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The Russian Economy

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Abstract:

This report surveys the state and structure of the Russian economy at the beginning of the 21st century. The nature of the economic system is characterized in terms of the inherited structural and institutional legacies and the efforts to overcome these since 1991. Despite the vast changes that have occurred during a decade of 'transition', these legacies still stand in the way of developing a well-functioning market economy. The size and structure of the economy is analyzed, together with prospects for further development. The current (Gref) development program of the Putin regime is argued to be promising, if appropriately implemented, but faces domestic political challenge that may derail progress.

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1 Introduction

The Russian economy in the first year of the new millennium is still very much a reflection of its Soviet predecessor. Indeed, despite vast changes in the organizational, institutional and production structures of the economy, there is a feeling that ten years of "reform" have been wasted, and only now can real reform begin.[1] While macroeconomic performance has bottomed out, and we are witnessing a rather strong and broad growth of economic activity, the dead hand of the Soviet economic system still lies across the economy, stifling new initiative, dragging resources into wasteful activities and structures, and obstructing a clear view of what still needs to be done for a true modernizing and globalizing revival of the Russian economy. Yet a new spirit is struggling against this legacy, embodied in new entrepreneurs and managers, and some political agents, who are fighting to break through with new business activities, resuscitating and restructuring old industrial objects, and exploiting opportunities presented by the fluid situation.[2]

The result is that Russia has an unevenly marketizing — hence partially marketized, but not yet truly market — economic system. While making money is a primary motivation, and virtually anything — political, social or economic — can be bought, the nature of 'economic' interaction and the structural incentives and opportunities built into the system, are often quite different from those typical of a functioning and functional market economic system. This distorts both policy impacts and performance statistics, rendering economic analysis and policy formulation more difficult and raising questions of the suitability, or indeed ability, of Russia to effectively and fruitfully integrate into the global economy,

[1] This feeling has been expressed, for example , by Sergei Karaganov, Deputy Director, Institute of Europe RAN, in an interview published in *Trud,* 29 June 2001: "In fact, Vladmir Putin has started a structural reform of Russian society which former leaders tried to carry out in the early 1990's. Russia tried to reform its economy and finances but failed and lost ten years."

[2] Some evidence of this is seen in an August 3, 2001, conference in Volgograd, "Business and Power: A Strategy for Interaction," sponsored by local entrepreneurs with support of the Presidential Administration. See JRL, 7 August 2001. Also the entrepreneural group Russia Club-2015 has been active in pushing to improve the business environment. See Carnegie Endowment "Private Sector Initiative for Russia Meeting Report," V. 3, #14, 3 May 2001, on their web page <*www.ceip.org*>.

other than as a resource appanage to the developed market economies. But there is a tremendous amount of turbulent economic activity — experimentation, adjustment, success and failure — that is pressuring the economic system to adjust toward more market-friendly institutions and structures. Thus the future is far from determined, or even predictable. The Russian economy stands at a crossroads where policy choices can make a critical difference.

2 Nature of the Economic System

The Russian economy is typically referred to as a 'distorted' or quasi-market economy. It is "market" as the "private" sector is predominant, everything carries a price, profit is an incentive, and most economic activity is formally connected with markets for both acquiring means and disposing of product, as indeed were the Soviet contractual supply (*snabzhenie*) and disposal (*sbyt*) systems. It is 'quasi-' or 'distorted' as necessary markets are often severely restricted or missing, activity is often legally unprotected and/or subject to bureaucratic or criminal caprice or extortion, and non-economic factors (personal ties and/or traditional links) are often determinant of the activities allowed or pursued. The transactional, banking and legal institutions that undergird a market economy are in Russia weak, 'personalized,' and often dysfunctional in their intermediating roles. Yet prices arise from market-like decentralized interaction. This combination of market and non-market forces and institutions, "Capitalism Russian Style,"[3] is largely a consequence of inherited structures, institutions and behaviors (or understandings) coming out of the Soviet system and its pseudo-market forms, or from its autocratic Russia predecessor. These legacies have provided much of the content of the new market forms introduced during transition.

2.1 Structural Legacies

The structure of economic activity — its location, capital and other factor use, and output portfolio at the beginning of transition — was the consequence of 70 years of mal-development of production and distribution capacities in the Soviet Union. The resulting "Soviet" structure of production was fully consistent with the planned priorities of the Soviet state, but was, and is, inconsistent with any coherent pattern of economic cost accounting.[4] The plans and prices toward which economic activity was oriented were seriously distorted with respect to true economic costs and opportunities. Hence virtually every production operation was economically inefficient, and highly wasteful in its use of resources, materials, energy, labor and capital.

Developed without consideration of economic (opportunity) costs or valuation, the overall structure of production is fundamentally non-viable in a decen-

[3] See Gustafson (1997), Brady (1996), or Hedlund (1999) who calls it "Russia's 'Market' Economy: A Distorted Case of Predatory Capitalism."

[4] The argument is developed in Ericson (1990, 1991).

tralized market environment. Further, much of the distortion was systematically hidden by arbitrary and economically irrational Soviet pricing that failed to reflect economic (market) valuations.[5] That implies, after price liberalization, serious problems of cost recovery in the operation of much of the industrial structure, vast unmeasured amounts of waste in its operation, and the need for massive cross-subsidization and further waste in any attempt to operate it in a decentralized, non-command, mode.

This distorted structure is currently reflected in patterns of:

- Crumbling infrastructure, irrationally and sparsely built, always poorly maintained, and now without a clear "owner" responsible for preservation of its useful parts;[6]
- Location of industrial and other economic activity, built for planners convenience and security/defense considerations and innocent of real transportation, location and other opportunity costs;[7]
- Structure and location of employment and factor use, reflecting wasteful "extensive" growth and excessive factor and input stocks as a buffer against disruption in the absence of market redundancy; and
- Use of technology, both inappropriate and obsolete from the perspective of producing economic value, due to the absence of economic criteria for its evaluation.[8]

To facilitate planning, and based on a misplaced belief in (engineering) economies of scale, production activity was concentrated in massive facilities with sole suppliers and users ("technological chains"), eliminating the redundancy inherent in market competition. The absence of any economic criteria of relative value or obsolescence led to the maintenance of virtually all installed capital and all enterprises and facilities, resulting in an age structure and employment of the capital stock that is undesirable, and indeed unsustainable, when market based costs must be covered by earnings from its use.

As a consequence, there remains a need for extensive cross-subsidization of important economic activity, that, in the absence of direct government control, is implemented indirectly through the acceptance of payment arrears, tax offsets and generously priced barter. This is substantially driven by non-/anti-market survival strategies of inherited production organizations and enterprises (recourse to "virtual economy"), accepted, and often encouraged, by government

[5] This problem of pricing and its implications are discussed in Ericson (1999).

[6] This is nicely illustrated in the annual Russia survey by Edward Lucas, "Putin's Choice," **The Economist**, 19 July 2001.

[7] Examples include unsustainable regional/local autarky in food production, "interior" and "northern" locations in extremely hostile and costly environmental conditions, and manufacturing concentrations that ignored costs of procuring inputs and disposing of outputs.

[8] Many of these legacies, and others regarding household behavior, are discussed in Guriev and Ickes (2001).

at all levels.[9] And it has the serious consequence of the preemption of critical resource flows (e.g. energy, real estate services) by existing enterprises and operations, starving new activity of resources and placing a substantial barrier in the way of de-novo, market-based economic activity.

2.2 Institutional Legacies

Much of the institutional structure and patterns of interaction remain an inheritance from the command economy. Where new organizational forms and rules have been introduced, their content and the nature of their functioning have been defined more by the attitudes and understandings, the "economic culture," inherited from the Soviet Union. This can be seen in the absence of key institutional arrangements required for the proper functioning of a market economy.

2.2.1 Economic

One of the key economic legacies of the Soviet Union is the lack of a dense and redundant set of networks for economic and financial intermediation. Planning rationality dictated sole suppliers and users, unique transportation links and wholesaling organs, and minimal intermediate inventory holdings. Furthermore, the fundamental irrelevance of money for economic, and in particular production, activity meant that there was no proper intermediating banking or financial system. Thus the demise of the central planning and allocation system, the disappearance of the hierarchical controlling structures of *Gossnab* and the *Party*, and the breakup of the monobank left economic agents without the trading and financing options essential to the functioning of the market, and hence subject to opportunistic exploitation by individuals and groups with personal connections and networks derived largely from positions in the Soviet political apparatus or the Soviet criminal underground. The result is a highly personalized and politicized intermediation, aimed in large part at overcoming political barriers and extracting 'rents' for insiders. Markets are thus highly segmented, and quite dependent on the goodwill and facilitation of local and regional political authorities.

Another critical institutional legacy is the incompleteness and ambiguity of property rights. Given the chaotic, and both legally and socially questionable, means of acquiring productive property, there remains much doubt as to its security.[10] There is a lack of "free and clear" ownership, questionable enforceability of property rights except perhaps by private means, and a general lack of contract protection and enforcement. This generates extremely short behavioral horizons, and subsequent efforts to minimize investment and realize gains as

[9] See the discussion in Gaddy and Ickes (1998, 2001) and Ericson and Ickes (2001). Woodruff (1999) shows how this was a natural response of local and regional governments attempting to preserve "local substantive economies" in face of the shock of marketization.

[10] How institutional and behavioral legacies perverted the privatizations process and its outcome is nicely discussed in Hedlund (2001).

soon as possible. It also means that economic agents must fall back on stronger ties, on personal connections and networks, with extra-economic and extra-legal means of enforcement, in order to engage in complex economic activity.[11] Hence there is a tendency for existing organizations to rely on inherited networks, and maintain inherited ties and activities, rather than engaging in entrepreneurial restructuring and market exploration.

These tendencies are reinforced by the lack of disinterested adjudication of disputes.[12] Just as Soviet First Secretaries, administrative and Party functionaries could dictate the terms of resolution of conflict, the interpretation and implementation of plans, so political agents now influence regulatory bodies, civil and arbitration courts, making the outcome of property and contract disputes as much a function of political relations and influence as of the content of the dispute. This is particularly clear in the implementation of the recent bankruptcy law, expressly based on Western models and practice. The influence over bankruptcy judges by political authorities has led bankruptcy to become an instrument for redistribution of property to the politically connected and for the extraction of rents by regional and local political authorities.[13] This is to a large extent just a continuation of Soviet "telephone justice."

