CHAPTER 3

COMMAND ECONOMY AND ITS LEGACY

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THE contemporary Russian economy has been molded by many factors. Its location and natural endowments, Russian history and culture, and the cataclysmic events of the twentieth century have all played significant roles in determining the structure and functioning of the Russian economy, the nature of its institutions, and the problems it faces.

Perhaps the most significant influence has been the nature of the economic, social, and political system that preceded the contemporary Russian economy. Borne of the cataclysms of world war, revolution, civil war, and the Great Socialist Offensive, the command economy organized the material bases of social and political life in pursuit of a utopian dream. It supplanted the developing market economy of the Russian empire, crushing its institutions and implanting in their place hierarchically organized and centrally directed structures striving to control all economic as well as social and political activity. Thus, the command economy developed as a coherent, and diametrically opposed, alternative to any market (capitalist) economy.

This political-economic system, in place for over two generations, profoundly altered the nature of economic (and social) development in the Soviet Union. The structure of capital, labor, and production; the location of economic activity; the nature and structure of economic interaction; the nature and sources of innovation; and how the Russian people and elites understood both the nature and meaning, the goals, and objectives of economic activity and how it should be organized and managed were all fundamentally changed. This system, and the spectacular chaos of its collapse after 1987, provides the initial conditions for the development of the current Russian market economy. Its legacies have influenced and occasionally molded policies and institutions, constrained options, imposed barriers, and generally channeled the development of the post-Soviet economy. These legacies are both physical and systemic—structural, institutional, and behavioral—and have played a dominant (if fading) role in the early development of the post-Soviet market economy. Many (physical and institutional) legacies have been overcome in the past decade, whereas others (institutional, behavioral, and intellectual) remain deeply embedded in the economic system.

In this chapter I present my understanding of those legacies, their source and persistence, and their impact on the Russian economic system. The next section summarizes the nature of the system, the Soviet command economy, that spawned the contemporary economy in the transition period of 1988 to 2005.[1] By the logic of its operation and development, that economic system implanted a structure of economic activity, which has constrained and molded the processes of transition. The following section focuses on physical legacies reflected in the sectoral structure of production, its location and supporting infrastructure, and bequeathed technologies. Then I address the more systemic legacies, those reflected in the broader institutional structure of the new economy. These include the heritage of "missing institutions" necessary to the proper functioning of a market economy, as well as a vast array of dysfunctional and counterproductive institutions inherited from the past. Finally the most deep-seated legacies of command—those of belief, understanding, "economic culture," and behavior—are discussed. These frame and mold the decisions and interactions of all economic agents, particularly of elites in a position to determine economic outcomes. Together with the institutions they support, these legacies are most resilient to change, deeply influencing the evolution of the Russian economic system. The chapter concludes with a discussion of their continuing effects and the nature of the economic system they bequeathed the Russian economy.

The Command Economy

> *A command economy is one in which the coordination of economic activity, essential to the viability and functioning of a complex social economy, is undertaken through administrative means—commands, directives, targets and regulations—rather than by a market mechanism. Economic agents in a command economy, in particular production organizations, operate primarily by virtue of specific directives from higher authority in an administrative/political hierarchy, that is, under the "command principle."* (Ericson 2006b, 52)

The nature, defining characteristics, and structure of the Soviet command economy have been extensively discussed in the comparative economic systems literature (Grossman 1963, 1987; Ericson, 1990, 1991, 2006b, 2007; Kornai 1992). For much of its existence, it provided a complete, coherent alternative to market systems, even those with substantial state ownership and strong state direction of the economy. Attempting to implement fully "rational" human direction of social, political, and economic development toward achievement of a utopian state, the command economy aspired to total control over all economic activity. The impossibility of realizing such a totalitarian objective meant, in practice, that the system leadership and its implementing organs had to relinquish control outside of those areas of its primary interest, those critical to determining material production and its uses in society. Even in priority areas, much of the detail of commanded activity had to be left in the hands of poorly informed, self-interested subordinates. Still, this aspiration led to unprecedented influence over economic behavior and continuing efforts to maintain and enhance that influence—efforts that in large part defined the command economy.

