4). Interestingly, outsiders also seem less eager to engage in this type of restructuring. The only competition variable to show up significantly in this equation is the interaction of the concentration ratio with the import penetration ratio. This result, which also holds when IP is entered separately, and not only interactively, suggests that imports may stimulate adjustment.

Table 5.3: Changes in Product Lines

Determinants of layoff behavior are shown in Table 5.4. PSH is positive and significant in most specifications, and when disaggregated, the ownership effects turn out, for reasons similar to those for CORPROD, to come predominantly from managerial ownership. No competition variables are significant in these equations.¹⁷

Table 5.4: Layoffs

6. Conclusion

In this paper, we have made an initial attempt to measure whether the recent change of regime in Russia has had consequences for enterprise behavior. That some aspects of behavior have changed substantially is not in doubt, as a glance at our summary statistics or a few visits to Russian enterprises can attest. But whether those changes can be linked in a systematic way to policies in such areas as privatization, liberalization, and anti-trust, or to the hardening of budget constraints is trickier.

¹⁷To test the intriguing notion that privatization and competition may have a complementary relationship (for instance, so that competition would only have an effect on privatized companies), we also tried specifications including interaction terms for OWN and COMP, but the estimated coefficients on these variables were not significant.

Some might argue that it is still too early to look for systematic relationships. The privatization program only finished its first, "mass" phase in mid-1994 (the time of the survey from which we draw most of our information in this paper), and sales of the remaining shares and companies are still ongoing as of late 1995. Competition is also only gradually evolving, as new companies grow large enough to compete with the formerly state-owned behemoths and as foreigners gingerly test the water, and Russian companies are only moderate in their response. In a situation of great chaos and uncertainty, random experimentation may seem to be the order of the day, making it hard to make any predictions about the direction to be taken by "restructuring" enterprises. Moreover, together with all the other changes, the ways of measuring those changes (accounting systems and statistical reporting) are themselves changing, making it difficult to monitor and calibrate, a problem still further exacerbated by the years of near-hyperinflation. Perhaps it would indeed be better to "let the dust settle" a bit before trying to determine the new lay of the land.

As against this epistemological pessimism, we would argue that much can be learned in Russia, even in the short run, and that the situation is too exciting (and perhaps dangerous) to wait for historians to sort out in the next generation. Moreover, if one is ever in the future to be able to chart the path of transition, including thorough understanding of the starting point, then the time for gathering data and trying to make sense of events is already slipping away.

But most importantly, we believe that even the exploratory results offered in this paper are instructive. Privatization seems to have a clear and substantial effect on productivity, one which is robust across a wide variety of specifications. Its effect on the restructuring of product lines and employment (layoffs) is much less clear: privatization *per se* is not consistently significant. But we demonstrate that the specific type of new owner can make a big difference, a proposition for which we have argued on theoretical grounds (1995a). Most importantly, worker-ownership is associated with less changes in the product mix

and with fewer layoffs, while managerial ownership is associated with more of both, and outsider ownership with more product changes but no difference in layoffs.

Our results for competition are more ambiguous. In some cases, we have managed to unearth statistically significant relationships among variables, but despite our attempts to measure competition in a multitude of ways (as shown in Tables 3.1, 3.2, and 3.3), it is hard to identify a consistent pattern. Where we have measured productivity in terms of nominal sales per employee, it is possible that our results indicate the ability of monopolists to raise prices and the degree to which import competition may limit that power. This inference is strengthened by the lack of significant effect of concentration on productivity when the latter is defined in terms of real output, implying no effect of market structure on real productivity.

One of the biggest surprises to us was that our variables measuring the location of firms and the geographic scope of their markets bore no fruit. Either entered separately or as interactions with concentration or import penetration ratios, neither group appeared to be significant in almost any equation. Most commentators on concentration and competition policy in Russia (for instance, JST) maintain that market power is exercised primarily on the regional level, and we were prepared to believe the same. But, on the contrary, import penetration shows up as perhaps the strongest competition variable (although still somewhat inconsistent), and its effect does not vary significantly across regions.

Our analysis of these data thus seems to indicate that privatization is having some positive impact, even if the large-scale giveaways to insiders diminish the benefits. Perhaps this provides some empirical support for the often heard recommendations (including our own) for policies designed to facilitate secondary trading of shares and the entry of outsiders. The effect of competition, on the other hand, is much less clear. Taken at face value, the results suggest that regional market power is less important than many commentators have assumed, while imports are already beginning to have some impact nationwide. The data generally seem to reject competition variables as determinants of restructuring. The other possibility is,

as we have noted, that competition and market power are extraordinarily difficult to measure, and that our variables are too highly aggregated or imprecise to define the relevant markets properly. Together with trying to gather better indicators, it would be valuable to estimate similar relationships to those we have examined in this paper using additional measures of firm behavior and restructuring. We have begun to assemble a more systematic collection of such measures (1995c), and we plan to report on their relationship with such variables representing important classes of "motivators," such as ownership, competition, and budget constraints, at a later date.

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Table 1: Privatization By Sector of Russian Industry

Sector of Industry	State Share	Private Share	PO %	N
Energy & Fuel	52.4	47.6	42	19
Energy	72.0	28.0	29	7
Fuel	41.0	59.0	50	12
"Heavy Industry"	38.7	60.8	70	133
Ferrous metallurgy	16.6	83.4	90	10
Nonferrous metallurgy	21.1	78.3	88	8
Chemicals	17.0	83.0	85	13
Heavy machine building	30.9	69.1	75	20
Electrotechnical	27.3	70.2	82	11
Machine tools & computers	60.9	39.1	40	14
Automobile industry	23.3	76.2	89	9
Agricultural machinery	41.9	58.1	69	13
Light machine building	60.5	39.5	50	4
Defense industry	53.4	46.6	73	11
Ship building	38.2	61.8	75	8
Radio industry	77.8	20.2	25	12
"Light Industry"	40.2	58.4	61	80
Communications & Electronics	43.1	54.9	60	15
Metal constructions	28.6	69.4	79	14
Machine repairing	35.8	61.0	53	15
Wood harvesting	73.9	26.1	22	9
Wood working industry	36.3	63.7	71	14
Construction materials	35.5	65.5	69	13
"Consumer Goods"	28.1	71.7	77	89
Textiles	17.1	81.6	82	22
Clothing industry	10.8	85.6	90	21
Food processing	41.6	56.8	67	18
Meat and milk	11.0	89.0	82	11
Other industrial production	60.0	40.0	44	17
Total Industry	37.0	62.4	67	321

Notes:

PO % = percentage of firms in sector more than 50 percent privatized; N = number of firms in sample.

The total of State Shares and Private Shares does not always strictly equal 100, both because of rounding errors and because of the occasional existence of "other" owners whose property status was not specified. However, the magnitude of these unclassified "other" shares was never large enough to affect the categorization of the firm as predominantly state or privately owned.

Table 2: Disaggregated Shareholdings in Russian Industry

Share Owners	Means by Industry Groups				Total Industry		
	Fuel & Energy	"Heavy Industry"	"Light Industry"	"Consumer Goods"	Mean	St. Dev.	Valid N
State	52.4	38.7	40.2	28.1	37.0	40.4	320
Private	47.6	60.8	58.5	71.7	62.4	40.1	319
Insiders	33.9	44.8	44.5	59.8	48.2	36.3	320
Managers	12.4	12.4	11.9	20.1	14.4	22.1	318
Workers	22.8	32.5	32.8	39.8	34.0	30.9	320
Outsiders	12.4	15.9	13.8	11.0	13.8	20.0	320
Banks	0.29	0.87	0.84	0.65	0.77	4.11	309
Inv. Funds	4.8	3.8	3.2	2.0	3.2	8.1	309
Other Firms	0.59	4.7	3.9	4.8	4.3	11.4	309
Foreign	0.00	0.44	0.38	0.00	0.28	2.4	309
Individuals	4.7	4.8	5.1	3.1	4.4	11.4	309
Others	0.00	0.46	1.3	1.1	0.8	4.4	319
N	19	133	80	89	321		

Notes:

Industry groups are defined as in Table 1.

Table 3.1: Measures of Market Power in Russia

Variables	Means by Industry Groups				Total Industry		
	Fuel & Energy	"Heavy Industry"	"Light Industry"	"Consumers Goods"	Mean	Standard Dev.	Valid N
CR4B	41.0	28.4	9.2	10.4	19.5	14.7	273
CR4J	NA	46.5	44.3	25.7	44.3	22.0	103
CR4BJ	41.0	35.4	24.9	12.4	26.1	21.3	274
HIRAW	26.8	22.9	17.3	21.9	21.5	12.3	321
HIADJ	0.37	0.10	0.05	0.08	0.1	0.11	321
IP0	0.00	30.7	22.3	31.7	26.8	13.8	310
IP	0.00	28.8	20.9	21.0	23.1	12.6	304
CR4BIP	41.0	20.1	6.87	8.3	14.9	10.9	256
CR4JIP	NA	33.7	36.0	31.6	34.0	15.0	100
CR4BJIP	41.0	25.5	18.7	10.3	20.4	16.1	257
PRICONT	70.6	42.9	38.7	34.1	40.5	49.2	304
N	19	133	80	89	321		

Table 3.2: Subjective Measures of Market Power in Russia

Variables	Means by Industry Groups				Total Industry		
	Fuel & Energy	"Heavy Industry"	"Light Industry"	"Consumers Goods"	Mean	Standard Dev.	Valid N
MAJCOMPD	0.63	0.72	0.79	0.79	0.75	0.43	309
MAJCOMP#	14.8	19.7	19.0	27.0	21.0	101.8	267
MAJFORD	0.06	0.25	0.08	0.25	0.20	0.40	259
MAJFOR#	0.06	10.76	0.63	17.1	9.0	87.8	259
N	19	133	80	89	321		

Table 3.3: Geographic Scope of Markets in Russia

Variables	Means by Industry Groups				Total Industry		
	Fuel & Energy	"Heavy Industry"	"Light Industry"	"Consumers Goods"	Mean	Standard Dev.	Valid N
RAYON	16.5	3.1	15.4	19.3	11.8	25.8	243
OBLAST	12.2	18.1	41.7	31.4	27.4	34.8	245
NATIONAL	60.1	65.4	35.6	40.0	50.1	39.0	248
FSU	7.8	8.3	5.0	1.7	5.7	10.0	289
CMEA	0.72	1.9	0.73	0.27	1.1	5.6	287
WEST	6.9	5.7	1.7	3.5	4.2	12.7	286
N	19	133	80	89	321		

Table 4: Measures of Restructuring in Russia

Variables	Means by Industry Groups				Total Industry		
	Fuel & Energy	"Heavy Industry"	"Light Industry"	"Consumers Goods"	Mean	Std Dev	Valid N
S/EMP4	21.6	6.7	4.7	9.6	8.0	10.2	234
S/EMP0	0.03	0.05	0.03	0.03	0.04	0.08	171
RX/EMP4	0.03	0.07	0.15	0.25	0.15	0.22	116
RX/EMP0	0.11	0.12	0.25	0.36	0.22	0.32	284
CORPROD	0.61	0.50	0.64	0.61	0.56	0.65	153
LAYOFF	0.03	0.07	0.06	0.08	0.07	0.11	235
N	19	133	80	89	321		

Table 5.1: Regression Results for Labor Productivity [Log(S/EMP)]
(Standard errors in parentheses)

Variable	Specification					
	1	2	3	4	5	6
PSH	0.44** (0.21)		0.53** (0.24)		0.33* (0.20)	
WSH		0.41 (0.25)		0.23 (0.31)		0.21 (0.24)
MSH		0.14 (0.38)		0.94* (0.58)		0.62 (0.38)
OSH		0.47 (0.36)		0.82* (0.44)		0.32 (0.37)
CR4BJ	0.02** (0.01)	0.02** (0.01)				
CR4BJIP	-0.09** (0.18)	-0.09** (0.19)				
1/(1+MAJCOM#)			-0.08 (0.36)	-0.15 (0.37)		
MAJFORD			-0.14 (0.20)	-0.09 (0.21)		
PRICONT					-0.03 (0.15)	-0.03 (0.15)
GOVSUP	-0.07 (0.15)	-0.07 (0.15)	-0.04 (0.19)	-0.06 (0.19)	-0.15 (0.15)	-0.15 (0.15)
Log(S/EMP0)	0.40** (0.07)	0.40** (0.07)	0.38** (0.09)	0.37** (0.09)	0.47** (0.07)	0.46** (0.07)
Constant	2.77** (0.35)	2.77 ** (0.35)	2.69** (0.40)	2.68** (0.40)	3.18** (0.35)	3.16** (0.35)
Adj R ²	0.35	0.35	0.18	0.18	0.22	0.21
N	125	125	98	99	155	156

* significant at 0.1 level
** significant at 0.05 level

Table 5.2: Regression Results for Labor Productivity [Log(RX/EMP0)]
(Standard errors in parentheses)

Variable	Specification					
	1	2	3	4	5	6
PSH	0.49* (0.08)		-0.07 (0.32)		0.32 (0.26)	
WSH		3.8E-03 (3.6E-03)		-2.5E-03 (4.3E-03)		1.7E-03 (3.2E-03)
MSH		0.01* (5.4E-03)		4.7E-03 (0.01)		0.01** (4.8E-03)
OSH		4.0E-03 (5.1E-03)		-4.1E-03 (0.01)		1.2E-03 (4.6E-03)
CR4BJ	1.9E-03 (0.01)	2.1E-03 (0.01)				
CR4BJP	-0.02 (0.02)	-0.02 (0.02)				
1/(1+MAJCOMP#)			-0.51 (0.49)	-0.61 (0.49)		
MAJFORD			0.28 (0.28)	0.23 (0.28)		
PRICONT					-0.23 (0.20)	-0.14 (0.21)
GOVSUP	0.26 (0.22)	0.28 (0.23)	0.15 (0.26)	0.13 (0.27)	0.16 (0.20)	0.18 (0.20)
Log(RX/EMP0)	1.00** (0.08)	0.99** (0.08)	0.99** (0.09)	0.98** (0.09)	1.02** (0.07)	1.01** (0.07)
Constant	-1.24** (0.33)	-1.28** (0.33)	-0.87** (0.39)	-0.76** (0.37)	-0.90** (0.29)	-0.95** (0.30)
Adj R ²	0.66	0.65	0.67	0.67	0.69	0.69
N	91	91	64	65	114	114

* significant at 0.1 level

** significant at 0.05 level

Table 5.3: Regression Results for Changes in Product Lines (CORPROD)
(Standard errors in parentheses)

Variable	Specification					
	1	2	3	4	5	6
PSH	0.22 (0.15)		0.13 (0.17)		0.17 (0.14)	
WSH		0.45** (0.18)		0.28 (0.22)		0.36* (0.18)
MSH		-8.6E-04 (0.24)		-0.54* (0.31)		-0.13 (0.24)
OSH		2.9E-04 (0.28)		0.72* (0.33)		0.19 (0.28)
CR4BJ	0.01 (0.01)	0.01 (0.01)				
CR4BJ*IP	-0.02* (0.13)	-0.03** (0.13)				
1/(1+MAJCOM#)			0.01 (0.36)	0.13 (0.23)		
MAJFORD			2.8E-03 (0.16)	-0.03 (0.17)		
PRICONT					0.04 (0.11)	0.04 (0.11)
GOVSUP	0.08 (0.11)	-0.08 (0.12)	-0.01 (0.14)	-0.08 (0.14)	0.03 (0.11)	0.04 (0.11)
Constant	0.40** (0.14)	0.42** (0.14)	0.53** (0.17)	0.48** (0.16)	0.42** (0.14)	0.40** (0.14)
Adj R ²	0.02	0.04	-0.04	0.05	-0.10	0.01
N	114	114	87	88	147	148

* significant at 0.1 level

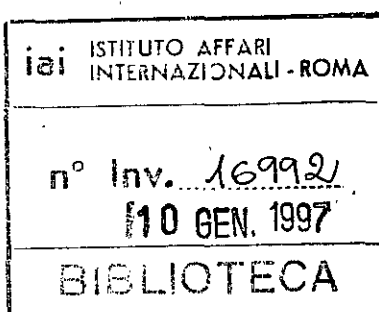
** significant at 0.05 level

Table 5.4: Regression Results for Layoffs
(Standard errors in parentheses)

Variable	Specification					
	1	2	3	4	5	6
PSH	0.04* (0.02)		0.03 (0.02)		0.03* (0.02)	
WSH		0.03 (0.03)		2.5E-04 (2.9E-04)		2.2E-04 (2.3E-04)
MSH		0.06* (0.04)		9.3E-04* (4.6E-04)		6.9E-04** (3.3E-04)
OSH		0.03 (0.04)		-5.9E-06 (4.5E-04)		1.2E-04 (3.7E-04)
CR4BJ	-4.6E-04 (6.8E-04)	-4.2E-04 (6.8E-04)				
CR4BJP	9.2E-04 (2.0E-03)	9.2E-04 (2.0E-03)				
1/(1+MAJCOM#)			4.1E-03 (0.03)	2.6E-03 (0.03)		
MAJFORD			5.78E-03 (0.02)	0.01 (0.02)		
PRICONT					-0.02 (0.01)	-0.02 (0.01)
GOVSUP	-0.02 (0.02)	-0.02 (0.02)	-0.03* (0.02)	-0.03* (0.02)	-0.02 (0.01)	-0.02 (0.01)
Constant	0.06** (0.02)	0.06 ** (0.02)	0.05** (0.02)	0.05** (0.02)	0.06** (0.02)	0.06** (0.02)
Adj R ²	0.01	0.003	0.02	0.02	0.02	0.02
N	182	182	135	136	229	230

* significant at 0.1 level

** significant at 0.05 level



Ownership Structures, Patterns of Control and Enterprise Behavior in Russia

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"We have created a broad basis of shareholders who have an economic interest in the success of the reform" A. Chubais (FT, 30th June 1994)

"Most enterprises continue to be run unchallenged by old management teams, which often lack the human capital and interest to initiate significant restructuring" M. Boycko (FT, 30th June 1994).

1. Introduction

According to The Financial Times (June 27, 1994), Russia's mass privatization program, carried out between late 1992 and mid-1994, "sold more than 11,000 state owned enterprises, accounting for around 70% of Russian industry, in exchange for cash and 148m freely distributed vouchers." From a very low level in 1992, employment in the private sector is estimated to have grown to around 50% of the labor force (EBRD, cited in IHT). It is unsurprising therefore that Russia's pro-reform politicians, as well as some Western analysts (see eg. Leiberman and Nellis (1994)) have hailed the program as a success. But for many observers the speed of privatization has been bought at the price of sub-optimal ownership structures, which may carry deleterious implications for the restructuring process.

Surprisingly, there has been little empirical analysis as yet of which ownership forms have emerged, nor of the implications for the control and behavior of formerly state owned firms. Government sources suggest that some 40 million people, around half the labor force, have become shareholders (Reuters, 30 June 1994), and according to Professor Yasin, head of Yeltsin's advisory economic council, "insiders own on average some 70% of the privatized enterprises" (reported in FT, 30th June 1994). Data from a sample of 142 firms by Blasi and Shleifer (1995) indicate that insiders held on average some 65% of the shares in 1993. The ownership question may be crucial, for economic theory predicts different performance, not merely depending on whether firms are privately or state owned, but according to whether privately owned firms are insider or outsider controlled, and whether the controlling group of insiders are managers or workers (see eg. Aghion, Blanchard, Burgess (1994)). While all the evidence suggests that it is employees who hold a majority of shares (see eg. Blasi (1994)), control is usually argued to be vested primarily in the hands of senior management (see eg. Blasi and Shleifer (1995), Commander, Dhar, Yemtsov (1995)). However, there has not yet been an attempt to describe the patterns of ownership and control, nor to analyze the impact on different areas of enterprise decision-making. It is these three issues - ownership structures, patterns of control and enterprise behavior - and their inter-relationships which are the subject matter of this paper.

The following two sections set the context for the empirical work. A framework of analysis is outlined in section 2, which summarizes hypotheses about how alternative majority ownership forms might influence control and behavior, and there is a brief discussion of

institutional features of ownership in Russia in the third. The fourth section addresses the question of who owns Russian firms, on the basis of a sectorally as well as geographically representative structured random sample (see Fan and Fang (1995)). Enterprises are categorized, according to largest ownership holdings, into State-Owned (SO), Worker-Owned (WO), Manager-Owned (MO), Outsider-Owned (OO), and new (*de novo*) private firms (DNs); these are the groupings which form the basis for the subsequent analysis of control and behavior. We find that, among all privatized companies, workers hold 48% of shares, managers 21% and outsiders 20%; the remaining shares are still held by the state. Workers hold a dominant stake in 65% of privatized firms; managers in 19% and outsiders in 16%. Privatized firms make up almost 60% of firms in the sample; of the remainder almost two thirds are still in state hands.

In the fifth section we begin to investigate whether majority ownership has yet translated itself into control in Russian firms. The qualitative evidence suggests that "management and executive boards" have the greatest influence over all types of enterprise decisions, irrespective of the structure of shareholdings. Although consistent with widespread popular perception, this result emanates from the opinion of managers responding to the survey, suggesting further investigation into enterprise behavior. This we do in the sixth section, which inquires whether different majority ownership forms lead to different economic relationships with the state, and to different economic performance. We find striking evidence that the development of a politically independent and market oriented enterprise sector is associated with private ownership, most noticeably in *de novo* private firms but also in dominant worker owned ones. There are relatively few ownership effects on other indicators of performance, however, though this may reflect the relatively short period that the new owners have had to implement restructuring. Policy conclusions are drawn in the seventh section.

2. Alternative Ownership Forms and Enterprise Behavior: Some Hypotheses

Although the literature on transition has stressed that privatization is a critical component of the transition process, there have been few attempts to evaluate the comparative strengths and weaknesses of alternative majority ownership structures for the newly privatized companies. Earle and Estrin (1995) argue that the balance of advantage shifts between different ownership forms according to the problem under consideration. For example, outsider ownership may offer superior access to external capital markets but may also cause greater social dislocation, while worker ownership may slow employment restructuring. In this section, we provide a simplified comparison of alternative majority ownership forms in achieving four widely accepted

objectives of the transition¹, namely:

- developing a politically independent and market oriented enterprise sector, which we term "depoliticization"²
- long term restructuring
- short term restructuring
- minimizing transaction costs associated with further evolution of ownership

The hypothesized impact of each ownership form, relative to one another and against the base case of state ownership, is reported in Figure 1. The figure summarizes the analysis which follows, and indicates, for example, the predicted extent of depoliticization in worker owned firms, relative both to state ownership and the other ownership forms. But a few words of caution are needed. Firstly, the figure summarizes results derived from theoretical models of 100% ownership by one or another group. However in defining our five ownership forms empirically, we take a majority stake, (or indeed the largest single stake if other holdings are diversified), as implying effective control of the firm. This may be misleading. In practice, the largest group of owners may have highly diversified holdings, while minority interests may be highly concentrated, giving the latter effective control. For example, enterprises classified as worker-owned according to ownership stake may actually be managerially controlled. We return to this issue below.

Moreover, there are many assumptions behind the hypothesized behavior in the table, not all of which will always be satisfied. Three cases will suffice. First, the extent of restructuring will typically be greater when product and factor markets are more competitive, *ceteris paribus*. If sectoral and regional diversity is sufficient, these elements might swamp any independent ownership effects. Second, the precise institutional form of different ownership types may significantly affect behavior. Thus, firms owned collectively by workers with limited share tradeability might be expected to perform much worse than those owned by workers on the basis of individually held and freely tradeable shares. Finally, the

¹Justification for these objectives and further discussion is contained in Earle and Estrin (1995)

²The term "depoliticization" does not precisely capture the concept which we are investigating. According to the Webster New Collegiate Dictionary, it means "to take out of the realm of politics". We are concerned with inculcating a profit orientation and establishing market discipline over firms. This relates to the nature of control over enterprises (eg state versus private), the objectives of the controlling group (eg rent versus profit maximizing) and to the environment in which they operate (eg soft versus hard budget constraints). For ease of exposition we henceforth use the term depoliticization to refer to this complex process of firms distancing themselves from the state.

situation of the firm itself is relevant. Profitability clearly assists restructuring regardless of ownership form. On the other hand, collective employee ownership might be beneficial in situations of extreme loss-making by geographically isolated firms, because such a form allows workers to trade wages for employment security. These provisos aside, the figure reports predictions about the relative impact of alternative ownership forms on restructuring. The arguments are summarized in the following subsections.

2.1 Developing a Politically Independent and Market Oriented Enterprise Sector

A fundamental objective for new ownership structures in transitional economies is to promote the clarification of property rights, and to establish new objectives of the firm. All privatizations assign titles of ownership to particular individuals. But founding a new relationship with the state involves ensuring the freedom of firms from arbitrary interference and a radical reorientation of goals from seeking rents to satisfying the demands of the market, (see Boycko, Shleifer, and Vishny (1993), Frydman and Rapaczynski (1994)).

Relative to state ownership, *de novo* private and outside private ownership seem likely to be best able to ensure depoliticization of the firm and reorientation of objectives. To the extent that the new owners are entrepreneurs, they will less be a part of the old order and perhaps also have more restricted access to the flow of subsidies³. Insiders will also have incentives to increase economic profits, since they personally stand to gain via their shareholdings. But they may also have closer ties to the state bureaucracy, and greater opportunities to pursue special concessions than outsiders or new entrepreneurs.

Within the category of insiders, one might also predict a difference between managerial and worker ownership. If budget constraints are soft, it is arguable that transfers of ownership either to managers or to workers will have little or no effect on enterprise behavior because both sets of new owners will remain motivated to maximize rents rather than profits or earnings per worker. Insider privatization is therefore unlikely to bring many benefits until budget constraints are tightened. Under somewhat harder budget constraints, the net returns to profit as against rent seeking will be determined by both the opportunity costs and the benefits, which are in turn affected

³Webster and Charap (1993) in an early survey of 99 private manufacturing firms in St Petersburg find that the vast majority of Russian entrepreneurs formerly held high level posts in state owned enterprises. However, while their skills in the sector are clearly relevant, it is unclear that these new entrepreneurs would also be able to take with them favored access to government grants, let alone rent seeking attitudes.

by the prospects of the firm, its environment, the political situation, etc. However, there may be some differences between employee and managerial ownership in this respect. Workers represent a new and more diffuse group of owners than managers, who are generally survivors from an earlier period, maintaining their good connections and bad habits. The costs to seek rents may be higher for worker owned firms than those under managerial ownership because the former organization may have more diffuse and heterogeneous objectives. More importantly, the benefits to rent-seeking may be lower in employee-owned firms because managers, given their longstanding connections under the previous regime, may be more effective at extracting subsidies. Managers may also be able to achieve higher returns to rent seeking because they may be better able to appropriate the rents for themselves personally, or because there are fewer of them among whom to share the spoils. In such circumstances, insider privatization to employee owners, by weakening the old relationships, might be superior to managerial ownership. However, we predict that both will prove inferior on this score to outsider privatization.

2.2 Long Term Restructuring

We focus on three issues here: unbundling, organizational structure and investment. The boundaries of firms in a market economy are supposed to be determined by efficiency considerations: the costs and benefits of integration. But in socialist economies, as emphasized by Kornai (1991), the relationship between the managers of firms and their superiors, whether the director of a trust or a branch minister, differed little from the relationship between the manager and the foreman or production supervisor under his/her direction. An important element in the transition process is therefore to reorganize the groups of productive units which previously comprised the enterprise sector to form a new industrial structure in which the boundaries of the firms minimize internal transactions costs.

A market orientation should also be reflected in changes in enterprise organizational form. The structure of the organization should be adapted to be able to respond to the changing demands of customers, to ensure adequate mechanisms for managerial control, and to provide appropriate information for rational decision-making. This may involve for example the establishment of new functional divisions within the firms suitable for finance or marketing, and the development of new control and monitoring systems. Finally long-term restructuring involves investment in capital equipment, to introduce new technologies, to raise quality standards, to broaden product differentiation, and to address input wastage and its environmental consequences. An important issue is the ability of different ownership forms to mobilize capital and to introduce new technologies.

Restructuring, both long and short term, are primarily problems faced by current and former state owned firms, so we exclude *de novo*

private firms from these comparisons.⁴ Provided outsiders are able to exercise their nominal property rights, outsider ownership is probably the form best suited to long term restructuring. This is because given their profit orientation, outside owners will take the most dispassionate view of existing production and organizational structures, and because in principle they suffer least from agency problems in their dealings with external capital markets. Insider owned firms might be predicted to suffer more serious difficulties in raising outside capital because of the agency problems faced by lenders and minority investors (see eg. Shleifer and Vasilyev (1995), Hansmann (1990) for summaries).

Ownership by managers is also likely to dominate that of nonmanagerial employees in redefining the appropriate boundaries of the firm. Worker ownership may still be superior to state ownership because rearranging the boundaries of the firm will be possible provided the employee gainers can compensate the losers. In principle, even highly egalitarian employee-owned firms with high solidarity may therefore be able to undertake some restructuring and unbundling provided it offers a potential Pareto improvement and some form of compensation package can be agreed upon.

In some situations, however, this compensation will not be possible and potential Pareto improvements will not be convertible into actual Pareto improvements (for instance, because lump-sum transfers are infeasible or because of severe capital market imperfections). The biggest problems are likely to arise due to the difficulties of collective decision-making under uncertainty, and particularly when some groups of workers are earning supra-competitive rents. Many enterprises have a large number of restructuring paths which they could potentially follow, for instance changing product lines, re-organizing company divisions, or adopting different kinds of new technologies, but each has different implications for the value of the human capital of various groups of workers in the company. Given that the profit associated with each path is also greatly uncertain, each group of workers will try to block paths which seem likely to downgrade their own skills. Thus, it may not be difficult for blocking coalitions to form *ex ante*, preventing *ex post* desirable restructuring.

In resolving these agency problems, managerially owned firms have a clear advantage. They will be motivated to undertake any restructuring or rearrangements in the boundaries of the firm which increase profits. Supra-competitive wages may be reduced and workers laid off with little or no compensation. Agency problems apart,

⁴The *de novo* private sector as a whole, of course, can influence industrial and economic restructuring. For example they may invest and minimize labor costs. But they are not adjusting from a former state owned structure to a market determined optimum, rather adjusting as profit-maximizers to changing market conditions. As such, we exclude them from the table.

managerial ownership can therefore potentially yield restructuring benefits analogous to those of investor ownership, greater than those under worker ownership.

2.3 Short Term Restructuring

The transition process demands that firms become responsive in the short term to market signals in terms of both the products they choose to supply and in their use of factor inputs. In firms for which the optimal level of output has fallen, the ownership system must be able to effect large decreases in employment and other inputs. Due to the inherited technologies and the production practices which were wasteful in the use of inputs, including energy and labor, new owners must have the incentives and the ability to ensure that costs are reduced, that the factor mix is rationalized, that productivity is raised, and that quality is improved. These are the standard problems of restructuring (see eg Belka et al (1994), Estrin et al (1993)).

Once again, one predicts outside owners to have less qualms than insiders about reducing employment, and other short term restructuring measures. However, they might be unable to exercise their property rights in such sensitive areas, especially if insiders refuse to cooperate. Moreover, if product or factor markets are relatively more competitive and budget constraints hard, insiders may be forced to restructure and improve their efficiency in order to survive.

Comparing managerial and worker ownership, it is important to stress that both have equivalent incentives to increase economic profits and to cut non-labor costs. But worker-controlled firms are likely to perpetuate even more than managerially owned ones inefficiencies in the allocation of labor. However, the flip side is that worker owners would probably be able to get rid of managers more easily. In cases where managerial turnover is a *sine qua non* for the firm to be turned around, managerial ownership has the disadvantage of entrenching bad managers.

2.4 Evolution of Governance Form

The transition process involves dynamic adjustment by organizations to changed and changing economic circumstances. The outcome of the process may be path dependent, and the appropriate institutional arrangements may gradually change as the process unfolds. In such circumstances, it may not be possible to specify *ex ante* the optimal ownership structure but it would be desirable that whatever structure is first selected should have the flexibility to evolve as the dynamic path of transformation proceeds. The lower the transaction costs involved in exchanging ownership rights, the less binding the initial allocation of ownership rights, because markets would emerge to ensure a reallocation to achieve better matching of owners with assets. Institutions concerning property rights should therefore be designed to lower those transaction costs and to facilitate the development of financial markets. The new ownership configuration should also

minimize the probability of degeneration back to state ownership.

Widespread ownership by outsiders, whether *de novo* or in privatized firms, is likely to encourage the development of secondary markets and thus further the evolutionary process of matching and rematching assets with owners. In contrast, concentrated insider ownership will discourage the development of takeover markets, because the lack of liquidity in small numbers of shares implies that it may be very difficult in a takeover action to earn the control premium on minority stakes previously acquired; thus rematching is inhibited. If worker shareholdings are widely dispersed, secondary markets may develop more easily than if shares are concentrated in the hands of a few managers. Although still difficult, it may be somewhat easier for outsiders to take over companies by buying up small numbers of shares than by negotiating with a single manager or a small group of managers. The reason is that, while there may be a collective interest of the insiders to keep out outsiders, individual employees may "free ride" by selling their small holdings to outsiders. Concentrated insider holdings are more likely to lead to entrenchment because of the informational advantage of insiders over outsiders. In an environment of great uncertainty over the prospects for any company and lack of financial markets functioning to provide estimates of value, the concentration of holdings together with the asymmetry of information may give rise to adverse selection in the market for corporate control.

2.5 Summary of Hypotheses

In summary, outside ownership is predicted to provide the greatest progress towards our four objectives for enterprises in transition; where relevant this performance would be matched by *de novo* owners. Insider privatization is expected to be superior to state ownership, but worse than majority outsider control. If we compare forms of insider ownership, worker ownership is hypothesized to have deficiencies in long term restructuring, especially rearranging the boundaries of the firm, and short term restructuring when employment levels are at issue, but perhaps to be superior in terms of depoliticization and in the evolution of governance structure.