2.2.2 Political

Much of this economic institutional environment is derivative of the post-Soviet nature of governance and political power. In the Soviet system, vast discretionary authority, unchecked by law or institutional constraint other than the power of higher Party organs, resided in political and administrative organs. Pleasing them became the ultimate criterion of economic (and political) success, and hence their whim (interpretation of plans, and their superiors' intentions) became 'law' for all subordinates.[14]

This personalization of economic authority, political power and governance has largely survived the demise of the Soviet Union. Indeed, it was enhanced by the elimination of the Communist Party and its discipline and controls, leading to an extraordinary intertwining of economic and political authority and decisions. It allows personal gain and political consideration to dominate economic

[11] See the discussion in Ericson (2000) for some detail and references. Examples in retailing in three Russian cities are analyzed in Frye and Zhuravskaya (2000). The use of contract killings in enforcement was recently highlighted in the **Jamestown Foundation Monitor**, 10 August 2001: "From Moscow to Vladivostok, Contract Killings are Common."

[12] The arbitrage courts have been improving, and, unless government is involved, generally fair in adjudicating contract and property disputes. They, however, lack reliable means of enforcement, leading firms to ignor, or pursue private enforcement, of their decisions. See, among others, Ryterman and Weber (1996), Hendley, et. al (1997), Radaev (1998) and S. Lambroschini, "Russia's Judiciary: The Arbitration Courts' Problems," **RFE/RL Newsline,** 26 and 27 April, 2001.

[13] For a theoretical and empirical analysis, see Lambert-Mogiliansky, Sonin and Zhuravskaya (2000). A recent discussion, focussing on the case of the profitable Novokuznetsk Aluminum Plant, appeared in **The New York Times,** "Using Bankruptcy as a Takeover Tool," by S. Tavernise.

[14] See Ericson (1991) on the economic logic of this.

choices, disemboweling markets of their economic content by systematically distorting pricing and other market signals of economic value. By intertwining the personal and the public, the political and the economic, it has fostered at all levels ubiquitous corruption, rule by "decree" rather than law and contract, the predominance of patron-client relations, and the domination ('trumping') of formal institutions by personal relations.[15]

Such a personalized, "fealty-based" system is the antithesis of one based on "rule of law" so essential to the functioning of a modern market economy. While its roots are undoubtedly historically and culturally deeper than the Soviet system,[16] that system by its very nature (Ericson, 1991) amplified and strengthened the personalized, premodern, and anti-market aspects of the inherited structures of political and economic relations. This absence of "rule of law," of effective constraints on both the strong and the state, was most clearly visible in Yeltsin's Russia and its autocratic, elite (insider) dominated governance, its exercise of arbitrary discretion at the top, with obsequious submission at the bottom, and the resort at all levels of government to the use of secret instructions, orders and decrees that operated above all laws.[17] It was also clearly visible in the ubiquitous predation against new, unauthorized ("outsider") activity and initiative, particularly reflected in the difficulties of small business and family farming.[18]

2.2.3 Social

This arbitrariness of political and economic power is reinforced by another central legacy of the Soviet system, the absence or weakness of autonomous social institutions, and the extreme vulnerability of those that have been formed in the post-Soviet period. Soviet labor unions were "house pets" of the state management, and functioned largely as transmission belts for information gathering and dissemination, and for the management of state guaranteed workers' benefits.[19] While a number of independent labor unions in the European mold have arisen during the transition period, the large successors to the official Soviet unions remain weak and unable to, or uninterested in, upholding workers' rights; they appear to be more rent seeking agencies working in collusion with management to maintain as much of the old structures and prerogatives as possible. The Orthodox Church in Russia has always been an arm of the state, and remains very much such. Other religious organizations either remain disengaged as they reassert themselves in their spiritual domain, or are struggling to survive as they are subject to increasing political pressure, sometimes provoked by the

[15] While in many respects resembling east Asian and Latin American "crony capitalism," the phenomenon in Russia is much more pervasive and destructive of market economic activity, as it is unencumbered by tradition, moral constraint, and pre-existing markets, both domestic and foreign.

[16] For some discussion of roots and their impact on reform, see the articles in Sachs and Pistor (1997).

[17] This is nicely discussed in Reddaway and Glinski (2001), although the discussion is scattered throughout the volume due to its primary focus on political and social developments.

[18] See the discussion in Shleifer (1997) and Aslund (1997).

[19] See Ruble (1981).

Orthodox church. In neither case are they capable of effectively articulating or representing alternative social interests to those of the ruling elite.

Until high *perestroika* in the late 1980's, all other organizations that might constitute civil society were either illegal or strictly subordinate to, and directly controlled by, Party organs or organizations such as *Komsomol.* For example, all musical, theater and artistic groups, all chess and sports clubs, and all forms of recreational activity outside the immediate family were subject to organization, approval and control by some 'responsible' organ of the Party or (by delegation) the State. Such control extended to all forms of legal civic association and all political and/or discussion clubs and organizations.

In the late *Gorbachev* period we saw a flowering of such civil society under the protection of official *glasnost'*. Its roots, however, were extremely shallow and weak, as evidenced by its steady marscesense under both Yeltsin and Putin.[20] Hence there remains a systematic lack of any countervailing social power to the arbitrary discretion of the elite and its governmental tools, facilitating the personalization and idiosyncrasy, and hence self-serving nature, of economic and political decisions and interactions.

This stimulates and rationalizes the general lack of initiative among the mass of the population, and the failure of society to insist on and assert it rights against the authorities. Instead, "authority" is looked to for initiative and problem solving; the 'elite' decides for all, with democratic formalisms a cover for legitimacy, just as market forms are a cover for political power. Finally, the absence of vigorous civil society leads to the search for individualized, special relation based, solutions to economic and social problems, and in particular to a "family"-based striving for maximum possible self sufficiency.[21] This seriously undercuts the development of generalized, trust and law-based, interaction and support that characterizes properly functioning market systems.[22]

2.3 Legacies of Understanding and Behavior[23]

These economic, social and political legacies reflect deeper patterns of behavior, and their associated understandings of, and attitudes toward, the economy and markets. These understandings and attitudes are inherited from the Soviet period or perhaps the deeper Russian past, and inhibit market development and market-functional behavior. They comprise an "economic culture" and understanding of how an economy works that are profoundly destructive of the

[20] A wonderful discussion of the origins, growth, and gradual cooptation and destruction of the democratic movement and its associated civic organizations under the Yeltsin regime, see Reddaway and Glinsky (2001), especially Chapters 3, 4, 6, and 7.

[21] This is much odf the basis for Russia's historical and continuing "economy of favors." See Ledeneva (1998).

[22] Of course, this is a matter of degree. Personal ties and networks play an important role in well functioning market systems also, but they do not comprise its central, driving component. Rather they are embedded in impersonal networks and markets which provide a rich, heavily redundant, set of 'outside options' ensuring that voluntarily entered special relations are value-adding for the individuals, and not stifling or exploitative.

[23] This section is based on my general reading of Soviet and Russian economic and business literature, and not on any specific sources.

necessary relations and proper functioning of a modern market economy. While this topic deserves an entire monograph, I can only touch on a few general misunderstandings obstructing the path of proper marketization and development of the Russian economy.

One critical attitude is the "reification" of value in physical structures. There is no understanding of the economic concept of "opportunity cost," or indeed of the meaning of "sunk costs." This is seen in the general belief that value is determined by expenditures (sunk cost), and a subsequent faith in the value and utility of inherited structures. These attitudes are supported by the Soviet misunderstanding of the role and functioning of markets, prices and financial constraints. There is very little understanding of how market value is determined, and in particular of the informational role of price levels and, more significantly, their changes in determining what should be done in a market system. Rather, there is a belief that connections, influence payments, and *blat* determine (and should determine) activity undertaken, and the acceptance of subordination of economic activity to political authority; government as 'player' rather than 'referee.'

This is closely related to the managerial/bureaucratic belief that activity and payment not necessarily related; that failure to cover costs is a problem with prices, not the activity.[24] Thus there is a lack of acceptance of 'budget constraints;' as in the Soviet Union money should follow clear "economic need" rather than limiting and forcing choice among possible alternatives. These attitudes are reinforced by the acceptance of different "rules of the game" for 'insiders' and 'outsiders,' a general hostility toward 'outsiders,' and possessive managerial and governmental attitudes to "their" enterprises and operations.[25] Thus only trusted insiders, or those who make special arrangements with the authorities, are allowed to operate, undercutting the competition so essential to the proper functioning of markets and the proper determination of prices and valuations. Finally, there is a critical misunderstanding of the meaning and function of "property rights" in a market economic system. Hence "privatization" is largely understood as the seizure/redistribution of existing property rather than the creation of secure, tradeable property rights facilitating the generation of new value.

2.4 Is Russia a "Market Economy"?

In view of these legacies, I have argued at length elsewhere (Ericson, 2000) that the Russian economic system under Yeltsin was better characterized as "feudal" in structure, than as a "market economy." Four general systemic characteristics stood out: (1) the politicized and personal-connection based economic

[24] This can be seen in the repeated claims that energy and/or utility prices are too high, despite their below market-clearing levels, or that subsidies are necessary for operations in the north or to preserve some enterprise of sector in a specific region. Instead of questioning the value of operations that are apparently non-viable at market prices, the call is for prices to be "fixed" so that the operations appear viable.

[25] Thus can be seen in the revealed attitudes of managers, businessmen and politicials in their statements quoted in Blasi, et. a. (1997) or Woodruff (1999), for example.

decision making; (2) the dis-integration of the state, with "parcellization of its sovereignty" and "privatization" of its functions; (3) a fragmentary market structure without effective complex intermediation; and, (4) widespread market non-viability of economic organizations and institutions, leading to survival strategies of autarky and "virtual economy" networking.