The Russian version was further influenced by deep cultural and historical forces (Pipes 1974; Keenan 1986; Hedlund 1999, 2005) that made its aspirations, its driving ideas, socially and politically acceptable. Deep-rooted collectivism, accepting the supremacy of the group over the individual, supported a paternalistic, indeed patrimonial, political system in which the polity and society are legitimately controlled by a "leader" and his close subordinates, and reward is based on service to the state, personified in the leader.[2] These cultural characteristics were reinforced by the massive role of the state and its leadership (the Party), ideologically legitimated by its deep understanding of the direction and laws of history. This leadership presumed to be uniquely qualified to direct and manage the developing economy in its urgent pursuit of modernization, the rapid growth of industrial and military potential, and the creation of the material basis for future society. Both ideology and the urgency of the situation created an imperative of control that inevitably drove the logic of the organization and structures that defined the Soviet command economy.

This imperative of control over the growing economy required the centralization of (at least) all important decisions, and hence required structures making central planning, ex ante coordination, and ex post management of economic activity both feasible and effective. This posed an increasingly overwhelming task as the economy developed, growing in size and complexity, in the face of limited information, communication, and computation capabilities of the leadership. To manage the vast amounts of information required for planning and the provision of operational instructions/commands to implementing agents, a complete, elaborated hierarchy in which both information and instructions might be both aggregated to the top and disaggregated to the bottom was found to be necessary. Economic activity was determined in and controlled by nested hierarchical structures, each facing a relatively simple subproblem of planning and implementation and working with aggregates at all but the lowest level.

This simplification of the economic planning and management problems allowed effective focus on priorities and the achievement of sufficiently important goals. In doing so, however, it rendered decisions crude—consistent only (at best) with respect to planning aggregates—and systematically isolated decision makers at all but the highest levels from the consequences of their decisions, a source of fundamental irresponsibility in operational decision making.[3] Furthermore, priorities were achieved at the expense of nonpriority sectors and activities, which were still subject to mandatory targets and arbitrary interventions from above but had to fend for themselves without taking resources from priority uses or disrupting more important (from the perspective of the highest authorities) activities. Hence, resulting plans, necessarily developed in haste on the basis of delayed and partial information, were always incomplete and suffered numerous inconsistencies which could not be allowed to disrupt the achievement of priorities.

Another consequence of this imperative was the destruction of markets and market institutions—the foundation of any economic autonomy—and their replacement with a set of institutions antithetical to proper market functioning.[4] Thus, institutions were required, enforcing subordinate obedience to plans and operational interventions from above and restricting subordinate autonomy. In particular, strict control over the physical allocation of all material and human resource allocation had to be maintained, and subordinate capabilities for unauthorized "initiative" had to be severely limited. This included rationing material inputs and access to labor and capital and severely limiting the effective power of and access to "money"—a generalized command over goods and services that is the foundation of any effective economic agent autonomy in a complex social economy. It also included tight regulation of the incentives and parameters guiding allocation at levels of detail beyond central purview and severe restrictions on the flexibility/capabilities of subordinates to respond to problems. Information from planners was rationed on a need-to-know basis, liquidity was provided only when and as needed, and Soviet "money" was restricted to a mere unit of measurement and account where possible.[5] All legitimate incentives were tied to service to the (Party and) state as interpreted by superiors in the hierarchy, with individual well-being dependent on such contribution.[6] And arbitrary (ex post) discretion was necessarily left in the hands, of particularly political (Party), superiors to alter commands to fix problems and get things done. Thus, the institutions of the command economy strove to block all unauthorized initiative and force strict compliance with commanded (both explicitly and implicitly) activities.[7]

Of course, large areas of economic activity proved too complex or insufficiently important to be centrally planned and directly managed. Thus, households and many agricultural organizations remained outside the formal state sector, necessarily operating in a (partially) monetized environment, and hence had to be dealt with through quasi markets for labor, consumer goods, and some agricultural produce. Here money was necessarily more active than in the state-managed sectors, opening opportunities for decentralized initiative and posing a continual threat to effective state control.[8] Hence, its availability and use had to be subject to as strict monitoring and control as possible, a primary task of the Soviet dual monetary system. Yet despite extraordinary controls built into this system (Garvy 1977), the inevitable errors in planning and surprises in implementation led to growing "liquidity" outside of centralized controls, undermining plan discipline and the ability to effectively manage economic activity. This increasingly fed the growth of a second economy outside of (if largely parasitic on) the state-planned command economy.[9] This illegitimate (in terms of the logic of the command economy) market economy acquired an outsized importance in the early transition as a foundation and a functioning model of "the market" and "market behavior," behavior that was, however, quite different from what is required for a well-functioning market economic system.