3. Institutional Features of Russian Privatization

The Russian mass privatization involved large-scale giveaways to insiders on the argument that there was no politically feasible alternative form of privatization. This is because managers and workers had already accumulated tremendous political influence and enterprises, had gained significant autonomy and *de facto* property rights. Early methods of ownership decentralization under *Perestroika* had already emphasized leasing arrangements, eventually resulting in insider buyouts at highly preferential prices.

The institutional features implied by the State Privatization Program seem straightforward. The legal form of enterprises is an

open, individually owned joint stock company and shares are in principle fully tradable, and voting rights (of voting shares) freely and equally exercised. But there are some important qualifications relevant to our hypotheses above, which we list in increasing order of importance. First, in addition to the better known ways in which workers were able to acquire shares, there was possibility of a kind of ESOP, the FARP (Fund of Workers' Shares). On average the FARP seems to hold only a minor fraction of shares, but may sometimes be more significant, exercising a governance role and/or restraining share trading⁵. Second, under the "Option 1" method of privatization, 25 percent of company shares were given to company employees free-of-charge, but under the condition that they be non-voting⁶. Third, as noted above, many companies were privatized outside of the State Privatization Program, generally through the buyout of a lease granted to the workers' collective during the years of *Perestroika*. According to Webster et al (1994), "almost all former leaseholds were either closed joint stock or limited liability companies..." (page 11). In closed joint stock companies, share trading is permitted only among employees and with the approval of the workers' collective (which apparently survives in many firms).

Furthermore, many observers question the degree to which the legal institutions function in practice, even in nominally open joint stock companies. For instance, there seems to be some evidence of ESOP-like trusts forming with the motivation of stifling worker influence. According to Blasi (1994), many managers intended to form a trust for the employees' shares in order to control how those shares were voted. More generally, voting rights may not always be freely exercised. Managers have reportedly often postponed the first general meeting of shareholders after privatization, and voting is said to be sometimes conducted neither by secret ballot nor in proportion to shareholdings. Despite frequent press accounts, it is difficult to obtain reliable information on such practices or to estimate their prevalence.

There also seem to be many constraints on the tradeability of shares, resulting partly from attempts by insiders to prevent the entry of outside investors and partly from the limited development of secondary markets. Probably the best evidence for the poor possibilities for share trading was the extremely low cash value of

⁵Unfortunately, we are able with our data neither to compute the shares held in a FARP nor to assess its effects on behavior.

⁶Although the data do not distinguish voting from non-voting shares, we know the method of privatization and were able to make adjustments for this factor in our appraisal of corporate control below.

vouchers and implied low value of company shares⁷. Because the cash value of vouchers was determined, for the most part, by transactions involving minority investors, it seems likely that the control premium in this case is simply enormous: outsiders have little willingness to pay for minority stakes in insider-controlled firms⁸.

Finally, we come to the issue of residual softness of budget constraints. Little change in enterprise behavior can be expected to result from ownership changes in situations where firms systematically do not bear the costs or win the benefits of their actions. It is often assumed that subsidy reductions are necessarily associated with privatization, but in Russia this may not be true. Indeed, shortly after the voucher privatization process began, and no doubt intended to encourage that process to move forward, Yeltsin signed a State Decree "On Not Permitting Discrimination Against Privatized Enterprises in the Provision of State Financial Support" (November 27, 1992). Nonetheless, there seems to be agreement that subsidies and money creation have generally been declining in 1993 and 1994, so that the "non-discrimination" may be starting to apply in the sense of hard budget constraints for all. If true, then privatization could begin affecting behavior in Russia. We examine the evidence provided by the survey on these points below.

4. Corporate Control in Russian Enterprises

In our subsequent empirical work, we address whether firms owned by different groups of majority of dominant owners behave differently. The five categories of ownership groups were constructed as follows. The firm in the sample were first classified according to whether they were old enterprises (privatized or state owned (SO)) or new private ones (DNS)⁹. Categories for the possible controlling interests in the

⁷According to Boycko, Shleifer, and Vishny (1993), imputing the value of the entire Russian capital stock on the basis of the cash value of vouchers would result in a figure around the net worth of one large U.S. company.

⁸Some evidence may be found in Pistor (1993), who states, for her sample of recently privatized companies, that "trading volumes were low, and usually occurred among employees and former employees" in the summer of 1993. Moreover, the prices on the secondary markets were reportedly still much lower than in the original voucher auctions, again implying extreme shyness on the part of outsiders. Webster et al (1994) also found little evidence of share trading.

⁹A major gap in the sample concerns the date of privatization. We can assume that most of the privatizations in the State Program were implemented from late 1992 until mid-1994, but lease buyouts may have taken place earlier.

old firms were then defined on the basis of the information on legal form, method of privatization, status of privatization, and the structure of ownership, the latter given by the percentage of voting shares held at the time of interview by ten categories of owners¹⁰.

Old firms were then categorized into state and those claiming their company "has been privatized"¹¹. The latter companies were designated as outsider-owned (OO) if banks, investment funds, other domestic firms, foreign institutions, and individuals other than employees together held more than the combined total for insiders¹². Insider-owned companies were considered to be managerially controlled (MO) when the percentage of shares held by managers was at least as great as that held by non-managerial employees. Those which had a larger share held by non-managerial employees we classified as worker-owned (WO)¹³.

Table 1 reports information on the ownership structure, of the 439 companies in the sample. Of these, 45 are DNs, and 325 are old firms, of which 110 still have a dominant state share and 214 are majority privatized¹⁴. The sample of state owned and privatized firms was randomly drawn from a list of the population of industrial firms employing more than 15 workers, to which were added a predetermined number of de novo firms. The data therefore provide an opportunity, which is particularly valuable in the absence of comprehensive official

¹⁰The structure of ownership was not available in some observations, but often, for instance in unincorporated state enterprises, it could be inferred and imputed. In other cases, firms claimed to be privatized, but reported that a majority of their shares were still held by the state; we classified them as state-owned (SO). Problems also arose due to missing values, answers of an unspecified or ambiguous "other," and the presence of nonvoting shares. Option 1 in the State Privatization Program gave employees 25 percent of the shares free-of-charge, but the shares carried no voting rights; we subtracted those shares from the numbers given for insiders, and on this basis reclassified a number of companies.

¹¹In the group of potentially privatized, we designated as SO all companies in which the federal and regional property fund still owned 50 percent or more of the shares.

¹²Unfortunately, we had no information on which of these entities might themselves still be state-owned, and in our analysis we are implicitly assuming they are all private.

¹³When the data did not permit us to classify companies by dominant owner, including cases of inconsistent answers across questions, the firms are designated "unclassified".

¹⁴The remaining firms are unclassified.

statistics, to measure the ownership outcome of the Russian privatization process. Workers have become dominant owners in a majority of cases: WOs account for 138 firms, 65 percent of the total; 19 percent, or 40 firms, are MOs; while the remaining 16 percent, 36 firms, are OOs. Among all privatized companies, workers hold an (unweighted) average of 47.5 percent of all shares, and managers hold 20.8, which yields a total insider stake of 68.3 percent, over two-thirds of all shares. The remainder is divided between the state (10.7 percent) and outsiders (19.7 percent), while 1.1 percent of the shares were owned by non-classifiable "others."¹⁵

The sample contains significant diversity in terms of category of dominant owner, which makes it well-suited for our purpose of relating these categories to various aspects of the firms' behavior. There also appears to be an association between the extent of share ownership held by workers and that held by outsiders: both are more likely to own shares in a company dominated by the other than they are to own shares in a company dominated by either managers or the state. Managers and outsiders seem particularly loathe to own shares in one another's companies. In addition, the state seems to exhibit a slight preference for share ownership in companies dominated by managers over those dominated by workers and those by outsiders. Together, these results provide some evidence against the somewhat prevalent views (for instance, in Webster et al (1994)), that managers and workers are in close coalition with one another in privatized Russian firms and that managers are more likely than workers to become independent of the state.

Official data on the ownership structure of the newly privatized companies is unavailable. However, our results on ownership shares are of the same order as those obtained from three earlier surveys that attempted to obtain some of this information for samples of privatized companies. In Pistor's (1993) sample of 36 firms, all employees together received an average of 61.8 percent of all shares, while outsiders had 19 percent on average, and the State Property Fund retained 19.3 percent. Blasi's (1994) survey of 127 privatized firms found 90 percent with majority employee ownership. On average, all insiders had 65 percent of shares in his sample, with a median of 60 percent.¹⁶ Finally, Webster et al (1994) reports on a survey conducted

¹⁵The open-ended answers to the ownership (and other) questions allowed several "other" owners to be classified reliably into one of our categories.

¹⁶Thus the distribution is positively skewed, implying that there were few firms which had a small proportion of insider ownership. Outsiders had an average of 21.5 percent of the shares, and the state retained 13 percent on average. Blasi also provided information on the division of shareholdings between top managers and all other employees: top managers had an average of 8.6 percent of all shares (the median was 5 percent).

in October 1993 of 92 privatized firms in Moscovskaya and Vladimirskaia oblasts. On average, only 10 percent of shares remained with the state from these companies, managers had 17 percent, and workers have 61 percent.

These studies of course rely on small non-random samples, and did not have information on key aspects of ownership rights, such as whether shares were voting or non-voting. Our findings also differ, particularly insofar as the managerial stake in the companies in our sample is significantly larger¹⁷ and because we did find a significant number of outsider-controlled companies among those privatized. The survey was also conducted later, and there may, of course, have been some evolution of the ownership structure, although most commentators believe such changes have been so far minimal, (see Blasi and Shleifer (1994)).

Tables 2 to 4 provide information on other characteristics of our sample by our categories of ownership. Table 2 reports the breakdown according to legal form for 415 companies for which this information is available. Among privatized companies, the joint stock form overwhelmingly predominates, with 90 percent of the total, but, we are unable to distinguish closed from open joint stock companies. DNs exhibit a wider variety of forms; the largest number are individual entrepreneurs.

In Table 3, the distribution by industrial branch is shown, and in Table 4 the distribution by region. In order to control for differences in technologies and in shocks across firms, we have disaggregated branches according to the major product, which results in 26 roughly two-digit industrial branches. The survey instrument also asked which firms were part of the military-industrial complex (MIC); 53 of the 369 placed themselves in that category, as against 14 in the defence sector. Around 60% of MIC firms remain state owned, a higher proportion than of all firms, and of the around 40% which have been privatized, more than half are worker owned. Table 3A gives a simpler picture of the distribution of ownership classes across sectors. Sectors can be combined into 4 main groups: Group 1 includes sectors 1 and 2; Group 2 sectors 3-13; Group 3 sectors 14-20; and Group 4 sectors 21-26. 65% of enterprises in Group 1 (fuel and energy) are SO, 20% are WO, 10% are MO, 5% are OO with no DN's. Clearly the state still controls these sectors of the economy, perhaps to levy taxes on their profits. In Group 2 around 70% of enterprises are SO and WO. These sectors need considerable investments but their products are in demand. 67% of enterprises in Group 3 are also SO and WO, perhaps so the state can continue to control such sectors as electronics. In Group 4 workers control more than 45% and the state less than 20% of enterprises, perhaps because these sectors require lower levels of

¹⁷Blasi has pointed out that he defines managers as top managers while we refer to all managers. Using our definition, he finds median managerial ownership to be 15%.

investment.

Regarding regions, we have combined similar groups of oblasts into 9 regions closely following the usual division of the Russian Federation into 12 economic regions which differ in the level of economic development and infrastructure, the availability of natural and human resources, their fields of specialization and their geographic locations. Due to a small number of observations in some regions, however, we have combined the regions of the North and North-West, Central and Central-Chernozem, and Eastern Siberia and Far East. In Kaliningrad, we had no observations, and we treat Moscow as a separate region¹⁸.

5. Ownership and Control in Russian Firms

What do these data on the structure of ownership imply for who controls Russian firms and for enterprise behavior? Despite the relatively small proportion of managerially dominated firms, and of managerial ownership generally, most observers believe that top managers have remained firmly in control (eg. Blasi (1994), Boycko, Shleifer and Vishny (1993)). In this section we look at the reported degree of "influence" over various types of decisions exercised by different owners, to test whether nominal ownership and effective controls are positively correlated.

"Influence" is measured in our data as a qualitative variable which can take on one of three values: "rarely or never influential" (1), "moderate influence" (2), or "dominant, most important" (3). We assume that these categories are adequate proxies for participation in decision-making concerning the firm's operation and analyze their relationship with ownership shares.

Tables 5.A, 5.B, 5.C, and 5.D contain the means, by ownership-control type, of the reported influence of several kinds of "actors"¹⁹ over four different types of decisions: (A) sales, production,

¹⁸Our 10 areas were constructed as follows: Moscow (Moscow city), Center (Vladimirskaya, Voronezhskaya and Moskovskaya oblasts), Urals (Permskaya, Sverdlovskaya oblasts and Bashkortan), West Siberia (Novosibirskaya, Tyumenskaya, Kemerovskaya oblasts and Altayskiy kraj), East Siberia (Krasnoyarskiy and Primorskiy kraj), Povolzhski (Tatarskaya, Saratovskaya and Samarskaya oblasts), North Caucasus (Rostovskaya oblast and Stavropolskiy kraj), North (St. Petersburg and Leningradskaya oblast), North (Arkhangelskaya and Volgogradskaya oblasts), and Volga-Vyatka (Nizhnegordskaya oblast).

¹⁹This includes owners and other actors not specifically identified as owners, but whom we use as proxies for the corresponding ownership group, namely local and federal governments and banks.

marketing, and current operations; (B) employment, hiring and firing of workers, and social and non-wage benefits; (C) employment, hiring and firing of management, and managerial compensation; (D) allocation of profits, major investments, sale or lease of major assets, and financial issues generally. One might expect the influence of outside owners to be greater in D than the other decision areas; of workers to be relatively greater in B; and of managers in A. One would also expect dominant owners to have significantly more influence than other actors in general on decision-making.

In fact, none of these propositions seems to hold for these data. Rather, in every firm "management and executive boards" are reported to have the greatest influence on all types of decisions. They are closely followed by managerial shareholders, while at first glance all other actors dwindle into insignificance.

There are however a few specific areas in which dominant ownership category impacts upon control over enterprise decisions. First, we note that worker shareholder control is consistently greatly on average than the influence accorded to any other decision-making set of actors, though markedly less than managerial influence. In this regard, it is particularly worrisome that workers are seen as moderately influential over the allocation of profit, especially in worker owned firms. This sits slightly uneasily with studies which dismiss the influence of workers outright (see eg. Blasi and Shleifer (1995)). The flip side is that we find limited evidence of outside owners, either individuals or institutions, having significant influence over enterprise decisions, though outsiders do have some influence over financial decisions in OOs, and banks on production and sales. This weak outside control is despite the fact that the survey suggests that their shareholdings are considerable (15% on average) and that they are dominant shareholders in around 15% of privatized firms. This suggests that, rather than searching for changed shareholdings, one has to look to changes in control and behavior before applauding the gradual increase in outsider shareholdings in Russian firms. Finally, we note a continued, if secondary, influence of the state, especially in state owned firms and in decisions regarding production and the allocation of profit.

We go on to investigate more systematically whether these measures of influence are associated with the magnitude of ownership stakes using correlation analysis. Table 6 contains simple correlation coefficients between influence and ownership share. The coefficients are typically low and relatively few are statistically significant²⁰. However, it is interesting to note that the two groups upon whom higher ownership confers significantly more influence are managers, over the issues of long run resource allocation, and outside individual owners,

²⁰This result remains essentially unchanged when the ownership share variables are allowed non-linear effects as follows: less than 10 percent was reclassified as "1", 10 to 25 percent as "2", and over 25 percent as "3".

over all issues except question of short run sales and production. Banks as owners also appear to be able to exercise some control via their shareholding over production decisions. Worker shareholdings are positively correlated with influence, especially over questions of managerial employment and long run allocative issues, but the effect is not quite significant.

These results might be taken as evidence for the common view that Russian managers are largely in control of their firms, regardless of share ownership (see Blasi (1994), Boycko, Shleifer, and Vishny (1993), and Shleifer and Vasilyev (1994)). It must be remembered, however, that in all cases the evidence relies on the self-reported perceptions of managers themselves. The widespread self-confidence of managers does not in itself constitute sufficient evidence. Table 6 suggests that the higher shareholding yields greater influence, both to outsiders and to banks, and while the evidence on worker shareholdings is weaker, one could imagine a normally quiescent workforce intervening to prevent drastic restructuring. We therefore go on to examine how closely the objectives of the firm, as demonstrated through observable actions, follow the interests of dominant shareholder groups.

6. Ownership and Enterprise Behavior

In this section, we analyze empirically whether different structures of shareholding influence enterprise behavior in Russia. In particular, we test some of the hypotheses outlined in the second section about the relative effects of privatizing to different dominant ownership groups. We report our findings in three subsections, namely,

- changing the nature of the economic relationship between the firm and the state ("depoliticization")
- long and short term restructuring strategies ("reorientation")
- short term enterprise performance eg. in employment, sales, exports etc.

The latter two subsections conflate the second and third "objectives of transition" from section 2 above, in a manner dictated by the data.

Unlike in the previous section, where we looked at both the number of shares held by each ownership group, and firms categorized according to dominant owner, in the work which follows we look only at the five ownership groups by controlling shareholder interest. Our general approach is to use regression analysis to investigate whether there are statistically significant differences in enterprise performance by dominant ownership category, and if so, whether these differences persist once we control for sectoral, regional, and firm-specific sources of heterogeneity within each ownership class.

Our approach is to estimate four OLS regressions on each indicator of performance, commencing just with the ownership dummies, then adding a lagged endogenous variable (where available), then including sectoral and regional dummies and finally also controlling for size by

employment in 1991. The simplest equation provides information on the distribution of performance by ownership types. The second is a dynamic specification which indicates the impact of ownership on change in performance. Neither of these equations include any other explanatory variables, and they are intended to describe in a statistically meaningful way the differences between the ownership groups. The third equation tests whether ownership effects on the change in performance can be isolated when a fuller set of explanatory variables has been included as independent variables to control for firm specific heterogeneity in the data set. In the absence of a formal model to guide the choice of independent variable, and for parsimony and consistency between equations, we prefer to report only regressions which control for competitive market pressures and locational effects, picked up by sectoral and regional dummies respectively²¹. However, since the size of the firm may be an important variable for certain aspects of Russian transition, especially when comparing *de novo* with current and former state owned firms, we sometimes also report a final equation which further includes a proxy for firm size, namely employment in 1991²². This helps in the analysis of the relative performance of *de novo* firms, which could perform differently because they are new and private, or because they are new and small (see Richter and Schaffer (1995)²³.

6.1. Distancing From the State

In this subsection, we investigate the hypothesis that, relative to state ownership, outsider owned firms, and especially DNs, will be the most successful in distancing themselves from the state. Between managerially and worker-owned firms, we want to test whether worker-owned firms become relatively less dependent on the state than their managerially owned counterparts.

Our initial approach is descriptive. In table 7 we report several proxies for state influence in, and support for, enterprises. The

²¹A persistent problem with this data set is that, because of missing values scattered across variables, a change in specification of the equation can lead to major changes in the size of the data set upon which the model is estimated. These differences are minimized by including only lagged endogenous variables (since firms typically report the previous value for a variable if they report it currently) and sectoral and regional dummies (which we have for all firms). The number of observations will typically be smaller when firm size is included in the fourth specification.

²²In the cases where we estimated equations with such a specification, the data set is a slightly updated version.

²³We are indebted to Mark Schaffer for suggesting this line of enquiry.

first three variables concern sales of products to state-customers, the argument being that the relationship between the enterprise and the state will be closer in enterprises producing primarily for procurement, whether military or not. PRFORST2 is the percentage of revenue from all "government customers," while PRFORST4 is the percentage of revenue from the sale of what we infer to be publicly procured goods²⁴. According to both measures, government sales are most important to SOs, followed in order by MOs and OOs, but they are least important to WOs. Although the standard deviations are large enough to suggest caution in interpreting the results, on average it does appear that the WOs have the least supply ties to the state among old companies. Surprisingly however, the proportion of total revenue derived from government sales on the part of DNs is quite high -- 30.8 percent -- perhaps providing evidence of some dependency also of the new private sector on the state in Russia.

PROFORST measures the change in the percentage of revenue derived from sales of publicly procured goods since 1990²⁵. The decrease averaged only 2.6 percent, with the size of the decline directly related to the current level, so that these sales fell the most in SOs, followed by MOs, OOs, and WOs. Regression results are reported in Table 8.1. In the first column, the only independent variables are dummies for dominant owner groups. We confirm that WOs, OOs, and DNs receive a smaller percentage of their revenue from the state, differences which are significant at the one percent level (for WOs), the five percent level (for DNs), and the ten percent level (for OOs). But these results are level rather than rate of change phenomena; they vanish in the second column, where PRFORST4 from 1990 is added to the right-hand side. The lagged dependent variable has a coefficient of .66, which, with a T-statistic of 27.5, accounts for much of the variation in current sales to the state. This is evidence that there is significant inertia in sales to the state. The third column shows the results from adding controls for sector and region, many of which are significant, but the most important explanatory variable remains the 4-year lagged dependent variable. In the latter two equations, we do not pick up any significant differences across ownership forms. This suggests that the significant rankings by ownership type are selection effects by history, region and sector, and the ownership category is not yet significantly affecting the pace of change of sales to the state.

Although it is unlikely to be under the direct influence of enterprises, the continuing existence of price controls does reflect lingering state involvement in enterprise behavior, as well as an issue for which influence costs could be quite high. Such controls persist

²⁴The variable is defined as the sum of "Military goods" and "non-military goods purchased by the state (hospital products, schoolbooks, etc.)"; PRFORST4 is therefore smaller than PRFORST2.

²⁵The change in PRFORST2 is unavailable.

largely through the ability of local governments to constrain the size of markups. PRICONT in Table 7 is a dummy variable equal to one if the firm reports that there are "price controls or fixed profit margins on [their] major products," and zero otherwise. By this measure, prices are far from fully liberalized in Russia, with a full 57 percent of SOs reporting price controls. Distinctly fewer privatized companies, 30-32 percent, face controls on their output prices, and the fraction for DNs, 24 percent, is still less, although the levels are high in absolute terms.

We now turn to the vexed issue of state support for the enterprise sector. ARRTOST measures the percentage of tax liabilities which were more than three months overdue as of April 1, 1994. This follows exactly our predicted pattern. Arrears were highest among SOs at 20 percent, followed by MOs and WOs at 13 percent, OOs and DNs at 6 percent. The next two variables measure loans received with state support. STATLOAN is a dummy variable taking the value of one if either of the company's two largest outstanding loans was received from or mandated or guaranteed by the Central Bank or any state agency and the value of 0 otherwise. 20 percent of SOs receive such loans, while only 13-14 percent of privatized companies and only 9 percent of new private firms do. A measure of preferential credits is PREFLOAN, the percentage of all loans for which the interest rate is below the discount rate of the CBR. Once again, SOs receive the best treatment: 22.1 percent of their loans are preferential, compared to 20.6 percent among OOs, 15.2 percent among WOs, 14.0 percent among DNs, and 6.4 percent on average for MOs.

The final set of variables we have to measure the extent of depoliticization consists of various indicators of direct government assistance to the companies. As shown in Table 7, GOVSUP92, GOVSUP93 and GOVSUP94, are dummy variables equal to one if the enterprise admitted receiving any type of support from the state -- subsidies, investments, tax benefits or exemptions, preferential credits, or others -- in 1992, 1993, and 1994, respectively. The percentage of companies reporting support rose from 22 percent in 1992 to 32 percent in 1993 before falling back to 26 percent in 1994. The highest percentage of companies is for the group of SOs, of whom 39 percent received support in 1994. Surprisingly, OOs were next with 31 percent, followed by MOs and WOs with 20 and DNs as expected were least with 16 percent.

This pattern is confirmed from estimating logistic regressions with GOVSUP94 as dependent variable are shown in Table 8.2. Also before, the first column shows the simple specification where only ownership dummies are included on the right-hand side. DNs, WOs, and MOs have a significantly lower probability of receiving state support than do SOs, while between SOs and OOs there is no statistically significant difference. The results in columns 2 and 3, however, make evident that there is quite significant persistence in the receipt of government support: the lagged dependent variable is highly significant in both equations, implying that the same firms receiving

support in 1993 also tended to receive it in 1994. It is impressive that the coefficient on WOs remains statistically significant in these regressions, implying a systematic regularity that more worker owned firms lost support in 1994.

The reported total value (in current mln RBS) of all of the same categories of government assistance are represented in Table 7 by GOVASS92, GOVASS93, and GOVASS94 for 1992, 1993, and 1994, respectively²⁶. Assistance declined sharply in 1994, to about 20 percent of its real value in 1993, once privatization had been accomplished. Mean assistance is highest in SOs, next highest in OOs, followed by WOs, MOs, and DNs. Privatized firms received substantially fewer subsidies than did state-owned enterprises. Because ownership types also differ by size, we divided government assistance by employment; GASS94BE equals the ratio of GOVASS94 to employment in 1994. Scaling by size reduces the difference between dominant owner types, while preserving their order in the receipt of assistance. The change in this ratio from 1993 to 1994 is variable GASS43BE, which showed there was little nominal change, but a strong real decline in all the enterprises which we could classify by dominant owner. For example, WOs received only 42 percent of the assistance per employee in 1994 compared to what they received in 1993 (measured in 1994 rubles), while OOs received about 32 percent, and MOs about 28 percent. By these measures, Russian budget constraints seem to have hardened quite significantly in 1994.

The regression results in Table 8.3 provide further support for this conclusion. In column 1, GOVASS94 is regressed only on ownership dummies, demonstrating again that the lower level of assistance provided to WOs, MOs, and DNs is statistically significantly lower than that for SOs, while the OOs show no clear difference. Column 2 adds the lagged values of the dependent variable, which, as with the previous Table 8.2, reduces most of the ownership dummies to insignificance. The coefficient on WO however remains negative and significant. In the following column, however, where sector and regional dummies are added, even the WO dummy loses significance.

In this sub-section, we have looked at government enterprise relations in terms of procurement, price controls and subsidy. The findings taken together conform with our prior hypotheses - the influence of the state via these three channels is most marked in the remaining state owned firms, and least in *de novo* private firms. Insider privatization does act to break the links with the state, though more markedly in worker-owned than managerially owned firms. Surprisingly however, the relationship between the state and outsider firms remains very strong, comparable to that in state owned firms.

²⁶Because data are provided in the table only for the first half of 1994, the comparisons in this paragraph multiply the amount of assistance for 1994 by two. When calculating real changes, we employ the relevant price index for the first half of 1994.

This could be explained by selection effects: outsiders may have tended to take control in firms historically closely connected with the state. In any case, our results demonstrate the powerful inertia in the relationship between the state and the enterprise sector.

6.2. Reorientation of Firm's Objectives and Restructuring

We hypothesized in the second section that privatized firms, particularly those which are outsider-controlled, may be superior to state-owned firms in most areas of restructuring. In comparing insider-controlled firms, worker ownership might lead to relatively less unbundling, investment and reduction of labor costs than managerial ownership. We test these hypotheses in this section using qualitative data from the questionnaire recording managers' own views about their restructuring strategies. The questions cover four areas of enterprise decision-making: production, marketing, employment policy, and investment. Managers are invited to indicate their priorities across a variety of responses in each area, being allowed to respond on a scale from 1 (not important) to 3 (very important) for each response. The results are tabulated in Table 9, which reports the rank order of responses by ownership type and the average response on the 1 to 3 scale.

In sharp contrast to the findings concerning depoliticization, we see little evidence that majority ownership stakes are yet influencing restructuring strategies among privatized firms, though DN's are clearly somewhat different. The most striking thing about Table 9 is how little the responses vary by ownership type. For example the mean response across the ten possible actions under the heading of production strategy varies between 1.94 and 2.06. The variation is in fact hardly greater within any particular answer. It is perhaps encouraging, however, that marketing and investment/finance strategies are on average regarded as slightly more important than production or employment strategies, regardless of ownership type.

Commencing with production strategy, the rank orders of importance are remarkably similar in all five ownership types. The ranks in Table 9 rise with the importance attached to a strategy, so we note that all firms attach least significance in their production strategy to disposing of assets, seeking foreign consultants and closing plants or shops, and most importance to increasing the efficiency of input use and to investments. The only major exceptions are privately owned firms, which presumably are not encumbered with poor practices, at least to the same extent. Hence as we would expect they place less importance on investment policy, changing product mix and improving efficiency of resource use, and emphasize, even more than other ownership groups, technology, product quality and investment.

Privately owned firms are also rather different in terms of employment strategies; employment reductions are seen as much less important, presumably because being new organizations, they have not inherited the bloated labor forces of current and former state owned

firms. However, apart from this, the similarities across ownership types are much more revealing than the differences and not entirely consistent with the view of unconstrained managerial control. In all ownership forms, the most important strategy by far on the labor side is an increase in wages, followed by the desire to increase wage differentials. Outsider-owned firms however place slightly more stress on establishing an internal wage structure than insider-owned firms however, and surprisingly slightly less weight on employment reduction.

Turning to investment strategy, some modest differences begin to appear within the private group. New private firms place particular emphasis on seeking foreign investors and reducing bank borrowing. A similar stress on foreign investment is placed by both state and worker-owned firms. However, managerially owned firms in particular, and outsider firms also, shy away somewhat from foreign involvement; perhaps in the case of the latter category because foreign advice and capital is less needed and in the case of the former because it would threaten managerial entrenchment. Outside owners also place less stress on obtaining new loans than any other ownership form.

On the marketing side, all ownership types rate an improvement of marketing and discovering new domestic markets very highly, but place less emphasis on price adjustments or changing suppliers. One intriguing difference, however, is that managerially owned firms place less weight on increasing exports, while state and worker-owned firms regard international markets as being of potentially greater importance.

6.3 Enterprise Performance

We conclude our evaluation of the impact of different majority ownership forms by looking, not at the self-reported intentions of managers, but at the behavior of their firms. We report the result of regression analysis undertaken to analyze various elements of company performance in Russia, including sales, employment, exports and pay. Means of the variables under consideration by ownership type are outlined in Table 10, where some differences by ownership type do emerge, though the standard deviations are typically large.

The first variable in Table 10 is sales in 1994. State-owned firms are much the largest enterprises, followed by worker-owned, managerially owned, outsider-owned and privately owned. The five types of firms in fact increased sales at a similar average rate between 1992 and 1994. Size according to employment shows a similar pattern. The Russian firms in our sample are not major exporters outside the former Soviet Union; on average only 4 percent of sales go to such customers and the maximum observed in the whole sample is only 20 percent of total sales. Non-FSU exports are slightly higher on average in outsider owned and worker owned firms than in SOs or MOs and negligible in DNs.

The information on profits provided in our survey is poor, but the

questionnaire did ask firms to report whether they were typically profit makers. The average response to this question is reported in the second row of Table 10. As can be seen, according to Russian accounting procedures most firms normally make profits, and the differences across ownership types are negligible. Turning to capacity utilization, rates in 1994 are very low, averaging around 53 percent across all firms. However, they are higher among DNs and lower in outsider-owned firms. The Russian capital stock according to the survey is relatively modern; only around 32 percent is reported as being more than 15 years old. Unsurprisingly, DNs have significantly younger capital on average, but SOs, WOs and MOs are all close to the mean. But the proportion of old capital is rather higher in outsider owned firms: 42 percent of the total. Finally, average wages for workers and for managers are highest in DNs and lowest in worker owned firms. State-owned and managerially owned firms are around the mean, while pay for both groups is rather above average in outsider-owned firms.

In the remainder of this section we use regression analysis to investigate whether these differences persist once we control for sectoral, regional and firm-specific sources of heterogeneity within each ownership class. Our approach is to estimate the four versions of the performance equations outlined at the start of this section.

Performance in short term restructuring is analyzed in Tables 11 and 12, which explain 1994 sales and non-FSU exports respectively. Commencing with sales, we note from column (1) of table 11 that *de novo* private firms are significantly smaller than state owned firms (always the omitted class), as are worker owned firms. However, in the dynamic specification of columns (2) and (3) there are no significant ownership effects, though the sign on all privatized firms is positive relative to SOs. We interpret this to imply that majority ownership structures are not yet significantly impacting on the rate of change of sales, though there is great persistence in turnover as well as significant market environment effects from sectors and regions²⁷.

From Table 12 we find that worker-owned, and even more so outsider-owned firms, export significantly more than the other three ownership types. Despite considerable inertia in export performance over time, this result persists for worker owned firms in the dynamic specification, and remains nearly significant when sectoral and regional fixed effects are taken to account. DNs export notably less; all other ownership forms have a positive sign relative to state owned firms. We note from the fourth column that the size of firms is not however a significant explanatory variable for non-FSU exports; its inclusion leaves other results unchanged.

²⁷The fourth equation, controlling for size, is not included in Table 11 because of the close relationship between sales and employment. As expected, in the regression employment was found to have a positive and significant coefficient.

Turning to capacity utilization, we find contrasting ownership effects in column(1) of Table 13. There is no significant difference between the rate of capacity utilization in WOs, MOs and SOs. However, capacity utilization is significantly lower in outsider owned firms, and higher in DNs. The latter is easy to explain - *de novo* private firms did not inherit the same excess capacity and are in fact growing (see Richter and Schaffer (1995)). Perhaps outsiders have taken control only of firms with more serious restructuring problems, for instance having faced a larger output drop or inherited worse capital. It is interesting that these effects typically persist in the dynamic specifications, so the change in capacity utilization is also correlated significantly with ownership, positively for DNs and negatively for outsider-owned firms. There is also weak evidence that the further decline in capacity utilization tends to be correlated with employee ownership. Once again, the size of the firm does not impact on the other results, and the size variable is not significant.