Of these characteristics, three continue to be central to the current Russian economic system; only the second is apparently being reversed under Putin. These legacies and characteristics cast doubt on the claim that Russia has a *market system*. For markets, market motivations, financial constraints, and the ability to cover costs and produce value at market prices are the essence of any *system* that can claim to be market based and driven. Rather than being built on idiosyncratic personal and traditional networks, a market system is non-hierarchical and functions within an established political and legal framework providing "rules of the game" constraining behavior regardless of the political or social position of the agent. In a market economy, "sovereignty" resides in an autonomous state outside, and in some respects — above, the market system, rather than being "parcellized" among various political and economic actors, as was the case in Yeltsin's Russia. There is a clear separation of political and economic roles, of the public and private spheres, with rules and limits applicable equally to all regardless of rank or status. Similarly, property and contractual rights in a market system are clearly defined and socially protected, regardless of the status of the agent.

Interaction and networks in a market economy are thus primarily based on the perception of opportunity and mutual benefit from cooperation and/or exchange, and are perpetually changing in pursuit of new opportunity and/or cost avoidance. Ties are contractual, specific, and subject to voluntary renegotiation and third-party enforcement, rather than traditional, general, and based of personal commitment and obligation. And incentives derive from the rewards to meeting the needs and desires of other market participants, to creating new products, services and wealth. Hence, investment in the pursuit of opportunity, and of the wealth to develop further opportunities, is a primary reflection of market economic motivation. In a market economy, economic power is clearly differentiated from political power and/or political/moral authority, and is based on success on markets rather than social or political legitimacy and power.

These "modern" characteristics of a market system stand in sharp contrast to those of the coalescing Russian system. And they lie behind the growth of active, complex systems of factor, product, service, and financial markets, operating independently of direct political/social controls, that are at the heart of a market economic system and provide the basis for investment and economic growth. In Russia, however, we see neither the deep structural characteristics of a modern market economy, nor the functioning of an integrated system of complex markets fostering investment and growth. Rather, "feudal" characteristics seemed to have developed under Yeltsin. Despite dramatic differences in technologies and capabilities for communication, for information processing, and for control of economic activity, a feudal "parcellization of sovereignty," a devolution of economic activity to quasi-autarchic networks, a fragmentation of markets, and a personalization of rule and interregional interaction seemed to have taken hold.

At the base of this system remain industrial, agricultural and construction enterprises, whether privatized or not, regional and local governments, and some of the more important, as they are politically connected, new commercial and financial structures (FIG's). Most of these organizations are legitimated by tradition, having been derived from Soviet economic/political entities or built on connections from that period, and many of the new commercial and financial structures have acquired the status of the industrial enterprises over which they have taken control.[26] Personalized power is exercised through overlapping networks of personal ties and obligations, replicating to a large extent Soviet/traditional patterns of coordination and control (Ledeneva, 1998). Markets and market relations seem predominant only in dealing with strong outsiders, e.g. foreign firms and markets, and in areas outside the core interests of the major institutions surviving from the Soviet era; even there, markets are locally regulated or monopolized where possible, often by informal, extralegal organizations. And, as under feudalism, property and contract rights are diffuse, circumscribed by Soviet "tradition," and encumbered by conflicting claims of multiple stakeholders, rendering them often unenforceable through regular legal channels. Hence there was very little investment beyond that required to maintain current, reduced levels of activity until the post-crash boom of 1999-2001. And since then, most investment outside the energy sector seems to have been aimed a resuscitating Soviet industrial structures, rather than at restructuring or developing new market-viable operations. Finally, the sources of political and economic power are localized and relational, unencumbered by moral or overarching institutional constraint.

Thus, the structure and functioning of the Russian economy seem to be fairly inconsistent with a market system, despite the fact that, as Aslund (1995) demonstrates, the command economy has been destroyed. Despite radical decentralization, the lack of ex-ante planning and coordination, and the absence of vertical integration and control of information, markets cannot play the role that they must in a true market economy. Essential institutions for the proper functioning of markets and market relations are lacking, including: transparent, uniformly enforced laws, rules and regulations; enforcement of property rights; and contractual commitment with third party enforcement.

There is virtually no "complex market intermediation," but rather networks based on personal connections and mutual dependence. The domain of impersonal, horizontal relations, characterizing much market interaction, is severely restricted, and there is a lack of "equivalence in exchange" that is reflected in the non-uniformity and "personalization" of prices, depending on the status of, and relationship between, the agents. Factor markets are degenerate,

[26] For example, *Menatep* evolved from a 'bank' through and industrial holding company, *Rosprom*, to an energy company based on *Yukos. Similarly, Bank Rossiiskii Kredit* has become a holding company in the metallurgical industry, and *Oneximbank* has combined *Noril'sk Nikel* with *Sidanko* oil, before losing the latter through a manipulated bankruptcy to *TNK.*

and full market relations predominate only when dealing with foreigners and/or advanced/luxury products. Economic behavior is not oriented toward the creation of wealth and minimization of opportunity cost, but rather toward the redistribution of property, and the seizure of wealth for consumption and political power. Survival and autarchy have become primary objectives. Incentives beyond personal derive largely from your "network" or "clan," and stimulate supporting its organizations and leadership, not creating market value.

3 Size and Structure

The Russian economy is undergoing substantial and turbulent change. The ambiguity of rules and variance in behaviors, the mixing of inherited and new patterns of activity and interaction, and the absence of well established, stable market institutions and structures, render any measurement of the 'size' of the Russian economy rather questionable. Yet certain broad trends and developments seem clear.[27]

3.1 Issues of Measurement

The classical problems of incomplete, incoherent statistics, and "index number relativity" continue to haunt the measurement of the Russian economy.[28] Reporting channels are largely those developed in the Soviet period, and the accounting methodology of most existing firms, whether privatized or not, remains oriented toward material product and physical production indicators, poorly measuring economic value and cost. High and variable inflation undercuts the reliability of measures of economic aggregates and their changes. Base prices in which economic activity is measured and aggregated are frequently distorted by both regional and national price controls on basic inputs, and regional segmentation of markets. Price information for measuring both inputs and output is often further distorted by the use of quasi-monetary instruments or barter, rendering the measurement of real economic activity less reliable than it appears,[29] and raising questions about the reliability of the balances in the system of national accounts (*natsional'nye scheta*).

Among the problems with official economic statistics, four deserve to be particularly highlighted:

- only the activity of large and medium enterprises is directly measured (reported), a legacy of the Soviet data base; the activity of small scale and individual enterprises is estimated from a survey based on a stratified sample from tax records;[30]

[27] The basic sources used for official statistical data on the Russian economy are *Goskomstat* (2000a, 2000b, 2000c).

[28] On some of the problems, and the early progress in addressing them, see Koen (1996).

[29] This is related to the maintenance of the "virtual economy" [Gaddy and Ickes (2001)] or what Woodruff (1999) calls "local substantive economies" inherited from the Soviet period.

[30] See Goskomstat (2000a), pp. 3-4.

- the "guesstimate" of 'unofficial' economic activity, recently raised from 20% through 23% (1998) to 25% of reported activity;
- the lack of adjustment of official statistics for reported activity supported by "black cash" payments, generating deductable costs for fictitous economic activity (usually construction, repair or other services);[31]
- economic activity is not fully 'market' determined or driven, hence the meaning of Western accounting concepts is not the same when applied to Russia; the economic value of activity measured in national accounts is not necessarily the same as it would be were those numbers generated by a fully functional market economy — errors occur both in measuring waste as real activity and in ignoring valuable economic activity.[32]

Despite these continuing problems, substantial progress has been made in adopting standard international SNA methodologies, and in attempting to get clean, reliable data. But the task is extremely difficult, due to the level of understanding, and the inherited mind-set of most of the managers and administrators at the basic reporting levels in the economic system. Western accounting concepts and understanding of the cost and value categories being measured are only vaguely understood, if at all, by the vast majority of Russian managers and bureaucrats, leading to inevitable mistakes in measuring and reporting real economic activity. Where real progress has been made is in the statistical accounting organs at the center (*Goskomstat*) where substantial training and aid has been provided by international assistance programs.[33] As a result, we have apparently conscientious and honest processing of rather unreliable data, subject to substantial errors on both the positive and negative side.

3.2 The Aggregate Economy

Official *Goskomstat* (GKS) statistics place GDP at 4,545.5 billion rubles, or 34,068 rubles per capita, in 1999.[34] At official exchange rates, this makes GDP about $175 billion, or $1,320 per capita, indicating an economy about the size of Denmark despite its vastly larger population at an apparently third-world level of development. That, however, seriously understates the size and strength of the economy, for reasons discussed below. A better relative measure, taking account of many of the pricing distortions in the Russian economy is in terms of purchasing-power parity (PPP) prices. GKS has estimated 1996 Russian GDP

[31] The use of "black cash" for tax evasion and 'rents' and cost shifting is analyzed in Yakovlev (2001). This clearly leads to an exaggeration of levels of economic activity, particularly by small and medium-sized firms.

[32] There is an interesting discussion of this problem in Gaddy (2001), related to issues of measuring the "virtual economy" (Gaddy and Ickes, 2001).

[33] A concise summary of methodology an assumptions behind Russian National Income Accounts can be found in *Goskomstat,* **Natsional'nye scheta Rossii** (Moscow: GKS, 2000), pp.16-26.

[34] This is the last year for which complete statistical tables are available, although estimates for 2000 and the first few months of 2001 are also available.

at PPP prices as $996.1, or $6,742 per capita, placing Russia at the level of development of Tailand, Turkey or Mexico in that pre-crisis, pre-recovery year when GDP was still some 2% above its level in 1999. A more recent estimate by the World Bank in 2000 corroborates that estimate for 1999: $948 billion or $6,500 per capita, making the Russian economy the 10th largest in the world.[35]

The macroeconomy grew between 7.7 and 8.3% in 2000; the initial (February) official GKS report was revised in June 2001 to show the higher rate of growth, but this was apparently based on an upward revision in the estimated size of "value added" in industry, due to reweighting of sectoral shares and of the "unofficial" economy. And the aggregate economy has been growing, according to official reports, at a rate of somewhere over 4% during the first half of 2001, giving a mid-2001 annual GDP of about 7.2 trillion rubles, or $250 billion at current exchange rates (∼29R/$). Although PPP estimates are apt to more than triple that number, the Russian economy remains at best at the level of upper tier developing economies, and well behind the less developed countries of southern Europe.[36]

3.3 The 'Shadow' and 'Virtual' Economies

Beyond the "marketized" and officially measured economy, there is a substantial unofficial, "shadow" or "second," economy. Excluding activities which are criminal and hence not measured anywhere (e.g. drugs, extortion, theft), the statistical organs estimate now that this activity adds about 25% to the levels of measured activities. Some scholars, and some statements by the tax authorities and prosecutor general, place the size of this "shadow" economy at 40%, although this estimate is not used in calculating official performance statistics.[37] This 25% adjustment tries to capture small-scale activity missed by the inherited statistical measurement systems, as well as tax avoiding and unregistered, but otherwise legal, activity. This adjustment is included in official measures of macroeconomic and sectoral performance above.