The Soviet command economy was a system well suited and indeed built for mass mobilization. It was a coherent, politically driven shortage economy, defying market logic in most of its economic interactions. It was inherently economically inefficient, albeit effective at achieving priorities of the political leadership. The Soviet system initially showed its effectiveness by achieving large-scale, quantifiable regime priorities, goals so important that cost could be no barrier. Thus, the Soviet industrial structure, collectivization, urbanization, wartime mobilization, and structural recovery from the devastation of war and occupation were achieved in record time.

These systemic characteristics also implied an unavoidable, deep economic inefficiency in all that was accomplished. Fine cost-benefit trade-offs—indeed, all but the crudest aggregate trade-offs—were beyond the capability of the system. Such trade-offs require detailed and precise information of particular and changing circumstances, and fine valuations of all relevant materials and activities, and hence require *decentralized* authority and decision making.[10] Furthermore, they invariably indicate in certain circumstances that some central objectives should *not* be pursued; cost-benefit analysis implies constraints on behavior—explicitly rejected in the Soviet approach. Therefore, economic efficiency and cost had to remain a distant secondary consideration, as the central authorities had neither the capability nor truly the desire to let efficiency considerations disrupt central planning and control over economic development.

As the Soviet economy grew, became more complex and less amenable to central oversight and control, the consequences of this inherent economic inefficiency became more salient, undermining effectiveness in achieving priorities and reducing economic growth. To counter these tendencies and restore economic dynamism, the leadership turned to numerous reorganizations; refinements in planning, incentives, and controls; and numerous partial liberalizations, but it stopped short of challenging the essential characteristics of the command system (Schroeder 1979). Each of these reforms disrupted the logic of the system, and were hence rendered impotent or dysfunctional by the system's response, leading to their revocation or replacement by further partial reforms.[11] Thus, the defining characteristics of the system (Ericson 1991) determined a coherent, stable system, one that systematically rejected partial reforms. This only changed when the characteristics were comprehensively attacked in the chaotic transition beginning with Mikhail Gorbachev's perestroika. Yet they provided the foundation of the legacies, the initial conditions, bequeathed to the Russian transition economy.

In the following sections I briefly review the most salient of these many legacies, breaking the discussion into three parts. The first deals with the physical legacies embedded in the inherited structure of production, assortment, and quality of economic activity, its location, and supporting infrastructure. The next set of legacies can be roughly labeled institutional, in the sense of North and Davis (1971). These involve the rules of the game, formal and informal, and the organizations, agencies, and groups that support and/or implement them. These legacies—economic, political, and social—are more deeply rooted than those built into physical structures, and have at least as great an impact on economic policies and outcomes and efforts to "modernize" the Russian economy. Finally come the less concrete but still critically important legacies of understanding, behavior, and culture. Economic outcomes ultimately derive from human behavior, and that in turn depends on more than resources, capabilities, institutions, and rational calculation. Equally important are the cultural values, the beliefs and understandings about how the world actually works and how it should work, about what is desirable, what is legitimate, and what is permissible. These norms and understandings frame and constrain the choices, the perceived problems, constraints, and opportunities faced by policy makers and economic actors, and hence the kinds of decisions they can make and enforce. In Russia, they are deeply embedded in inherited political and economic culture, one rather different from that in which modern market economies evolved.

Physical Legacies: The Structure of Production and Interaction

At the beginning of transition, the structure of economic activity—its location, its capital and asset configuration, labor and other input use, and output assortment—was the consequence of some sixty years of "commanded" development. This Soviet structure was created to facilitate central planning and control, rapid industrial growth, and the development of military capability. The plans and prices around which economic activity was oriented reflected political, ideological, and security concerns, were largely innocent of economic understanding, and hence were seriously distorted with respect to true economic costs and opportunities. Only political objectives, obvious physical constraints, and engineering considerations, supported by prices that were economically arbitrary, truly influenced its development. The resulting economic structure was supported, and to a large extent systematically hidden, by Soviet pricing that failed to reflect economic (market) valuations.[12] It was able to reproduce itself and grow, as long as each component fulfilled its aggregate output delivery plans and followed orders to the maximum extent possible, given its assigned and acquired resources. It was, however, inconsistent with any coherent pattern of economic valuation or cost accounting.[13]

Thus virtually every production operation, every investment activity and location decision was economically inefficient and highly wasteful in its use of resources, materials, energy, labor, and capital, despite meeting critical planned needs. The inherited overall structure of production was fundamentally nonviable in any decentralized environment, where incentives and trade-offs are based on market valuations/prices. It implied, after any true price liberalization, serious problems of cost recovery in the operation of much of industry, and hence the need for massive cross-subsidization to keep it operating in a decentralized, noncommand mode.[14] This conundrum lies at the heart of the physical legacy bequeathed by the Soviet Union to its Russian successor.