It is interesting to ask whether the differences by ownership type are associated with the vintage of the capital stock. There is some evidence for this view in Table 14, at least with respect to *de novo* private firms. These are found to have a significantly lower proportion of capital more than fifteen years old. However, there is no explanation of the poor showing of outsider and worker-owned forms vis-a-vis capacity utilization here; the coefficient on OOs is insignificant and on WOs positive and weakly significant. Size of firm is once again not significant.

A major issue which we predicted would distinguish insider and outsider privatization was employment. The regressions reported in Table 15 however, provide little support as yet for our hypotheses. We do find in column (1) that *de novo* private firm are significantly smaller. However the equations also reveal very strong persistence of employment with significant sectoral effects but no ownership impact in the dynamic specifications. It would not be sensible to include a size effect here, as in other equations, because we measure size of firm by lagged employment to 1991. Finally, we look at insider (manager and worker) remuneration in Tables 16 and 17; one might expect these to be higher in insider than outsider controlled or state owned firms. In fact, there is no evidence that Russian managers or workers are taking advantage of their position as yet to pay themselves higher wages. No insider ownership variables are anywhere significant. Interestingly, however, wages of both managers and workers are found to be higher in *de novo* private firms, though this is a feature caused by inertia, sector and region rather than adjustment behavior. Interestingly, large firms pay workers more, but not managers.

In summary, therefore, enterprise behavior indicates more ownership effects than we found in terms of managers' self-reported restructuring intentions. However these tend to concern the level of performance rather than the pace of adjustment. There is particularly evidence of differences in behavior between *de novo* private firms and all other ownership types. Privatization does not yet seem to be

affecting employment or sales adjustment.

7. CONCLUSION

The most widely noted features of Russian privatization have been its scale and remarkable speed. In this paper, we have tried to explore the implications of the privatization program for dominant ownership forms, and to analyze the effects of different ownership structures for enterprise behavior. Our findings confirm the central ownership role granted by the privatization process to managers and particularly workers, though it also reveals a higher proportion of outsider dominated firms - both privatized and formed *de novo* - than expected. What are the consequences of this ownership structure for enterprise behavior and restructuring, and what are the policy implication of these findings?

Theory led us to expect much better enterprise performance across the board from outsider than state-owned firms, with insider-controlled companies being somewhere in between. The balance of advantage between worker and managerial ownership depended on the issue raised, with majority managerial ownership potentially offering advantages in long-term and short-term restructuring, but worker ownership perhaps superior in achieving a greater degree of depoliticization and possibilities for evolution.

Our findings go some way towards confirming these hypotheses. We find significant differences across various aspects of control, behavior and restructuring between state-owned and outsider-owned firms, most notably DNs. There are also differences between state and insider-owned firms, though they are less marked. The balance of advantage between managerially owned and worker-owned firms is unclear overall, but strikingly we confirm that depoliticization is more associated with the latter than the former majority ownership form. The results on DNs are particularly encouraging because in other work (see eg. Belka, Estrin, Schaffer and Singh (1994)), one of us has argued that, in Poland at least, it is the small and middle sized enterprises of the *de novo* private sector which is in fact leading the transition process. Our findings provide an initial indication that the same forces may be at work in Russia (see also Richter and Schaffer (1995)).

But our understanding of the Russian privatization process is also much enriched by focusing on the areas in which the data do not support our hypotheses. Although still preliminary, the most striking result is that the differences between state-owned and privatized firms, regardless of majority ownership form, are typically not very great, especially regarding the key issue of restructuring. This phenomenon is probably explained by the fact that the restructuring which is occurring at the moment arises primarily from the hardening of budget constraints, and this impacts more or less across the board (if not indeed more markedly on state owned firms). Evidence from Poland (see,

eg. Belka et al (1993), Estrin et al (1993)) suggest that state owned firms will adjust their behavior in the early phase of transition solely in response to hard budget constraints and increased market competition, without any significant impact from changes in ownership and control. The force of this point is increased when we note that the survey was undertaken relatively soon after the mass privatization was completed, probably before major behavioral changes could be expected as a consequence of the new ownership structures.

More subtly, the results for enterprises privatized to outsiders are disappointing. There is no evidence of greater depoliticization, nor of differences in restructuring strategy, and apart from exports, virtually no difference in performance compared with the other privatized firms, the state owned sector. One explanation may be that outsiders have simply not yet been able to establish effective control over the firms in which they have a majority stake; a view consistent with the evidence about managerial dominance over decision-making in the fifth section. There is also some evidence to suggest that outsiders have taken majority control over somewhat inferior firms, in terms of capacity utilization, overemployment, profitability and so forth. Perhaps insiders, who by all accounts controlled the firm's privatization process only accepted majority outsider ownership when the situation of the firm was so desperate that the wider resources of outsiders were needed to ensure survival of the organization. In this case, the poor performance of outsiders would be related to the larger scale of the task in hand, rather than deficiencies of outsider control as a majority governance group.

Finally, we must consider the consequences of worker ownership. Our study reveals that Russian privatization has created an economy primarily comprising majority worker-owned firms. But the effects on behavior and restructuring are not yet as disastrous as might have been predicted. Many of the reasons we have already noted: for instance that worker ownership may assist the process of depoliticization, but restructuring, where it may prove a major impediment, has hardly begun. Some may take heart from the fact that, even in worker-owned firms, managerial control seems assured. However, the fact remains that majority worker ownership may present a threat to effective restructuring in the future, both in the long term when the key is access to external capital markets, and in the short term when firms need to address the problem of overstaffing.

Policy conclusions follow directly from these findings. First, the mass privatization program has of necessity concentrated the attention of policymakers on the former state-owned sector, but in terms of performance and behavior, prospects look better with *de novo* firms. The government may wish to develop a more systematic strategy for small and medium enterprise development, especially in the classic areas of SME weakness: access to outside (loan) capital, management training, and dealing with bureaucracy.

The government may also wish to look more closely at what is going

on in outsider-controlled firms, to see whether the problems arise from deficiencies in the legal institutions and arrangements for corporate governance. If so, regulatory changes or more effective enforcement of current legal requirements may be required.

Finally, we return to the overhanging threat of majority employee control. We do not feel that the potential governance and behavioral problems will necessarily be resolved by continued effective managerial control. In situations of conflict between workers and managers, for example over mass redundancies, either managers will give way to the dominant owner, or they will in some way overrule workers, which is counter-productive insofar as it acts to undermine emerging property rights and the rule of law. The way forward is instead for majority worker ownership to evolve to new ownership forms, most significantly outsider ownership. The key policy is therefore to ensure that secondary markets are functioning so that worker shareholdings can be traded, and that purchasers obtain full voting rights with their shares.

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TABLE 1
Distribution of Ownership by Dominant Owner Type

	Dominant Owner ²⁸					TOTAL
Owner	SO	WO	MO	OO	DN	
STATE						
Mean	89	10	13	12	1	34
Standard Deviation	21	14	15	13	5	40
WORKERS						
Mean	7	63	14	26	6	31
Standard Deviation	14	20	20	14	17	31
MANAGERS						
Mean	2	12	63	7	58	17
Standard Deviation	5	11	23	7	39	26
OUTSIDERS						
Mean	2	14	9	53	26	15
Standard Deviation	6	16	12	21	36	22
NUMBER OF ENTERPRISES	110	138	40	36	45	439

SO - enterprises with dominant state stake
WO - enterprises with dominant workers stake
MO - enterprises with dominant managers stake
OO - enterprises with dominant outsiders stake
DN - new established privately owned enterprises

The TOTAL column includes firms which were not classifiable according to dominant owner, thus this does not correspond strictly to the sum (or average) of the previous five columns.

²⁸It was possible to classify some firms (2 WOs and 20 DNs) even without complete information on ownership shares

TABLE 2
Legal Form by Dominant Owner Type

LEGAL FORM	DOMINANT OWNER					TOTAL
	SO	WO	MO	OO	DN	
Joint Stock	27	120	30	31	12	267
Limited Liability	0	1	3	0	3	7
General Partnership	1	0	1	0	1	4
Limited Partnership	0	9	5	0	11	33
Cooperatives	0	1	0	0	2	2
Physical Persons	0	0	0	0	14	15
State-owned Joint Stock	8	0	0	0	0	11
Leasehold	0	2	0	0	1	3
Non-incorp. state-owned	68	0	0	0	0	70
Other	5	0	0	0	0	3
TOTAL	109	133	39	31	44	415

The TOTAL column includes firms which were not classifiable according to dominant owner, thus this does not correspond strictly to the sum of the previous five columns.

TABLE 3
Branch by Dominant Owner Type

INDUSTRY SECTOR	Dominant Owner					TOTAL
	so	wo	mo	oo	dn	
Energy	5	1	1	0	0	7
Fuel	8	3	1	1	0	13
Ferrous metallurgy	1	5	1	3	0	10
Nonferrous metallurgy	1	5	1	1	0	8
Chemicals	3	8	2	0	4	17
Heavy machine building	6	11	2	1	1	21
Electrotechnical	3	5	2	1	2	13
Machine tools & Computers	7	5	1	1	3	17
Automobile industry	1	5	1	2	2	11
Agricultural machinery	4	5	0	5	2	16
Light machine building	2	1	0	0	3	6
Defence industry	6	4	2	1	1	14
Ship building	2	2	1	3	0	8
Radio industry	9	3	0	0	0	12
Communications & Electronics	7	6	0	3	1	17
Metal constructions	3	5	2	4	1	15
Machine repairing	6	5	2	3	0	16
Wood harvesting	8	2	0	0	0	10
Wood working industry	3	6	3	2	3	17
Construction materials	6	7	1	1	11	26
Textiles	4	11	6	1	4	26
Clothing industry	2	13	6	1	4	26
Food processing	6	8	3	1	0	18
Meat and milk	1	9	0	1	1	12
Other industrial production	6	3	2	0	1	12
Commercial activity	0	0	0	0	1	1
Military Industrial Complex	31	12	5	4	1	53
TOTAL	110	138	40	36	45	369

TABLE 3A
Dominant Owner by Industry Sector Group

INDUSTRY SECTOR GROUP	Dominant Owner					TOTAL
	so	wo	mo	oo	dn	
Fuel & Energy	13	4	2	1	0	20
Heavy Industry	36	56	13	18	18	141
Light Industry	42	34	8	13	16	113
Consumer Goods	19	44	17	4	11	95
TOTAL	110	138	40	36	45	369

Notes:

- SO - enterprises with dominant state stake
- WO - enterprises with dominant workers stake
- MO - enterprises with dominant managers stake
- OO - enterprises with dominant outsiders stake
- DN - new established privately owned enterprises

TABLE 4
Region by Dominant Owner Type

REGION	TOTAL	Dominant Owner				
		SO	WO	MO	OO	DN
NORTH	53	17	16	6	10	4
VOLGA-VYATKA	21	6	9	1	2	3
POVOLZHSKI	49	21	18	5	1	4
NORTH CAUCASUS	36	1	23	5	3	4
URALS	49	18	14	5	6	6
WSIBERIA	43	13	21	3	4	2
ESIBERIA	29	8	6	6	3	6
MOSCOW	43	16	11	6	3	7
CENTRE	46	10	20	3	4	9
TOTAL	369	110	138	40	36	45

Notes:

SO - enterprises with dominant state stake
WO - enterprises with dominant workers stake
MO - enterprises with dominant managers stake
OO - enterprises with dominant outsiders stake
DN - new established privately owned enterprises

TABLE 5A
Clarification of Property Rights
Influence of Actors by dominant Owner Type

Actor	Dominant Owner					TOTAL
	SO	WO	MO	OO	DN	
Management, Board of Dir.	2.77	2.68	2.86	2.63	2.76	2.73
Manager shareholders	2.48	2.48	2.58	2.48	2.65	2.52
Worker shareholders	1.36	1.39	1.41	1.24	1.32	1.35
Outside indiv. owners	1.15	1.15	1.00	1.30	1.30	1.17
Outside inst. owners	1.26	1.25	1.00	1.30	1.00	1.21
Local government	1.34	1.20	1.16	1.13	1.23	1.23
Federal government	1.47	1.24	1.30	1.38	1.22	1.35
Banks	1.19	1.33	1.27	1.41	1.31	1.30

Notes:

SO - enterprises with dominant state stake
WO - enterprises with dominant workers stake
MO - enterprises with dominant managers stake
OO - enterprises with dominant outsiders stake
DN - new established privately owned enterprises

The TOTAL column includes firms which were not classifiable according to dominant owner, thus this does not correspond strictly to the sum (or average) of the previous five columns.

TABLE 5B
Decisions concerning employment hiring and firing of workers,
social and non-wage benefits

Actor	Dominant Owner					TOTAL
	SO	WO	MO	OO	DN	
Management, Board of Dir.	2.71	2.60	2.78	2.51	2.66	2.66
Manager shareholders	2.44	2.40	2.55	2.46	2.64	2.49
Worker shareholders	1.45	1.43	1.47	1.27	1.21	1.41
Outside indiv. owners	1.14	1.11	1.00	1.17	1.20	1.11
Outside inst. owners	1.25	1.19	1.00	1.26	1.00	1.15
Local government	1.26	1.21	1.19	1.36	1.18	1.22
Federal government	1.19	1.13	1.14	1.21	1.14	1.17
Banks	1.08	1.11	1.09	1.03	1.14	1.11

The TOTAL column includes firms which were not classifiable according to dominant owner, thus this does not correspond strictly to the sum (or average) of the previous five columns.

TABLE 5C
Decisions concerning employment hiring and firing of management,
managerial compensation

Actor	Dominant Owner					TOTAL
	SO	WO	MO	OO	DN	
Management, Board of Dir.	2.69	2.61	2.86	2.74	2.66	2.69
Manager shareholders	2.40	2.32	2.52	2.57	2.74	2.47
Worker shareholders	1.24	1.33	1.36	1.26	1.28	1.31
Outside indiv. owners	1.11	1.12	1.00	1.17	1.10	1.11
Outside inst. owners	1.21	1.23	1.06	1.41	1.00	1.19
Local government	1.30	1.19	1.13	1.25	1.10	1.22
Federal government	1.26	1.16	1.14	1.10	1.14	1.19
Banks	1.10	1.11	1.10	1.03	1.14	1.11

Notes:

- SO - enterprises with dominant state stake
- WO - enterprises with dominant workers stake
- MO - enterprises with dominant managers stake
- OO - enterprises with dominant outsiders stake
- DN - new established privately owned enterprises

The TOTAL column includes firms which were not classifiable according to dominant owner, thus this does not correspond strictly to the sum (or average) of the previous five columns.

TABLE 5D
Decisions concerning allocation of profits, major investments,
sales or lease of major assets, financial issues generally

Actor	Dominant Owner					TOTAL
	SO	WO	MO	OO	DN	
Management, Board of Dir.	2.77	2.87	2.92	2.67	2.63	2.81
Manager shareholders	2.47	2.53	2.81	2.41	2.71	2.59
Worker shareholders	1.42	1.68	1.63	1.26	1.26	1.53
Outside indiv. owners	1.19	1.23	1.10	1.43	1.22	1.25
Outside inst. owners	1.46	1.34	1.12	1.63	1.00	1.37
Local government	1.34	1.27	1.23	1.33	1.29	1.29
Federal government	1.46	1.25	1.28	1.32	1.27	1.32
Banks	1.24	1.27	1.13	1.23	1.22	1.23

Notes:

- SO - enterprises with dominant state stake
- WO - enterprises with dominant workers stake
- MO - enterprises with dominant managers stake
- OO - enterprises with dominant outsiders stake
- DN - new established privately owned enterprises

The TOTAL column includes firms which were not classifiable according to dominant owner, thus this does not correspond strictly to the sum (or average) of the previous five columns.

TABLE 6
Correlation of Ownership and Influence

Type of owner	n	Type of decision			
		A	B	C	D
Manager-shareholders	257	0.108	0.133	0.143	0.176*
Worker-shareholders	233	0.109	0.083	0.135	0.127
Outside individual owners	160	0.178	0.215*	0.188*	0.197*
Outside institutional owners	123	0.030	0.051	0.154	0.157
Local government	202	0.017	0.020	0.063	0.071
Federal government	188	0.150	-0.051	-0.007	0.052
Banks	193	0.209*	-0.060	0.065	0.142

Notes:

* -1-tailed Significance: 0.01

A -sales, production, marketing, current operations

B -employment, hiring and firing of workers, social and non-wage benefits

C -employment, hiring and firing of management, managerial compensation

D -allocation of profits, major investments, sale or lease of major assets, financial issues generally

TABLE 7
Depoliticization

	Dominant Owner					TOTAL
	SO	WO	MO	OO	DN	
PRFORST2						
Mean	32.72	22.56	24.03	23.82	30.77	26.27
Standard Deviation	42.00	35.44	37.43	40.95	42.09	38.61
PRFORST4						
Mean	9.93	2.21	7.58	3.10	3.02	5.50
Standard Deviation	24.66	12.34	21.98	13.93	11.03	19.18
PROFORST						
Mean	-5.56	-1.08	-2.89	-1.93	.20	-2.56
Standard Deviation	17.41	5.18	11.31	9.90	3.26	11.56
PRICONT						
Mean	.57	.32	.32	.30	.24	.38
Standard Deviation	.52	.47	.47	.47	.43	.48
ARRTOST						
Mean	20.00	13.03	13.16	6.25	6.15	13.88
Standard Deviation	33.67	27.24	24.77	21.65	22.19	28.56
STATLOAN						
Mean	.20	.14	.13	.14	.09	.13
Standard Deviation	.40	.34	.33	.36	.29	.34
PREFLOAN						
Mean	22.09	15.21	6.40	20.58	14.00	16.03
Standard Deviation	35.49	27.54	15.79	25.26	31.94	28.38

Definitions:

PRFORST4 = percentage of production to the state out of the total revenues in 1994;
 PRFORST(T-4) = percentage of production to the state out of the total revenues in 1990;
 PROFORST = change in percentage of total revenue provided by these goods in 1994 compared to 1990.
 ARRTOST = percentage of liabilities to the state which are overdue more than three months.
 PRICONT = dummy which takes on value of 1 if there is rice control and 0 otherwise.
 STATLOAN = dummy which takes on value 1 if enterprise received any loan from government.
 PREFLOAN = percentage of total loans received at a rate of interest less than the central bank discount rate.

The TOTAL column includes firms which were not classifiable according to dominant owner, thus this does not correspond strictly to the sum (or average) of the previous five columns.

	Dominant Owner					TOTAL
	SO	WO	MO	OO	DN	
GOVSUP92						
Mean	.33	.19	.18	.23	.13	.22
Standard Deviation	.47	.40	.38	.43	.34	.41
GOVSUP93						
Mean	.46	.32	.28	.37	.16	.32
Standard Deviation	.50	.47	.45	.49	.37	.47
GOVSUP94						
Mean	.39	.20	.20	.31	.16	.26
Standard Deviation	.49	.40	.41	.47	.37	.44
GOVASS92						
Mean	93.67	13.47	10.95	13.97	.18	30.02
Standard Deviation	449.48	57.94	31.22	48.98	.79	225.60
GOVASS93						
Mean	611.69	67.29	139.72	213.09	5.52	220.32
Standard Deviation	3150.09	239.02	519.93	905.69	28.30	1621.70
GOVASS94						
Mean	368.50	107.06	82.92	163.62	3.09	160.22
Standard Deviation	1281.96	700.49	231.05	613.77	11.71	784.17
GASS94BE						
Mean	.16	.10	.06	.11	.03	.09
Standard Deviation	.50	.61	.17	.30	.09	.36
GASS4BE						
Mean	-.61	-.38	-.37	-.58	-.15	-.30
Standard Deviation	2.42	1.17	1.48	1.68	.68	1.35

Definitions:

GOVSUP94-92 = dummy defined as 0 if there was no government support in 1994-92 respectively, 1 otherwise.
 GOVASS94-92 = mln rubles of government assistance in years 1994-92 respectively.
 GASS94BE = mln 1994 rubles of government support per employee received in 1994.
 GASS4BE = GOVASS94/EMPLOYMENT91 - GOVASS93*IPI/EMPLOYMENT93, where IPI is Industrial Price Index.

TABLE 8.1
Depoliticization Regressions

INDEPENDENT VARIABLES	DEPENDENT VARIABLES		
	PRFORST4		
	1	2	3
WO	-7.72** (2.46)	1.22 (1.27)	1.24 (1.43)
MO	-2.34 (3.52)	1.89 (1.76)	2.48 (1.91)
OO	-6.83* (3.77)	1.02 (1.92)	.96 (2.16)
DN	-6.90** (3.36)	2.17 (2.47)	1.99 (2.80)
PRFORST (t-4)	NO	.66*** (.02)	.67*** (.03)
REGIONS	NO	NO	YES
SECTORS	NO	NO	YES
N	323	279	279
adj R ²	.023	.736	.737

Notes: * = significant at 10% level;
 ** = significant at 5% level;
 *** = significant at 1% level.

Definitions:

PRFORST4 = percentage of production to the state out of the total revenues in 1994;
 PRFORST(T-4) = percentage of production to the state out of the total revenues in 1990;
 ARRTOST = percentage of liabilities to the state which are overdue more than three months.

TABLE 8.2
Depoliticization Regressions:
Existence of Government Support
(logits)

INDEPENDENT VARIABLES	DEPENDENT VARIABLE: GOVSUP94		
	1	2	3
WO	-.94*** (.29)	-.84** (.38)	-1.21*** (.47)
MO	-.94** (.44)	-.58 (.57)	-.56 (.66)
OO	-.34 (.41)	-.10 (.56)	-.47 (.66)
DN	-1.25 (.46)	-.30 (.58)	.05 (.70)
GOVSUP92	NO	.51 (.37)	.21 (.45)
GOVSUP93	NO	3.16*** (.39)	3.64*** (.49)
REGIONS	NO	NO	YES
SECTORS	NO	NO	YES
CORRECT PREDICTIONS (PROPORTION)	73.78	86.22	87.57
N	370	370	370

Notes: * = significant at 10% level;
 ** = significant at 5% level;
 *** = significant at 1% level.

Definitions:
 GOVSUP94-92 = dummy defined as 0 if there was no government support in 1994-92 respectively,
 1 otherwise.

TABLE 8.3
Depoliticization Regressions:
Magnitude of Government Assistance

INDEPENDENT VARIABLES	DEPENDENT VARIABLE: GOVASS94		
	1	2	3
WO	-261.44** (110.18)	-150.79* (83.24)	-134.66 (91.16)
MO	-285.58* (158.13)	-131.82 (117.11)	-124.02 (125.15)
OO	-204.88 (166.33)	-64.37 (124.29)	-81.16 (134.08)
DN	-365.41** (151.49)	-175.82 (113.52)	-176.75 (128.14)
GOVASS92	NO	.79*** (.14)	.82*** (.15)
GOVASS93	NO	.20*** (.02)	.19*** (.02)
REGIONS	NO	NO	YES
SECTORS	NO	NO	YES
No. OF PLANTS	NO	NO	NO
EMPLOYMENT IN 1991	NO	NO	NO
EMPLOYMENT IN 1994	NO	NO	NO
ADJUSTED R ²	.013	.36	.37
N	353	343	343

Notes: * = if significant at less than 10% level;
 ** = if significant at less than 5% level;
 *** = significant at 1% level.

Definitions:

GOVASS94-92 = mln rubles of government assistance in years 1994-92 respectively.

TABLE 9
Responses on Importance of Management Strategies
(Rank Order)

9.1 Responses on Importance of Production Strategy

No	Production strategy	SO	WO	MO	OO	DN
1	Change in area of activity	6	4	7	4	5
2	Changing production mix within	8	7	8	8	6
3	Change of inventory policy	5	6	4	7	3
4	Closing of plant/shop	3	3	3	1	2
5	Change in product quality	7	7	6	9	9
6	Disposing of assets	1	1	2	2	1
7	More efficient use of productive resources	10	10	10	10	7
8	Changing technology	4	4	5	5	8
9	Seeking foreign consulting adv.	2	2	1	3	3
10	New investments	9	9	9	6	10
	Mean	1.94	1.97	1.9	2.05	2.06

9.2 Responses on Importance of Employment Strategy

No	Employment	SO	WO	MO	OO	DN
1	Decrease in labor	4	5	5	4	3
2	Increase in labor	2	1	3	3	5
3	Cutting social benefits	3	3	2	2	1
4	Cutting wages	1	2	1	1	2
5	Increasing wages	7	7	7	7	7
6	Increasing wage differentials	6	6	6	6	6
7	Modifying or establishing an internal wage scale	5	4	4	5	4
	Mean	1.97	1.95	2.00	1.97	1.88

9.3 Responses on Importance of Investment Strategy

No	Investment strategy	SO	WO	MO	OO	DN
1	Reducing new bank borrowing	6	5	6	5	7
2	Reschedule loans	3/4	2	3/4	2	5
3	Obtain new loans from banks	2	4	3/4	1	2
4	Obtain new loans from non banks	1	1	1	3	3
5	Lengthening period for payables	5	6	7	7	1
6	Reducing outstanding receivables	8	8	8	8	6
7	Change bank connections	3/4	3	2	4	4
8	Seeking foreign investors	7	7	5	6	8
	Mean	2.12	2.15	2.14	2.21	2.07

No	Marketing strategy	SO	WO	MO	OO	DN
1	Improve marketing	7	6	7	7	6
2	Change distribution network	3	5	5	6	4
3	Change suppliers	2	2	3	2	2
4	Seeking new domestic markets	6	7	6	5	7
5	Increasing export efforts	5	4	1	3	3
6	Increase product price relative to competitors	1	1	2	1	1
7	Drop product price relative to competitors	4	3	4	4	5
	Mean	2.06	2.14	2.07	2.13	2.04

TABLE 10
Company Performance

	Dominant Owner					TOTAL
	SO	WO	MO	OO	DN	
Sales						
Mean	157022	5970	3785	3071	682	7382
Standard Deviation	53763	41956	8913	5354	3086	36949
Profit Maker Dummy						
Mean	.86	.86	.90	.89	.87	.87
Standard Deviation	.34	.35	.30	.32	.34	.34
Capacity Utilization						
Mean	54	50	56	43	43	53
Standard Deviation	26	26	24	29	29	27
% Sales to non-government in 1994						
Mean	90	98	92	97	97	95
Standard Deviation	25	12	22	14	11	19
% Sales Exported to non-FSU in 1994						
Mean	3	5	2	8	9	0
Standard Deviation	6	15	7	20	20	0

Company Performance

	Dominant Owner					TOTAL
	SO	WO	MO	OO	DN	
Percent of Capital Stock aged > 15yrs						
Mean	36	29	30	42	9	32
Standard Dev.	29	28	31	316	23	31
Employment in 94						
Mean	3016	1886	1293	2072	98	1904
Standard Dev.	7959	8196	1808	3639	146	6269
Wage of workers						
Mean	135988	127062	131510	144357	173633	13554510
Standard Dev.	111337	98102	102536	118705	141316	8353
Wage of managers						
Mean	162957	159976	174029	205718	226103	17347415
Standard Dev.	175990	132727	162253	174979	196806	9915

Notes:

SO - enterprises with dominant state stake
 WO - enterprises with dominant workers stake
 MO - enterprises with dominant managers stake
 OO - enterprises with dominant outsiders stake
 DN - new established privately owned enterprises

TABLE 11
Sales in 1994

	1	2	3
WO	-9775* (5581)	2912 (2021)	3277 (2206)
MO	-11916 (8063)	3035 (3037)	2136 (3230)
OO	-12631 (8357)	2437 (3188)	1642 (3481)
DN	-15020*** (7524)	2605 (3002)	2691 (3385)
Lagged endogenous variable(1 year)	No	2.76*** (0.08)	2.76*** (0.08)
Sectors	No	No	Yes**
Regions	No	No	Yes**
Adjusted R ²	0.006	0.86	0.86
N	2.98	246	246

Notes:

SO - enterprises with dominant state stake
WO - enterprises with dominant workers stake
MO - enterprises with dominant managers stake
OO - enterprises with dominant outsiders stake
DN - new established privately owned enterprises

TABLE 12
Percentage Sales Exported to Non-FSU

	1	2	3	4
WO	2.24* (1.64)	-2.71** (1.47)	2.58 (1.67)	.10 (2.19)
MO	.07 (2.28)	1.27 (2.06)	.58 (2.27)	-3 (3.39)
OO	6.16*** (2.52)	3.48 (2.29)	4.09 (2.45)	2.77 (3.23)
DN	-2.55 (2.17)	.29 (1.98)	-.003 (2.34)	-4.08 (4.47)
Sectors	No	No	Yes	Yes
Regions	No	No	Yes	Yes
Size/1000	No	No	No	.14 (.12)
Lagged endogenous variable	No	8.89*** (1.01)	8.29*** (1.12)	.77*** (.14)
Adjusted R ²	.02	.21	.17	.12
N	325	325	325	243

• denotes significance at 10% level
 *** denotes significance at 5% level
 *** denotes significance at 1% level

TABLE 13
Capacity Utilization in 1994

	1	2	3	4
WO	-3.50 (3.78)	-3.97* (2.43)	-3.17 (2.73)	-4.74* (2.81)
MO	1.77 (5.37)	-5.46 (3.47)	-5.68 (3.76)	-7.33* (3.74)
OO	-10.63* (5.87)	-3.38 (3.80)	-7.42* (4.20)	-7.68* (4.02)
DN	16.00*** (5.02)	5.87** (3.23)	8.70** (3.76)	7.03 (5.39)
Size/1000	No	No	No	-.14 (.17)
Lagged endogenous variable	No	0.87*** (0.04)	0.85*** (0.05)	.88*** (.05)
Sectors	No	No	Yes	Yes
Regions	No	No	Yes**	Yes
Adjusted R ²	0.06	0.62	0.62	.68
N	294	285	246	235

* denotes significance at 10% level
 *** denotes significance at 5% level
 *** denotes significance at 1% level

TABLE 14
Proportion of Capital Stock More than 15 Years Old

	1	2	3
WO	-6.84* (3.96)	-5.96 (5.19)	-5.82 (5.92)
MO	6.17 (5.78)	3.42 (7.41)	5.01 (8.25)
OO	6.57 (5.84)	8.74 (7.6)	10.04 (8.32)
DN	-27.0*** (5.3)	-23.6*** (7.0)	1.24 (12.85)
Average of sector	No	-0.02 (0.14)	.02 (.19)
Size/1000	No	No	.17 (.36)
Sector	No	Yes***	Yes
Region	No	Yes***	Yes
Adjusted R ²	0.09	0.08	.02
N	308	244	193

• denotes significance at 10% level
 ** denotes significance at 5% level
 *** denotes significance at 1% level

TABLE 15
Full Time Employment

	1	2	3
WO	-1130 (895)	-183 (277)	-161 (279)
MO	1723 (1269)	930 (391)	-176 (382)
OO	944 (1352)	-428 (415)	-327 (414)
DN	-2918** (1206)	153 (405)	200 (418)
Lagged endogenous variable	No	0.92*** (0.02)	-0.91*** (0.02)
Sector	No	No	Yes***
Region	No	No	Yes
Adjusted R ²	0.007	0.91	0.93
N	337	317	317

* denotes significance at 10% level
 ** denotes significance at 5% level
 *** denotes significance at 1% level

TABLE 16
Average Monthly Wage of Managers

	1	2	3	4
WO	-2981 (22733)	-20219 (19217)	-4737 (20887)	-10530 (23967)
MO	11071 (33007)	-19910 (28176)	-6645 (29000)	-19562 (32013)
OO	42760 (34183)	-10793 (29363)	19446 (31141)	7112 (34160)
DN	63146*** (31995)	23213 (27675)	30414 (31174)	61325 (60562)
Size	No	No	No	-2.37 (1.48)
Lagged endogenous variable (1 year)	No	0.94*** (0.16)	1.63*** (0.18)	1.60*** (.21)
Sector	No	No	Yes***	Yes
Regions	No	No	Yes***	Yes
Adjusted R ²	0.007	0.31	0.35	.36
N	306	306	306	245

* denotes significance at 10% level
 ** denotes significance at 5% level
 *** denotes significance at 1% level

TABLE 17
Average Monthly Wage of Workers

	1	2	3	4
WO	-7418 (15319)	-14204 (14548)	-4352 (14872)	-8884 (14626)
MO	-2969 (22690)	-9136 (21408)	-11830 (20866)	-12636 (19778)
OO	98780 (23242)	3492 (22205)	7872 (22343)	8496 (21043)
DN	39153** (21741)	29694 (68208)	26662 (22155)	29514 (37275)
Size	No	No	No	1.59* (0.92)
Lagged endogenous variable (1 year)	No	0.792*** (0.12)	0.58 (0.12)	1.64*** (0.18)
Sectors	No	No	Yes*	Yes
Regions	No	No	Yes*	Yes
Adjusted R ²	0.004	0.13	0.27	0.43
N	310	310	310	248

Notes:
 *denotes significance at 10% level
 **denotes significance at 5% level
 ***denotes significance at 1% level

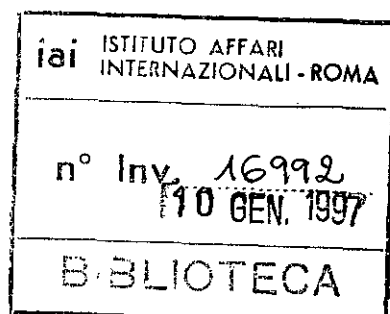
**FIGURE 1. Comparison of the Impact of Alternative Ownership
Forms in Attaining Objectives of Transition**

	WO	MO	OO	DN
Reorientation	++	+	+++	+++
Long-Term Restructuring				
unbundling	+	++	+++	U
investment	+	++	+++	U
internal organization			+++	U
Short-Term Restructuring				
non-labor cost	++	++	++	U
minimization	O	+	++	U
labor cost minimization				
Evolution	++	+	+++	+++

All entries are relative to the status quo; state ownership

Notes:

- +
 - ++
 - +++
 - U
 - O
- denotes better
denotes much better
denotes comparable to Western firms
denotes not a relevant comparison
denotes the same as the status quo



DRAFT. COMMENTS WELCOME

OWNERSHIP, CONTROL OVER THE ENTERPRISES AND STRATEGIES OF STOCKHOLDERS

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ABSTRACT

This paper examines challenging processes of ownership transformation of Russian privatized enterprises. The major tendency is steady and continuous differentiation of the insider stock on that of managers and that of non-managerial employees. Therefore, widespread managerial control is in a process of successful transformation into control of managers-owners.