A phenomenon which is ignored in official statistics, but indirectly influences them, is that of the "virtual economy."[38] This encompasses a range of activities, largely in the traditional industrial sectors, whose reported performance is exaggerated by the use of quasi- and non-monetary instruments of exchange, such as barter, offsets, and promissory notes, that allow wide variation and idiosyncrasy in transaction prices, generally exaggerating the reported value of industrial output and understating the costs (particularly energy) of its production.[39] This exaggerates both gross output and value added in industry to an

[35] See World Bank's **World Development Report: 2000.**

[36] Putin, in his first State of the Nation Address, 8 July 2000, claimed that it will take Russia over 15 years of annual growth of 7-10% per year to surpass Portugal in GDP/capita.

[37] See Johnson, Kaufmann and Shleifer (1997) and Kaufmann and Kaliberda (1996) for some western estimates. The larger figure is regularly repeated in statements of the legal authorities and in the Russian press. See the Introduction in Dolgopyatova (1998).

[38] See Gaddy and Ickes (2001).

[39] See in particular the Guriev–Ickes and Commander papers in the Seabright (2000) conference volume.

unknown degree. If properly accounted for, and we have no evidence that it is, it will also reduce the estimated size of the "value adding" sectors (e.g. fuel and energy, intermediate materials and metals, services) with an ambiguous impact on the measured size of the overall economy.

Thus the virtual economy has a significant impact on the measurement of the sectoral structure of the Russian economy, and its changes over the last decade. In particular, it reduces the measured relative size of the energy and basic metals and materials sectors, while exaggerating the size of a number of the manufacturing and engineering sectors. These non-market driven activities cloud our measurement of the market structure of the economy, raising questions about its economic coherence.

3.4 Sectoral Structure

The Soviet Russian structure of production activity was strongly tilted toward heavy and military industry and the inputs critical to their expansion, and quite weak in the production of consumers' goods and services. It focussed on physical product and the production of the means of further production as the key to economic, and hence military, power, downplaying "unproductive" if necessary activity that only provided goods and services to the civil population. Thus the resource and energy sectors, and the manufacture of industrial inputs and machinery, dominated the structure of industrial activity, while industry, agriculture, construction and industrial transportation accounted for almost 3/4 of GDP, with all consumer services, including housing, a portion of the remaining quarter.[40]

This structure underwent substantial change in the mid-1990's, particularly after the first real shock of stabilization set in 1995, amid the general and deep contraction of all economic activity.[41] Tables 1 through 4 show the shift in the structure of both employment and output by macroeconomic sector and industrial branch. As was to be expected from the substantial, if incomplete marketization of the economy, industry, construction and agriculture shrank in relative size, while services expanded substantially. Within industry, manufacturing and processing contracted substantially, while new sectors, particularly business and financial services, arose where the Soviet state had placed low priority or had forbidden activity (e.g. financial intermediation). Finally, the resource, energy and fuel sectors appeared to grow dramatically in terms of relative output share, leading to claims of "deindustrialization" and becoming a "resource appanage" of the capitalist world.

The changes in the structure of output have been much greater than those in employment. This is partly a reflection of the unwillingness of management, now often the "controlling" private owners, to release workers. This arises from the confluence of strategic, paternalistic and political motives, and the pressure

[40] Ericson (1990), IMF et. al. (1991), OECD (1995) and Gavrilenkov and Kuboniwa (1999) for more detail.

[41] The beginnings of this structural change are analyzed in some depth in Gavrilenkov and Kuboniwa (1999).

of local and regional governments.[42] But it is also partly the consequence of the dramatic changes in sectoral prices following the liberalizations of 1992, and the succeeding gradual adjustment of the still regulated (in particular, energy and transportation) prices.

In the Soviet Union, priority inputs for industrial development, and military priority resources, were priced artificially low, giving the appearance of lower output in those sectors and limited input use in downstream sectors.[43] If relative world prices are used, rather than current Soviet prices, to explore the structure of production in pre-transition Russia, the branch structure of industry appears to have changed much less since 1990, and indeed the relative shares of the energy, fuels and metals sectors may have fallen in the transition, as can be seen from Table 5 showing the output structure of industrial branches in world prices of 1991. However, their share may still be understated due to the continuing regulation of prices and the operation of the "virtual economy" which exaggerates output in inherited manufacturing and processing industries.

Thus the actual change in the structure of output has been less than it appears from the output data in current prices, and the sectoral structure still remains rather far from that of a modern market economy, despite some substantial movement in that direction.

4 Performance and Prospects

In the middle of 2001, the Russian economy is still experiencing a strong if diminishing recover from the great depression of the 1990's.[44] Current domestic political and economic policy stability promise, in the absence of serious shocks from the external economy, to maintain this recovery in the near future, while further reform offers the prospect for sustained and rapid growth, realizing Russia's economic potential over the longer term. But to realize that potential, reform must be sufficiently comprehensive and sharp to break the grip of Soviet legacies, and thus transform the economic system to a truly market one.

4.1 The Current Recovery

Since bottoming out following the financial crisis and default of August 1998, Russian GDP has rebounded, surpassing its level of 1995 by 3% at the end of 2000. While still substantially below pre-transition levels (2/3rds of 1990 levels), it reflects a qualitatively different performance and structure, better reflecting

[42] These constraints are emphasized in the empirical studies of labor and its adjustment in the Russian transition. See, in particular, Broadman and Recanatini (2001), and Desai and Idson (2000).

[43] The implications of this for understanding the Soviet structure of production and some of the difficulties of the early trasnsition are explored in Ericson (1999). In particular this pricing hides wasteful use of basic inputs such as energy, metals, and industrial and construction materials.

[44] Statistics on most recent performance are derived from the current Russian press, **Russian Economic Trends**, and the Bank of Finland's Institute for Economies in Transition **Russian Economy: The Month in Review,** issues through June 2001.

true value produced than did the arbitrary and inflated measurements of the Soviet period.[45]

This somewhat surprising, if long awaited, recovery has arisen on the coincidence of a 'favorable economic environment' and the 'hitting of an economic bottom.' The preceding economic collapse, beginning under *Perestroika* in 1990, had been so deep and extensive that there was little room for further contraction by early 1999; the contraction of industrial activity by the end of 1996 far exceeded that of the Great Depression and was beginning, in some sectors to resemble that of the 1919-21 Civil War collapse.[46] The August 1998 default and devaluation, after a sharply negative impact on the 'new' (especially financial) sectors of the Russian economy, and the subsequent dramatic rise in international energy and resource prices, opened new easily profitable opportunities for the un- and under-employed factors and resources of the Russian economy. Russian industrial and resource capacities, particularly in the manufacturing and processing sectors, which had been unable to cover basic operating costs, never mind turn a profit, suddenly became viable as producers for markets. And the easy transfers, credits and subsidies through governmental and quasi-governmental organs came to a halt in the collapse of government finances, forcing producers to turn, in ways that they had hereto been able to avoid, "to the market" in order to survive.

This recovery has been based on substantial, but fundamentally short-run, favorable shocks:

1. an over four-fold devaluation of the ruble, which has priced competing foreign products out of the market and dramatically lowered domestic, in particular labor, costs;

2. maintained price controls over energy, utility and transportation input costs, further enhancing the competitiveness of Russian industry; and

3. a dramatic rise in international basic commodity and energy, in particular oil, prices in 1999, greatly enhancing the relative value of Russia's primary exports.

Thus we have seen substantial import substitution in both consumers' and producers' goods markets, a significant strengthening of businesses "bottom line," and a strong improvement in the current account as imports collapsed and the price of exports rose. These factors have substantially improved the government's liquidity position, and have set into motion an apparent remonetization of economic activity and an improvement in enterprise cash flow, as witnessed by a drop in wage and tax arrears and a decrease in the role of barter

[45] Soviet performance measures captured the use, and indeed the massive waste, of fundamental resources and industrial capacity, rather than the value of output produced, giving a substantially false picture of real economic preformance. See Aslund (2001), Ericson (1999), Khanin (1993), among others.

[46] On the dimensions of the collapse, see the EBRD (1999) Chapter 3 and pp. 258-61. The civil war collapse can be seen in the statistics of Chapter 3 of Gregory and Stuart (1998).

in the economy. Payments arrears are now stable at less than 23% of GDP, "barter" is now used in less than 25% of industrial transactions (down from 50-70% in 1997-8), and business profits were up more than 25% in 2000, although there has been a decline in real terms in 2001. This improvement in enterprise cash flow, together with improved tax collection, higher excises on oil and gas exports, and mandatory turnover of 75% of foreign exchange earnings to the Russian Central Bank for rubles, has further aided the recovery of state finances to the point where the budget runs a substantial surplus (over 4% of GDP). Russia is current in all its international financial obligations, and in 2001 even refused further IMF loans, despite being in substantial compliance with the budgetary and macroeconomic performance conditionality earlier imposed by the IMF.[47]

This positive dynamic has been aided by what would generally be considered negative factors. First, the maintenance of controls holding down domestic energy price increases has contributed substantially to the economic viability of manufacturing, while not damaging the energy and resource firms whose primary earnings were and remain based on exports; "windfall" profits in the energy and resource sectors are being transferred to support weak manufacturing and other industrial sectors. The general default also played a role in facilitating these transfers and husbanding financial resources for domestic industrial recovery by preventing the transfer of new earnings to foreign creditors, albeit at the cost of disrupting access to foreign borrowing. And finally, the lack of a functioning financial intermediation (banking) system played a role in limiting the potential damage from financial disruption following default; a credit crunch/crisis was avoided as Russian industry has never had access to normal credit.