The Soviet growth model, with extensive growth built on massive input and resource use, also created a resource trap. Growth of existing, well-understood activities absorbed all free resources, starving innovation and slowing future growth. Furthermore, productivity inexorably declined from the lack of homeostatic mechanisms, of informational "valuation feedback," needed to stop funneling resources to low-productivity uses. Thus the economy was dominated by resource extraction and processing, heavy industry, machine building, and industrial construction—the "plannable" industrialization priority sectors, with a large underdeveloped agricultural sector, and the small sectors providing consumers goods and services operating as residuals in the economic system. Finally, the massive commitment of resources to military-oriented industry, infrastructure, and technologies placed a large and growing burden on capabilities of the system. This hypertrophic and economically inefficient military-industrial sector was a major structural legacy provided of the Soviet system (Rosefielde 2007 and see chapter 19 in this volume).

The command economy imparted a number of other significant structural distortions, impeding the development and proper functioning of market institutions through their impact on real economic opportunities and costs. For example, to facilitate planning, and based on a misplaced belief in (engineering) economies of scale, production activity was concentrated in massive facilities (production plants) with sole suppliers and users (technological chains), eliminating the redundancy and backup inherent in market competition.[15] To keep vertical control simple and clear, subordinate firms (enterprises) were limited to single, massive (contiguous clusters of) plants producing a very limited assortment, eliminating the possibility of organizational, scope, or nonengineering scale economies in production. These massive facilities often became the core of a "city," a center built around the enterprise with only minimal supporting activities available to the populace, with the enterprise responsible for the provision of most public services and infrastructure.[16] This socialist construction left a structural legacy of an efficiency-killing social burden on enterprises and of monocities requiring substantial, sustained external support to remain viable in a market environment.[17] Firms were also highly specialized by design into technologically based (near) monopolies in tight technological chains, albeit with massive wasteful "auxiliary production," reflecting the striving for autarky necessary to succeed in the Soviet system (Guriev and Ickes 2001; Ickes and Ofer 2006).

This striving for autarky and the effort to avoid external dependence at the national level led to a hypertrophic development of industry, "overindustrialization" relative to market economies.[18] This was reflected in overcapacity for basic industrial materials and overuse of those materials; excessive capacity in inefficient machine-building and metal-working (engineering) sectors; inefficient, input-intensive, and low-productivity agriculture; energy- and materials-intensive industrial output; and in enterprises specialized to producing an extremely limited assortment of relatively simple versions of their assigned output. Furthermore, every agent's effort to buffer itself against external shocks and the uncertainties and rigidities of the planning system led to vast accumulations of unused, and often unusable, (partially) hidden reserves of material inputs, investment materials, labor, and machining capacity and a rapidly growing stock of unfinished construction of further industrial capacities.[19] The absence of any economic criteria of relative value or obsolescence further 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 was wasteful, and indeed unsustainable, when market-based costs had to be covered by earnings from its use.[20] The distortion of capital structure was further reflected in the structure and location of employment and factor use, resulting in irrationally and sparsely built infrastructure poorly maintained and without a clear owner responsible for its maintenance.[21]

The lack of any real economic valuation also resulted in a location of industrial and other economic activity, built for planners' convenience and security/defense considerations, that was innocent of real transportation, location, and other opportunity costs and hence profoundly wasteful of social resources.[22] One lasting consequence has been the continuing existence of "closed" cities, "academic cities/villages," and monocities built around one or two large enterprises employing the lion's share of the workforce. Many of these (those not involved in basic metals or energy resources production) have proved to be nonviable in the post-Soviet market environment and survive only on substantial subsidies, enforced by the state.[23] These legacies were aggravated by the command economy's fundamental lack of real trade, financial intermediation, banking, and any market business services or indeed consumer services beyond the most elemental, as discussed in the next section.

This structural legacy of Soviet "development" is nowhere more apparent than in Siberia. Here the vastness of territory and resource potential, and the absence of constraints from prior development, opened the way to virtually unbounded economic waste, the repetition and magnification of mistaken, wasteful, and unnecessary economic activity without obvious or immediate negative impact on the rest of the economy. Thus Siberian development, innocent of true economic cost considerations, generated an extreme case of nonviability of much nonextractive industry, particularly manufacturing. Siberian and Far Eastern industries further suffered from construction, maintenance, and operational costs of cold weather, including massive breakdowns and weather-related disruptions; phenomenal costs of transportation and communication over vast and inhospitable distances; and the maintenance cost of their infrastructure.[24] They also suffered from the general lack of complementary economic activities that make production work smoothly and allow a reasonably comfortable life to the workers who make up the labor force and their families.