Managers demonstrate controversial behavioral strategies. The minor part of them utilizes control over enterprises for active market adaptation and restructuring, while the most of directors are much more devoted to intensive income and capital extraction for their own short-term benefits. Advantages and shortcomings of both strategies from macro- and microeconomic standpoints are revealed in the paper.

In order to make the process of ownership concentration more consistent and irreversible, top managers create and strengthen in-enterprise managerial coalitions. It is argued that these coalitions are a peculiar and significant feature of an on-going concentration of enterprise stock; in addition to them, outside managerial coalitions are emerging on the basis of mutual penetration of stock of technologically related companies. The latter pave a path to changes in existing enterprise boundaries.

A portion of outsider investors, who own or control Russian enterprises still remains low, although there was slight growth during 1994-1995. Not only is the relatively modest financial potential an obstacle, but the strong unwillingness of enterprise managers to exchange control and ownership for monetary inflows, which in principle could be provided by interested outsiders, as well.

Actual outsider owners do not demonstrate less problematic incentives and behavior than managers. Hence, the problem of efficient corporate governance does not seem to have synonymous solutions in Russia. Real characteristics of enterprise performance under transition are more dependent on individuals in charge of companies, than on what socio-economic group they represent.

The paper deals with the desirable functions of the state in the area of privatization and enterprise performance. Given limited leverage of the current statehood on economic developments, it is not clear enough whether suggested functions may become operational.

INTRODUCTION

The speed and scale of Russian privatization were quite substantial during 1992-1994. From the beginning of 1992, when nation-wide privatization started, 112 thousand small, medium and large enterprises eventually changed the type of ownership, including some 65 thousand during 1993-1994. Privatized enterprises employ about 17 million people, which is 23% of the economically active population. (Sotsial'no-Ekonomicheskoye Pologheniye Rossii, 1993-1994). According to the VCIOM survey, done in early April, 1995, a portion of privatized firms within the standard enterprise-size categories appeared to be the following: among the firms with 1000 and more employees 35% were privatized; among those with 501-1000 employees - 10%; among those with 201-500 employees - 17%, and among the companies with less than 200 staff members 20% were privatized. (New Russia Barometer IY, Centre for the Study of Public Policy, (1995).

Instead of former state enterprises joint-stock companies with mixed ownership structure have been created in most cases. (See Frydman, Rapaczynski and Earle, *et al*, (1993) and Bim, Jones and Weisskopf (1994) for summary on methods and variants of privatization in Russia). Cumulative charter capital of joint-stock companies, formed in 1993-1994, totals 1257,9 bln. rubles (Sotsial'no-ekonomicheskoye pologheniye Rossii, 1993-1994).

Naturally, institutional changes of such a global size have drawn a lot of attention towards their actual consequences, i.e., towards the impact of privatization on enterprise economic status, behavior and development. Focusing on the consequences makes a lot of sense: neither numbers of privatized entities nor volumes of circulating vouchers and shares, but qualitative changes in ownership, patterns of control and decision-making, evidence of irreversible market adaptation and restructuring of enterprises determine the real significance of the privatization campaign and results.

This paper examines institutional changes at the former state enterprises, following the first phases of Russian privatization. It focuses on the background for new patterns of incentives and behavior, demonstrated by the most important economic agents involved in enterprise performance in the course of privatization. Those patterns have already had implications on economic behavior of privatized companies, restructuring perspectives and further privatization developments, which

are the subject of this paper as well. More concretely, the following issues are explored:

- The nature of ownership structure development. What are trends of modification, that has occurred to ownership structure, predetermined by initial privatization procedures - in-enterprise subscription for shares, voucher auctions, etc.? What kinds of circulation of enterprise stock are typical and why? What does the current proportion between insider and outsider ownership look like? Are there any significant changes within insider and outsider stakes?
- Stereotypes of incentives and behavior of major stockholders. Strategies of insiders and outsiders towards ownership, control and enterprise performance.
- The interrelation between ownership and control. Do transformations of ownership structure lead to new patterns of control? Or - to put it more explicitly - are emerging (modifying) and strengthening patterns of control over the enterprises adequate to ownership structures, by which these patterns are supposed to be stipulated?
- Corporate governance or authoritarian control? What are the prospects for civilized corporate governance in contemporary Russia?
- Relevant policy recommendations.

This paper is based partly on the outcome of enterprise surveys, which were conducted by the author while working with the Russian Privatization Center.¹ For more about the results approach: Bim, (1994a).² Given the limited size of the sample surveyed and the fact that in some respects, changes in enterprise performance were quite dynamic during 1994-1995, late empiric results, presented more recently by other researchers and research teams, are broadly discussed in the paper and involved in analysis as well.

Since the author had interviewed enterprise directors, other managers and employees personally, he did not only follow a formal questionnaire, but tried to maintain a dialogue with respondents, to make them talk in order

¹ Figures with no special quotation along this paper are taken either from Bim (1994a) or from unpublished components of survey results, being on the author's files.

to extract both explicit and implicit information. Thus, not all the statements of this paper, although based on survey results, may be supported by formal, quantitative characteristics. Therefore they could be considered by strict readers more as hypotheses. Some of such statements are strengthened by the fact, that they are completely conformable to conclusions, presented in literature. But some statements sound different. Further empirical findings will either confirm those hypotheses or disprove them.

1. OWNERSHIP STRUCTURE

The analysis, presented in this section, is focused on some major trends that predetermine formation of core stockholders and real control over the enterprises. For more general observations of ownership structure dynamics see: Boycko, Schleifer and Vishny (1995).

It is quite well known, that most of the enterprises have chosen the so-called second option for privatization (for a description of Russian privatization general framework and options see Frydman, Rapaczynski and Earle, *et al*, (1993) and Bim, Jones and Weisskopf, (1994). In Bim's sample 83,3% of newly created joint-stock companies (transformed state enterprises) had followed this path. The corresponding figure for all industrial enterprises is 78% (Gurkov, (1995).

It was commonly supposed that the second option will lead to significantly prevailing insider ownership with all the inherent characteristics, appreciated by adepts of this type of property relations and blamed by its critics (for debate see Bim *et al*, 1994). While not including a theoretical discussion here, it is necessary to mention that insider ownership really has appeared to be quite widespread. According to Blasi and Shleifer (1994) insiders held about 65% of enterprise shares in 1993.

At the same time insider ownership in Russia has manifested itself as a peculiar phenomenon. First, it differs from that advocated by East European and Western enthusiasts as collective ownership. Second, it has started very soon to disperse and, hence, has become substantially differentiated. Third, eventually it became clear that under certain preconditions this type of ownership may be transformed more or less naturally into ownership with considerable and even major outsider stake.

The main distinction between Russian insider ownership and a classical model of collective ownership is the absolutely predominant role of managers in governance and control over the Russian privatized enterprises, that are formally owned by all categories of insiders (this issue will be thoroughly revealed in the subsequent sections of the paper).

What dispersion and differentiation of insider ownership are concerned, Bim's surveys showed the following facts. At the end of 1993, non-managerial employees possessed more than 50% of shares only in 16,7% of surveyed companies. In the prevailing number of joint-stock companies - in 66,7% of them - non-managerial employees acquired 30-50% of shares with a good portion of companies quite far from the upper margin of this interval. That meant that this vast group of insiders was actually not a core owner: **without integration with any other group of stockholders, non-managerial employees could not establish even formal control over cumulative capital and, therefore, over the enterprise.** Given serious "positional differences" between managers and other employees it seemed reasonable already in 1993 (see Bim, 1994a) to draw attention to the quite peculiar nature of insider ownership in Russia and to argue against simplifications such as common statements of 1993-1994 that privatization in Russia had proceeded *de facto* in favor of workers (employees) or insiders as a homogenous group.

At the end of 1993 the portion of managers in the structure of enterprise shareholdings appeared to be the following: 3-5% of shares belonged to managers in 20,8% of surveyed companies, 5-10% - to managers also in 20,8% of those, 10-20% of shares were acquired by managers in 12,5% of companies, and 20-30% of shares belonged to managers in 8,3% of surveyed companies. Outsiders obtained, on average, 10-15% of enterprise stock. In Blasi's sample (1994), top management (with no indication as to exactly who was covered by the characteristic "top") obtained 8,6% of shares on average. The percentage of outsiders in his sample was higher - it reached 21,5%.

In the course of 1994, according to author's observations of the same sample, the picture changed. At the end of 1994 and at the beginning of 1995, in more than 70% of companies non-managerial employees got less than 50% of stock, and managers obtained in about 60% of companies 10-30% of stock. The portion of outsiders on average increased slightly - up to 15-18%, but in several companies outsider stake grew up to 30% of shares. In the much larger sample of Earle,

Estrin and Leshchenko (1995, 439 enterprises), on average across privatized companies, workers held 48% of shares, managers - 21% and outsiders - 20%.

The numbers and major outlined tendencies - (i) differentiation of insiders and increase of managers' stake and (ii) slow growth of outsider stake as well as the appearance of a number of outsider owned enterprises - are also obvious from the surveys, that were undertaken by other researchers and research teams (see Earle, Estrin and Leshchenko (1995) for summary).

Nevertheless, the fact of early and considerable dispersion of insider ownership is surprisingly stressed much rarely. In our view it is quite essential that, basically, workers (employees) ownership (or insider ownership in a classical sense) in many cases appeared to be not the fact at all, and - what is more important for our considerations now - workers themselves are possessing controlling stake rather rarely and, therefore, are unable to control enterprises without unification with other groups of stockholders. This trend also confirms earlier assumptions, that in the course of privatization managers will gradually increase their shareholdings to become majority owners (Peck, 1995).

2. MAJOR CHARACTERISTICS AND STRATEGIES OF STOCKHOLDERS

2.1. Managers

The crucial characteristic of the status of managers is that in the course of reforms, top managers not only remained the key figures at the microeconomic level, as they used to be under communism, but have significantly strengthened their positions in almost all respects. There are at least three reasons for that.

First, weakness of the current statehood - certainly not in a sense of giving up centralized planning and distribution, which was natural, but in a sense of inconsistency and discrepancy in reformist economic policy. Classical examples are: unpunished interfirm arrears; federal and local subsidies, remaining in hidden forms at large; various individual (per enterprise) exemptions; absence of bankruptcies. Badly regulated economic environment gives much room both for normal, productive managerial performance and for perversions in managerial activities.

Second, deficiency in constructive intentions and mechanisms of enterprise governance, which should have been caused by privatization. What seems most important here is lack of efficient control over managers.

Third, social immobility and depression of employees, unable to somehow defend their interests.

Sounds symptomatically, that none of the interviewed directors had complained on lack of self-dependency and pressure either from upper or lower levels as on reasons for the difficulties, which managers have now to overcome. These sorts of complaint used to be quite typical under communism. Gurkov (1995) mentions the same: according to him, top managers are almost completely satisfied by their independence in decision-making - the average estimate of respondents was 4,55 on a 5-point scale.²

There are reasons to argue that most directors have been successfully accustomed to transitional reforms of *a lá Rus* type. This was forecasted in 1992 (Bim, 1994b) and has been since then confirmed. It means that despite their public claims (sometimes loud enough), managers at that time already did not rely seriously on the state as on a supplier of resources in any direct way and either free or almost free of charge. It appears to be even more important, that directors understood that a transitional situation might promise enormous benefits to themselves; in their explicit or implicit interpretation, problems resulting from reforms, refer first of all to enterprises as such and to enterprise workers (employees), while benefits might be applied first of all to top managers.

This is completely relevant to privatization. Blasi (1994) and others emphasize, that despite the evidence that insiders as a whole (and among them employees) have held a major stake of shares, control has concentrated around enterprise executives (general directors or CEOs). Initial stages of Russian privatization and post-privatization development clearly have led to **managerialism** (for one of the good definitions see Szelenyi, Eyal and Townsley, 1995), typical to other transition economies of Eastern Europe as well. But the scale and significance of this phenomenon is much more challenging in Russia.

Surveys made it clear that directors find (or feel) certain interrelations between the constraints of shocking, speedy economic transformation and their possibilities to fulfill individual and corporative interests. 63% expressed no doubts that gradual and "better organized" reforms

probably could soften many kinds of constraints, but would definitely decrease individual and corporate opportunities for managers as well. This consideration helps to interpret the unarguable fact that during the whole period of Russian reforms, industrial managers refrained from serious attempts of putting political pressure on the government by heating dissatisfaction and tension among workers.³ Hence, the hypothesis can be built up, that despite the fact that many industrialists used to be and still are in the prison of old-fashioned communist stereotypes concerning enterprise and national economy organization, they appeared to be much closer to pro-reformist orientation than had been often predicted. Nowadays the alliance of enterprise directors with any sorts of marginals looks less and less imaginable: entrepreneurial and wealth interests of managers lie far from those of losers in the series of stormy battles for the marketization of Russia.

This is not a surprise, therefore, that politically the major part of directors extends support to those parties and/ or public movements, which do not intend to overrule the achieved results of privatization. At the same time, directors favor politicians, who claim to soften budget constraints, to provide or enlarge tax and duty exemptions, etc., but to the best of our understanding they do not seriously believe that combination of such intentions with irreversibility of privatization results is very likely. So such unrealistic claims do not seem to be of any serious danger.

What might be much more unpleasant, is state protectionism towards current ownership structure, already practiced by certain federal and regional bodies and declared by some politicians as their future goal and pre-electoral obligation. This is synonymously favorable for a bulk of directors and could prevent outside investors (both domestic and foreign) from persistent interventions into the industrial sector.⁴

There is a debate (see, for example, Earle, Estrin and Leshchenko, 1995), whether it makes sense to rely on self-reported perceptions of managers concerning their own role in control over the enterprises. In our surveys (as well as in Gurkovs') this role has been evaluated as high by non-managerial employees, local officials, actual and potential outsider investors as well. In Bim's sample employees, for instance, reported that enterprises have been under the complete control of managers in 82% of cases in 1993 and in about 80% in 1994.

Top managers closely identify their individual interests with enterprises. This is not a surprise at all: what other comparable values if not businesses being at their complete disposal, can directors offer in "the

market of opportunities" typical to the circumstances of transition? That is why, as it was revealed in the previous section, they do their best to make this advantageous position stronger and irreversible by concentrating enterprise stock directly in their own hands.

Russian evidence does not corroborate the conclusion of Szelenyi, Eyal and Townsley (1995) that conditions of economic uncertainty do produce disincentives for managers to become private owners. This statement is fully applicable to outsiders (although many of them are quite active in privatizing as well), but in the case of managers it seems to be misleading. Directors already practice control over the enterprises and gain a lot from it, so their experience of privatization is quite positive. At the same time, they do not have any alternative sources of doing well nowadays and in future - contrary to banking and trading entrepreneurs. So they have all the incentives to try to keep their controlling position. But they fear outsiders, who are eager to seize control away from managers through further stages of privatization. So they have to be aggressive in privatization in order not to lose control. These are good reasons for directors to be willing to reinforce actual control with genuine ownership.

Blasi (1994) presents the same conclusions. He examined opinions of the senior management of enterprises concerning future optimal ownership of their companies. It would be strange if opinions about this subject did not implicate intentions as well. Senior managers reported, that desirable ownership structure would be the following: all insiders - 72% of stock, employees (excluding top management) - 32%, top management - 40%, all outsiders - 27%, state - 0%.

However, the nature and the manifestations of managers' interests towards enterprises are not homogeneous. 1993-1994 surveys made it possible to argue for two essentially distinctive managerial strategies (Bim, 1994a). The first one could be called **constructive** and means that managers try to do everything possible for the efficient adaptation of enterprises to new circumstances. This involves (either - or) modification and modernization of production mix, substitution of suppliers and consumers by more suitable ones, improvements of interfirm organization, necessary cuts of personnel, restructuring of fixed assets and so forth. Approximately 26-28% of interviewed directors were radical enough to be considered as followers of this strategy.

Alternative strategy is naturally suggested to be called **destructive**. It is followed by enterprise executives who realize that, due to quite different

reasons, their core businesses cannot be reliable sources of prosperity for considerably long period of time. Such reasons might have their roots, in particular, in sectoral allocation of enterprises. Those in light and food-processing industries, for example, are very unlikely to promise any wealth to entrepreneurs because of severe competition of imports. So **immediate efforts are made by managers not to adapt enterprises, but first of all to succeed in creative and intensive extraction of incomes and enterprise capital itself for their personal benefits.** These efforts sometimes may be easily defined in terms of barbarism or robbery. Not less than 60% of interviewed directors, while discussing concrete matters of enterprise performance, implicitly confirmed involvement in activities of this sort.

Forms of the above mentioned extraction might be various and depend on both creativity of managers and enterprise characteristics: profile, boundaries, technological complexity, status of privatization (scale of outside control), etc. There are several common ways. 1993 was outstanding from the point of view of income extraction by managers - their salaries exceeded those of workers and other non-managerial staff 5, 10 and more times. In the surveyed sample, 38% of the top managers reported their salaries to be higher than the enterprise average 5 and more times.⁵

Beginning with late 80s, enterprise managers practiced largely to offer enterprise premises (sometimes with equipment, sometimes - not) for lease. Dolgopiatova (1994) points out that leasing used to be one of the main "survival oriented" measures in enterprise activities. This kind of business cannot be qualified as perversion as such. It sounds normal in general, and in specific Russian circumstances, large-scale leasing played an extremely positive role in development of newly created private entities: without renting premises from the state and former state institutions they simply could not start and survive. But the crucial point for our considerations in the current context is, that rent actually is utilized as the one-sided benefits of general directors and their entourage. Few investments of any sort are usually based on leasing-out of premises or equipment. In 73% of the surveyed cases, non-managerial employees claimed to have had nothing from the rather advanced leasing-out activities of the top management. Revenues from the leasing-out premises, etc., are normally used for the all-enterprise needs in the cases of emergency only.

Another common path, successfully followed from the late 80s, is the creation of numerous semi-state or semi-private small businesses around

the core ones, through which enterprise resources are channelled to physical persons - principals of these small businesses - and then utilized by the latter with no further relation to the deals of the basic enterprise.⁶ In 100% of the cases, those principals are enterprise officials personally or their allies. It certainly appeared to be quite difficult to get obvious answers from the directors on this point, but 73% of those interviewed reported to have small "surrounding" businesses organized under their auspices. All such businesses were evaluated by managers as surviving, 72% of the existing number - as enlarging or gradually being transformed into more vast private entities.

Dolgopiatova (1994) indicates more modest figures: in her sample, referring to 1993, from one-fourth to one-third of the enterprises have practiced organization of satellite businesses. Szelenyi, Eyal and Townsley (1995) argue that surrounding private firms, owned by managers (these authors call them "subcontracting", what is not exact in all cases), are typical to privatized enterprises in Eastern Europe also.

The next form of enterprise capital extraction is strongly connected with exports and related hard currency outflows (quite well known as "one-way travel of exports").⁷ Middle-level officials in 21% of surveyed companies informally and occasionally (while discussing other issues) reported that top management had obtained property (real estate) abroad on behalf of enterprises or satellite businesses. Exported and not repatriated capital has certainly been channelled into Western financial markets as well.

The aforegiven statements are conformable to the results of the VCIOM nationwide representative sample survey of 1998 Russians, covering European and Asiatic Russia and both urban and rural areas (Source: New Russia Barometer IY, Centre for the Study of Public Policy, (1995). In reference to privatized enterprises 28% of the respondents reported that managers used firms' assets for private benefits, 14% gave negative answers, and 58% reported that it was difficult to say anything exact.

It is reasonable to mention that the described forms of so-called opportunistic behavior are to a certain extent shared by all top enterprise executives, even by those who pursue constructive strategy of management. Key orientations and scale of unfair capital extraction are different, but some inherent characteristics of typical behavioral patterns are similar. These realities characterize the major and most unpleasant feature of vague and uncertain mixture of socio-economic interests and incentives, typical to the current stage of socio-economic transition:

superiority of individual interests over public, corporative and other private interests reached an extreme, which implies complete separation - up to opposition - of individual interests from the interests of institutions (public, private and "mixed" structures), of which bearers of those individual interests are members and even heads. To put it more transparently, it means that incentives and efforts of managers, aimed on individual success and wealth are quite natural, if these do not contradict dramatically the state of a company; Russian transitional phenomenon is completely opposite: the wealth of managers is built up not necessarily on efficient company performance or restructuring, to the contrary - very often it is based on purposeful and semi-legal capital extraction. That is why this phenomenon is called "opportunistic behavior".

Estrin (1994) underlines that in circumstances where owners do not directly control decision-making, mechanisms of governance are required to ensure that managers are motivated to maximize profits. Now it is clear, that it is critical to stress that the talk should be about **enterprise profits**, which ought to be maximized; otherwise there are reasons to evaluate existing mechanisms of company governance in transition countries as quite efficient since they work rather perfectly for maximization of the individual profits of managers with no relevance to the results of companies' performance.

Peck (1995) gave a forecast that if managers become the dominant owners of enterprises, they would focus on profit maximization - exactly what a market system requires. In respect to real market economies this is a truism, but in respect to transition economies it sounds quite a bit like simplification. Russian evidence suggests that for the time-being, a minority of directors identify their own profit maximization with that of enterprises. Therefore, it seems difficult to support the confidence that all of the managers, while trying to acquire a controlling stake of shares, are thinking necessarily about companies' progress (profit maximization) and not about better conditions for themselves as potential dominant owners for further profit and capital extraction.

From macroeconomic and institutional standpoints "managerial parasitism" can't be considered simply as a shortcoming (see below). **But the fundamental fact that managers in charge of enterprises, which they in fact own or exercise full control over, are so far delimitating their personal interests and interests of a company much beyond the brink of controversy, sounds not very optimistic.**

More observations are needed to come up with generalized conclusions on this point. But it seems to be clear that general political and economic uncertainty, as well as peculiar cultural stereotypes, rooting in the past, play a no less important role in formation of managers' strategies, than privatization as such.

Parasitism of managers, being too painful for a particular enterprise, its employees and stockholders, might have paradoxically better implications on macroeconomic and institutional developments. In fact this is a strategy, the extreme of which leads enterprises to inevitable bankruptcies along a probably much shorter path, than that of other potential bankrupts. This means that from the standpoint of badly needed general structural adjustment, reallocation of national resources, mobility of the labor force this strategy could be not so disastrous.

A constructive pattern is beneficial for stockholders if it means attempts of radical restructuring. The positive potential of this strategy, however, may be undermined by a misleading identification of an enterprise as a property object, materialized capital, and an enterprise as a productive entity in its current shape (production mix, boundaries, employment, etc.). Constructivism cannot mean conservation of the latter; it necessarily means restructuring aimed at profit and capital maximization.

2.2. Workers (non-managerial employees)

What workers are concerned, all the interviewed managers reported the lack of any positive influence of privatization on their incentives and behavior. The strongest "privatization interest" demonstrated in the course of 1993 was the interest in dividends. Then, given low levels of dividends and their extremely limited availability, employees stopped paying much attention to them.⁸

The normal interests for stockholders, such as participation in enterprise strategy development and decision-making, according to our observations, are much weaker than is sometimes suggested. In the shareholders' meetings the top leadership is a completely dominating party. Evidence, that some "worker owned firms" (where the major stake remains in the hands of employees) do exist, does not contradict this statement at all. Simply managers in these particular cases either intentionally refrain from further stock acquisition or do not have enough resources for that. At the same time, they are in a full control over companies.

If any single fluctuations of workers' activeness occur, "the activists" are usually unsuccessful in seeking decisions, alternative to those suggested

by management. Alliances of non-managerial staff and outsider investors due to the initiative of the first, which could support stockholders-employees in attempts to override managers, are quite rare so far.⁹ Employees are still more often supportive to management in the conflicts "managers vs. outsiders", because they consider even tough managers to be less radical and more tolerant towards employees than "strangers" could potentially turn out. The idea of stock concentration in the hands of managers, although not very popular among employees, is still closer to their hearts than that concentration by outsiders. In 72% cases in 1993 and in 73% in 1994, responses of interviewed workers showed clearly, that managers had succeeded in creating an "enemy image" with respect to outsider shareholders throughout working collectives.

According to the directors' estimations, from 10-12% (1993) to 15-18% (1994) of non-managerial employees are not interested in their position of shareholders at all - in a sense of both rights and obligations. These employees do not see advantages in holding a small part of enterprise stock or - what is more or less the same - do not believe in the reality of any proclaimed advantages. This group of in-house stockholders is most inclined to sell out their shares - if not to say to get rid of them. They are the main suppliers of shares to both financial markets and to eager managers.

Gurkov and Maital (1995) also indicate some related facts. More than 40% of the workers in their sample reported that their capacity to influence the decision-making deteriorated after they became shareholders, and 38% indicated "no change". 46% of workers-shareholders even mentioned that their access to information about the performance of their companies had also become worse after privatization. About 50% of the workers reported playing no role in distribution of bonuses and dividends.

It does not sound surprising then that privatization, as 100% of the directors do point out, has not yet demonstrated any positive influence on employees' motivations as workers and specialists. Having no role as stockholders, why should they be well motivated as enterprise functionaries? Such factors of higher motivation as threat of layoffs and wage level do matter, but first, they are not directly connected with privatization, and, second, are in fact beyond any real influence of employees and sometimes even of that of managers. Externalities like level and structure of market demand and arrears of consumers' payments appear to be much more important factors, that determine the economic situation at the enterprises and its impact on employees. The

VCIOM survey results offer a pessimistic estimation of current labor activities, based on responses of workers themselves: 60% of them claim that they are "often doing little at work". Characteristically, this figure is the same in reference to state and privatized enterprises. (New Russia Barometer IY, Centre for the Study of Public Policy, 1995).

2.3. The state as the enterprise stockholder

The state bodies in charge of implementation of the privatization program were initially assigned 20% of enterprise shares. In some cases property funds kept up to 30% of shares - due to the fact, that not all of those, envisioned for sale, were successfully realized through primary privatization procedures (close subscription, voucher and monetary auctions).

In principle, the state institutions are supposed to release the enterprise stock in the course of the global process of the separation of the state from the economy and depoliticization of enterprises. Nevertheless, there is a resistance towards complete privatization of former state enterprises. On the one hand, such resistance comes from the state apparatus of different levels, that dreams about retaining at least some control over companies. For a lot of remaining *nomenklatura* this is a question of survival.¹⁰ On the other hand, directors, who fail to adjust enterprise performance to marketization of the economy, prefer to keep links with the state wishing to be supported and protected by authorities. Both sorts of resistance determine different restrictions, which from time to time are put on privatization of the state stake in enterprises of various sectors of industry.

By definition, a process of legal and administrative regulations of privatization rests in the hands of the state. General rules and procedures were more or less set up during 1992-1995. But, as usual in Russia, implementation becomes a problem. Sometimes difficulties arise, when federal, regional or local authorities come up with controversial decisions on particular points, that are based not on regulations in force, but on one-sided interests of the parties involved in privatization. (See the endnote 4 mentioning the attempts of restitution at the Krasnoyarskii aluminium plant). Such tendencies certainly seem quite dangerous for continuation of privatization and its impact on enterprises.

There are two main issues concerning performance of the state structures as stockholders. The first one refers to their participation in the decision-making process at the privatized companies, which is important, given their possession of a large enterprise stake. Strategy of the property funds

in this respect seems to have been quite standard: in the general meetings of the shareholders, called in order to elect the directors and executive boards, property funds' representatives used to vote for the candidates, who were supported by majority of other voters. Another variant: if regional authorities, to which the respective property funds are subordinated, had any preferences, representatives of the property funds at the general meetings supported the relevant candidates. In the board meetings enterprise executives have been usually backed by property funds. Both enterprise managers and heads of property funds, confirmed these latter policies in the interviews.

Another issue has been a subject for sharp debate: a continuation of the privatization process in respect to the further destiny of enterprise stock held by the state. Already in 1994, it became more or less clear that financial markets would not absorb much of the enterprise stock, in particular - that which was consolidated in large packages. Demand from outsiders was not large enough. The splitting of packages, currently held by the state, was considered by experts and policy-makers to be undesirable, due to a likely negative impact on the prices of shares and on the creation of potentially efficient stockholders.

In early 1995, a consortia of eight large Russian banks came up with an initiative to provide the federal government with long-term loans in exchange for packages of enterprise stock held by the state. Those packages should have been given to the banks-creditors in trust. Such a deal seemed to be quite attractive for the government, since the 1995 state budget had to gain 9,3 trillion rubles as revenues from this so-called "monetary stage" of privatization, but prior to implementation of loans-for-shares scheme only about 1,3 trillion rubles had been accumulated (Open Media Research Institute Daily Digest I, # 1, 1996-01-02). So there were no reasons for surprise from the rumors that this "initiative" had been provoked by state officials themselves.

Extensive discussions were focusing on the following issues:

(i) Do banks really have enough resources to fulfill declared obligations concerning the loans? The banking crisis, that occurred in late August 1995, heated suspicion and uncertainty concerning the reliability and solvency of the banks. Later data that refers to the third quarter of 1995, indicates that the net value of bank assets decreased by 11% in comparison with the previous quarter, and growth of that assets occurred by only 2,6%, compared with a 15,5% increase during the second quarter. The number of commercial banks declined by 7,8% in the course

of the first 11 months of 1995 (Open Media Research Institute Economic Digest, Vol 2, 1996-01-04);

(ii) Will the operation planned be really helpful in creating efficient outsider holders of enterprise stock? Or would there not be serious impact on development of fruitful corporate governance?

For the moment these questions remain open. The process started quite recently, in September, 1995. Nevertheless, state packages of shares of selected largest companies were actively sold out through competitive biddings (tenders). Among those companies were LUKOIL, YUKOS, Nafta-Moskva (all - oil companies), and Svyazinvest (telecommunication company). Twelve governmentally organized loans-for- shares auctions took place, through which some 4,7 trillion rubles (1,01 billion USD) were generated (Open Media Research Institute Daily Digest I, # 1, 1996-01-02). This is 78,3% of the total amount, gained by the government from "the monetary stage of privatization" (6 trillion rubles), and 50,5% of planned revenue, fixed in the 1995 state budget.

Three main problems have become obvious in the course of this campaign:

(i) The level of demand and competition, accompanying the auctions, by now is rather low. Typically, not more than 2-3 bidders pretend to acquire share packages being offered. For example, at the auction, where shares of Yukos, the second-largest of Russia's oil companies were tendered, only two rival bidders showed up (Open Media Research Institute Daily Digest I, # 239, 1995-12-11). The same situation occurred at the auction, organized for selling out state shares of LUKOIL, the largest oil producer (Open Media Research Institute Daily Digest I, # 251, 1995-12-29). The main reasons are lack of available and "interested" domestic capital, cautiousness of potential foreign investors and - last but not least - results of bidding considered to be predetermined due to obvious preferences, extended by the government to several selected banks (see more below).

(ii) As a consequence, share prices are relatively low as well. Experts claim, that offer prices in federal loans-for-shares auctions on average are more than 30% below the current market value for the shares of companies involved (Open Media Research Institute Economic Digest, #6,7 1995-12-13). Bidding itself often appears to be quite symbolic: the consortium of the LUKOIL company and the Imperial Bank won the bid, offering to the government \$35,1 million for a package of LUKOIL

shares with the starting price of \$35 million (The Jamestown Foundation Broadcast, 8 December 1995 Monitor).

(iii) The government is dealing with a limited number of banks (about 2% of the total number), which looks as they are enjoying serious advantages. It is amazing, that the winners in the tenders are typically those bidders, who have affiliation with the banks, authorized to organize these very tenders. For example, Menatep bank acquired 78% of the YUKOS shares through an intermediary company Laguna. A 33% stake was purchased at the investment auction for \$150 million, guaranteed by Menatep, and a 45% stake in the loans-for-shares auction. \$159 million credit in the last case was guaranteed jointly by Menatep, Tokobank and Stolichnyi bank. The only rival bidder, admitted to the loans-for-shares auction, was Reagent, another company sponsored by this very bank. named Reagent. Menatep was also the organizer of the auction (on behalf of federal authorities). (Open Media Research Institute Daily Digest I, # 239, 1995-12-11). Now Menatep has to invest \$350 million only in YUKOS (op. cit.), having a lot of other loan and investment obligations (Open Media Research Institute Digest I, # 231, 1995-11-29).

Indicated problems cause a lot of concern and, as already mentioned, leave the issue of efficiency of loans-for-shares schemes quite open at the moment.

2.4. Outsider investors

There are three categories of outsider investors, which have different nature (origins) and demonstrate different intentions and activities from the standpoint of further privatization and impact on the enterprises.

Private companies. These (including sometimes former state enterprises) are most active in financial markets. They intentionally acquire shares in order to obtain either control or at least influence over enterprise deals. So their inclination to intervene in decision-making may be regarded as obvious. The surveys, conducted by the author, did not address this kind of shareholders specifically, but occasional information suggested that often private entities, intending to obtain real influence or control over particular enterprise or group of enterprises, come up with quite substantial restructuring programs. The problem is, that still there are too few cases where outsiders manage to acquire either a controlling stock or at least a controlling position.

Actually, two kinds of enterprises have to be delimited. First, companies, in the capital of which outsiders do not obtain controlling or

sizable stake. So far, these form a majority of former state enterprises. Participation of private companies in the performance of such enterprises remains on average not significant. It would be strange to accuse them for precautions: what sense does it make to intervene with private money in the deals, that are not under control from the side of investors? Unless patterns of control would not change due to either enlargement of outsiders' stake, or to emergence of any other forms of strengthening outsiders' decision-making and controlling power (let us say, the banks will inevitably put real sanctions against debtors that may bring them to bankruptcy and then eventually in the hands of outsiders), activity of private investors will stay limited and even shrinking.