Some credit for the recovery must also be attributed to the strengthening of Federal executive authority under Putin and the stability that this has imparted to the political-economic environment. This has helped ensure that the Russian government has shared in the increased prosperity of business brought about by the recovery, and has given business the stability required for effective planning of activity and the initiation of deep structural change. It has brought greater order to both tax collection and budget implementation, has increased collection and payment discipline of Federal organs, and has induced greater caution on the part of Regional and local "lords" in their extraction of 'rents' from business activity. Thus a more favorable and predictable business environment has been fostered by the strengthening of the center, and the ensuing predictability of the economic environment, that has encouraged new managerial behavior and entrepreneurship.[48] This environment has encouraged businessmen and managers to implement new initiatives and undertake serious restructuring, improving the

[47] Russia has already paid $1 billion of the $2.07 billion due this year, out of a total debt owed to the IMF of $8.8 billion [**RFE/RL Newsline,** 7 August 2001]. The prior figures are from the **Russian Economic Trends** monthly update, June 2001, and from the June issue of **Russian Economy: The Month in Review** of the Bank of Finland.

[48] A discussion of the "changed management ethos" appeared in **Rossiiskaia gazeta,** 21 March 2001.

efficiency and viability of many, if not most, businesses in Russia.[49]

4.2 Restructuring

The decade of disintegration of Soviet economic structures has also had a positive effect in this recovery. Much of the obsolete capital stock and many non-profitable activities have been abandoned, and substantial shifts have taken place in the allocation of labor throughout the economy. Thus much Soviet low to negative value-added activity has withered away during the prolonged depression of the 1990's, in principle freeing resources for new and restructured economic activities. Those sectors, such as engineering (MBMW), processing and agricultural, whose logic of Soviet development left their enterprises least likely to be viable, have shrunk the most, while new (e.g. financial and consumer services) and resource sectors have shown greatest growth in both output and employment. As a result of this reallocation, labor productivity in Russian industry, which shrank through 1994, has been broadly increasing since then. This has been the result largely of the elimination of low productivity jobs and a rise in intra- and intersectoral job reallocation, focussed through privatization and market competition on the lowest productivity jobs, rather than new job creation in de-novo or restructured firms.[50]

However, in spite of the improved allocation of labor and activity, surprisingly little "strategic" restructuring appears to have taken place among inherited production activities, although "defensive" restructuring in pursuit of survival has yielded some efficiency gains. But much more could be expected through appropriate restructuring of technology, factor use, market relations, and management practices and structures.[51] Here continuing Soviet institutional and behavioral legacies, their anti-market and feudal character, have blocked or distorted new activities and initiatives, undercutting the incentives for and returns to true restructuring. Indeed, privatization per se has been found in Russia to have little impact on restructuring and productivity, except in cases of truly new, in general outside and/or foreign, owners.[52]

Yet despite the less than hospitable socio-economic and political environment, new activity appears to be taking root under the Putin stabilization. There is increasing anecdotal evidence of new and revived economic activity, of serious strategic restructuring, beginning to occur in industry. It is part of

[49] Over 35% of business firms, however, remain unprofitable, despite the highly favorable macroeconomic environment (**Russian Economic Trends,** July 2001). This illustrates the remaining need for deep restructuring of many enterprises.

[50] See Brown and Earle (2001). Aspects of its regional dimension, and constraints on the process, are discussed in Broadman and Recanatini (2001).

[51] This point is eloquently made by the "Report on Russian Economic Performance" of the McKinsey Global Institute (1999). There the particularly destructive role of inherited social and political relations and elite behaviors discussed above is highlighted.

[52] Djankov and Murrell (2000) and Earle and Estrin (1998). The impact of privatization is clearer and positive in market economies, and even in east central Europe where the institutional environment was not distorted by 70 years of Soviet socialism. See Koenings (1997), Pohl, Anderson, Claessens, and Djankov (1997), and Frydman, Gray, Hessel and Rapaczynski (1999).

the burst in economic activity created by the favorable post-crash conditions discussed above, although by now Russian companies have lost about half of the cost advantage they gained in 1998. It is hard in such conditions, however, to know how much of this activity involves real restructuring, and how much is just patching up and resuscitating old Soviet capacities that can now temporarily cover their production costs. That judgement is further clouded by the substantial move toward reagglomeration in industry, as rich resource and energy companies plow their new earnings into acquisitions instead of investing in themselves, presumably engaging in restructuring of other industrial operations. Thus we see consolidation in the oil industry, Alfa Group moving into telecoms, Interros adding a naval shipyard to its core nickel-mining interests, Severstal buying automotive, engine and locomotive factories, Siberian Aluminum purchasing Gorky Automotive, and Russian Aluminum consolidation most of the rest of the aluminum industry.[53]

If the crisis of '98 has truly marked the beginning of qualitatively new, market-based/driven economic activity, with qualitatively different managers and entrepreneurs, then this new economic activity and growth should be resilient in the face of the evanescence of the favorable external conditions behind the 2000-1 recovery. In that case, we should see a strong continuation of growth and new activity even after the price of oil falls below (1999) $18/barrel, internal energy and transportation prices are raised to market-clearing levels, and the ruble completes its reappreciation against the dollar. If, under such conditions, strong growth resumes after a brief adjustment period, then substantial restructuring in 1999-2001 will be revealed.

4.3 Performance Trends[54]

At the end of 2000 the Russian economy appeared to sputter and stall. Investment plummeted almost 6%, GDP and industrial growth all but ceased, and inflation spiked (21%) in the December 2000 – February 2001 period, although all output figures showed positive growth relative to those 12 months earlier. Beginning in March 2001, however, new growth appeared to kick in, although its pace remains far below that of the previous year. The result is that economic performance appears to be on the track anticipated in the 2001 budget. Real wages continue to rise (4.4% in six months), despite stronger than anticipated inflation, while the underlying rise in producers' prices is slowing, having dropped from a 47% annual rate in mid-2000 to a 26% annual rate in mid-2001. The output of key sectors was up 5.3%, leading to an anticipated rise in GDP of about 5%.[55] Other basic performance indicators can be seen in Table 6 in the Appendix.

[53] For anecdotal evidence on these trends, see for example **Business Week,** International Edition, 16 July 2001, "Russia's Big Get Bigger" by P. Starobin, and **Financial Times,** 25 July 2001, "Consumer Goods Shake Off a Bad Reputation" by R. Cottrell.

[54] All data in this section, unless otherwise noted, are derived from the July **RET Monthly Update**, 6 July 2001.

[55] These figures are from the *Goskomstat* report in **The Moscow Times,** 23 July 2001.

This new growth in 2001 has been most rapid in the core industrial sectors — MBMW (up over 10% in 6 months), Defense Industry, Chemicals and Petro-Chemical products — although food and light industry are still showing import substitution strength; it is not oil, gas or metals exports that are driving the Russian economy now.[56] But this growth is not accompanied by the sort of investment boom, including foreign direct investment, that would be reliable evidence of sustainable economic recovery. Indeed, foreign direct investment (FDI), running just above $4 billion per year, remains far below its peak of $6 billion in 1997. But there are some indications at the end of the second quarter of 2001 that this is about to change. Capital flight, which exceeded $20 billion in 2000, is currently running at a bit more than half that rate, and there is renewed and growing interest in investing in Russia by U.S. firms following the visit of Secretaries O'Niell (State) and Evans (Commerce) in July 2001.[57] However, investment in capital formation remains overwhelmingly self-financed and concentrated in those resource and energy industries which have benefited most from the favorable circumstances behind the recovery. Finally, as noted above, many those firms with an investable surplus are using it both to acquire foreign assets (some $15.8 billion in 2000) and to diversify through the purchase of existing companies in Russia, rather than restructuring to insure future viability.

State finances have remained strong in 2001, allowing Russia to remain current on payments to international financial organizations, without additional support from the IMF. Russia maintains a strong current account surplus of $21.2 billion for the first half of 2001, if down 7% from 2000. This has allowed it to remain current on its international obligations, increase its FOREX reserves to $35.1 billion, and to reduce the amount of mandatory turnover of foreign exchange earnings from 75% to 50%. The federal budget is currently running a primary surplus of about 4.5% of GDP, and even the consolidated regional and federal budgets are running a slight surplus. This gives the Russian state some flexibility for dealing with its vast investment and restructuring needs.

4.4 Prospects for Development

The prospects for development are now the most encouraging of at least the past decade. As noted by U.S. Secretaries Paul O'Niell and Don Evans in their July 2001 visit to Russia, the Russian government appears committed to developing investment and investor friendly institutions and environment by stressing structural reform and political stability. It is hoped that this will attract foreign capital and business expertise, and Russian domestic and flight capital, to the task of transforming and rebuilding infrastructure, restructuring production activity and economic interactions, and hence exploiting the vast opportunities for developing a modern, high technology and consumer oriented economy in place of the crumbling, old-industry oriented remains of the Soviet

[56] Otto Latsis, "The glass today is half empty," **Russia Journal,** August 3-9, 2001.

[57] See the August 2001 edition of the JFK School's newsletter, "Russian Investment Symposium."

economic system. The concrete reform agenda was outlined in the Gref Program and in Putin's April 3 address to the legislature.[58]

4.4.1 Putin/Gref Program

In its economic content, this program is a continuation of the liberal reforms of Gaidar and Chubais (1992-5), and as such has stimulated some vocal opposition.[59] It hopes to stimulate private initiative under the oversight and protection, but not direction, of the state. It directly addresses a number of the institutional/structural problems discussed above, beginning in 2000 with reasserting the role and powers of the central government, in particular Federal fiscal authority, and with initiating budgetary and tax reform.