Second, enterprises, being owned and therefore controlled by outsiders. These are a minority so far, and owners demonstrate controversial behavior. In Bim's sample, only several companies were owned by outsiders, and in all observed cases the new owners implemented substantial restructuring projects based on funding brought in by themselves. Opposite examples are also not a revelation. Therefore, Gurkov's (1995) view on outsiders' characteristics makes a lot of sense. His conclusion is, that private companies are rather active in penetration into the industrial sector (what probably reflects more 1994-1995 tendencies, than 1993-1994). At the same time, these eagerly expected core owners "act mostly as company raiders", preferring either to dissolve newly-owned enterprises immediately, or to use them as "cash cows" for their own current needs. The lack of strategic agenda in relation to outsiders is seriously stressed by this author, as well as by Earle, Estrin and Leshchenko (1995).

Voucher investment funds ("CHIFs"). These funds were established mainly by banks and other financial structures on the eve of privatization and were supposed to serve as intermediaries in vouchers' ("privatization checks") and shares' circulation. As Estrin (1994) and Frydman and Rapaczynski (1994) point out, such intermediaries were suggested especially in order to confront and overcome the wide diffusion of property rights, materialized in initial privatization certificates (vouchers). Following this logic, these funds had to play the role of major corporate outsider owners. These intentions certainly caused opposition towards intermediary institutions from the side of enterprise managers, and as a reflection legal restrictions were set up, according to which voucher funds were not permitted to possess more than 10% of stock of a particular enterprise.

As a result "CHIFs" have appeared to be one of the "modest" and inefficient stockholders. In Bim's sample (if referring to 1994), in 21% of the enterprises "CHIFs" were holding 10-12% of shares (later on the above mentioned restrictions were waived), in 23% of the companies - 5-10% of shares. Pistor (1994), indicates that the average stake held by a voucher fund in her sample (148 of the total of 516 these funds in Russia) was about 7,6%. Few exceptions known from the media and other sources only confirm the rule, as usual. Moreover, after gaining huge profits on voucher speculations, voucher funds had tried to extrapolate the same "speculative strategy" on their deals with enterprise shares. So their interests were manifested mainly in the area of financial markets as such with no particular focus on enterprise control, management and/ or restructuring. Many of these investors have become insolvent and eventually gone bankrupt; some have been transformed into conventional financial markets' players.

"Physical persons". There are reasons to subdivide physical persons-outsiders into two groups. The first one is not very large and consists of "free riders", who acquire quite small packages of enterprise shares in order to get dividends and/ or to speculate in the markets. This group is not interested in enterprise performance and perspectives at all (i.e., interests are limited by the current sights of getting dividends). Another group is more exciting. It consists of people, who formally have nothing to do with enterprises in question (in a sense that they are not employees), but at the same time are in close contact with: (i) either top managers or managerial coalitions, which control the enterprise or are seeking complete control; (ii) or private entities interested in the same. In both cases interests and strategies of this type of shareholders are strictly dependent on the strategies of their shadow seniors.

Pistor's (1994) observation, that most of the trading of stocks (88,6%) takes place off the official markets helps to imagine, how such peculiar shareholders appear on the scene (or better - act behind the scene). It also shows that enterprise managers are in fact controlling not only enterprises as such, but outside share circulation (i.e., financial markets) as well.

3. OWNERSHIP AND CONTROL: REFLECTION OF LATE SOVIET STEREOTYPES OR MOVE TO CORPORATE GOVERNANCE ?

The fact that ownership and control cannot coincide to a complete extent had been well known and broadly discussed in Western literature far earlier than privatization in Eastern Europe appeared on the agenda. Therefore, the issue that privatization procedures should have been aimed at the creation of efficient corporate governance system, which would be able to provide perfect control by proprietors over managers and assure positive motivations of the latter, was challenged often on the eve of privatization in transition economies. See, for example, Estrin (1994), Frydman and Rapaczynski (1994).

3.1. Control vs. Ownership: Russian Peculiarities

This problem has to be considered as particularly important for Russia. The point is, that the former administrative system eventually produced and fixed extremely untransparent and unclear relations of management and decision-making concerning so-called public property. Enterprises and other entities, having been proclaimed as public or even "nation-wide", were never really treated as such by the ruling bureaucracy. Moreover, within bureaucracy, delimitation of rights and functions used to be quite vague and uncertain. Existing hierarchies relied extensively on both formal and informal relations between officials (Joskow and Schmalensee, 1995). Although legal and administrative procedures existed, that were supposed to balance public, regional, local and individual interests, in fact the bulk of power was concentrated in the upper levels of state and communist party hierarchy. Major issues of enterprise performance, such as profile and production mix, main suppliers and customers, rules of income distribution and capitalization, price and wages regulations, etc., were strictly predetermined by the central governmental bodies.

At the same time, the center was seriously dependent on the enterprise administration in the process of working out plans and regulations and in the course of fulfilling plans as well. In the first case, information from below was necessary, in the second, certain efforts were inevitable "beyond the regulations" in order to meet usually not very realistic tasks. Given the scale of the economy and size of the country, the center was doomed to relying on managers from lower levels, first of all - enterprise executives. The latter not only enjoyed a lot of privileges, granted to Soviet *nomenklatura*, but also created a complicated system of levers for reinforcement of their real (both formal and informal) positions in

decision-making. One of the most common levers was multiphasic bargaining for lower plans in return for higher supplies (see for description Bim (1989) and Naishul' (1991).

It is necessary to mention that some pseudo-democratic procedures used to be a part of the Soviet planning. General meetings of "working collectives" for endorsement of different "counter plans" as well as innovative initiatives (very often - after prior approval of such "initiatives" by the upper levels), local trade unions committees, "recommending" on wages and social benefits, were quite common in this really whimsical system of management and decision-making. So many employees recognized such procedures as meetings of the shareholders as similar kinds of *pro forma* well known from the past.

It makes sense to stress, that in all these artificial mechanisms of management enterprise directors played a key role. In the course of the 70s they became quite qualified in pursuing decisions (or - what was the same - drafts and proposals for decisions of the upper levels), clearly identified with their own interests. Under those circumstances, however, the interests of managers could not be too much separated from those of enterprises. Further promotion of managers and their material wealth used to be dependent on success (which was actually also a subject for definition! - A.B.) of enterprise performance. The easiest and most common way to achieve higher results was certainly diminishing the goals as well as real production capacities. So both managers' and enterprises' interests were aimed at making life easier - fulfilling lower plans with larger centrally allocated resources.

The challenging feature of "communist management" was the following: depending on the concrete situation, both upper bureaucracy and enterprise employees could be successfully misled by managers. Employees were completely under the influence of enterprise executives.

These facts from the past are mentioned in this far not a historical paper in order to arrive at the following: privatization procedures, as they were built up and implemented in Russia, could not rapidly change the psychology, mental outlook and behavioral habits of enterprise insiders. This means that ruling, superior position of enterprise managers appeared to be *an priori* given obstacle for any sufficient corporate governance at the Russian formerly state enterprises.

Hence, in all cases of acquisition of the major part of enterprise stock by insiders, the full control over the enterprises certainly belongs to

managers, and more concretely, to general directors. That explains a gap between the formal assignment of shares and the real control exercised by the shareholders. Real control is in the hands of managers.

Aforementioned statements are hardly new to experts dealing with economies of Soviet and post-Soviet type. They are articulated here, because sometimes analysts do not question the adequateness of the real process of control and governance to formal ownership structure. Russian privatized enterprises can be certainly classified according to the structure of shareholdings. But in our view, there is no straight dependence up to now between the surface of a picture (structure of shareholdings within insider ownership) and the substance, i.e., shape of real power or control. In-depth interviews clearly show, that even if the majority of enterprise stock is in the hands of non-managerial employees, managers are the only real controlling party. Other insiders simply do not have enough access to working out, considering, formulating, approving and implementing decisions if this is not done through managers. But if it is so, the latter certainly have all the opportunities to pursue those policies, which they themselves evaluate as appropriate, despite "the formalities" of ownership structure.

These statements are completely conformable with some conclusions of Earle, Estrin and Leshchenko (1995); for example with their statement that the balance of advantage between managerially-owned and worker-owned firms in terms of influence on enterprise behavior is unclear. Our explanation is that both types of companies are controlled by managers and, therefore, do not show many differences in performance. The same reason interprets another conclusion of these authors, that the effects of "worker ownership" on behavior and restructuring are not yet as disastrous as predicted.

There are even reasons to argue, that when employees reach the top of their influence on the enterprise deals and change (re-elect) the general directors at the general meetings of shareholders, they do not end up with establishing any real control over a newly elected directors. In 18% of surveyed enterprises late directors did not receive their mandates for the next term during 1993-1994. Both employees and new directors claimed, that the former managers were dismissed due to lack of competence, mismanagement, etc. But, then 92% of employees emphasized, the new directors did not introduce any radical changes, relevant to the reasons of the dismissal of former leaders, and were not more responsible to workers than the previous ones. 88% of newly elected directors reported that they do not find any sense or possibility to manage the enterprises

meeting those demands of the collectives, for ignoring which the former leaders became fired. The situation described certainly may reflect the fact, that some general directors are actually dismissed not due to mismanagement in a common sense, but either because of externalities being quite beyond their influence, or because of internal conflicts they did not succeed to ward off or overcome.

The abovementioned statements do not mean that things are more straightforward than they really are. Employees certainly have some influence on management. The variety of precise circumstances force enterprise executives to consider workers' reactions on forthcoming decisions or foreseeable events. Such considerations may be dependent also on the ownership structure, among other factors. Interviews definitely prove that directors prefer to act in order to eliminate or unblock potential or actual conflicts much more than to provoke them. But this kind of indirect influence, which is actually not too strong, differs from that which might be a direct one, predetermined by the active role of holders of a major part of enterprise stock. Such role could be played only in the case of self-identification of employees as proprietors, on the basis of their vested interests, well-targeted strategies and perfect organization. That would mean real impact of privatization on decision-making and management.

3.2. Managerialism in Russia: Key Features and Key Problems

Directors are certainly thinking about making their actual control over enterprises more solid and prolonged. That it is why they are working on transformation of control, based on traditions and administrative advantages, into control, based on adequate ownership structure. So there are reasons to emphasize, that **the substance of a running process from the side of managers is not gaining control due to the sizable stake of property acquired, but to acquire sizable property stake in order to keep and strengthen the control already achieved and exercised.** This is a serious difference between the position of managers and that of outsiders. Control serves as a precondition for ownership, not vice versa. And ownership is still not necessarily a precondition for control.

87% of the directors, 73% (1993) and 77% (1994) of other managers reported that they have had definite interest in further acquisition of enterprise stock. This is not a surprise, given the evidence of concentration of shares in their hands (see the first section). It might sound interesting, that there are two ways of that concentration: an "open" one and a "hidden" one - a very typical Russian combination. The "open" way includes the following activities: (i) implementation of

differential conditions for closed subscription for shares under the second privatization option, which provided preferential opportunities for managers. This mechanism has been used by 25% of the surveyed enterprises; (ii) intensive buy out of shares at the first voucher and monetary auctions. Prior mobilization of vouchers and funds was necessary for that; it had been successfully completed by top managers on the basis of their personal benefits, gained from the phases of initial liberalization of the Soviet economy (1988-1991) and well known *spontaneous* or *nomenklatura* privatization (in more or less the same period); (iii) even more intensive buy out of shares in the secondary market - primarily from the voucher funds, as well as from the shareholders-employees. The latter are commonly forced to sell out shares within the working collective, i.e., to managers, even in cases of open joint stock companies, where such order is not predetermined legally as an exclusive one.

The "hidden" way, used by directors or managers' coalitions, implies : (i) mobilization of existing satellite private structures (see section 2.1.) or creation of new ones, especially for the concentration of shares according to guidelines of enterprise executives; (ii) orientation of private persons formally having no relations with the enterprise, but having those with its leadership, on purchasing shares in the auctions and secondary market.

Not only the "hidden", but also the "open" ways described, were certainly not eagerly revealed by managers in the course of interviews. It does not seem possible to present any more or less reliable quantities, characterizing scale of these operations. But quite reliable information can be extracted by analysis of the Registers of shareholders. Many curiosities become obvious if one examines those (not to mention that their availability not only for strangers, but for "ordinary" shareholders themselves is usually in question, and our sample was not an exception in most of the cases). For example, in 67% of surveyed joint-stock companies, the list of outside stockholders consisted up to 10-22% of legal entities, which were registered at the same mailing addresses as the basic enterprises. Could a better proof be found, that those entities were nothing else but satellite structures under control of enterprise leadership? Moreover, in 58% of surveyed enterprises among physical persons-outsiders percentage of people, identified in the Registers by the same family names as those of enterprise top executives, varied from 3 to 19%.

There are no reasons to argue that aggressiveness of managers as new owners is in all cases dangerous. There were many claims in professional

literature and in media that managers will necessarily demonstrate old-style stereotypes as lack of competence, conservatism, rent-seeking from the state, excessive care of employees and so forth. To a certain extent it obviously has appeared to be true. But at the same time, rather many managers have performed in a very flexible and pro-reformist way, and the speed of their adaptation to new environment has been really amazing. Under such leadership dozens, if not hundreds, of Russian enterprises are already recovering. At some point many directors adapted too rapidly and too radically, given their intentions of clear separation of their individual business interests from those of enterprises they were in charge of.

We tried "to measure" business qualities of enterprise directors, analyzing their behavior in the spheres of production, marketing, investments and restructuring, financial policy, labor policy, and privatization. It is necessary to stress, that not lonely facts of enterprise performance were taken into account, but those facts in connection with directors' activities. This way was chosen due to the obvious assumption that success stories and enterprise performance in general are dependent both on subjective factors, such as directors' policies, and (sometimes much more) on objective factors (sectoral allocation, technological level achieved, etc.) and externalities (regional allocation, remoteness from sources of energy and transport).

33% of the directors in 1993 and 38% in 1994 could be considered quite competent and efficient: they managed to maintain more or less stable financial status of enterprises; sufficient changes in production mix were timely introduced; destructive social conflicts were avoided; purposeful privatization policy, including admission of outside investors, was pursued.

25% of the directors in 1993 and 27% in 1994 could be evaluated as more or less corresponding to pro-reformist demands: they achieved an acceptable level of current functioning, first of all due to efficient commercial policy, including judicious price formation and flexibility towards suppliers and consumers; restructuring was going on, but without introduction of all the potentially possible levers and sources; moderate paternalism used to be practiced; privatization was going ahead, but purposefulness and strategic approach were lacking.

Finally, 42% of the enterprise executives in 1993 and 35% of those in 1994 seemed to be unable to lead their companies to recovery and market adaptation: the financial status was continuously critical; almost no restructuring took place, also in a sense of changes in the output structure; stock was spontaneously diffusing without any evidence of goals from the side of enterprise management.

So from the point of current activities, there are probably not so many reasons to dream about immediate removal of directors-oldtimers. Szelenyi, Eyal and Townsley (1995) consider, that the dominant ideology of **managerialism** is monetarism - "if for the new New Class, what Marxism-Leninism, or scientific socialism was for the old New Class". Our surveys do not confirm this observation, although it may

sound very attractive for liberals. It remains a question, if even outside the industrial sector, within the segments of economy, occupied by newly created private entities, this statement is true. Concerning managers of former state and now privatized enterprises, they are rather homogenous as a whole; despite some differences, they seem to be followers of only one ideology - pragmatism. Identification of their personal interests and thorough following of those interests in the practical life form the background of their behavior.

Basically, those directors, who do not meet "the demands of time", eventually go. According to some estimations, that are worth verifying, 20-30% of the general directors achieved their current positions in 1992-1995.¹¹ What is really crucial, refers more to their status as proprietors. As such they typically demonstrate a strong unwillingness to share their control over enterprises with any outsiders, who are not under their control themselves. This is characteristic to this "social corporation", and **very often the more progressive and efficient particular directors are in current performance, the less they are committed to any losses of control.** It seems a bit too optimistic to suggest, that if enterprise shares are mainly bought by managers, there are no reasons for the latter not to behave in the interests of other outsiders (Sutela, 1995). Such reasons exist and are rooted partly in psychology, partly in above mentioned possibilities for the directors to benefit more through unfair all-embracing control than through civilized corporate governance.

At least two problems arise here. First, lack of outside control is quite bad by definition. Economic agents are unlikely to work efficiently in the long run, being governed in authoritarian style, i.e., without the influence of concerned proprietors on administrators. Second and most important: in the contemporary transition economies privatized property and mobile capital are separated and concentrated in different institutional forms. Property - in the industrial sector, mobile (or financial) capital - in the banks and other financial institutions. In order to achieve necessary industrial restructuring of enormous scale, it is inevitable to bring these two components of economic resources together. The challenge is, that this looks completely impossible if financial structures do not channel financial flows into the production sphere, and they will certainly not do it unless the current controllers are ready to exchange control for such inflows.

So normal corporate governance becomes crucial not only because of inherent problems and goals of privatization. It becomes crucial due to the lack (if not to say - absence) of resources at the disposal of

enterprises for substantial market adaptation and restructuring. That is why specific attention is paid by analysts and policy-makers to the current, monetary stage of privatization and to described loans-for-shares schemes, aimed at obtaining by the banks (through their subsidiaries) a sizable component of the enterprise stock. But in return banks are going to credit government, not enterprises. So direct monetary inflows to the latter, although envisioned in the course of this manoeuvre, may be regarded as questionable.¹² Time will show also, what this kind of trust (state packages are supposed to be given to the banks in trust) means for both corporate governance and the further destiny of stock - which banks probably would intend to sell out in order not only to have their money, lend to the government, back, but to end up with a good surplus.

3.3. Coalitions of Managers and Privatization. Erosion of the Former Basic Social Contract

Surveys done by the author, clearly demonstrated evidence of widespread **inter-managerial coalitions** (Bim, 1994a), efficiently created and functioning in order to exercise control over current enterprise activities and benefit from them even if particular enterprises are in deep and continuous financial difficulties. This is the best proof that patterns of control do not necessarily depend either on ownership structure and - what may seem even more surprising - on the financial status of the enterprises. Such in-house managers' coalitions are used very broadly for the successful acquisition of shares and, hence, for privatization of enterprises not only *de facto*, but also *de jure* in favor of general directors and their allies.

Gurkov's (1995) assumption is that coalitions (he calls them "alliances") are usually created by those directors, who lack the financial and organizational means to acquire shares immediately themselves. Our observations are a bit different: coalitions are initiated by directors almost in all cases, irrespective of their possibilities to build up a single-person ownership. There are at least three reasons for that: (i) directors make other managers more interested in a proper enterprise performance and more responsible for the results. There are almost no real possibilities to exercise efficient administrative control, for which the formal rights of directors are only one of necessary preconditions, so the issue of economic incentives sounds quite crucial; (ii) by involving managers into in-house coalitions, directors try to avoid attractiveness for them of other alliances, first of all of alliance with aggressive outsiders; (iii) managerial coalitions make all the managers feel themselves to be "natural partners" of directors in all cases of potential and real confrontations within the working collectives. The importance

of the two last points may be confirmed by the fact, that in all the known cases of overthrowing the enterprise directors, the latter somehow lost support from the side of middle-level management.

It seems appropriate to mention here, that managers' coalitions are completely different from the well-known and much less formal **social contracts** between managers and employees, typical to the Soviet era. Peck (1995) supposes, that there are coalitions between managers and the workers' collectives, which present pattern of enterprise control is still based upon. Not arguing against certain obvious commonalities in interests of all of insiders, we defend a completely different approach. Due to disappearance of all-covering state control (late 80s - early 90s) and privatization (1992 - 1995) in Russia, differences in the interests of "positionally strong insiders" (managers) and "positionally weak insiders" (workers or other employees) have become much more significant than their commonalities. That is why **contemporary managers' coalitions have nothing to do with unification of those groups of insiders**. To the contrary, they reflect contradictions in interests and patterns of behavior of former social partners, now almost antagonists. Uvalic (1995), on the basis of analysis of privatization in the countries of Eastern and Central Europe, also points out that it is necessary to distinguish managers and employees as quite different categories of insiders.

One issue has to be especially examined in the context of erosion of the former basic social contract between managers and employees. Dolgopiatova (1994) and many others emphasize, that managers typically feel certain obligations concerning employees, originated in habitual values of the communist past. These obligations refer, first of all, to "safekeeping of the working collective" (refraining from firing employees due to economic necessities) and maintaining more or less appropriate (socially acceptable) salary level. Dolgopiatova points out, that in her sample among the main goals of enterprises, as seen by general directors, 58% of the latter put in the first place "safekeeping of the working collective".

Bim's sample, however, suggested different observations. Only 33% of the directors reported that they would give priority to the abovementioned goals; 20,8% did not mention social problems by their own initiative at all and, answering precise questions, explicitly underlined that they would not consider these problems, first of all preservation of employment, to be important goals for enterprises in transition.

In-depth interviews demonstrate, that a pragmatic approach in the attitude of managers towards employees is much more prevailing than emotional or ideological ones. Directors would prefer to avoid any more or less large-scale conflicts - that is the criteria they really follow, which has nothing to do with any curtsies towards values, moral obligations, etc. Most of the concrete solutions are made on the basis of pure pragmatic approach.

With respect to wages, managers try to maintain certain salary level, compatible with the in-regional standards. First of all, this level follows the inflation and, typically, is almost not connected with particular labor achievements and with economic reasons relevant to the enterprise as a whole. Dolgopiatova (1994) mentions, that wages have been transformed into an "independent component" of production costs. In many cases salary increases eat up a substantial portion of cumulative enterprise earnings. At the same time, a majority of directors channel some current resources for purchasing new equipment, i.e., for a kind of renovation and even restructuring (changing of production mix). In Bim's sample, about 18% of the directors in 1993 and 27% of those in 1994 reported buying equipment for production purposes.

As far as employment is concerned, estimations according to International Labor Organization criteria, show that 6 million Russians - 8,2% of the potentially working population - are unemployed (Open Media Research Institute Economic Digest, # 8, 1996-01-03). Hidden unemployment (people are kept affiliated with the job, but in reality not working regularly or full time due to the lack of resources, necessary for reproduction) covers much more people. So it is obvious that personnel, in fact, is cut, despite any declarations, but in order to keep people quiet and to save some labor reserve for potential (in many cases - wishable) "production boom", personnel reductions are adjusted and moderate.

The conclusion is, that managers' declarations concerning their "social orientations" should not be taken too seriously. Real facts are better proof for pragmatic approach.

Coalitions of the revealed type do not leave any room for non-managerial employees to withstand the dictatorship of managers in governance and their expansion in privatization. There is simply nobody who could organize and lead any resistance. Directors confirmed, that they attentively follow the situation and either expell dissatisfied employees,

or involve them in coalitions with all the consequences concerning benefits in general and privatization advantages in particular.

Gurkov (1995) and Gurkov and Maital (1995) underline, that the role of middle-level managers has become, in their own view, considerably less important in the process of decision-making. This shows that these managers actually have accepted a subordinate role in the coalitions offered by top managers. We have monitored quite a few cases, where middle-level managers responded differently, evaluating their influence as much higher than it used to be before. It easily may be so. Inherently predetermined monocentrism of decision-making (for example, until now everything might have become operational at the enterprises only through written orders, signed by the general directors personally), admits enlargement of the competence of lower levels. But with one quite necessary precondition: such enlargement can be legally and technically achieved only on the ground of acceptance by a general director, who is **granting** new functions and rights to the enterprise employees, subordinated to him. So the exceptions that we have observed, sound unarguable in a context of delegation of competence from the top of managerial vertical to its bottom. But it does not mean any aggravation of the self-contained role of middle-level managers in a framework of privatization, corporate governance and enterprise control.

Top management and, first of all general directors (chief executive officers), of enterprises play a dominant role in the coalitions not spontaneously, but quite consciously. Findings of Blasi (1994) confirm, that design of coalitions themselves is a subject for thorough considerations of the general directors. On his question about desirable distribution of insider ownership in future "optimal" ownership structure, CEOs responded, that within 40% of stock, they would prefer to be allocated to top management, 31% should be possessed by themselves and 9% - by other top managers. In addition, 17% of stock should be given to other (lower-ranked) managers.

Besides the aforementioned in-house coalitions, there appear to exist two more of a traditional type and decreasing influence. First, the coalition of managers, dealing with technologically and economically related enterprises of former branches or sub-branches (sectors or sub-sectors) of the economy. Second, the coalition of those managers, who are governing technologically and/ or formerly organizationally integrated enterprises within regions. Such coalitions are typically forming not for privatization needs: they embody quite different forms of managerial cooperation, beginning with searching for suppliers and customers and

finishing with lobbying in political circles and seeking investors. Our observation is, that the most of directors currently do not need these forms of "mild integration" too much and gradually give up membership in them.

Dolgopiatova (1994) describes in detail existing vertical and horizontal associations ("objedineniya"), which may serve as examples of coalitions of a traditional type. According to her data, in the fall of 1993 43% of the enterprises reported their unwillingness to join associations, 40% of privatized enterprises ceased to be members in any of them. Ickes, Ryterman and Tenev (1995) thoroughly explore the influence of membership in such associations on enterprise restructuring.

Another type of external (or outside) coalitions deserves serious further attention. These coalitions are emerging on the basis of mutual exchange and penetration of stocks between technologically and / or economically related companies. This process is organized by interested directors. Surveys produce many examples of directors trying to manage dissemination of shares not only inside, but also outside the working collectives. In 1993 they were most active with such initiatives, because during that very year outside circulation of shares was broadly launched by voucher and first monetary auctions. Therefore, initial affiliation of large outside blocks could, to a certain extent, determine further development of privatization and control over the enterprises. In Bim's sample 62,5% of the directors reported implementing purposeful policies in order to attract suitable outsiders by providing the latter with information about envisioned auctions and - what is even more expressive - by propaganda (so to say, very active advertising) of their companies as perfect objects for capital intervention.

In most cases coalitions of this type were organized certainly in order to prevent intervention of unexpected and "dangerous" outsiders. **In other words, "loyal outsiders" were created on the initiative of directors.** There were three typical paths for this process: "loyal outsiders" were selected (i) among more or less stable and reliable suppliers and consumers; (ii) within the economic sector, to which the enterprise-initiator itself belonged; (iii) by mutually advantageous agreements with new private (originally private, not privatized) investment institutions. In the first case, directors considered that they had surrounded themselves with commercial partners, who should be naturally interested in the stable functioning of their company. In the second case, experience and well established connections within former industrial branches or associations of a traditional type were intended to be exploited. The third

path promised certain financial support. But the main, usual goal was to prevent stocks from being spontaneously circulated in the financial markets without control and influence of managers.

Coalitions of this sort (contrary to above mentioned traditional associations) can be assessed as the product of the privatization process and indicate emergence of a significant stage of it, theoretically able to break (to change) the existing enterprise structures and boundaries and to lead to formation of new market entities. But for this purpose the incentives of directors have to change quite a bit: they have to move from safe-guarding, protective aspirations to active entrepreneurial motivations, implying interests in stock concentration and expansion of ownership and control not only inside, but primarily outside their basic companies. This was not the case in 1993-1995. So for now coalitions described are used much more not for development of new market institutions, but to the contrary, for conservation of old structures, i.e., for the purpose they were originally invented.

3.4. Outsiders as actual and potential core owners

When discussing the issues of corporate governance, it probably makes sense to mention, that while obtaining major or controlling stake of the capital, outsiders do not necessarily demonstrate the expected inclinations to invest largely and to improve the enterprise performance immediately. Their practices of control over managers are often quite controversial. We have already cited Gurkov (1995) on this point (section 2.4.); a more milder conclusion of the same sort is suggested by Earle, Estrin and Leshchenko (1995). So a certain contradiction between theory (or expectations) and reality is taking place.

The reasons for likely inefficiency of outsider ownership in Russia are to a great extent rooted in the nature of rather many outsiders.¹³ This time we do not mean CHIFs or individuals, but domestic and even foreign banks, investment companies and whatever. Some of them perform quite normally, some - with serious deviations and perversions. It is beyond our goals to explore this subject now, and the evidence is limited by only few examples of outsider ownership, but certain considerations and forecasts (if not to say alarms) sound rather urgent.

Many of the domestic investors were originated in the Soviet or post-Soviet shadow economy and almost all of them have been functioning during recent years under the influence of hidden "mafiosi" structures. This causes a lot of contamination to behavioral stereotypes and business habits of new and relatively new private structures (even if they are only

partly contaminated yet). Foreign investors, who are active in Russia, very often represent not the best Western companies. Along with good names there are a lot of marginal companies, sometimes based on activities of former exiles, sometimes - on partial repatriation of illegally exported or not properly returned domestic capital.

Hypothetical reservations about outsiders (as well as much more obvious facts and statements concerning insiders) should not be taken into account for straightforward revisions of current privatization activities, nor for any forms of illegal and dishonest restitution in cases already done. There are no reasons for attempts to diminish the necessity of corporate governance as a mechanism for establishing and maintaining satisfactory relations between proprietors and managers as well. **The point is, however, that the destiny of the enterprise performance in Russia for the timebeing is probably not synonymously predetermined by the prevalence of insider or outsider ownership and control. In the short run, most likely it will be dependent on the shape and intentions of concrete actors - insiders and outsiders - dealing with particular enterprises in the course of privatization and post-privatization.** Perotti (1994) seems to be quite realistic, suggesting that the role of individuals, running and controlling enterprises, will continue to be quite high. Current Russian realities require some clarification: the role of individuals will be high regardless of their being either managers or outsiders. That means, *inter alia*, the necessity to take into account a variety of multiple and controversial components, that determine and influence individual behavior and are much beyond schemes and factors of privatization as such.¹⁴

3.5. Challenging issues of corporate governance in question

The concrete situation in Russia makes theoretical discussions concerning different variants for efficient corporate governance almost senseless (see, for example, Perotti (1994) for a summary of those variants). Alternatives like financial intermediaries vs. banks or capital markets vs. specially created "holding companies as privatization agencies" (op. cit.) are not precise enough. Assuming that somehow industrial capital will become available for penetration by monetary inflows from the financial sector (what is not obvious at the moment at all), the key very pragmatic issue is, what actual and potential economic actors do have enough interest and resources for essential intervention into the industrial sector? How much are they ready to invest in order to obtain control over the former state capital, a good part of which is so far without a core owner?

Not pretending to suggest any immediate scenarios, referring to the evident situation only, it is possible to argue that for the time being only banks, despite the above mentioned complications, appear to be appropriate players in this game. Capital markets as such may sound promising in particular cases, but cannot play an important role in general due to the obvious lack of appropriate financial potential of too many participants. Doubts and uncertainty about financial markets were expressed by Perotti (1994) and Peck (1995). At the same time, as mentioned in section 2.3., it is by far not clear whether an alliance of banks and enterprises is really going to end up with positive economic and institutional changes of a large scale.

Another no less pragmatic challenge for corporate governance is, under what circumstances enterprise managers would be ready to exchange control over companies (or at least part of it) for badly needed financial inflows? In other words, what kind and strength of pressure from the market or from the state do they need to give up "opportunistic behavior" and act rationally from the position of enterprise interests?

4. POLICY IMPLICATIONS

There is no question, that problems indicated can be - and, therefore, have to be - solved only on the way of further progress of privatization, on the way of making it more deep and consistent. Any attempts to reverse the results already achieved and turn the process back would worsen the situation, not improve it. Based on this strong belief, suggested policy recommendations are in line with continuation and strengthening of privatization policy.

A debate still takes place about whether state regulations are important for the strengthening of Russian privatization process. Some experts claim, that the market will finalize this job and no interference from the state is necessary. Others are arguing for serious state intervention primarily in order to "correct mistakes" of the previous stages of privatization and then continue to regulate the process further, taking into account "state and public interests". It seems that both extremes, as usual, do not represent a rational, pragmatic approach or a realistic one. The second approach presupposes much more cancellation than continuation of privatization. But the first one has another sort of limitation: if the state remains indifferent towards the obvious shortcomings, which are typical to privatization and post-privatization nowadays, changes in ownership may easily remain formal and much

less productive than they could be in principle. Szelenyi and others (1995) suggest a quite realistic statement that **managerialism** may not at all be a transitory phenomenon. They underline, that key actors of economy and politics have a vested interest to reproduce this phenomenon and there are signs that it begins to enter a growth trajectory.

Vagueness and uncertainty of the current Russian statehood do not promise much efficiency from state policy in this quite complicated area, since it is also the area of strong controversy of interests and lobbying powers. But in our view, at least, the right attempts ought to be made: something is better than nothing.

First, it is necessary to pursue the achievement of more or less efficient corporate governance. Given the fact that the majority of enterprises is under the control of managers, it means the necessity for the state to provide prevailing support for outsiders, despite the aforementioned controversy regarding their behavior. This implies political, legal and practical measures: any possibilities for satisfying managers in their attempts to get rid of outsider investors other than through well motivated court decisions should be legally prohibited and administratively (i.e. - really) unattainable; access of outsiders to the enterprise capital has to be continued and enlarged by further selling out the state shareholdings; macroeconomic policy should remain anti-inflationary in order to, *inter alia*, prevent financial institutions from "making business" on inflation - this may heat their interest in industrial investment and sustain the profitability of the latter.

Second, serious measures have to be undertaken to avoid any possibilities for conservation of the enterprises, that have been in continuous recession and financial losses. Enterprise restructuring, both in macro- and microeconomic aspects, has to be reinforced in order to put an end to inefficient allocation of resources and to give more room for the implementation of investors' strategies. This could be done through an active policy of bankruptcies. Unfortunately, early beliefs that the great majority of restructuring in Russia would take place without having to revert to bankruptcy, or assumptions that bankruptcies themselves may not be as important for Russia as their threat (for statements see: Enterprise Behavior and Privatization of the Large Enterprises in the Russian Federation, 1993), appeared to be unrealistic. It is possible to say now, that lack of bankruptcies has been one of the major reasons for the enormous scale of conservation of inefficient enterprises in Russia as well as for relatively low efficiency of

privatization. The author would be happy to share the optimism of Joskow and Schmalensee (1995) concerning liquidation and bankruptcy of enterprises as part of industrial restructuring in Russia over the next few years, but there is no current evidence for this sort of forecasts.

Up to now only a few cases of bankruptcies can be indicated due to badly targeted and not instrumental state policy and the weakness of relevant market infrastructure. The Federal Bankruptcy Department of the Russian Federation admits, that only among the enterprises, partly owned by the state (in which the state possesses more than 25% of the charter capital) 7,75% or 2,314 were insolvent as of December 1, 1995. (Open Media Research Institute Economic Digest, # 8, 1996-01-03). The introduction of really strong measures for bankruptcy intensification, including development of efficient market (self-regulative) infrastructure for this process, seems to be critical.

SUMMARY AND CONCLUSIONS

Ownership structure of the Russian privatized enterprises is in the process of development. The major tendency is steady differentiation of the insider stock on the shareholdings of managers and those of non-managerial employees. Managers (first of all - general directors) concentrate more and more shares in their hands, willing to strengthen and enlarge their own *de facto* controlling power, based on historic circumstances and initially widely disseminated enterprise stock, by gradual obtaining major stakes in the enterprise capital. Currently a bulk of companies is under their complete managerial control, which is in a process of successful transformation into ownership control.

A fundamental fact has to be recognized, that so far formal allocation of shares (i.e., ownership structure) in the case of Russia does not coincide at all, on average, with the patterns of real control. If outsiders do not have more or less sizable stakes (the absence of which is still typical), despite formal proportions within the stake of insiders, control rests in the hands of the general directors. Therefore, conclusions concerning enterprise behavior could hardly be made on the basis of characteristics of the ownership structure.

In order to make the process of ownership concentration more consistent and irreversible, top managers create and strengthen in-enterprise managerial coalitions, which prevent spontaneous circulation of shares and undermine possible protests towards "unfairness" from the side of non-managerial employees. Managerial coalitions are a peculiar and

significant feature of on-going concentration of enterprise stock in Russia. Besides in-house coalitions, managers have started to design the outside ones by pursuing the mutual penetration of stock of technologically related companies. Thus, preconditions for future changes of contemporary enterprise boundaries are emerging.

Enterprise executives attempt to regulate outside shares' circulation (i.e. financial markets) as well. For that purpose, satellite businesses, surrounding former state enterprises from the late 80s and being owned or controlled by managers, are used at large. This is one of the reasons why registered stock acquisition may be completely misleading from the standpoint of real ownership and control: stock of those satellites, which are formally outsiders, in fact supplements the managerial stock.

Three years of large-scale privatization in Russia permit some conclusions to be made concerning the characteristics of different types of shareholders. Most of managers, as mentioned, intend to concentrate controlling stock in their own hands in order to exercise full control over companies. Nevertheless, there are differences in managerial behavior, and the latter refer not only to the speed of such acquisitions, which is certainly discernible. At least two managerial strategies have to be mentioned.

The first one is followed by those enterprise top executives, who identify their personal future success and financial wealth with the companies they are working for. Therefore, privatization in their minds, has strong links with efficient market adaptation and restructuring. They privatize - ideally - in order to recover, continue and enlarge businesses for their own long-term stability and benefits. According to our observations, these managers are in the minority.

The second strategy is followed by managers, who, because of different objective and subjective reasons, do not identify their personal long-term interests and wealth with the company they are currently in charge of. Hence, privatization is accompanied and followed by various forms of short-termism and even barbarism, aimed at an as much as possible acceleration of income and capital extraction from the enterprise in favor of "opportunistic managers".

Both strategies have advantages and shortcomings - depending on from what standpoint it is viewed. The first strategy is advantageous for those who happen to be stockholders of a particular, potentially efficient enterprise and have the willingness, tolerance and skills to keep their

stake. The second one is probably not bad from macroeconomic and institutional points of view, since it means nothing more than an accelerated move towards inevitable bankruptcies and the following reallocation of resources, i.e., to badly needed structural changes. What seems challenging, is the fact that **a good number of enterprise executives are so far delimitating their personal interests and interests of companies they are in charge of much beyond the brink of controversy.** This gap between privatization goals and the actual effect of privatization on managerial incentives and behavior (although it is resulting not only from privatization itself) may hamper potential positive impact of privatization on enterprise performance and the nature of entrepreneurial interests at large.

Another important group of insiders - employees - does not demonstrate any positive impact of privatization on their incentives. The interest in dividends used to be the strongest among interests referring to privatization, in particular during 1993. Due to the fact, that quite a few companies managed to provide dividends for shareholders and the latter appeared to be of a rather modest size, this interest became less articulated.

The portion of outsiders, who own and / or control Russian industrial enterprises is still low, although there was a slight growth during 1994-1995. The problem is, that demand from the side of investors for industrial enterprise stock remains not too high - due to both lack of mobile resources within the financial sector, and prospects of Russian privatization and economic growth considered to be not clear enough. Another crucial obstacle is the unwillingness of managers to exchange control and ownership for monetary inflows, which in principle might be provided by interested outsiders.

Actual outsider owners demonstrate no less controversial incentives and behavior, than managers. In both groups there are positive and negative examples of governance, which proved to be typical and therefore may be extrapolated. Hence, the problem of perfect corporate governance does not seem to have synonymous solutions. Not disregarding the basic principle, that corporate governance predetermines control proprietors over managers, it makes sense to argue that **real characteristics and efficiency of enterprise performance under Russian transition are more dependent on personalities (individuals) in charge, than on what social and / or economic group they represent.** Following this

statement, neither managers nor outsiders should be *a priori* praised or disqualified.

The state has to continue playing a role in regulating the institutional changes. Three major functions make a lot of sense and have to be activated. First, the state has to prevent - both legally and administratively - any attempts for restitution of the former state property, assuming that revisions of that sort have nothing to do with efficiency and fairness, but most likely reflect interests of losers in the previous privatization rounds. Second, the state has to pursue well-targeted and instrumented policy of bankruptcies in order to prevent the conservation of enterprises, that are in continuous and irreversible losses. This might "open" enterprises for further privatization and substantial restructuring. Third, the state has to improve the process of privatization of state packages of the enterprise stock. Ideally, this process has to be transparent, competitive and free of any presupposed solutions. Whether the contemporary Russian state is able to meet these requirements and, therefore, provide positive impulses to further privatization, certainly remains an open issue. But this is definitely a subject for another study.

ENDNOTES

¹ Under the auspices of the Russian Privatization Center, the author conducted in 1993 in-depth interviews with general directors, top and middle-level managers and non-managerial employees of 24 enterprises, located in three regions of Russia - Far East (Primorskii kraj), Vologodskaya oblast and Saratovskaya oblast. The sample reflected quite different sectors of the economy: the wood-processing industry, machinery, light industry, food industry, construction, transport, military-industrial complex. All the enterprises had completed the so-called initial privatization procedures (in-enterprise subscription for shares, voucher and first monetary auctions) and were privatized: the state retained not more than 25% of the stock. Observations were then continued in 1994.

² One of the major new dependencies (if not to say bondages) of the enterprise directors is certainly their dependence on *mafia* (criminalized shadow business activities). *Mafia* connections are usually out of more or less exact considerations through conventional economic surveys due to the obvious impossibility of obtaining reliable information. There are claims, that *mafia* is rather persistent in intervention into the Russian industrial sector in the course of privatization.

³ Well-known strikes and other "protest activities" of the coal miners (Kemerovo and Vorkuta regions mainly) are the exception. These actions often reflect not only the aggressiveness of trade union leaders and workers themselves, but the attempts of directors to gain "support from below" for their claims as well.

⁴ One of the most known cases is the willingness of the regional administrative and juridical bodies of the Krasnoyarskii kraj to reverse the results of privatization, occurred at the Krasnoyarskii aluminium plant, in order to help the general director to get rid of outsiders, which had obtained a large stake in this company.

⁵ It sounds interesting, that wide-spread wage arrears are in no cases applicable to enterprise managers. While non-managerial employees may be on mandatory unpaid leave, managers continue to be paid even if the production process is terminated, consumers do not pay, banks impose sanctions, etc.

⁶ Beginning with 1986-1987, numerous cooperatives, joint ventures and - later on - other forms of small businesses - eventually emerged. (See Bim, Jones and Weisskopf (1993) for quantitative characteristics and description). Both logically and historically they appeared to be the predecessors of contemporary satellite businesses, sometimes after transformation into more modern forms of enterprise organization, more rarely - kept under their initial status.

⁷ During recent years, Russian and Western literature have been giving rather different evaluations of the foreign currency outflows. One of the estimations referring to 1992 and 1993 suggests, that during each of those years hard currency outflows reached worth 15% of GDP (The Jamestown Foundation Broadcast, January Prism, Part 2, 1996-01-13). The EBRD relatively recently came up with the cumulative figure of \$45 "Russian billion", kept and circulated outside the country (SOURCE TO BE ADDED).

⁸ The level of dividends was initially connected with the prices of shares and therefore low. Moreover, it has been devalued continuously due to inflation. Directors in all cases prefer not to pay dividends, referring to different complications and to a lack of resources. At the same time they try to pay the so-called "13th salary", explaining to employees that for them it makes no difference in what form - dividends or that oldtimer payments - employees will receive money. In this way outsiders are certainly discriminated and insiders, to the contrary, appeased with the fact of this discrimination as such and with "keeping enterprise profits from unfair distribution among strangers". If the companies are controlled by outsiders, the dividends are certainly paid, but because of modest size still do not play the role of "good incentive" for employees.

⁹ Still such situations occur. One of those well announced was the dismissal of the oldtimer general director of the Vladimirskii tractor plant and election of a middle-age Western educated blockholder to this position in 1993. (SOURCE TO BE ADDED). In Bim's sample there were 12,5% such cases.

¹⁰ Considering the necessity to keep enterprises under control, bureaucracy has not necessarily formal benefits in mind, which it obtains from the state for doing the job. These benefits could hardly be compared with earnings in the private sector and, hence, are not very attractive. But what matters, are the illegal relations between *nomenklatura* and loyal enterprise directors. Through these relationships statesmen [may] get a lot in exchange for different kinds of exemptions and other forms of support.

¹¹ It is interesting to mention, that new CEOs are typically recruited by those parties, which manage to obtain control over the enterprises and get rid of the former directors, among the second-third persons of the "relative companies" (with the same profile, similar technology, etc.). "Pure strangers" are put into this position quite rarely. Following this strategy, the new owners, first, demonstrate their care about professional skills of the appointees. Another reason not to recruit general managers from outsiders is the unwillingness of the owners to enlarge the power of only one of themselves; this refers to the situations, in which outsider ownership and control rest in the hands of several proprietors (persons or parties).

¹² In most cases, direct monetary inflows are envisioned. In our view, it is still questionable, whether or not they will occur in reality. There are already examples, that investors postpone financing, which used to be a condition under competitive bidding, after obtaining desirable block of shares.

¹³ Such reasons as political uncertainty and *mafiosnost*, pure economic considerations concerning excessive taxes, lack of legal basis for profit sharing, enormous transportation costs, etc., matter certainly as well.

¹⁴ The fact, that transition in Russia, CIS and Eastern Europe is of a systemic nature is not completely understood yet, so to say, on the instrumental level. The systemic approach is not realized practically, while concrete economic issues are analyzed. Privatization is one of those issues, that badly need, along with analysis of economic factors, consideration of the psychological, cultural and social aspects of transition.

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The Institutional Framework for Enterprise Social Asset Divestiture in Russia: Theory and Practice

by Mari Kuraishi

Enterprise restructuring in transition economies is often cited as the biggest -- and the thorniest -- issue of the transition. This understanding has been implicit in the Russian reformers' emphasis on mass privatization. But not all assets associated with Soviet enterprises were subject to privatization, among them the so-called *social assets* of enterprises. These include, among others: housing, schools, kindergartens, medical, cultural, and recreational facilities. These assets constituted five percent of assets in the enterprise sector at the end of 1993. If the assignment of property rights over such assets is not clarified, it can undermine one of the principal economic objectives of privatization -- the creation of real owners who are motivated to use resources efficiently. Owners of enterprise assets who are left with a residual of assets they neither own nor are divested of responsibility for are significantly handicapped in making efficient use of the resources they *do* own. The divestiture of these non-privatizable assets, therefore, constitutes an inseparable element of the process of enterprise restructuring. This paper examines the policy framework and the outcomes to date of the Russian Government's policy regarding divestiture of housing from privatizing enterprises.^{1/} Housing was chosen as the most significant social asset (up to two-thirds of all enterprise social assets), and because of low cost recovery in the housing sector, financially the most burdensome to enterprises.

On the face of the Russian reform program also recognizes divestiture as an important part of the enterprise restructuring process. The privatization process rules that assets which were not included in the enterprise's charter capital upon corporatization must be divested to local authorities within six months.^{2/} Over Rb 12 trillion (some 1.8 percent of GDP) was allocated in the federal budget in 1994 to finance the divestiture process, and foregone tax

^{1/} The analytical framework reflected in this paper is the outcome of preparatory work done under the World Bank's Enterprise Housing Divestiture Project for Russia managed by Dennis Whittle. The Project has been managed on the Russian side by the Ministry of Economy under the leadership of Sergei Vasiliev and Elvira Nabiullina. Many people and agencies collaborated in this preparatory work, including but not limited to staff of the Urban Institute, the Battelle Memorial Institute, VTsIOM, the Institute for Housing Economics, Natalia Kalinina, and Eric Martinot. The paper was developed in close collaboration with Sheila O'Leary and Ray Struyk of the Urban Institute, Lev Freinkman and Irina Starodubrovskaya of the World Bank. One caveat, though standard, deserves special mention given the very close tie of this work to a World Bank Project: all views presented in this paper are of the author only and do not necessarily reflect those of the World Bank.

^{2/} Presidential Decree 2284, state Program of Privatization of State and Municipal Enterprises, 12/24/93, Article 6.14.

revenues to the enlarged government amounted to an additional one percent of GDP.^{3/} Yet as of early 1995 only some 20 percent of enterprise housing had been divested to local governments.^{4/} The federal government continued its program of transfers to finance the divestiture process in 1995, allocating another Rb 12 trillion (0.7 percent of GDP) for transfers, and additional foregone tax revenues to the enlarged government. In spite of these efforts evidence persists that enterprises continue to hold, maintain, and operate housing, anywhere from 20 to 85 percent of the housing stock in a city.^{5/}

Why is has housing divestiture lagged? Explanations vary, from the argument that enterprises have chosen to continue supplying social benefits to workers^{6/} to reasoning that under conditions of extreme budgetary pressure, cities cannot afford to accept divested housing.^{7/} However, the reasons for which enterprises might choose to continue supply social benefits to workers are likely to differ radically from enterprise to enterprise, and divestiture can have quite different impacts on city budgets depending on the proportion of enterprise housing in a city, the profitability of the enterprise sector in a city, and the extent to which the city budget is subsidized by the regional government. This paper is focused on identifying the institutional reasons which underlie lagging divestiture, including among them taxation and transfer policies which were originally designed to facilitate divestiture. It concludes that whether enterprise managers have so far chosen to keep social assets or not, institutional obstacles to divestiture are such that even those managers who do want to divest their housing find it quite difficult to do so. It also finds that although individual cities might find it difficult to accept divested housing because of budgetary constraints the institutional framework to finance divested housing is very much biased towards the city, and if a city claims not to have enough financing to pay for divested housing it is most likely because in the short term it would *prefer* not to -- for instance, so as avoid raising cost recovery in the housing sector.

Why divest?

Soviet enterprises frequently began their existence as firm and local community rolled into one -- a large enterprise may be the only reason that a town or city grew around it at all. The enterprise would then have been allocated investment resources by the planning agency to build schools, housing, utility networks, cultural and medical facilities for their

3/ Based on unpublished data from the Ministry of Finance to the Urban Institute. Urban Institute, 1995.

4/ This figure represents an estimate by the Urban Institute based on data on housing privatization, the stock of municipal housing, and figures on divestiture from Goskomstat data. Urban Institute, 1995

5/ Urban Institute, 1995.

6/ Commander and Lee, 1995.

7/ Urban Institute, 1995.

employees. However, employees would eventually become pensioners, and other enterprises might be built in the same area, and new workers might well be housed in housing built by the first enterprise. Other enterprises, even when situated in built-up areas, might belong to a sector considered to be of high-priority by the Government. Such enterprises (for example, defense enterprises) might build housing so as to be able to attract high quality labor with the promise that workers for the enterprise would have access to new housing in town. Again, resources for such investments were allocated from the center, as were resources for their maintenance. Frequently, therefore, social assets were of greater value as political assets in the bargaining for annual resources from the center than as wage substitutes to attract labor -- labor, once attracted, was a liability if the enterprise ran out of resources to pay them.

In a market economy, however, social assets are not a political asset. They can only be assets in their own right -- either as property, or as non-wage benefits which can be provided to employees. However, in the Russian context the bulk of social assets cannot be owned by the enterprises, non-employees frequently have control rights over such social assets, and low cost recovery in the housing and social sectors mean that these assets require high levels of subsidization for maintenance and operation. In other words, enterprise social assets are frequently liabilities for enterprises, and this assumption has underlain the policy thrust of enterprise reform in Russia so far. The privatization program states that social assets which have not been incorporated into the charter capital of enterprises are to be divested to local authorities within 6 months after corporatization of the enterprise. Survey research indicates, however, that divestiture is not taking place as quickly as seemingly allowed by the legal framework -- of 439 industrial firms interviewed in 1994, only 7 percent provided no benefits, and close to 60 percent continued to provide more than 4 types of social benefits. Researchers have concluded that managers view the provision of social benefits as a necessary function and one consistent with social-ethical obligations to workers and the community.^{8/}

Clearly, part of the static picture of lagging divestiture is a perception by some managers that social assets do not represent an enormous burden, and that perhaps for that reason they may conceive of these social assets as benefits with which to attract labor to the enterprises. But the static picture has to be considered within a framework of the institutions of the divestiture process, which first and foremost is a *bargained* process and should be considered as a potentially iterated game. This process is framed by institutions which have the following characteristics from the enterprise's point of view:

- Through a course of complex and not always coordinated negotiations a tax regime has emerged which as a whole: a) distributes the burden of supporting social assets across enterprises via a turnover tax established at end 1993 levied on all enterprises, but credited against direct enterprise expenditures on social assets; and b) "shares" the cost of supporting social assets between the enterprises and the city via credits and exemptions against the turnover and profit taxes. As a result the short-term burden of supporting these social

assets is lessened, and for some enterprises (given the range of different financial and managerial positions that individual enterprises may find themselves) significantly reduces incentives for pressing for quick divestiture.

- Key points of the legal and regulatory process of divestiture are controlled by the city, leaving the enterprise in a weak bargaining position. These range from the determination of acceptable standards of capital repair of housing (see Freinkman and Starodubrovskaya), legal registration of the balance-transfer process, to the determination of the tax exemption levels which can be given to an enterprise which continues to hold housing on its balance.

Clearly, the difficulties of the divestiture process -- even the prospect of future divestiture can have on the current situation of an enterprise -- can influence the perceptions of relative benefits and costs of divesting social assets for a manager.

Why accept divested social assets?

As noted above, why and when cities *should* accept divested assets is determined by law. But what is determined by law is frequently violated in practice -- although approximately two-thirds of large and 80 percent of small enterprises had completed privatization in 1994, less than 30 percent of enterprise housing had been divested to cities.^{9/} So why and when cities accept divested social assets is determined by something other than law. One argument is that cities are under severe budgetary pressure, and cannot afford to accept divested social assets, particularly housing.^{10/} However, estimated net costs of full and immediate divestiture in 1994 show that city expenditures would only have been increased by some 3-4 percent, or some 0.5 percent of GDP.^{11/} In addition, a number of

9/ Goskomstat data, and divestiture estimates by the Urban Institute (1995).

10/ Urban Institute (1995).

11/ These figures were calculated as follows. Direct enterprise expenditures on housing in 1994 did not exceed Rb 10 trillion (1.5% of GDP), so that if enterprises had divested all of their housing to cities in 1994, the *gross* costs to cities would reasonably not have exceeded Rb 10 trillion. The request from cities for federal transfers for housing accepted in 1994 (in fact, only a little over half of the outstanding enterprise housing stock was transferred in 1994) amounted to Rb 18 trillion. Carrying the hypothetical further, we calculated what the *net* cost to cities of complete and immediate divestiture of enterprise housing in 1994 would have been. After complete divestiture, revenue from the local turnover tax could increase up to Rb 5 trillion (assuming no exemptions), and cities would also receive additional revenues from the profit tax (against which enterprise could claim exemptions for expenditures on social assets) of up to Rb 2 trillion. The *net* cost to cities of full and immediate divestiture in 1994 could therefore have been some Rb 3-4 trillion, which amounts to some 3-4% of local expenditures (0.5% of GDP).

cofinancing agreements are allowed by law between the city and the enterprise, even if increased tax revenues might not suffice to cover all expenditures. Finally, city budgets across Russia are not uniform, yet the variance on rates of divestiture are nowhere near as high as the regional variance of per capita revenues.^{12/} Thus whether a city or region is relatively better or worse off may not determine rates of divestiture.

How the bargaining process between the enterprise and city tends to delay, rather than encourage divestiture, has been outlined above. In addition to that bargaining process, however, another set of incentives are determined by the outcome of interactions between the city, and the regional and federal levels of government on financial transfers for divestiture. These transfers have undoubtedly provided some incentive for local governments to accept divested social assets. Researchers have noted that divestiture rates increased in 1994 when the transfers were first made available.^{13/} The concept of federal transfers for divestiture was introduced by decree in December 1993 when the Ministry of Finance was instructed to take the increased expenditures undertaken by regional governments as a result of social asset divestiture into consideration when determining levels of transfers.^{14/} The decree was followed up by a budget allocation by the Duma in April of 1994, and for both 1994 and 1995 explicit budget allocations were made to finance the transfer of social assets from enterprises to local governments.

However, as seen above, the scale of federal financial transfers to regions in 1994 alone far exceeded the net cost of full and immediate divestiture. Moreover the Rb 12 trillion which was allocated for these transfers in 1994 had been scaled back from the amount requested by the regional governments in divestiture -- the requested amount totaled more than Rb 20 trillion. In reality, only some 17 percent of housing was divested to local governments in 1994. The emerging picture in the area of federal transfers for divestiture then, is similar to the picture in divestiture itself -- local governments are winning the games in every round.

Why are the cities "winning"?

The story behind lagging divestiture and disproportionate federal transfers for divestiture lies in the rules which determine the outcome of each of these transactions. Below is a summary of both the divestiture process and the transfer allocation process which highlights the key control rights held by the cities which allow them to influence the transactions to their benefit.

^{12/} Regional divestiture figures from Urban Institute, 1995, and data on regional budgets from Le Houerou, 1994.

^{13/} Urban Institute 1995.

^{14/} Resolution of the Government of the Russian Federation #1325, 23 December 1993, "On the Financing of social assets divested to local governments upon the privatization of enterprises."

Divestiture. The process of divestiture begins when an enterprise is corporatized, and it is precluded from including most social assets in its charter capital. Housing is the most obvious example, since federal legislation on housing privatization reserves the right to claim housing as an asset for the occupants. The asset remains, however, on the balance-sheet of the enterprise, and with the rights of balance-sheet holder come the responsibility for its maintenance and financing. Balance holders also have a right to any flows of income from the asset, but since housing costs are heavily subsidized, and cannot be increased except by local authorities, enterprises do not have the option of increasing cost recovery from tenants or users of the social assets which remain on their balance.

Full divestiture takes place when the social asset is transferred from the balance-sheet of the enterprise to that of the city. However, this process can be broken down into a couple of different steps, each of which is controlled by the city bureaucracy. First, the registration of the transfer itself is a city function, and the city can easily impose transaction costs through excessive demands for paperwork on the enterprise seeking to finalize the transfer process. Second, in the case of housing or utility networks, the city housing department holds the right to determine so-called adequate levels of capital repair. Anecdotal evidence indicates that a wide range of standards for capital repair exists in cities, first and foremost in the housing which is held by municipalities themselves. The application of these standards is clearly discretionary, and used by the cities at divestiture to either delay divestiture, or to extract a dowry from the enterprise upon divestiture. Depending of the financial situation of the enterprise, at this point the enterprise either incurs a one-time cost for divestiture, or is made to continue to hold the housing or utility on its own balance-sheet, as well as responsibility for current operation and repair of these assets.

Another level of control by the city emerges when divestiture is looked as one of a number of different objectives the enterprise might pursue. On average, enterprises are financially better off after divestiture, even when increased tax obligations are taken into account. For some enterprises the financial picture might be sharper -- if the enterprise holds a lot of housing, or if its turnover relative to profits is low, for instance. However, significant uncertainty is introduced if the fact that city financial departments determine the levels up to which direct enterprise expenditures on social assets can be counted against the turnover and profit taxes.^{15/} So although an enterprise might perceive its highest payoff as lying in full and immediate divestiture, the fact is that the city could not only refuse to accept the divested housing (either by citing capital repair standards or simply refusing to register the divestiture) but they can, in addition, threaten to lower the tax credits and exemptions that the enterprise gets for the direct expenditures has to keep paying for the assets it failed to divest. This would tend to moderate the incentives of most enterprises, leaving only those which are particularly determined, or those which find themselves in the most dire straits opting for divestiture.

^{15/} Research by the Russian Privatization Center on tax credit and exemption rates granted to enterprises in its pilot restructuring program indicates that these rates are applied in a discretionary fashion by city officials. These rates are not published, and can even vary quarter from quarter for a single enterprise.

One last discretionary control right exercised by the city is over cost recovery in the housing sector. This right cannot strongly influence the rate at which divestiture takes place, because the city is not allowed to discriminate between enterprise and municipal housing--cost recovery for maintenance and utility services must be the same across the city. Thus the city cannot threaten to hold cost recovery rates low for enterprises which it wants to punish, as in the tax credit and exemption thresholds. However, cost recovery from tenants does determine levels of subsidization by both cities and enterprise of the housing sector, and the point has to be made that if cities wish to afford divestiture, control over cost recovery rates gives cities the tool to facilitate the process.

Transfers for divestiture. Federal transfers for divestitures are made as part of the "mutual settlements" between the federal government and the subjects of the Federation as an *ex post* financing of divestiture. The program is legally restricted to compensate regional budgets only for the financing of social assets divested by federal enterprises, but in practice this distinction is not observed. Transfer agreements for current divestiture, as well as projected municipal expenditures for divested housing stock accepted in the past, and financial indicators for enterprises divesting their housing stock are submitted by local government to the regions, which send them on to the Ministry of Finance. The expenditure tables for divested housing are sufficiently detailed to include total living space, revenues received from the housing stock (including commercial rent), as well as the level uncompensated expenditures on capital repair, maintenance, and the provision of utility services. These detailed figures are then used by the Ministry of Finance to recalculate expenditure levels using their own "norms" per square meter of living space, and both cost recovery, as well as estimates of the increased revenues due local governments from the turnover and profit taxes paid by divesting enterprises are taken into account to yield the budget allocations made by the Ministry of Finance in the planning process. Even though in fact budget cuts decreased the actual levels of transfers made to regions for divestiture to some 20 percent of the allocated amount, the fact that the level of financing for transfers allocated in 1994 (Rb 12 trillion) exceeded the net costs of full and immediate divestiture in 1994 indicates that the Ministry of Finance has no way to verify the reported costs of divestiture. Nor does it have the means to verify that planned divestiture has taken place.

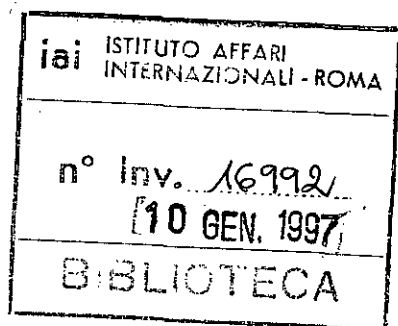
Evidence from the six cities of the Enterprise Housing Divestiture Project indicates that in early 1995 divested housing amounted to less than 20 percent of the total municipal housing stock, while incremental budget revenues from the turnover tax amounted to more than 35 percent of total municipal expenditures on housing. Federal transfers were given to cities on top of that. In one city, the request for transfers amounted to Rb 45 trillion, which amounted to some 130 percent of total city expenditures on housing in the previous year. In the event, the city received only Rb 14 trillion in transfers (some 32 percent of its original request) but the city also only accepted less than 5 percent of the housing stock that year. Transfers, in short, may stimulate divestiture, but do so at an enormously inefficient cost.

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Restructuring of Enterprise Social Assets: Trends, Problems, Rational Solutions

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Restructuring of Enterprise Social Assets: Trends, Problems, Rational Solutions¹

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INTRODUCTION

1. The problem of enterprise social assets is one of the key issues of enterprise restructuring. Wide provision of social services is the type of activity, which diverts enterprises from their main business. Additional financial and administrative costs associating with social functions prevent enterprises from being competitive. Social assets are considered as additional burden for external investors who refrain from investments in enterprises with large social liabilities. At the same time social functions make it very difficult to start bankruptcy procedures against insolvent enterprises, which forces the state to support inefficient allocation of resources and increases the bargaining power of large uncompetitive enterprises. Users of enterprise social services are often not protected enough from arbitrary actions of enterprise managers and general deterioration in the level of providing services.

2. Downsizing of enterprises' social activity means, that some other agents have to perform these functions instead. That's why the issue of enterprise social assets is not only one of the crucial components of enterprise restructuring, but is also closely connected with public sector reforms, from the one hand, and social sector restructuring, from the other hand. The role of the public sector in substituting enterprise social functions can be described in a following way: (i) protection of some critical elements of public consumption (e.g. kindergartens), which might otherwise disappear due to reductions in enterprises' funding; (ii) reform in delivering some public services (e.g. housing), which might be easier if all corresponding public assets are concentrated under the single management of municipal governments; (iii) provision of more equal access of the citizens to some important public services, as social activities of enterprises are sometimes delivered at a much higher, and sometimes at a much lower level, than the public ones; (iiii) financial savings through better utilization of economy of scale (closure of excessive units, better management, etc.). At the same time the former enterprise social assets can be either privatized or used for introduction of new institutional forms in public sector, as they have not necessarily to be transferred to existing governance structures and to fall under the control of prevailing system of interests. So they can be the pioneers in social sector restructuring and, therefore, might facilitate social sector reforms in general.

^{1/} The paper is prepared as a part of the World Bank's Enterprise Housing Divestiture Project managed by Dennis Whittle and Mari Kuraishi, whom we are very grateful for stimulating discussions and organizational support. We thank also Marina Krasilnikova, Olga Shabalina, Jeff Procak, Alexander Morozov, and Natasha Veligura for helpful comments and help with collecting and processing the data. Any errors are our own.

3. Though the importance of the problem was widely recognized, the fate of enterprise social assets didn't draw too much attention of researchers until recently. Now the situation started to change. As the first signals of this change one can mention the working paper prepared by Simon Commander and Une Lee (Commander and Lee, 1995) devoted to the scope of social benefits which are typically provided by Russian firms and Report on Russian Enterprise Housing Divestiture prepared by the group of experts from the Urban Institute (Urban Institute, 1995). Both of these papers are based on enterprise surveys and interviews.

4. This paper is based on some additional sources of information, which include various macro and sectoral data provided by the Goskomstat and the Ministry of Economy and the data collected in the course of preparation of the World Bank Enterprise Housing Divestiture Project.² Specifically, survey of 24 enterprises took place in 10 cities at the end of 1994 - beginning of 1995. More detailed description of the sample is in Annex 1. Respective municipalities were also surveyed. Though the survey was more directed to enterprise housing issues, the problems of other social assets and benefits were also taken into account. Some more information on legal and financial framework of enterprise social assets functioning and divestiture was received from the cities selected for the project.

THE SCOPE OF THE PROBLEM

This section provides some macro estimates concerning the overall scale of Russian enterprises' involvement in delivering social services. One might argue that while being quite substantial, enterprise social spending are still much below some earlier provided estimates derived from the small enterprise surveys. In particular, such spending neither make the level of 15% of GDP (Alm and Sjoquist, 1993) nor amount to 40% of the wage bill (Commander and Jackman, 1993).

5. Volume of social assets. Table 1 provides some estimates of the value of social assets being at the disposal of Russian enterprises before the process of their divestiture has been intensified in 1994. By the end of 1993, total social assets amounted to 5% percent of the total fixed capital assets accumulated by the enterprise sector. Assets in housing and utilities made two thirds of this total, and assets in education and health amounted to more than 20% of the total social assets. The data is derived from Goskomstat's regular annual statistics (form No. 11). Due to high inflation in Russia and because of the unsatisfactory way, in which the accumulated stock of fixed capital has been re-estimated, the quality of the provided data is not very high. In particular, the data are not comparable across the stock (accumulated social assets) and flow (new construction of social assets in 1992-93) variables. Despite these deficiencies, this information might be useful for considering the structure of accumulated stock of social assets. Table 1 also suggests that divestiture was very slow in both 1992 and 1993.

²/Partly this information was used in the paper of S. Commander and U. Lee mentioned above.

6. Total social spending by the enterprise sector in 1993-94; as reported by Goskomstat³, amounted to about 3.3% of GDP. Social spending decreased by 30% in real terms in comparison with their 1992 level. Enterprises did not make any additional reductions in social spending in 1994 while some divestiture of social assets has happened during this year and despite general deterioration of the overall financial position of the enterprise sector. As a result, 1994 social spending constituted a much larger share of gross profit in the economy than it was in 1993. About 30% of the overall 1994 social expenditures was spent on housing maintenance, 22% on education and health services, and about a quarter on new investments in social assets. (Table 2). More than 60% of the total amount in 1993-94 was spent by industrial enterprises, which employ less than 30% of the total Russian labor force (Table 3).