The initial focus has been on "strengthening the executive vertical," enforcing the uniformity in application and superiority of Federal law, and taming the legislative organs at both the central and regional levels. Thus the Federation Council has been reorganized, reducing the direct role of the regional governors, and seven new supra-regional districts have been set up to coordinate and control activity of federal organs, and to ensure the observance of federal law and decrees. In addition, a number of highly visible steps were taken to "tame the oligarchs," including a number of prominent tax raids and the opening of criminal cases against those too vocally in opposition, and in a set of moves to ensure a compliant mass media.[60] Tax reform has included a 'rationalization' of tax structure and a redivision of revenues, largely to the detriment of the regional and local governments[61], as well as "simplification:" a reduction in exceptions and loopholes and in the profit tax (from 35% to 24%) for businesses, a reduction in top personal tax rates to 13% while raising the tax and withholding on lower incomes to the same rate, and a unification of payments to "off-budget" (e.g. medical insurance, pension, unemployment, road and utility, etc.) funds. This has led to a budget that was actually implemented in 2000, and the dra-

[58] See V. Putin, "Annual Address to the Federal Assembly," on Russian TV, 11am, 3 April 2001, reproduced in JRL #5185, 3 April 2001, for the primary directions being pursued in 2001. The original Gref Program, published July 15, 2000, is available on the <*www.kommersant.ru*> web site. The state of the program and current tasks had earlier been elaborated in a press briefing by German Gref, Minister for Economic Development and Trade, on March 2, 2001. See <*www.fednews.ru*> for that date. The original program was published in July 2000 after receiving support at the G-8 meeting, and is most clearly outlined and analyzed in Nash and Lissovolik (2001).

[59] For a recent example, see M. Zimin, "Putin's Choice: Cabinet Dismissal or Social Upheaval," **Novaya gazeta,** No. 56, 9 August 2001. An even more strongly worded attack by 43 leading opposition figures, warning of impending disaster, was published as an open letter to Putin, "Stop the Lethal Reforms!" in **Sovetskaya Rossiya**, 14 August 2001.

[60] The most prominant case has been that against Vladimir Gusinsky, resulting in his exile and the destruction of his media empire, concluding with the take over of NTV by Gazprom-media and the assualt on Ekho Moskvy in July 2001. The establishment of Federal Media Center, the role of the Lesin's Press Ministry, and the use of <*strana.ru*>, and the FSB requirements on all web access providors for direct access to content, all fit the pattern of attempting to control the "commanfding heights" of public information, in the interests of security of the state.

[61] Indeed, there is some indication of an impending crisis in financing local governments.

matic improvement in the Federal fisc that was noted above. Similarly, customs and import regulations and tariffs have been simplified — made more uniform and transparent — in an attempt to introduce more meaningful competition for Russian manufacturers.

Other aspects of the reform program have been moving more slowly, if apparently no less surely.[62] A compromise land code, which still leaves the issue of agricultural land sales in abeyance (subject to local/regional determination/discretion), allowing full title and resale of urban and industrial property even by foreigners, has finally passed the Duma second reading and is sure of acceptance in Fall 2001. A money laundering law, albeit one lacking significant teeth, has become law, as has a currency liberalization cutting the repatriation requirement for foreign currency earnings from 75% to 50%. Initial approval has been given by the Duma to 11 bills reforming the legal system, aimed at reducing the arbitrariness and discretion of prosecutors and judges and imposing some new competency standards.

The extremely contentious issues of social reform have also been raised in legislation introduced this year. These reforms aim at making benefits promised commensurate with the means of the state, and by focussing them on the truly "needy," thus eliminating them for most Russians. Proposals have been made with respect to unemployment, housing and utility pricing, and pension reform, involving shifting greater burden to households. They also involve the (gradual) elimination of state subsidies to industry for social purposes, with the transfer of social obligations from industry to local governments. These proposals, and a new, more market-oriented labor code, eliminating many formal protections promised by the Soviet system but no longer delivered in practice, have provoked vociferous opposition, as neither households nor local governments appear to have the necessary means to take on such responsibilities. As a result, are now delayed in the political process. The reform of the banking and financial intermediation systems also remains stalled, largely due to opposition of the Russian Central Bank (Gerashenko), as is the structural reform of "natural monopolies" (UES, Gazprom, railroad system, etc.) that is to separate true natural monopoly from other business activities. The latter is true despite Rem Vakhyrev's removal as head of Gazprom and the (modified) acceptance of Chubais' proposed restructuring of UES.[63]

One further area in which real progress has been made is in "debureaucratization," in reducing regulatory burden by simplifying and /or eliminating registration, licensing and regulatory requirements on (particularly small) business. This has indeed been indicated by Gref to be a priority of the 2001-2 period, and is an important early step in addressing the institutional and behavioral legacies of the Soviet period. Finally, the program includes further measures to: enhance regulatory efficiency; to improve bankruptcy procedures reduce their abuse for seizing property; to introduce international accounting;

[62] The Duma session ending in July 2001 passed 130 new reform bills. **The Moscow Times,** 16 July 2001.

[63] Indeed, much of the discussion of these reforms seems focussed on consolidation to insure profitability rather than on fostering competition and efficiency.

fiduciary and transparency standards;[64] and to lift administrative curbs (often locally and/or regionally imposed) on the movement of goods, capital and labor. Thus overall, the Putin/Gref program provides important initiatives in addressing the legacies of the Soviet Union that are restraining modern market development of Russia.

4.4.2 Alternative Programs

While the Gref program is apparently the driving force behind the Kasyanov government's legislative program, Putin has apparently encouraged the development of a number of alternative programs of a much more *dirigiste* nature, perhaps for insurance in case of an economic downturn. The most substantial of these is the Ishaev Report of 22 November 2000 prepared largely by Academy of Science and opposition economists under the auspices of Khabarovsk governor Viktor Ishaev.[65] Supposed to "complement" the Gref program, it essentially negates it in proposing: a massive, state directed mobilization of resources involving forced mobilization of investment, particularly in MBMW, through a "Russian Development Bank;" forced modernization and development of domestic manufacturing and processing through state orchestrated and controlled financial intermediation; new state institutions to evaluate debt quality and investment projects, to absorb investment risk and guarantee credits; an emphasis on "dual use technologies" with direct state control of the defense, agricultural and transportation "complexes;" and state control of wages, credit, and financial flows between regions to preserve equity and the desired directions of industrial development. Another anti-liberal program is also under development in an interdepartmental working group of the Security Council headed by V. Soltaganov.[66] Called a "State Strategy for National Economic Security," it emphasizes strengthening of the military and its supporting industries, and focusses on developing self-sufficiency and limiting international dependence, by developing state priority activities and enforcing "threshold levels" of international contacts. Finally, there remains in the background the pseudo-Keynesian program of the Russian Academy of Sciences Institute of Economics.[67] This program emphasizes reviving the Soviet industrial structure through massive monetary emission and deficit financing of state orders to bring un-/under-used capacity back on line. It involves an incomes policy, reinforcing social guarantees through industry, state control of resource industries, emphasis on investment

[64] Financial market regulation currently provides insufficient oversight and protection of "commoners" and weak enforcement mechanisms, fostering insider manipulation and undercutting the development of financial intermediation. For an interesting empirical study of this, see Bernand Black, "Does Corporate Governance Matter? A Crude Test Using Russian Data," Working Paper No. 209, Stanford Law School, December 2000.

[65] For an outline and analysis of the report see J. Tannenbaum, "The Ishaev Report: An Economic Mobilization Plan for Russia," **Executive Intelligence Review,** V.28, #9, 2 March 2001.

[66] This is discussed a in A. Nadzharov, "Backing Up?" **Novye Izvestia,** 9 August 2001.

[67] Its fullest statement is in the May 1997 booklet, RAN, **Guidelines of the Programme for Medium Term Social and Economic Development of Russia** (Moscow: RAN, 1997.

in manufacturing and high-tech (largely military) industries, import substitution, and state directed industrial policy. It appears an attempt to return to the policies of *perestroika* and do them "right" this time!

As should be clear from prior discussion, none of these programs can facilitate the development of a modern market economy in Russia. They are rather themselves products of the Soviet legacy of economic understanding which fall back on precisely those aspects of that structural and institutional legacy which are so debilitating for the modern economic development of Russia.

4.4.3 Growth Prospects

The Russian economy is now riding a wave that must be renewed, or it will die away. In the near term, and in the absence of serious negative shocks, the prospects are quite good for moderate (4-6%) annual rates of economic growth, even without substantial systemic reform. We are already witnessing a resurrection of the mid-'90's economic/ industrial base, and a renewal of confidence, leading to signs of new economic activity and development, arising largely from the now politically stable economic environment. The reforms now in place, and those proposed — now more credibly than ever before — have provided new incentives and an increased confidence in the future that could be the basis for a prolonged spurt of real investment and growth. With the state, regional and local governments increasing efforts to shore up inherited infrastructure, and increasingly recognizing the value of new economic activity, the stage is set for a full recovery from the great depression of the 1990's.

But whether this recovery turns into true modern market growth, whether it leads to Russia playing a leading role in the world economy, depends very much on the choice of policy and its proper implementation. The "window of opportunity" that opened following the crisis of August 1998 needs to be more rapidly and thoroughly exploited in order to lay a firm foundation for sustained market growth. Continuing strong economic growth (5-8% per year), with increasing integration into the world economy, will require at least:

- substantial progress toward disentangling political power and economic activity, including
  - building and strengthening institutions of outside intermediation and adjudication;
  - separating the personal and public spheres in administration, regulation, and business;
- further substantial progress on the structural reform agenda, particularly relating to banking, debureaucratization, legal and judicial reform, and financial market and natural monopoly regulation; social reform is less critical, although a gradual focussing of support and shifting of responsibility is ultimately needed;

- substantial investment in both production and social infrastructure;[68]
- serious beginnings of radical restructuring of industrial capacities;

The first set of these is perhaps the most critical. It is required not only to remove substantial distortions in incentives faced by economic agents, but also to allow the price system to begin playing its proper role as a source of determining information for economic decisions. This would allow institutional/structural reforms to have the desired impact on economic behavior and decisions, leading to true value-creating investment and other economic activity. In particular it will foster economically rational investment in infrastructure and rational restructuring of economic capacities. True modernization and growth will be fostered by such changes, undercutting the non- and anti-market foundations of much of the current economic system discussed above.