7. Enterprise social spending as a whole was an equivalent to a little more than 25% of total consolidated budget spending on social purposes and housing in 1993⁴. This share dropped to 22% in 1994 due to some relative decline in enterprise spending on both housing and health. Enterprises' contribution to financing housing maintenance was equivalent to almost 30% of the actual budgetary spending on this purpose in 1993 and it amounted to 23% in 1994.

8. The data show some increase in social spending as a share of the total labor costs. In 1993, the total registered social spending by enterprises amounted to 17% of the total wage bill⁵ (in industry -- 22%) and to 13% of the total labor costs estimated as a sum of the wage bill and the payroll tax (in industry -- 18%). In 1994, these shares for the economy as a whole amounted to 20 and 15% correspondingly (Table 3). This aggregate data is consistent with the results of the large enterprise survey. As it was shown by the World Bank survey of 420 industrial firms held in summer 1994, average per capita social spending in this sample were equivalent to 18% of the wage bill, and these social spending were positively and significantly correlated with the average cash wage. According to this survey, very few firms, only about 5% of the sample, did not provide any social services, while more than 60% provided 5 or more various types of such services (Commander and Lee, 1995)

9. Under-reporting. The presented data on total enterprise social expenditure are likely to be significantly under-reported. It happens (i) because of insufficient enterprise coverage in Goskomstat form No. 10f used for preparing tables 2 and 3, and, especially, (ii) due to statistical biases in the data provided by enterprises.

3/ The numbers are derived from Goskomstat's official publication (form No. 10f) of financial indicators for various sectors in the Russian economy. The quality of these data is discussed below.

4/ This does exclude transfers from extrabudgetary funds, i.e. government expenditures on social protection.

5/ Including bonuses from profit.

(i) While the annual form 10f supposed to cover the whole enterprise sector, as it follows from the employment data, in 1994, Goskomstat was able to collect this form only from enterprises with the total employment of about 85% of the overall labor force. However, one might assume that most of the largest enterprises, who are the

main providers of social services, are covered by this form, and therefore under-reporting due to this reason is not very large. Small firms, and in particular those newly emerged private businesses, are much likely to be under-presented in Goskomstat data but this part of the enterprise sector is less involved in delivering social services.

(ii) A number of reasons, such as widespread barter transactions; the delivery of goods and services to employees at low prices; excluding depreciation and costs of renting corresponding premises from the total costs related to the provision of social services, etc., make the reported social spending volume substantially under-estimated. Enterprise managers had and still have incentives -- e.g. because of the excess wage tax -- to include some actual expenditures made in the social sphere into their general production costs by using deficiencies of the existing accounting classifications. In addition, most social services are provided by enterprises at non-profit basis, so opportunity costs of getting the same services through independent providers might be higher. Therefore, the actual burden on enterprises for all types of social financing is probably higher than that reported by Goskomstat but it hardly exceeds 4% of GDP.

10. Over-reporting. There are also certain incentives for enterprises to over-report their social spending. This information is used for determination of tax deductions and can influence financial situation of enterprises. At the same time it's very difficult to control the actual allocation of funds between production and social purposes within enterprises. Some types of costs are even not formally accounted for. For example, in our survey, a number of enterprises could not report their costs of heat supply for enterprise housing, as they are not accounted separately from costs of heat used for production purposes. So funds which are reported to be spent for social activities, can be actually easily used for production needs.

FACTORS WHICH INFLUENCE SOCIAL ASSETS RESTRUCTURING

Two main factors influence the process of social assets restructuring: external economic environment and internal situation on the enterprise. Among the external factors one can identify legal framework, financial framework and attitude of local authorities. Internal situation is determined first of all by financial situation on the enterprise and position of enterprise management.

11. Legal framework. Legal arrangements for enterprise social assets in Russia were determined first of all by the Federal Government for enterprises in the process of corporatization and privatization (Annex 2). They varied across different types of social assets. A part of the social assets (among which some health, educational, cultural and sport facilities) was allowed to be included in the charter capital of enterprises, with an obligation to keep profile of these assets unchanged. Another group of assets, such as housing together with attached utility networks (if they are not on the territory of enterprises) as well as maintenance units of enterprises with all the so called "material base" are prohibited to be included into the charter capital and have to be mandatory divested to municipalities in

accordance with the time schedule approved by municipal administrations, but within the six months after privatization.. Before the divestiture happens such assets have to be hold on the balance sheets of enterprises. At the same time enterprises were not forced to have any social assets in their property, if the working collective did not want to include them in privatization plan. In cases when some assets are located on the territory of enterprises but are used for municipal needs they have to be transformed into the common property of privatizing enterprise and local authorities.

However, regional and local differences in regulation of enterprise social assets play a major role in determination of actual legal framework in this field. All the researches in this area prove that federal norms(which themselves are fragmentary and contradictory in many cases) are often either violated or ignored by local authorities who actually set up their own "rules of the game" (Urban Institute, 1995, A. Bim, 1994). For example, in some places local authorities insist, that almost all the social assets should not be included into the charter capital of privatized enterprises, while in other locations the process was mainly determined by the decisions of the working collectives of privatizing enterprises.

Meanwhile, in those locations where local authorities are weak and enterprises are strong the federal rules are violated in different way. For instance, in many cases heat supply systems (boilers), which are situated on the territory of enterprises were included into the charter capital and local authorities have no access to the proper information on these boilers' activity (unit costs, technical characteristics) and no power to influence the supply of heat to municipal housing stock and other social facilities. As a result heat tariffs for such enterprises producing heat are set at a too high level and the supply of heat is unstable (when enterprise needs more heat for production purposes it reduces supply to residents) The ban to reprofile social assets which have been included into the charter capitals of privatized enterprises is also usually violated. In particular, a lot of enterprise kindergartens were either reprofile for commercial purposes or close down after enterprises were privatized (See A. Bim, 1994). In some cases those assets which were forbidden to be included into the charter capital (housing), were in practice privatized as enterprise property.

Arrangements regarding certain types of social assets are regulated by traditions. For example, recurrent costs for enterprise medical units were traditionally financed by municipalities while enterprises had to compensate building maintenance and some overhead costs, and such a practice is continuing unchanged in many localities.

Thus, "the rules of the game" for social assets restructuring are only partly regulated by federal legislation which is not very much consistent itself. They are mainly determined by the main players on regional and local levels: regional authorities, local authorities and enterprises in the region, their balance of interests and relative bargaining power. Different fragments of federal regulation are used in different locations, while the rest is ignored. As a result the legal regime for social assets restructuring substantially differs both from federal rules and across municipalities. In the further sections of the paper the discussion is focused not on the formal regulations but on the real framework for social assets restructuring. Specifically, local differences seriously influence financial arrangements for enterprise social assets.

12. Financial framework. Two main positions exist regarding financial consequences of

enterprises' social functions. The first one is that financial impact is quite negative and additional spending for social assets' maintenance and operation form comparative disadvantages for enterprises which hold social assets versus those which are free of them. The other position is that holding of social assets does not influence too much the financial situation of enterprises (See Teplukhin, Halligan & Willer, 1995). According to our analysis the actual picture varies from city to city. In general, on the basis of analysis of both legal and financial environment it's impossible to determine potential financial impact of social assets to the general financial situation of enterprises, as specific financial mechanisms of compensating social expenditures vary substantially across cities and their consequences for enterprise can be absolutely different.

The main extra sources of funding to cover social expenditures of enterprises have been introduced by federal regulations and now are uniform almost everywhere: it's the right of enterprises to deduct their social expenditures from both the profit tax (but not more than 50% of the amount of tax) and from 1.5% turnover local tax, which can be introduced (and is actually now introduces almost everywhere) by local governments specifically to finance housing and social sector. However, the local regulation of these sources is quite different. The following types of differences can be mentioned.

1. By the way how costs are deducted:

- a. According to actual reported expenditures of enterprises;
- b. According to special norms established by municipality for maintenance and operation of housing and other social assets (for example, for housing they are measured in "rubles for square meter"). These norms vary substantially across regions, covering from as low as 40% of actual costs up to 100%.⁶

Different options can be used for the regulation of profit tax and turnover tax deductions.

2. By the way how expenditures are covered.

- a. Enterprises can deduct their expenditures from appropriate taxes (according to any of the mechanisms mentioned above), but if these tax privileges are not enough to cover the full spending, the city contribute nothing to support the enterprise social activity.
- b. Enterprises can deduct their expenditures from appropriate taxes (according to any of the mechanisms mentioned above) and if the amount of money is not sufficient, local authorities compensate additional spending of enterprises.

^{6/} Besides, in some regions, local governments severe restrict the types of spending being eligible for tax credits. For instance, in Moscow oblast, enterprises' spending on heat and other utility services delivered to enterprise housing is not covered by these benefits. As a result, only about 20% of the actual housing costs of local enterprises are credited against the corresponding taxes. (Kalinina, 1995).

c. Deduction mechanisms do not work appropriately. For example, Volgograd officials reported, that there are no general rules for 1.5% turnover tax benefits in the city. In certain specific cases (for example, if enterprise is loss-maker or works for city needs) a decision might be made to use preferential tax rates. Otherwise, an enterprise has to pay the full amount of the tax due, independently of its actual social spending.

While options "a" and "b" can be used in the framework of existing legislation, option "c" openly contradicts federal law, according to which social expenditures of enterprises should be deducted from the amount of 1.5% local turnover tax.

3. By the way how deductions from two different taxes can be combined. In most of the locations the mechanism works in a way, that allows enterprises to benefit twice from the same social spending. The turnover tax is paid before profit tax, so turnover tax payments automatically reduce profit tax liabilities. While enterprises decrease turnover tax by the amount of their social spending (which makes the effective rate for enterprises 2/3 of statutory rate) they have a right to deduct full amount of turnover tax (according to statutory rate) in the process of calculating their profit tax obligations. From eleven cities considered for participating in the World Bank project eight confirmed that they have this rule.

There are also some other sources of financial support to enterprises in some cities. For example sometimes municipalities declare social assets to be divested from enterprises, receive federal transfers to support these assets, and share these funds with enterprises, which actually continue to have social assets on their balance. Such situations are possible, as we discuss below, because of unclear meaning of the word "divestiture".

It's also worth mentioning that local authorities usually support even those social assets which were included into the charter capital of enterprises, not only those which are only on their balance and therefore are subject to divestiture.

In some cases federal and regional transfers are allocated directly to enterprises. In many rural settlements and one-enterprise towns, municipal governments still do not have adequate administrative capacity to manage corresponding assets because in these places historically largest firms were providers of the bulk of social services. Due to this tradition, the enterprises, not municipalities, continue to receive subsidies from both federal and regional budgets and to run housing, schools, hospitals, kindergartens, etc. Governmental transfers for social purposes are the most significant in the agriculture, coal, and defense industry (See Annex 3).

13. Attitude of local authorities. Local officials have absolutely different personal attitude to a problem of enterprise social assets. In some cases they are very keen to receive the full control over social assets in the city and start developing the city infrastructure as a single system. Therefore, they insist on social assets divestiture even if it means the additional financial burden for the city. In the other cases city officials are interested in delaying social assets divestiture as long as possible. They try to introduce agreements between enterprises and city administration on joint use and financing of social assets, which actually means that enterprises continue to hold the whole financial and management responsibility for maintenance and operation of social assets, while city contributes from time to time some

money if they are available (funded at the expense of federal transfers or from 1.5% turnover tax).

It's very interesting if there are any objective factors which influence the position of local authorities besides just personal inclinations of specific people. According to our experience within Enterprise Housing Divestiture Project, in the cities which are dominated by one or several large enterprises, where almost all the housing and other social assets used to be controlled by those enterprises and as a result local authorities were absolutely powerless and depended completely in the development of social sector on investment decisions of enterprises, city administrations are much more radical in their supporting divestiture then their colleagues in larger and more diversified cities, who are overloaded by financial and managerial problems with existing municipal social facilities.

14. Position of enterprise managers. It's not worth spending too much time to analyze the influence of financial situation of enterprises to their attitude to social functions. It's obvious that the more difficult is the situation the more keen enterprises are to get rid of social activities. At the same time there are some general characteristics of enterprise managers' attitude to social functions, which are not explained by pure financial reasons and have more deep psychological and cultural basis.

In general most of the enterprise managers assess social functions as significant burden. But the attitude to different kinds of social activities is not uniform. As one can see from Table 4, social function which are associated with holding of social assets are considered as the most difficult ones by enterprise managers. Social functions which are associated with provision of financial gains or benefits in kind, but without holding substantial social assets (food shop with subsidized prices, transportation subsidies, direct distribution of commodities produced by enterprise itself or received through barter at subsidized prices) constitute much less burden than the former ones. For example, Table 4 shows, that in general it's much more easy for enterprises to compensate their workers for resort recreation than to hold recreation facilities themselves.

At the same time there is different attitude to two different groups of social assets. Kindergartens, housing and dormitories are considered as a major burden by relatively large group of the respondents and their fate is the most painful issue now. But it is much easier for enterprises to continue holding such assets as sport facilities, cultural centers, hospitals and clinics.

On the basis of this information one can guess that enterprises should be very keen to get rid of social assets, first of all of those which constitute the main burden for them. However, our survey from the first sight does not support this view. From 24 enterprises only one reported that it plans to stop providing all the social services and one more has clear strategy to make social activities self-financed. The other six presented the strategy of social assets restructuring which can be considered as rational (which means that the main attention is going to be paid to downsizing or increase in cost recovery of those types of social activities which are the most difficult for enterprises to provide). The rest either have no strategy at all or their strategy can't be considered as rational according to the criterion mentioned above. Six enterprises were not going to change anything in their social activities, three were going to start providing new social services.

Such an outcome contradicts not only the results of the other studies in this area, but also the answers to some other questions in our survey. For example, only two enterprises reported, that they are not interested in housing divestiture, which means that the others who insisted on keeping all the social functions expressed their activity in a wrong way. But it seems that this result has a psychological explanation and corresponds to traditional paternalistic attitude of enterprise managers to working collectives. Even if in practice they take some actions to get rid of social assets they do not consider it as appropriate to admit, that they are going to leave their workers without social support from enterprise in some areas. It's not surprising that in these cases their practical steps towards divestiture would not be very consistent and active and could be easily blocked by local authorities.

POSSIBLE WAYS OF SOCIAL ASSETS RESTRUCTURING

There are three possible solutions for the issue of enterprise social assets. Enterprise social assets can: (i) continue to be kept by enterprises with or without changes in principles of their utilization; (ii) be divested to municipalities for further privatization; (iii) be divested to municipalities to be kept in municipal ownership for a while.

15. A significant portion of the entire social assets has been included in the founding capital of the former State owned enterprises and privatized together with productive assets. Insiders considered such privatization deals as beneficial for themselves because they saw future profitable opportunities of either using or selling this real estate. It was a voluntary action by insiders to take responsibility for maintaining these assets, and therefore there is no reason for the government now both to consider plans of their divestiture and to continue subsidization of their maintenance, including implicit subsidization through tax benefits. Among social assets, which have been most frequently involved in privatization, are sport, recreation, and entertainment facilities. The costs of their maintenance might amount up to 25% of the total costs of maintaining enterprise social assets. (See Annex 4).

According to the survey, enterprises consider different possibilities how to use social assets in their disposal, including downsizing certain activities and making them self-financing. Among the ways to increase cost recovery the most popular is to attract new clients from non-employees and increase user fees for them. The possibilities to increase fees from the employees of enterprise and to reprofile and commercially use some social assets are also under consideration, though less frequently.

16. In cases, when enterprises are keen to divest their facilities in e.g. entertainment or other non-core social activities, the government should support this transfer, while it must not accept responsibility for these assets. Instead of this, the government has to develop and execute a privatization plan for corresponding assets based on the general principles of privatization program. This possibility is envisaged in Russian legislation (Annex 2).

17. However, there is a big amount of social assets, which either can't legally be included into the charter capital of privatized enterprises or were not included for some reasons and immediate privatization of which is not quite reasonable. Housing stock and utilities constitute the largest portion of such assets, the same thing is relevant for the part of educational and medical facilities. While theoretically privatization option probably has some

advantages, in practice, due to a number of institutional and regulatory barriers, in Russia and many other countries in transition, direct, wide-scale privatization of housing and supporting utility units, firstly, is not, as a rule, possible in short-term, and, secondly, even where it's possible, it would not help to eliminate financial burden of subsidizing corresponding assets. This means that even in the case of radical privatization, for instance, of housing stock, responsibility for remaining housing and similar subsidies has to be divested to municipal governments.

To get more accurate understanding of the institutional origins of the problem of divestiture, it seems important to make a clear distinction between the issues of privatization and elimination/reduction in subsidies. It can be done using the example of housing. In Russia and some other FSU states, when tenants privatize their apartments, this does not lead to any change in household housing payments. According to the existing regulations, any form of discrimination in maintenance/utility tariffs based on the ownership rights of the tenants is not allowed: all of them have to pay the same bills⁷. At the same time, a lot of households are not interested in even free housing privatization because their rights are well protected against eviction without getting a formal title for the apartments. In such cases, tenants can't be enforced to privatize their apartments because privatization is considered as a voluntary action which can happen any time in future, and, meanwhile, these apartments can't be privatized by outsiders.

Therefore, for the governments, housing privatization and an increase in cost recovery appear to be quite separate and independent policy targets. The governments are trying to encourage housing privatization and simultaneously -- but by other tools -- they are pushing for increase in cost recovery. Because of political constraints, many Eastern European countries, including Russia, Ukraine, and Lithuania, found politically hard to eliminate housing subsidies simultaneously with overall price liberalization, when the most of prices became free. Cheap, heavily subsidized housing helped to keep social peace during the most painful stage of liberalization. As a result of this, these subsidies are still the largest subsidies remained in the fiscal systems and these countries have chosen a very cautious approach to their step-by-step elimination.

18. The problem of social assets, which simultaneously are not included into the charter capital of enterprises, can't be immediately privatized and are heavily subsidized is the most painful one. Two types of solutions are possible in this situation. Either enterprises continue to hold these social assets on their balance (with no right to make any strategic decisions about these assets and full or partial financial and managerial responsibility for their operation and maintenance) or municipalities accept these assets and take full responsibility for their further fate. We are going to argue that from the long-term perspective the last option is better both from the viewpoint of enterprises and economy as a whole.

ASSESSMENT OF THE CONSEQUENCES OF DIVESTITURE BY ENTERPRISE MANAGERS (the example of housing)

⁷/ And sometimes even lower. For example, to push apartment privatization, authorities of the city of Novochoerkassk made a decision to decrease by 3% all the rent and utility payments for the owners of privatized flats.

We have more information in the survey to analyze the process and consequences of enterprise housing divestiture, so we are going to use the example of this very important part of enterprise social assets to come to some additional conclusions. Most of the enterprises in the sample are interested in divestiture of their housing, but the bulk of them have still been in the process of divestiture and have not completed it, so we can use only their estimates of the consequences of this process. However, enterprise managers seem to take this process very seriously and almost all of them (20-21 from 24) were able to give their estimations about the possible influence of housing divestiture on different aspects of enterprise performance (Table 5).

19. Financial influence. As a result of different tax treatment analyzed above and different financial situation of the enterprises financial consequences of divestiture vary on case by case basis. Three enterprises reported that divestiture would make no impact on financial situation, two even thought that financial pressure would be harder. But most of the enterprises admit that financial result of housing divestiture would be positive. According to the general estimates, the enterprise sector as a whole is expected to gain only about 0.5 percent of GDP from the divestiture process in the short term. However, individual enterprises that provide a lot of housing will get substantial net benefits--up to 50 percent of current gross expenditures on housing and more in some cases (See Annex 4).

20. Administrative influence. Enterprises are much more uniform in their answers about the managerial consequences of divestiture. The bulk of them agreed that managerial burden would decrease. It's quite natural, taking into account, that according to the survey more than 7% of enterprises' labor force was involved in maintaining and operation of enterprise housing either full time or more than half of their working time. Full employment in both housing and other social activities amounted to almost 18% of total labor. According to the other research, about 20% of senior management time is typically spent on an enterprise's housing related activities (Urban Institute, 1995).

21. Influence on the attraction of employees. Enterprises are not very keen, that housing divestiture would limit their opportunities to hire workers. More than a half of managers think that it would not influence this process at all. It's not a big surprise, taking into account, that in many cases most of the residents of enterprise housing are not enterprise employees⁸ and enterprises have no right to force the person out or to increase the rent payment if the person leaves the enterprise. Increasing competition on the labor market as well as labor shedding by many enterprises should also be considered as important factors. In two cases managers consider divestiture as a way to increase opportunities to hire workers, possibly because it improves financial performance of the enterprise. However, the situation seems to be different in different cases, as 7 managers admit that divestiture would limit their abilities to hire workers and in one case it was the reason for the enterprise not to initiate divestiture at all.

Workers themselves are also not very interested in holding enterprise housing (Table 6). Only

^{8/} According to the survey, employees or retired employees are living in 56% of apartments of enterprise housing in surveyed cities (of which the share of pensioners amounted to 13%).

three enterprises reported about resistance from working collective for divestiture process and only in one case it was trade union who protested (in other two resistance came from maintenance units of the enterprises, which is also quite interesting). It's also quite natural, as enterprises in many cases limit their expenditures on housing below minimally necessary levels and almost stop maintaining it which leads to deterioration of housing stock and decreasing comfort for residents.

22. Influence on prices. About a half of respondents do not see any connection between enterprise housing divestiture and the level of prices for their products. However, the other half considers divestiture as a possible source to decrease prices. It supports the idea that in many cases housing divestiture can directly influence in a positive way the competitiveness of production. It's also interesting that enterprise managers started to understand the inter-relation between the level of social spending and their market competitiveness.

CONSEQUENCES OF DIVESTITURE FOR MUNICIPALITIES

23. Divestiture and policy reforms. Various components of the Russian public sector require radical changes in their operational and managerial principals. Some currently publicly funded services have to be taken out from the public sector completely (housing), others should expect either an increase in cost recovery (child care) or emerging of more flexible co-existence of public and private providers (health care, education). It might be difficult to achieve these changes without transferring social assets under full public control, i.e. without divestiture. First experience with housing reforms in Russia demonstrated practical advantages of having enterprise housing divested to municipalities, which have more managerial capacity and more incentives to push for housing privatization, increase in cost recovery, establishing housing allowances for poor households, etc. Even when enterprises have to support a large housing stock, housing remains a by-side activity for them. Enterprises do not see themselves as promoters of any housing reforms, and their preferable policy in this field is to be a passive and not necessarily accurate follower of recommendations coming from local governments, while their major adjustment has been taking place through simple cutting funding for housing maintenance. As a result, enterprise housing in Russia is on average in a worse physical shape, it has a slower rate of unit privatization, and its tenants have less access to housing allowances.

24. Gross potential fiscal impact of divestiture. Analysis of the structure of enterprise social spending demonstrates that the total incremental fiscal burden from full-scale divestiture will be much smaller than the current level of enterprise spending on social services. One might argue that the potential fiscal impact is not more than 60% of the amount reported by the enterprises, i.e. it's close to 2% of GDP. This is due to a fact, as it was partially discussed above, that various types of social spending currently financed by enterprises are not transferable (i.e. they are not subject to divestiture) either in financial or in physical sense. These non-transferable types of services include:

(i) Those services financed not from enterprises' revenues but from budget transfers. The corresponding assets might be transferred but this will not impose extra costs for the budget if this is accompanied by redistributing the transfers from enterprises to municipalities.

(ii) Those services, which constitute an important part of the overall benefit package of employees as non-wage benefits. Under existing economic environment, it's unlikely that managers of state-owned and former state-owned enterprises will insist either on divestiture of these services or their substantial reduction because they are not considered as a real burden by enterprise management. One might expect that real cuts will happen on its own only in medium term as a result of substantial changes in both corporate governance regime and taxation.

(iii) Those social assets which will remain at the enterprises' disposal as a result of their privatization by enterprises.

(iv) Those social assets, which should not be remained in public possession in the market economy and must be privatized in the case of divestiture.

Moreover, in some cases municipal costs of supporting divested assets might be smaller than those of enterprises. This is due to the fact that in many cases those social assets, which are at the disposal of enterprises, are underutilized and overstaffed.⁹

25. Net potential fiscal impact taken into account actual development in 1994-95. Since the moment, when the turnover tax had been introduced in late 1993, municipalities collected quite a lot of revenues from this source but the actual divestiture was very slow. As a result, local authorities put themselves in much more difficult financial situation regarding further divestiture than it could be if recent introduction of the turnover tax would have had the same rate as actual transferring of enterprise assets. According to our estimate, if the cities increase the effective tax rate of the turnover tax up to 1.5% and get rid of remaining profit tax exemptions, they will be able to get about 0.8-1.0% of GDP as additional budget revenues. However, to complete full scale divestiture will require about 2% of GDP in incremental expenditures. It's quite likely that municipalities will try to fund the remaining fiscal gap of 1.0-1.2% or 6-7% of the overall regional budget spending with the help of the federal budget transfers.

PACE AND BARRIERS FOR DIVESTITURE

26. Real rate of divestiture in Russia. Housing statistics is in flux in Russia now, and so it's not very much clear how much housing was actually divested to municipalities. The report by the Urban Institute (1995) estimates that only 20-25% of the initial enterprise housing stock was divested in 1991-94. The evidence from various surveys demonstrated that the actual estimate might be closer to the lower end of this interval. Even in six cities selected for EHDP, which are among the most advanced Russian municipalities with regard to the housing reforms, this share was on average about 25% with dramatic variation across the cities. And our survey December of 1994 showed that the share of enterprise housing

9/ For instance, in Kyrgyz Republic, teachers' salaries in kindergartens managed by enterprises are 10-50% higher than those in municipal kindergartens. If the whole kindergarten system were rationalized to bring enterprise kindergartens to equivalent current municipal expenditure level with respect to food, salaries, and utility spending, the corresponding savings would amount to 20% of the current total costs of supporting kindergartens. (ADB & Associates, 1995)

in surveyed cities was still above 40%.¹⁰ The large enterprise survey held in summer of 1995 revealed that by that time less than 5% of enterprises actually transferred any of their social assets. (Commander and Lee, 1995) Only one from 22 enterprises participating in our small survey in December 1994 has completed divestiture of a portion of its housing stock by that time, while the rest either still had been running negotiations with local authorities or even did not start them yet. All this proves that in 1995, at least 35% of the total urban housing stock was still financed by enterprises.¹¹ In addition, divestiture in rural areas was even slower (See Annex 3). However, one might mention that a part of this housing, which is described as being financed by enterprises, in fact is controlled and financed by various federal ministries (e.g Defence, Interior), and this housing is not subject to divestiture.

27. Barriers for divestiture. While enterprises are in general interested in the process of housing divestiture, municipalities in about 60% of cases try to delay or stop this process (Table 6). 9 enterprises from 10 which have not started divestiture negotiations yet, foresee that these negotiations would be very difficult because of certain conditions imposed by city administration which are very hard for enterprises to fulfill (in one case the city was not intended to start negotiations at all). The situation with enterprises in the process of divestiture negotiations is described in Table 7. Two main tools are used by local administrations to impede divestiture.

(i) All the housing is declared to be divested (which actually means nothing, as even formally housing is only on the balance, not in the property of enterprises), but enterprises are forced to keep responsibility for maintenance and operation of the same housing stock. As one can see from the Table 7, it was envisaged in divestiture agreements that enterprises are going to continue maintenance and capital repair on their own expense in two cases from 11 and continue utility services provision on their own expense in three cases from 11. However, as the definition of divestiture is very unclear and a lot of compromise solutions (as cost sharing agreements, for example) are legally possible, local authorities use these instruments to delay the actual divestiture.

(ii) As preliminary conditions of actual divestiture local authorities insist on huge amount of capital repair both of the housing stock and networks to be financed and actually fulfilled by enterprises. Of course, it's impossible to determine in general, what amount of repair works can be considered as reasonable and what is not, but this requirement can be easily used by local authorities to delay divestiture if they would like to. It's quite natural, that the items related to this problem are very frequently included in divestiture agreements and very conflicting as well. If enterprise has no money and no ability to carry out repair work, municipality sometimes demands to acquire some additional property to compensate these costs. As the mayor of one of the cities admitted, "if it (the enterprise) has no money, we can take cars, tractors, administrative buildings". Complaints for the same treatment were expressed by the respondents in the survey. The other conflicting issue is divestiture of

^{10/} The enterprise housing share in the total urban housing stock initially amounted to about 45% in 1990.

^{11/} This also includes some housing financed by federal ministries, such as Ministry of Defence.

enterprise housing maintenance units. Most of the enterprises have no problem with transferring of employees from this unit to the municipality (divested maintenance units are usually included into existing municipal maintenance structures or reorganized into separate municipal enterprise), though employees themselves sometimes have different attitude, as it was mentioned above. The conflict is around the amount of assets (workshops, means of transportation) which should be divested to municipality. All these conflicts are quite sufficient to delay the actual divestiture substantially

NECESSARY MEASURES TO ACCELERATE DIVESTITURE

28. Divestiture is a very complicated and painful process which involves a lot of financial, logistical and administrative issues and simple solutions are not appropriate here. However, there are certain aspects of the problem, the solution of which can simplify control over the process and can create additional incentives to push divestiture further:

(i) Definition of divestiture should be legally clarified. Local authorities might have a right to conclude co-financing agreements with enterprises and leave certain functions for maintenance and operation of social assets with them, but it should not be considered as divestiture. Divestiture means transferring not only the title, but also financial and managerial responsibilities to municipalities. Only in these cases cities should be eligible for federal transfers and other forms of support allocated for this purpose.

(ii) Institutional mechanisms to solve conflicts between local authorities and enterprises in the process of preparation and implementation of divestiture should be established. Maybe, these problems should be solved on the regional level with involvement of federal officials if necessary, but the existence of disagreements should not be used to delay divestiture forever

(iii) Methods of estimation financial consequences of divestiture should be improved both to make the picture more transparent for local authorities, who often do not know how much extra financial resources they will receive as a result of elimination of local turnover and profit tax privileges. This also will help to improve accuracy of regional requests for the federal transfers filed with the Ministry of Finance.

29. Divestiture of enterprise social assets impose additional financial and managerial pressure on local authorities. According to the survey of municipalities, which examined this problem with regard to housing divestiture, even the existing level of budget subsidies for the housing sector is considered as serious or even unaffordable burden for the budget. According to city officials, if the housing divestiture would be completed, the share of the budget to be spent on housing subsidies would increase by several times, typically from 2 to 3 times. As it was shown above, on average such estimates are substantially upwards biased. This is, in particular, due to underestimation of additional tax revenues associated with divestiture. In addition, more active policy reforms can potentially ease excessive budget pressures derived from existing housing subsidies. Two types of activities should be given the top priority:

(i) Increase in cost recovery. In time of the survey, cost recovery in the housing sector of

surveyed cities was between 4 and 16% (despite the fact that the cities had the legal right to have cost recovery of 20%). Now with the legal right to have 60% cost recovery, its general level is between 20 and 30%, while some cities achieve 40%. However, simultaneously with cost recovery increases, cities have to spend more budget funds on housing allowances to protect vulnerable households. But on the whole, increase in housing tariffs would eventually transfer a part of the financial burden from municipalities to residents. However, the population income level puts objective limits for the speed of this process.

(ii) Policy and institutional reforms. Current arrangements in the Russian social sector are far from optimal and lead to huge efficiency losses. Additional losses also arise from poor technologies used in this sector. The financial analysis shows that it would be quite difficult to insure a substantial increase in cost recovery, and therefore, reduction in housing subsidies, without implementation of a wide range of policy and institutional reforms as well as investments in the existing housing stock to increase its efficiency. It means that divestiture would be unaffordable and as a result unsustainable in a long run without acceleration reforms in the sector. In many locations these problems are quite well understood by authorities.

30. The main losses are associated with the housing stock and utility services. Two types of activities are considered on the local level to deal with this problem. First, local authorities try to decrease losses by saving of resources, first of all energy, including introduction of new energy- and water-saving technologies. Second, savings can be received as a result of policy and institutional reforms, specifically :

- demonopolization of maintenance market, attraction of private capital and privatization of municipal units in this area;
- better regulation of utilities as natural monopolies;
- ownership changes in the housing sector: creation of condominiums (as more radical changes are prevented by the concept of voluntary and potentially endless apartment privatization);
- management changes: introduction of private management.

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ANNEX 1. CHARACTERISTIC OF THE SAMPLE IN THE ENTERPRISE SURVEY

Total number of enterprises - 24

Location:

- single enterprise or single sector cities:
Novodvinsk - 1
Dzerzhinsk - 2
- cities dominated by several large enterprises:
Engels - 2
Novocherkassk - 3
Orenburg - 2
Komsomolsk-na-Amure - 3
- medium-sized cities with diversified economy:
Smolensk - 3
Kursk - 3
- large cities with diversified economy:
Volgograd - 2
Krasnoyarsk - 3.

Legal form:

- joint stock company with controlling interest in state hands - 3
- joint stock company with less than 50% of shares in state hands - 9
- totally private joint stock company - 11
- state enterprise - 1

Relation to privatization process:

- in the process of privatization - 5
- privatization process completed - 18
- privatization is forbidden - 1

Stage of enterprise housing divestiture:

- divestiture completed before 1990 - 1
- in the process of divestiture - 11
- are interested in divestiture, but negotiations have not started yet - 10
- are not interested in divestiture - 2

**ANNEX 2. MAIN REGULATIONS
GOVERNING ENTERPRISE HOUSING DIVESTITURE**

RF Law On Fundamentals of the Tax System, December 27, 1991 (amended by Law On Introducing Changes and Amendments to Certain Russian Federation Tax Laws, December 22, 1992).

RF Law On General Principles of Local Self-Governance in the Russian Federation, August 28, 1995

RF Presidential Decree No. 721 On Organization Measures of Transformation of State-Owned Enterprises into Joint-Stock Companies, July 1, 1992.

RF Presidential Decree No. 8 On Use of Socio-Cultural and Communal-and-Personal Service Facilities of Privatized Enterprises, January 10, 1993.

RF Government Decree No. 1325 On Financing of Socio-Cultural and Communal-and-Personal Services Transferring into the Authority of Local Bodies of Executive Power during Privatization of Enterprises, December 23, 1993.

RF Government Decree No. 235 On the Order of Transferring of Socio-Cultural and Communal-and-Personal Services in the Federal Property into State Property of Subjects of Russian Federation and Municipal Property, March 7, 1995.

GKI Order No. 135-r On Streamlining of the Process of Differentiation of Ownership Rights to Socio-Cultural and Communal-and-Everyday services of Privatized Enterprises, January 27, 1993.

ANNEX 3. SOCIAL ASSETS IN COAL INDUSTRY AND AGRICULTURE

COAL

The coal sector is the largest single subsidy item remaining in the federal budget. The sector received about 1.2% of GDP in subsidies in 1994 and, as estimated, about 0.6% of GDP in 1995.¹ Due to its privilege status under the socialism, coal mines have accumulated a plenty of social assets, which are currently a subject of direct government financing together with covering operational losses of coal extraction. By our estimates, at least 125,000 employees, or 15%, of the state coal company *Rosugol* of most mines are engaged in providing social services. Budget subsidies to support social assets amount to 17% of the total budget funding, i.e. 0.19% of GDP in 1994. These social spending per employees of *Rosugol* makes 28% of their average wage bill.

AGRICULTURE

Agriculture is another sector of the Russian economy, in which firms are heavily involved in providing social services to both employees and local population while the government is financing delivery of these services through implicit and explicit subsidies. According to Goskomstat, agricultural farms spent 0.25% of GDP on social services in 1993-94, which is about 8% of entire enterprise social spending. At the same time, explicit government transfers to agriculture, not including tax exemptions, comprising 2.4% of GDP in 1994², are about 10 times higher than direct social spending by farms. In fact, social services in agriculture are heavily subsidized by the government in an indirect way via subsidies to main farm products. This distorts incentives of all parties involved and make the financial environment within the sector non-transparent.

While potential fiscal impact of divestiture in rural areas is quite small³, there are a number of institutional and legal peculiarities of the status of social assets managed by agricultural farms versus those controlled by urban industrial enterprises, which complicate divestiture of these assets to local governments. As a result, divestiture in rural areas is going even slower than in cities. This leads to two sorts of problems. First, under the current financial crisis in agriculture, the quality of traditionally provided services has substantially deteriorated. And, in contrast to cities, much of the rural

^{1/} As reported by the Ministry of Economy.

^{2/} Figures are estimates on the basis of MoF and CBR data. This includes 1% of directed subsidized credits from both CBR and the consolidated budget and 1.4% of GDP of explicit budget (both federal and local) subsidies. Less than 10% of these subsidies are explicitly targeted at supporting delivery of social services.

^{3/} Rural social assets are relatively cheaper because housing makes a smaller share of these assets. In addition, rural housing has much lower access to utilities, and, therefore requires less subsidies.

population does not have access to alternative sources of supply of these services, especially in education and health. Second, delivering such important services via farms creates additional barriers for farm restructuring because of the disincentives for workers to leave the farms and because closing loss-making farms is difficult when there is no alternative institutional framework for delivering social services.

Institutional features include:

- (i) A tax regime under which farms are totally exempt from paying some basic taxes such as profit tax and turnover tax and local authorities have no power to reduce these exemptions as social assets are divested. The local governments therefore lack a solid tax base to finance divested social services, and, to compare to cities, rural local authorities have even less incentives for accepting the asset transfer.
- (ii) The institutional weakness of local authorities in rural areas at the village level. Traditionally in Russia, local administrations in such places perform only very simple administrative functions, such as registration, and are not capable of managing delivery of social and housing services. Construction, capital repair, heat and other utility supply, etc. have been delegated to specialized divisions of large agricultural farms, and were not incorporated into the municipal government structure. Human capital is also inadequate for regulating utility enterprises in the case of the transfer of existing facilities into independent utility firms for servicing local social assets.
- (iii) Less scope for competition within the housing sector in rural areas, at least in the medium term. It is likely that large former state farms will still dominate at the local level and will retain control over maintenance services. The combination of non-competitive supply of services and weak governance capability of local authorities complicates asset, especially housing divestiture.

Legal features include:

- (i) Employees' rights. According to regulations, social assets managed by state or former state enterprises are subject to divestiture. However, about a half of all agricultural farms in Russia before 1992 had a legal status of kolkhozes, i.e. they were collectively but not state owned. This means that legally the GOR cannot require the full divestiture of social assets from kolkhozes as it is the case of former state enterprises, including former state owned farms. Instead, GOR's strategy is based on imposing restrictions for full privatization of the social assets and encouraging kolkhozes and former kolkhozes to divest them. In general, existing regulation regarding farms requires social assets to be excluded from those farm assets that are subject of distribution on individual shares among farm members. These social assets may be, but not must to be, transferred to municipal ownership or become a part of a non-distributable fund of the farm under restructuring. Housing might be transferred or sold to tenants.⁴

^{4/} Government Resolutions No. 86 of 12/29/91 and No.708 of 9/4/92.

(ii) Regional vs. federal ownership rights. The federal program of social asset divestiture is focused on assets maintained by federally owned enterprises, which are, as a rule, medium- and large-size industrial enterprises located in urban areas. With few exceptions, enterprises in the agriculture are not, and have not been, federally owned assets. This means that the GOR has not committed to provide funds to compensate regional budgets for additional costs related to divestiture of rural social assets. As a result, the federal government is not in a position to impose strong pressure on local authorities to accelerate rural divestiture, and local administrations have strong fiscal disincentives to do so.

ANNEX 4. SOCIAL ASSETS OF VLADIMIR TRACTOR PLANT

As many large Russian enterprises, Vladimir tractor plant used to provide a wide range of social services before 1992. During 1992-94, the enterprise has faced a severe demand shock, which brought about a substantial reduction in both employment and spending on maintenance of social assets. However, only a minor portion of these assets (some kindergartens and sport facilities) was formally divested to the city in this period. In 1994, the enterprise still spent on covering losses related to maintenance of these assets more than 40% of its gross profit. However, it should be mentioned that all social facilities listed below in Table 1, except housing stock, kindergartens, and educational facilities, have been included in the founding capital of the enterprise and privatized along with the productive assets. The management of the firm was not supposed to divest such assets as dormitories, sport, entertainment, recreational, and medical facilities, while their maintenance costs amounted to almost a quarter of the entire spending on social assets.

Table 2 presents the estimates of the potential financial gain for the plant, which might be associated with the full divestiture of social assets non-included in its founding capital. All other conditions with respect to financial flows and taxation rules are considered intact. The analysis shows that under the present regime, the plant enjoys substantial profit benefits, which offset more than 50% of the actual social spending. However, given these exemptions, the net financial gain for the plant from full divestiture of housing and remaining kindergartens would be quite large, up to a half of the actual spending on maintenance of the whole stock of social assets or to 20% of the profit.

Table 1. Spending on maintenance of social assets by Vladimir Tractor plant in 1994, mn rbl.

Housing	4082
o/w: Dormitories, 1/	850
Child care	1315
Sport facilities	108
Recreation facilities	160
entertainment facilities	118
Medical unit	87
Education	41
TOTAL Spending	5911
o/w: on assets subject to divestiture	4588
"-", as % of the total	77.62
Spending credited against tax payments	5188
"-", as % of the total spending	87.77
TOTAL Spending, as % gross profit	42.38
Memo:	
Gross Profit	13948
Total Sales	834900
1/ - estimate	

Table 2. Potential financial impact of divestiture.

	Before divestiture	After divestiture
	Actual	Estimate
Spending on maintenance of social assets	5911	1323
o/w: Spending credited against tax payments	5188	1000
Turnover tax payments	0	252
Profit tax exemptions (-)	1815.8	438.2
Net costs	4095.2	1136.8
Net costs as % of profit	29.36	8.15
Net gain from divestiture		2958.4
Net gain as % of the initial costs		50.05

Table 1. The structure of fixed capital assets at the disposal of Russian enterprises. 1/

	In bln rbl			as % of total		
	1991	1992	1993	1991	1992	1993
1. Stock of fixed capital assets, 2/	7780	28539	37409	100	100	100
o/w:						
- main (industrial) activities	7521	25418	33830	96.67	89.06	90.43
- non-productive activities	157	1051	1875	2.02	3.68	5.01
o/w: housing	56	333	1038	0.72	1.17	2.77
utilities	n.a.	n.a.	250	n.a.	n.a.	0.67
health	n.a.	n.a.	273	n.a.	n.a.	0.73
education	n.a.	n.a.	141	n.a.	n.a.	0.38
other	n.a.	n.a.	173	n.a.	n.a.	0.46
2. Flow of new assets: new construction		375	8541		100	100
o/w:						
- main (industrial) activities		343	7131		91.47	83.49
- non-productive activities		26	950		6.93	11.12
o/w: housing		16	707		4.27	8.28
3. Divestiture of social assets						
- all non-productive activities		10	253			
o/w: housing		5	126			

Source: Goskomstat, own estimates

1/ without agriculture

2/ by the end of the year

Table 2. Social spending by the enterprise sector in Russia, in 1992-94 in real nominal terms

	1992	1993	1994
Social spending, total, trln.rbl., current prices	0.739	5.36	21.12
- health	n.a.	0.99	2.79
- education and culture	n.a.	0.58	1.78
- housing, only maintenance	n.a.	1.96	6.48
- investments	n.a.	n.a.	5.42
- other	n.a.	1.83	4.65
Social spending, total, as % of GDP	4.09	3.30	3.35
Social spending, total, real, 1992=100	100	72.89	71.27
MEMO:			
GDP, trln.rbl.	18.06	162.3	630
CPI	14.54	9.95	4.03

Source: Goskomstat, own estimates

Table 3. Social spending by the enterprise sector in Russia, in 1993-94, trln.rbl.

	1993			1994		
	Total	Industry	Agriculture	Total	Industry	Agriculture
1. Social spending, total	5.36	3.47	0.43	21.12	12.99	1.564
- health	0.99	0.64	0.086	2.79	1.93	0.126
- education and culture	0.58	0.41	0.047	1.78	1.29	0.159
- housing, only maintenance	1.96	1.15	0.169	6.48	3.97	0.486
- investments	n.a.	n.a.	n.a.	5.42	2.83	0.506
- other	1.83	1.27	0.128	4.65	2.97	0.287
MEMO:						
1. Revenue from sales	184.2	107.6	9.52	607.77	357.68	25.61
2. Total costs, ^{1/}	152.6	85.9	7.65	545.28	304.8	28.02
3. Profit from sales	31.2	21.8	2.06	62.49	47.37	-2.5
4. Total gross profit, net losses	37.5	26.73	2.8	80.44	52.71	-0.32
5. Total wage bill, with bonuses, ^{1/}	32.22	15.72	3.41	105.36	49.41	8.87
6. Payroll tax, ^{2/}	9.21	3.91	0.85	33.5	16	2.3
7. Budget expenditure on health	5.43			27.45		
8. Budget expenditure on education and culture	7.96			24.34		
9. Budget expenditure on housing	7.96			28.67		
Social spending as:						
a part of distributed profit(para.5), %	14.29	12.98	15.36	26.26	24.64	-488.73
a part of total labor costs(para.6+7), %	12.94	17.68	10.09	15.21	19.86	14.00
a part of wage bill (para.6), %	16.64	22.07	12.61	20.05	26.29	17.63
Total labor costs with social expend. as a part of total costs (para.3), %	30.66	26.89	61.34	29.34	25.72	45.45
Social spending as a part of the total social budget spending, %						
- health (para.8)	18.23			10.16		
- education and culture (para.9)	7.29			7.31		
- housing (para.10)	29.70			22.60		

Source: Goskomstat, own estimates

Notes: 1/ as reported in Goskomstat in the form 10f
2/ estimate
3/ including VAT and Excises paid on inputs

Table 4. Assessment of provision of different kinds of benefits by enterprise managers

<i>Type of benefit</i>	<i>Among 3 the most difficult to provide (number of responses)</i>	<i>Among 3 the most easy to provide (number of responses)</i>
Kindergartens	15	0
Housing	10	0
Dormatories	7	0
Recreation facilities	5	0
Canteen with subsidized prices	5	3
Compensation for resort recreation	2	3
Sport facilities	2	4
Cultural center	1	0
Healthcare facilities	1	5
Food shop with subsidized prices	0	2
Transportation subsidy	0	2
Commodities on subsidized prices	0	6

Source: Enterprise survey

**Table 5. Assesment of the consequences of enterprise housing divestiture
by enterprise managers**

<i>Issues</i>	<i>Assesment of consequences (number of responses)</i>		
	<i>decrease</i>	<i>increase</i>	<i>no influence</i>
Financial burden	16	2	3
Managerial burden	19	0	2
Opportunities to hire workers	7	2	12
Prices	9	0	11

Source: Enterprise survey

**Table 6. Assessment of resistance to enterprise housing divestiture
by enterprise managers**

<i>Resistance from the side of:</i>	<i>YES (number of responses)</i>	<i>NO (number of responses)</i>
local administration	12	9
enterprise workers, specifically:	3	18
trade union	1	-
workers of housing maintenance unit	2	-

Source: Enterprise survey

Table 7. Conditions included in housing divestiture agreements between enterprises and municipalities

<i>Conditions</i>	<i>Number of agreements</i>	<i>Were considered as the most difficult by enterprise managers in negotiations with local authorities (number of responses)</i>
Divestiture of housing in a good technical shape	9	4
Divestiture of heat and hot water supply systems	10	6
Divestiture of enterprise housing maintenance units	10	4
Sharing of maintenance costs	2	1
Sharing of capital repair costs	4	2
Sharing of utility costs	2	1
Continuation of maintenance and capital repair on the expense of enterprise	2	1
Continuation of maintenance and capital repair on the expense of municipality	5	-
Continuation of utility services provision on the expense of enterprise	3	-
Continuation of utility services provision on the expense of municipality	3	-
Total number of enterprises in the process of housing divestiture		11

Source: Enterprise survey

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What and How to Divest to Whom

At corporatization, enterprises must define a pool of assets to be included in their charter capital -- i.e., assets to be privatized. They are precluded from including housing in charter capital under any circumstances, and must come to agreement with the GKI committee in charge of their privatization process (local, oblast, or federal) on the inclusion of any other social assets in their charter capital. Title to any social assets which are not privatized at the time is assigned to local governments, but the divestiture process cannot be completed until the enterprise can transfer these social assets from their "balance" to that of the city. Thus the divestiture process, properly speaking, is not a transfer of title, but a transfer of the financing and maintenance responsibility associated with holding an asset on a "balance-sheet."

<u>Asset</u>	<u>Divestiture</u>	<u>Financing</u>
Housing	Cannot be included in the charter capital of enterprises under any circumstances. Individual units may be privatized by residents for a nominal fee at any time, and responsibility for the public space must be transferred to municipal governments or condominium associations (which may be created by owners of privatized units upon agreement with the local government as the owner of non-privatized units	Cost recovery from residents fell to as low as 1-2% in 1993 as utility tariffs were not included in the Government's price liberalization program. Since 1993 federal guidelines for cost recovery in housing maintenance and utility services have mandated full cost recovery by 1998, with municipal discretion to raise rates over the years. This has been accompanied by a program for targeted assistance for households in which expenditures for housing exceed certain percentages of their total income
Utility and maintenance units	Should be divested with associated housing (this includes distribution networks leading to the housing) unless the enterprise can prove to the local government's satisfaction that the utility serves the enterprise's production needs as well. They may be divested either to the local government or to the municipal utility enterprise at the city's discretion.	Financing responsibility for these assets is tied to the housing that they service.
Kindergartens	May be retained by the enterprise, but reprofiling restrictions can be imposed by the city. If the enterprise does not want to retain responsibility for it, it may be divested to local governments or privatized, again with the local government's consent.	Cost recovery from users can be raised by enterprises, who are also free to discriminate against non-employees who use the kindergartens.
Health units	Identical to kindergartens -- frequently retained by the enterprise	Identical to kindergartens
Pioneer camps, hotels, etc.	Identical to kindergartens -- almost never divested	Identical to kindergartens
Dormitories	Included in enterprise charter capital	Financed by the enterprise, usage restricted to employees

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L. SERRECA

ECONOMIC POLICY AND RESTRUCTURING IN RUSSIA

Edited by Simon Commander, Qimiao Fan and Mark Schaffer

Table of Contents

Foreword by Sergei Vasiliev, Deputy Minister of Economics, Russian Government

1. Introduction

Simon Commander and Qimiao Fan

Section 1: Product Markets, Employment, Wages and the Provision of Social Benefits

2. Product Markets

Qimiao Fan and Bingsong Fang

3. How Russian Firms Make Their Wage and Employment Decisions

Simon Commander, Sumana Dhar and Ruslan Yemtsov

4. Provision of Social Benefits and the Russian Industrial Firm

Simon Commander, Une J. Lee and Andrei Tolstopiatenko

Section 2: Financial Aspects of Enterprise Restructuring

5. The Problem in Arrears in Russia

Gilles Alfandari and Mark E. Schaffer

6. Bank-Enterprise Relations and Credit Allocation

Mark E. Schaffer, Qimiao Fan and Une J. Lee

7. Government Financial Transfers and Restructuring

Gilles Alfandari, Qimiao Fan and Lev Freinkman

Section 3: Corporate Governance and Competition

8. Ownership, Control and Enterprise Behavior in Russia

John S. Earle, Saul Estrin and Larisa L. Leschenko

9. Growth and Newly-Established Firms in Russian Manufacturing

Andrea Richter and Mark E. Schaffer

Appendix 1:

Empirical Methodology and Survey Results

Une J. Lee

Introduction

Simon Commander, Qimiao Fan, and Mark Schaffer

This book is concerned with a key issue in transition; the role and organization of the enterprise sector. This is particularly interesting in the Russian context where a concerted attempt has been made to change ownership arrangements and hence corporate governance. To analyse the implications of such changes in a convincing way requires disaggregated information covering the basic dimensions of decision-making in the firm. This book breaks new ground by presenting the results of a large industrial firm survey that we carried out in mid-1994 and which covered 435 industrial firms, including 49 de novo firms. This was the first such survey to be representative and coming in the wake of the mass privatization program gave some important indicators of the effects of ownership change on firm behavior. What follows is a summary of the main arguments and themes that emerge from the chapters.

Shocks and restructuring

Russian industry has faced large adverse shocks that have compounded the secular slowdown in productivity that preceded the break-up of the Soviet Union. Firms have been buffeted by a combination of both aggregate demand and supply shocks, including major negative effects associated with decline in CMEA and intra-FSU trade. And over time firms have to varying degrees had to operate as if under a hard budget constraint, as explicit subsidies have declined and cheap credits have been diminished. Federal government transfers have declined significantly in real terms between 1992 and 1994, although the picture with respect to local government transfers is less clear. Faced with these shocks, official data report industrial production at end-1994 at roughly half the level attained in 1990. Information from the survey of industrial firms gave roughly comparable numbers with a dramatic decline in labor productivity, as firms have continued to hoard labor. It has been argued that official output series are subject to measurement error and tend to overstate the decline, but figures on capacity utilization in the sample also indicate a large contraction since 1990/91, of the order of 30-40 percent for state and privatized firms respectively. The origins of this contraction and the respective time paths do vary somewhat by branch. However, regional effects may have been more important than those associated with the branch. And the initial impression is that measured over output, shocks appear to have been reasonably commonly distributed.

The survey allowed a look at the origins of these shocks and the subsequent response. In particular, it allowed distinguishing between an impact effect or negative restructuring and a more longer term, strategic or positive restructuring decision. The former summarizes the set of responses that firms have had to make as a result of these shocks and which can be considered a weak measure of restructuring, while the latter provides a stronger measure of restructuring by looking at dynamic choices relating to changes in product mix, trading partners, skill distributions in employment and so on. In addition, by collecting information before and after privatization, this allowed controlling for ownership.

The overall story that emerged was that firms have indeed been forced to restructure, but primarily in the first sense. This negative restructuring has generally involved reductions in employment, working hours and wages. There is far less evidence of more positive restructuring in both state and privatized firms. While nearly two-thirds of the sample of firms have experienced major changes in product mix, primarily through introduction of new products and raising the number of product types, and many firms have initiated new trading relationships for both inputs and outputs, these shifts are not at all tightly or consistently

correlated with other restructuring decisions, including on employment and wages. In sum, restructuring even in the weak or negative sense appears to be uneven across branches and dimensions.

Even if restructuring has rarely gone beyond the negative stage and has been very uneven, more encouraging has been significant growth in de novo firms, primarily in major urban centers, and some early signs that such firms are no longer simply gap-filling or service sector firms. For the most part, de novo firms have remained small in employment terms, with quite high employment turnover. Measured in levels de novo firms clearly look very different from both state and privatized firms. But as there was clear sample selection bias for the de novo firms, it is hard to say whether de novo firms look very different in changes and hence in terms of performance. However, it does appear that de novo firms account for a rising component in total job creation and that this is not strictly a function of firm size.

Firms' budget constraints

Central to firms' restructuring decisions has been the financing environment. Initially, in 1992 changes to subsidies were relatively small and total federal government financial transfers amounted to over 30 percent of GDP. These have come down sharply to around 6-7 percent in 1994 and have been increasingly concentrated at least in terms of industrial branches; coal and agriculture sectors being the principal recipients. Fuel sector subsidies in 1994 appear to have accounted for over 25 percent of all subsidies. Outside these branches, transfers have also remained highly concentrated with around 50 percent of total reported transfers being received by under 2 percent of firms. This meant that while a sizable share of firms still receive some form of subsidy from the federal government -- the share was around 25 percent in 1994 -- the average amount of transfer received was small and declining in real terms. Federal subsidies have continued to be directed at large firms, when measured in employment, and have likely been related to a combination of employment stabilizing objectives and compensatory finance for provision of social services. In general, transfers seem to have been used as a means for financing current operations and losses rather than a mechanism for financing restructuring.

The reported numbers likely understate the volume of transfers by simply looking at federal subsidies. A more inclusive picture that accurately measured transfers at a local government level would indicate not only a far higher level of aggregate subsidy for the economy but also a tighter link between transfers and employment. While ultimately the objective must be to reduce subsidies, it is evident that this cannot happen instantly. The main challenge in the interim will be to make more transparent the conditions under which transfers would be sanctioned. In so far as stabilizing employment has been a major trigger for subsidies, it would probably be better to make such transfers explicit as an employment subsidy with an announced level and time path. In this context, subsidies could take the form of explicit payroll tax exemptions.

Focusing only on subsidies, whether federal or local, misses some crucial features. It is important to note that nearly half the firms in the survey had accumulated tax arrears and/or payment arrears (of which more below). By 1994 the stock of tax arrears comprised 4-5 percent of GDP, with the flow in the range of 1.5-2 percent. While transfers amounted to only around 1 percent of output for sampled firms, tax arrears were over 5 percent in 1994. The 1995 estimates for tax arrears are yet larger. The accrual of tax arrears parallels developments in Eastern Europe for firms faced with lower explicit subsidies. Such substitution is confirmed by the fact that recipients of small transfers tended to have smaller tax arrears than those who did not receive government transfers. What is also striking is the

relative concentration of such arrears in financially distressed firms. Such firms comprised roughly 12 percent of the sample but accounted for close to half of total tax arrears.

That transfers and tax arrears continue to support a soft budget constraint is important in understanding the employment, wage and other choices made by firms. What about the relationship between firms and the financial system and firms with suppliers? Evidence from the survey suggests very strongly that inter-enterprise arrears have remained at levels comparable to OECD economies after the arrears cleaning exercise of 1992. In fact, given the information losses and other uncertainty associated with the collapse of the FSU and constraints on cross-border trade and payments arrangements, the level of trade credit has remained very low indeed. In general, it appears that pre-payment is common and late payments quite limited. What is far more prevalent, as already indicated, are late or non-payments of taxes.

It is also clear that firms are still able to extract some soft financing from the banking system. The survey evidence suggested that bad debts were over 25 percent of total lending but were considerably lower than overdues to the budget. There is also significant variation across branches in terms of credit intensity. Late payments or arrears are mostly short term, though measurement is complicated by the practice of capitalizing overdue interest and rescheduling principal. However, aggregate data points to a tripling of overdue bank credit relative to GDP over 1994. As significant parts of the banking system are under-capitalized and real interest rates are now significantly positive, this points to emerging liquidity problems in the banking system and to the risk of associated bank failures.

In summary, Russian industrial firms, whether state owned or privatized, have continued to extract soft financing from government, whether at federal or local level, and banks through a variety of channels. With respect to government, it appears that industry associations and firms with market power have been able to extract higher support. Banks have rising bad debt exposure and in many cases have proven unable to undertake effective credit risk assessments or exercise any effective discipline on firms. While this can partly be traced to the continuing use of directed credits with allocation decisions in effect taken by government agency, it is also attributable to weaknesses in the banking system itself. The result of this combined softness in the banking system, in tax collection and in federal and local supports has obviously been to weaken the budget constraint facing firms. While outside of agriculture and coal, Russian industrial firms try and operate as if facing *ex ante* a hard budget constraint, *ex post* this clearly does not hold. Government transfers from various levels of the fiscal system can still be captured, albeit at declining real levels. This declining volume of soft money has partially been offset by higher tax arrears and by the accumulation of bad debts from the banking system. In sum, Russian industrial firms still do not face a hard budget constraint. This allows loss-makers, including chronic distressed firms, to survive, sanctioning decisions on current operational costs not even consistent with a zero profit constraint.

Labor hoarding and worker compensation

In Eastern Europe, the pattern has been for the first or negative stage of restructuring to involve reductions in employment and some initial wage flexibility, as workers have given priority to employment. This appears to be broadly true in the Russian case, but with some important caveats.

Russian firms entered the transition with large excess employment. While employment reductions have begun to accelerate, relative to the fall in output, firms have continued to hold on to excess labor. And although real wages fell at transition, over time there has been some real wage recovery. These combined factors have duly forced up unit labor costs. The

unambiguous employment bias can be traced not only to insider influence at the level of the firms and the stability of their objectives -- including employment and worker welfare maximization -- but also to the outside environment. With unemployment benefits providing an inadequate fall-back option for separated workers, firms have tended to act with some benevolence, retaining workers but adjusting the hours worked and the monetary components of compensation. One result has been a continuing low unemployment rate; 2 percent according to registrations data ; 5-6 percent from survey results. The pattern of adjustment - - rather different from that observed in East Europe -- appears to be one where firms have partially traded down wages for employment stability. In around 30 percent of firms wage arrears were observed with such arrears comprising as much as a third of the monthly wage bill in early 1995. Clearly, this is consistent with workers placing a high weight on employment relative to wages. But this is only part of the story.

First, workers' compensation has become increasingly dominated by the non-monetary components of compensation, principally the social benefits provided by firms, including some de novo firms. The tax regime, particularly the incidence of the excess wage tax on monetary compensation, has likely motivated some substitution of non-monetary for monetary compensation. Firms -- particularly the larger firms who have as yet experienced smaller changes to employment and who have had a history of high benefits provision -- have generally tried to keep up the supply of benefits, thereby anchoring household incomes, while at the same time allowing workers to allocate low effort to work in the firm. One result has been the growing prevalence of multiple job-holding as workers diversify their time allocations.

Second, the size of shocks to firm balance sheets has commonly been sufficiently negative not to facilitate a simple trade-off. In short, insiders continue to extract rents even if wage levels remain low. Over 30 percent of firms in the survey returned negative gross profits per worker in 1993 and 1994, suggesting that tax arrears and other transfers were still a significant factor in allowing rent taking and in supporting the associated employment bias. Thus, signs of flexibility in the labor market though real need be tempered by the realization that for given financial performance the employment bias in both state and privatized firms appears to remain genuinely large, particularly in the latter category. As restructuring goes deeper we can expect significant employment contraction.

Privatization and firm behavior

Has changing ownership had any effects on firm behavior, given that most of the privatization has been done by insiders -- workers and managers -- with outside stakeholders being relatively unimportant? Indeed, workers held a dominant ownership holding in nearly two thirds of privatized firms. The evidence presented suggests that insider privatization reflected not only an explicit political choice but also the de facto importance of workers in firm-level decision-making. While it is true that managers appear to have considerable discretion in decision-making in many firms, they make decisions that are rarely obviously at odds with the perceived interests of inside workers. One result is that generally ownership changes have had rather weak effects on most indicators of performance, including sales, wages and employment. This can in part of course be attributed to the short elapse of time since privatization. The importance of lags may be partially confirmed by the finding, however, that firms that had already had their first shareholders' meeting had significantly larger employment adjustments than those that still had not convened that meeting. There was also some evidence that privatization was associated with a lower volume of transactions with the state, including receipt of subsidies. And de novo firms were unambiguously more weakly associated with the state in their dealings. Of interest is the fact that firms clearly

dominated by managers tended to maintain stronger links with the state than those dominated by workers. This could be interpreted in terms of a superior ability on the part of managers to maintain ties to the state and to politicians. However, maintaining such ties was not generally associated with lower levels of restructuring. Indeed, manager dominated firms were likely to do more restructuring than worker dominated firms.

While outsider shareholding was surprisingly important -- outsiders held a dominant stake in 16 percent of privatized firms -- there was also little evidence as yet of these stakes being turned into more direct interference in decisionmaking. There was a largely absent link between outside interest and behavioral variables. And it is interesting to note that although financial institutions appear to exert some influence on decisions when they are shareholders, few cases were reported where banks were shareholders.

These rather weak effects of ownership change in performance variables can, as already indicated, in part be attributable simply to lags, but it also needs to be traced to both the financing environment facing firms and the fact that ownership has not yet translated into control. In the latter regard, the emergence of share consolidation and bloc holding may begin to accelerate this translation. The overall picture that emerged on ownership was that the current share distributions were probably quite transitory and would be subject to major change. This would also depend on how the residual shareholdings of government are dealt with.

Prospects and summary

Russian firms have begun to adjust and in largely predictable ways. Product lines are being changed, marketing networks are being recast and changes to both employment levels, skill distributions and relative wages are being made. But the changes in most instances have only just begun and remain very unevenly applied. There has been a clear hardening of the budget constraint, even if the volumes of soft credit remain non-trivial, whether from government or the banking system. As such, negative restructuring has dominated through most of Russian industry. Net job destruction has accelerated (even though hiring rates continue to be surprisingly high) and worker monetary compensation has remained low. But firms, particularly large firms, still act benevolently, providing a significant range of non-monetary social benefits and employment stability. That this is a feasible strategy can only partially be attributed to wage flexibility. Rather, continuing access to financing outside the firm is important. Such finance comes from the various levels of government, with regional factors being increasingly important, as well as from the banking system. In this context, investment -- particularly in machinery and equipment -- has declined massively and there are only very limited indications of firms using retained earnings to finance new and needed investment. An obsolete capital stock obviously contributes to a further slowdown in productivity. Finally, privatization has yet to show any clear effect in terms of performance.

The fact that defensive restructuring has dominated to date is probably not surprising. Ownership changes have been recent and there remains considerable uncertainty in the policy environment. Further, the absence of appropriate management skills and human capital continue to limit the scope and efficacy of restructuring. However, there are signs that managers and, in some instances, outside shareholders are consolidating their stakes and this may in time translate into control and improvements in corporate governance. But it is also possible to see emerging managerial dominance as an outcome consistent with continued rent-taking and exploitation of links to the state. And the absence of an effective exit mechanism must continue to affect the efficiency of any discipline that should come through consolidation in ownership.

The absence of much more than defensive restructuring can be attributed not only to

lags and absent management skills, but also to uncertainty with respect to government policy, to the lack of investment resources associated with insider privatization and to the fact that transfers appear to have made in a manner that impedes effective restructuring. This is either because such supports compensate for services that firms, rather than government, provide or because they are a short run response to financial distress commonly used to postpone the required adjustment. The general message that emerged is that government would remain unable to play an effective and active role in restructuring.

In promoting positive restructuring, clearly key will be the second stage of privatization, in particular, what the government should do with its residual share holding. One option being discussed is to involve the banks explicitly in the management of this residual share. This would assign to banks a dual function of acting as strategic investors in firms while using government's shareholdings as collateral for lending to government. The argument runs that this provides a non-inflationary source of finance for the budget deficit while also providing incentives for banks to invest in the firms whose residual shares they controlled. However, the exposure of the banks to the firm sector to date suggests caution. First, few banks have hitherto chosen to take shares in firms; this likely says something about their perceived ability to intervene effectively in firm decisions. Second, significant parts of the banking system are not only undercapitalized but have a high share of non-performing in total loans to the firm sector. Raising equity exposure could potentially accentuate the existing softness of the financial system and the emerging bad debt problem. Third, mobilizing investment resources from the banking system will obviously depend on banks being able to exercise effective control through the residual shareholding. Given the entrenched power of insiders in most privatized firms, particularly of managers, this control may elusive. Pulling in investment to firms -- critical for effective restructuring to proceed -- continues to run up against the fact that huge concessions have already been made to insiders whose rights of control have yet to be effectively diluted. Share consolidation and other changes may ultimately facilitate strategic alliances between dominant insider interests and outsiders, but in any event it seems generally unlikely that insider interests can be ignored or overruled. Fourth, as with the financial-industrial groups that are being formed, there are potential incentive problems associated with closer bank-firm ties. For example, it can be argued that this only perpetuates close and often undesirable links between firms, banks and government and may actually facilitate continuing softness in firms' budget constraints. In this view, closer ties between banks and firms facilitate rent-seeking rather than promoting improved corporate governance.

The formation of financial-industrial groups -- eight to date -- testifies not only to the importance of inherited networks -- a number come out of the former branch associations, for example -- but raises the question of whether such groups can effectively pool capital. Given the effective absence as yet of a functioning capital market, let alone regional equity markets, this option may appear attractive. However, the motivation for creating such groups may be undesirable, for instance for conserving market power and/or raising their members bargaining power with government, local or federal. That firm size has historically been an important factor in explaining the flow of transfers and other preferential treatment may be a good clue to some of the motivation.

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