There is, however, nothing inevitable about such success. Without sufficiently vigorous and comprehensive reform, the "feudal" and "virtual" aspects of the current system might still emerge triumphant, particularly if an "economic security" oriented version of "directed market development" is chosen Such an approach would overemphasize the protection of existing activities and agents, and foster ignorance and avoidance of new economic opportunities and initiatives. It would seriously undercut opportunities and incentives for market exploration and experimentation, protect incumbents, both political and economic, from challenge, and hence foster "re-stagnation," and continuing "de-integration" of economic activity within Russia and with respect to the global economy. It would likely generate highly uneven, regionalized development, with oases of (resource exporting) strength amid vast stagnation and decay, and limited, particularized integration of some activities into the world economy, with little feedback into Russian development. While such a policy could maintain a certain amount of aggregate physical growth for a time, it would inevitably stifle new economic activity, except in the "shadow" economy, and reduce true economic (value) growth back toward zero, just as the Soviet system did.

5 Conclusion

In mid-2001 the Russian economy truly stands on a threshold. There is a real prospect of completed transformation to a market-based economic system with sustained growth and market oriented development. Yet there remains a real danger of drifting into a "third way" where perceived social and personalized political constraints fetter private initiative and market development, resulting in fitful, slow economic growth and development, and leaving Russia increasingly far behind the leading market economies.

The consequences for globalization of the Russian economy are diametrically opposed. Modern market development, unleashing Russia's substantial potential, should make Russia a leading player in the world economy, bridging and

[68] For a discussion of some of the needs here, see the conference report, NIO (2000).

enhancing development in Europe and Asia to its own great benefit. This is the hope engendered in Russia's acceptance into G-8. Because of its uneven resource, physical and human capital endowments, Russia can be expected to become one of the most open economies in the world, despite its vast size, and to reap among the greatest gains to trade and globalization. On the other hand, settling for a "Russian-style Capitalism," with its inherited distortions of market institutions and activities, is likely to render globalization increasingly painful and humiliating for Russia. Russia would increasingly become what it appeared to be in the mid-1990's: an industrial backwater and resource appanage to the world market system, supplying low value-added basic inputs to, and absorbing excess production from, the advanced capitalist world. Which path Putin's Russia will take is currently very much an open question.

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References

[1] Aslund, Anders (1995), **How Russia Became a Market Economy** (Washington, DC: Brookings, 1995).

[2] Aslund, Anders (1997), "Observations on the Development of Small Private Enterprise in Russia," **Post-Soviet Geography and Economics**, V.38, #4, 1997, pp. 191-205.

[3] Aslund, Anders (2001), "The Myth of Output Collapse after Communism," **Working Paper #18,** Post-Soviet Economies Project, Carnegie Endowment for International Peace, March 2001.

[4] Aukutsionek, Sergei. (1998), "Barter v Rossiiskoi promyshlennosti (Barter in Russian Industry)," **Voprosy ekonomiki***,* V. 70, #2, 1998, pp. 51-60.

[5] Blasi, J.R. and M. Kroumova, D. Kruse, *Kremlin Capitalism: Privatizing the Russian Economy* (Ithaca, NY: Cornell UP, 1997).

[6] Brady, Rose (1996), **Kapitalizm** (New Haven, CT: Yale UP, 1996).

[7] Broadman,Harry and Francesca Recanatini (2001), "Is Russia Restructuring? New Evidence on Job Creation and Destruction," preprocessed, The World Bank, February 2001.

[8] Brown, David and John Earle (2001), "Gross Job Flows in Russian Industry Before and After Reforms: Has Destruction Become More Creative?" preprocessed, SITE, Stockholm, May 2001.

[9] Desai, Padma and Todd Idson (2000) **Work without Wages** (Cambridge, MA: MIT Press, 2000).

[10] Djankov, Simeon and Peter Murrell (2000), "Enterprise Restructuring in Transition: A Quantitative survey," preprocessed, Department of Economics, University of Maryland, April 2000.

[11] Dolgopyatova (1998), **Neformal'hyi sektor v Rossiiskoi ekonomiki (The Informal Sector of the Russian Economy)** (Moscow: ISARP, 1998).

[12] Earle, John and Saul Estrin (1998), "Privatization, Competition, and Budget Constraints: Disciplining Enterprises in Russia," preprocessed, SITE, Stockholm, March 1998.

[13] EBRD (1999) **Transition report 1999** (London,UK: EBRD, 1999).

[14] Ericson, Richard (1990), **The Soviet Union: 1979–1990** (San Francisco: ICS Press, 1990).

[15] Ericson, Richard (1991), "The Classical Soviet-Type Economy: Nature of the system and Implications for Reform," **Journal of Economic Perspectives,** 5(4), Fall 1991, 11-28.

[16] Ericson, Richard E. (1999), "The Structural Barrier to Transition Hidden in Input-Output Tables of Centrally Planned Economies," **Economic Systems,** V.23, #3, September 1999, pp. 199-224.

[17] Ericson, Richard (2000), "The Post-Soviet Russian Economic System: An Industrial Feudalism?" Chapter 6 in Tuomas Komulainen and Iikka Korhonen, eds., **Russian Crisis and its Effects** (Helsinki: Kikimora Publications, 2000), pp. 133-66.

[18] Ericson, Richard and Barry Ickes (2001), "A Model of Russia's 'Virtual Economy'," **Review of Economic design,** forthcoming, 2001.

[19] Frydman, Roman and Cheryl Gray, Marek Hessel, Andrzej Rapaczynski (1999), When Does Privatization Work? The Impact of Private Ownership on Corporate Performance in the Transition Economies," **QJE,** V.114, #4, November 1999, pp. 1153-92.

[20] Frye, Timothy and Ekaterina Zhuravskaya (2000), "Rackets, Regulation and the Rule of Law," **Journal of Law, Economics, & Organization,** V. 16, #2, October 2000, pp. 478-502.

[21] Gaddy, Clifford (2001), "The Fallacy of Using GDP to Judge Economic Performance in Russia's Transition Economy," preprocessed, Brookings, Washington, DC.

[22] Gaddy, Clifford and Barry Ickes (1998), "To Restructure or Not to Restructure: Informal Activities and Enterprise Behavior in Transition," **WDI Working Paper #134**, February 1998.

[23] Gaddy, Clifford and Barry Ickes (2001), **Russia's Virtual Economy** (Washington, DC: Brookings, 2001).

[24] Goskomstat Rossii (2000a), **Maloe predprinimatel'stvo v Rossii** (Moscow: GKS, 2000).

[25] Goskomstat Rossii (2000b), **Natsional'nye scheta Rossii v 1992-1999** (Moscow: GKS, 2000).

[26] Goskomstat Rossii (2000c), **Promyshlennost' Rossii 2000** (Moscow: GKS, 2000).

[27] Goskomstat Rossii (2000d), **Rossiiskii statisticheskii ezhegodnik 2000** (Moscow: GKS, 2000).

[28] Gregory, Paul and Robert Stuart (1998), **Russian and SovietEconomic Performance and Structure,** Sixth Edition (Reading, MA: Addison-Wesley, 1998).

[29] Guriev, Sergei and Barry Ickes (2001), "Microeconomic Aspects of Economic Growth in Eastern Europe and the Former Soviet Union, 1950-2000," preprocessed, The New Economic School, Moscow, 2001).

[30] Gustafson, Thane (1999), **Capitalism Russian-Style** (Cambridge, UK: CambridgeUP, 1999).

[31] Hedlund, Stefan (1999), **Russia's "Market" Economy** (London: UCL Press, 1999).

[32] Hedlund, Stefan (2001), "Property without Rights: Dimensions of Russia's Privatization," **Europe-Asia Studies,** V. 53, #2, March 2001, pp.

[33] Hendley, Katherin and Barry Ickes, Peter Murrell, Randi Ryterman, "Observations on the Use of Law by Russian Enterprises," **Post-Soviet Affairs**, V. ,# , 1997, pp. 19-41

[34] IMF, World Bank, EBRD and OECD (1991), **A Study of the Soviet Economy** (Paris: OECD, 1991).

[35] Johnson, Simon and Daniel Kaufmann, Andrei Shleifer (1997), "The Unofficial Economy in Transition," **Brookings Papers on Economic Activity,** #2, 1997, pp. 159-239.

[36] Karpov, Pavel A. (1997), "On the Causes of Low Tax Collection (Arrears in the Fiscal System), General Causes of the 'Arrears Crisis' And Opportunities for the Restoration of Solvency of Russian Enterprises," **Report of Interdepartmental Balance Commission** (Moscow: IBC, December 1997).

[37] Kaufmann, Daniel and Aleksandr Kaliberda (1996), "Integrating the Unofficial Economy into the Dynamics of Post-Socialist Economies: A Framework of Analysis and Evidence," World Bank **Policy Research Working Paper 1691,** Washington, DC, 1996).

[38] Khanin, G.I. (1993), **Sovetskii ekonomicheskii rost: analiz zapadnykh otsenok (Soviet Economic Growth: Analisis of Western Evaluations)** Novosibirsk: EKO, 1993).

[39] Koen, Vincent (1996), "Russian Macroeconomic Data: Existence, Access, Interpretation," **Communist Economies & Economic Transformation,** V. 8, #3, pp. 321-33.

[40] Koenings, Jozef (1997), "Firm Growth and Ownership in Transition Economies," **Economic Letters,** V. 55, pp. 413-18.

[41] Kuboniwa, Masasuko and Evgenii Gavrilenkov (1997), **Development of Capitalism in Russia: The Second Challenge**, (Tokyo: Maruzen Co., 1997).

[42] Lambert-Mogiliansky, Ariane and Konstantin Sonin, Ekaterina Zhuravskaya (2000), "Capture of Bankruptcy: Theory and Evidence from Russia," **CEFiR** Working Paper, September 2000.

[43] Ledeneva, Alena V. (1998), **Russia's Economy of Favors** (Cambridge, UK: Cambridge UP, 1998).

[44] McKinsey Global Institute (1999), **Report on Russian Economic Performance,** on McKinsey web site: <*www.mckinsey.com/mgi.html*>.

[45] Nash, roland and Yaroslav Lissovolik (2001) Putin's First Six Months — an Assessment of Economic Reforms," **Renaissance Capital Economics** <*www.rencap.com*>**,** November 2000.

[46] NIO, "Russia's Physical and Social Infrastructure: Implications for Future Development," **Seminar Series Report CR 2000-06** (Washington, DC: NIC, 2000).

[47] OECD (1995), **OECD Economic Surveys: Russian Federation 1995** (Paris: OECD Publications, 1995).

[48] OECD (1997), **OECD Economic Surveys: Russian Federation** (Paris: OECD Publications, 1997).

[49] OECD (2000), **OECD Economic Surveys: Russian Federation** (Paris: OECD Publications, 2000).

[50] Pohl, G. and R. Anderson, S. Claessens, S. Djankov (1997), "Privatization and Restructuring in Central and Eastern Europe," **World Bank Technical Paper No. 368, (Washington, DC: World Bank, 1997).**.

[51] V. Radaiev (1998), "On the Role of Force in Russian Business Relationships," **Voprosy ekonomiki**, #19, October 1998.

[52] Reddaway, Peter and Dmitri Glinski (2001), **The Tragedy of Russia's Reforms** (Washington, DC: U.S. Institute of Peace Press, 2001).

[53] Ruble, Blair (1981), **Soviet Trade Unions** (New York: Cambridge UP, 1981).

[54] Ryterman, Randi and B. Weber (199), "The Role of Attitudes in the Performance of the Legal System: Evidence from a Survey of Russian Firms," The World Bank, October 1996.

[55] Sachs, Jeffrey D. and Katherina Pistor, editors (1997), **The Rule of Law and Economic Reform in Russia** (Boulder, CO: Westview, 1997).

[56] Seabright, Paul, ed. (2000), **The Vanishing Ruble: Barter and Currency Substitution in Post-soviet Societies** (Cambridge, UK: University Press, 2000)

[57] Shleifer, Andrei (1997), "Government in Transition," **European Economic Review**, V. 41, #3-5, 1997, pp. 385-410.

[58] Starobin, Paul and Catherine Belton, "Russia's Big Get Bigger," **Business Week** (International Edition)**,** 16 July 2001.

[59] Woodruff, David (1999), **Money Unmade** (Ithaca, NY: Cornell UP, 1999).

[60] Yakovlev, Andrei (2001), "Black Cash' in the Russian Economy," **Europe-Asia Studies,** V. 5, #1, 2001, pp.

6 Appendix: Tables

6.1 Employment Structure: Total and Shares

Branch	1990-Total	1990-Share	1999-Total	1999-Share	99/90	99s/90s
Industry	22809	30.3	14297	22.4	.6268	.7393
Agriculture	9727	12.9	8495	13.3	.8733	1.0310
Forestry	238	0.3	245	0.4	1. 029 4	1.3333
Constr'n	9020	12.0	5080	7.9	.5529	.6583
Transport'n	4934	6.6	4060	6.3	.8229	.9545
Communic'n	884	1.2	859	1.3	.9717	1.0833
Trade&Food	5869	7.8	9320	14.6	1.5880	1.8718
Housing,Cmnl Svcs	3213	4.3	3361	5.3	1.0461	1.2326
Health,Sport,SocSpt	4238	5.6	4496	7.0	1.0609	1.2500
Educat'n	6066	7.9	5935	9.3	.9784	1.1772
Culture,Art	1165	1.7	1129	1.8	.9691	1.0588
Science	2804	3.7	1209	1.9	.4312	.5135
Finance, Insurance	402	0.5	744	1.2	1.8507	2.4000
Government	1602	2.1	2858	4.5	1.7840	2.1429
Other	2350	3.1	1875	2.8	.7979	.9032
Total	75325	100	63963	100	.8502	1.0000

Measurement is in thousands of employees.

Source: *GosKomStat Rossii*, **Rossiiskii Statisticheskii Ezhegodnik,** Moscow, 2000, p. 112, and authors calculations. Last two columns from OECD (1995), p. 6.

6.2 Output Structure: Total and Shares

Branch	**1990**	**1990s**	**1999**	**1999s**	**Output s-ratio**
Industry	585.4	.4861	2995200.4	.3866	.7953
Agriculture& Svcs	159.1	.1321	634318.0	.0819	.6200
Forestry	0.9	.0007	8136.1	.0011	1.5714
Constr'n	108.4	.0900	471553.7	.0609	.6767
Other Goods Prod'n	12.9	.0107	33083.7	.0043	.4019
Transport'n	70.2	.0583	563998.8	.0728	1.2487
Communic'n	8.0	.0066	108703.0	.0140	2.1212
Trade&Food	45.2	.0375	1034228.4	.1335	3.5600
Zagotovki(procurem't)	4.3	.0036	6200.0	.0008	.2222
Computer Svcs	2.1	.0017	4800.3	.0006	.3529
Real Estate	0	0	116119.4	.0150	∞
Market Operations	0	0	53062.1	.0068	∞
Geology/Exploration	0	0	21342.8	.0028	∞
Housing, etc. Svcs	27.8	.0231	340994.1	.0440	1.9048
Finance, Insurance	6.0	.0050	83813.3	.0108	2.1600
Science	34.4	.0286	78697.1	.0102	.3566
Health,Sport,SocSpt	26.6	.0221	242094.2	.0312	1.4118
Educat'n,Culture,Art	43.1	.0358	232771.9	.0300	.8380
Defense	55.1	.0457	NA('97+)	NA('97+)	NA('97+)
Gov't [+Def (after '97)]	9.4	.0078	394966.1	.0510	.9533
Social Orgn's	5.5	.0046	53954.7	.0070	1.5217
Ind Fn'l Intermd'n Svcs	0	0	0	0	–
Total	1204.4	1.0000	7748038.1	1.0000	

Measurement is in current million-ruble units.

Source: *Goskomstat Rossii*, **Rossiiskii Statisticheskii Ezhegodnik,** Moscow, 2000, pp. 252, 257, and authors calculations.

6.3 Employment in Industry

Branch	1990	1990-s	1999	1999-s	99s/90s
Electric Power	545	.0260	880	.0662	2.5489
Fuel	801	.0381	738	.0555	1.4544
Ferric Matals	785	.0374	676	.0508	1.3594
Non-Ferrous Metals	487	.0232	503	.0378	1.6304
Chemical	755	.0360	761	.0572	1.5911
Petro-Chemical	294	.0140	214	.0161	1.1490
MBMW	9639	.4590	4688	.3524	.7677
Woodworking-Paper	1792	.0853	1057	.0795	.9311
Constr'n Materials	1097	.0522	718	.0540	1.0331
Glass-Porcelain	135	.0064	100	.0075	1.1693
Light	2288	.1090	863	.0649	.5954
Food	1545	.0736	1439	.1082	1.4703
Microbiology	36	.0017	21	.0016	.9208
Feed and Grain	128	.0061	163	.0123	2.0102
Medical	105	.0050	116	.0087	1.7439
Poligraphic	143	.0068	114	.0086	1.2584
Other	423	.0201	251	.0189	.9367
Total	**20998**	**100**	**13302**	**100**	

Measurement is in thousands of employees.

Source: Goskomstat Rossii, **Promyshlennost' Rossii,** Moscow, 2000, pp. 20-7, and authors calculations.

6.4 Output in Industry

Branch	1990	1990-s	1999	1999-s	99s/90s
Electric Power	21	.0359	269551	.0900	2.5087
Fuel	40	.0683	452686	.1511	2.2119
Ferric Matals	29	.0495	223356	.0746	1.5053
Non-Ferrous Metals	32	.0547	269527	.0900	1.6462
Chemical	27	.0461	126103	.0421	.9128
Petro-Chemical	12	.0205	52346	.0175	.8526
MBMW	168	.2870	509742	.1702	.5930
Woodworking-Paper	31	.0530	128670	.0430	.8112
Constr'n Materials	20	.0432	77096	.0257	.7534
Glass-Porcelain	2	.0034	9826	.0033	.9602
Light	66	.1127	45041	.0150	.1334
Food	73	.1247	392599	.1311	1.0511
Microbiology	1	.0017	3430	.0011	.6704
Feed and Grain	19	.0325	49614	.0166	.5104
Medical	3	.0051	22888	.0076	1.4911
Poligraphic	1	.0017	13714	.0046	2.6803
Other	9	.0154	29796	.0099	.6471
Unclassified	31.4	.0536	319215.4	.1066	1.9869
Total	**585.4**	**100**	**2995200.4**	**100**	

Measurement is in current million-ruble units.

Source: Goskomstat Rossii, **Promyshlennost' Rossii,** Moscow, 2000, pp. 20-7, and authors calculations. The branch "unclassified" is the residual from the total reported and the sum of all reported branches of industry.

6.5 Industrial Branch Output Structure (%): 1991

Branch	1991dp	1991wp
Electric Energy	4.0	12.4
Fuel	7.3	25.7
Metallurgy	11.2	7.9
Chemistry	6.5	2.2
MBMW	24.9	19.0
Wood&Paper	5.8	13.5
Construction Materials	3.7	5.4
Light Industry	16.2	2.9
Food Industry	14.4	8.2
Other	5.9	2.8
Total	100	100

Source: OECD (1995), p. 4.

6.6 Macroeconomic Performance Indicators

Indicator	1999	2000	2001	as of
GDP growth, %	5.4	8.3	4.9	1Q01
Industry growth, %	11.0	11.9	5.2	2Q01
Fixed Investment growth, %	5.3	17.7	4.0	2Q01
Unemployment level, %eop	11.7	10.2	9.2	5.01
Consumption growth, %	-14	11	8	5.01
Current Account, $bil	24.7	46.3	11.7	1Q01
FDI, $bil	4.26	4.46	1.1	1Q01
Bdgt Balance, %GDP	-1.3	2.5	4.2	2Q01
CPI-12 month growth, %	36.5	20.2	23.7	6.01

Source: BOFIT, **Russian Economy: Month in Review,** June 2001; **Russian Economic Trends,** 6 July 2001. [eop ≡ "end of period"]

These figures are based on the 2001 reweighting of sectors reflecting the 1999 sectoral structure, rather than that of 1995 (in which GDP grew 7.7% in 2000 and 4.3% in 1999).