Hence development was based on only an "administrative-military/security" rationale for the extraction and exploitation of resources, without consideration of human, material, financial, ecological, and other costs. As long as the command economy persisted, these costs could be ignored and borne in ignorance. With its collapse, they became an increasingly obvious and growing burden on the transition, absorbing resources and inflicting obvious pain when not adequately dealt with. The development of, and resulting situation in, Siberia is further discussed in chapter 28 of this volume.

Thus, a fundamental legacy of the Soviet system was that the economic resources, capabilities, and capacities left to transitional Russia were tied up in immensely wasteful activities in fundamentally irrational locations and configurations, without the structures and institutions necessary to facilitate their reallocation toward new, value-producing economic activity. Russia inherited a micro and submicro structure of production—of capital, labor, capacities (capabilities), and interactions—largely unable to cover true costs of production, with existing economic resources overcommitted to this wasteful structure and interconnected through a fragile, thin, (singular) inflexible network of (previously planned) interactions supporting "reproduction" of this structure. In addition, (private) activities outside of this structure were largely marginal, parasitic extensions, feeding off the irrationalities of the industrial structure and its built-in "planned" valuations.

INSTITUTIONAL LEGACIES

The command economy similarly framed the institutional environment for transitional Russia. Many of the formal institutions of the Soviet Union changed rapidly with its collapse, yet the informal institutions—the way organizations and agents operate and interact—remained mostly intact, resisting the changes and molding the operation of new formal institutions into some conformity with inherited understandings, relations, and procedures. Where new organizational forms and rules were introduced, their content and the nature of their functioning were initially defined more by attitudes and understandings inherited from the Soviet Union, and indeed czarist Russia, than by the formal Western models on which they were based. This can be seen in the slow and partial introduction of the key institutional arrangements required in a modern market economy.

Economic Legacies

The economic institutional legacies of the Soviet command economy arose from its systematic elimination and criminalization of market infrastructure and activities, denying the post-Soviet economy critical contractual, financial, and market distributional institutions. Not only was the economy left without these critical institutions, but their place was filled by inherited institutions that actively obstructed modern market development.

Central to these legacies was the initial absence and then incompleteness and ambiguity of property rights. Initially only the Soviet state held formal rights in productive property, and they were both absolute and undefined; they were what state agents said they were. There was a strong, inchoate sense of workers' ownership of the means of production, which influenced the approach to mass privatization but had no clear operational content. Thus, the Soviet collapse led to chaotic and legally and socially questionable processes and means of acquiring productive property, raising serious doubts as to the security of that property.[25] There was a lack of free and clear ownership, questionable enforceability of property rights (except for the politically connected or through private means), and a general lack of contract protection and enforcement. This generated extremely short behavioral horizons, and subsequently efforts to minimize investment and realize gains as soon as possible. It also meant that economic agents had to fall back on social and political ties, on personal connections and networks, with extraeconomic and extralegal means of enforcement, to engage in complex economic activity.[26] Hence there was 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.[27]

Furthermore, the Soviet economy left to Russia only a minuscule private sector, one that was largely informal. In fall 1991, only about 2.5 percent of Russia's industrial output was non–state produced, with cooperatives comprising only about 3 percent of nonagricultural employment (Ivanov and Kolbasova 1992). In 1992 "legal" small business employed just more than 10 percent of nonagricultural labor, and over 25 percent of such business was in Moscow or St. Petersburg.[28] Much of this business was under control of "rackets," both criminal and Party, or of entrepreneurs in the second and shadow economies.[29] Because the feasibility of central planning had required sole suppliers and users, unique transportation links and wholesaling organs, and minimal intermediate inventory holdings, a key economic legacy was the lack of a dense and redundant set of networks for interaction. Furthermore, the fundamental irrelevance of money for large-scale economic (particularly 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 the Party and Gossnab, and the breakup of the monobank left economic agents without the trading and financing options essential to the functioning of a modern market system.

The natural consequence was a highly personalized and politicized intermediation, aimed largely at overcoming political barriers and extracting rents for insiders. Economic agents were subject to opportunistic exploitation by individuals and groups with personal connections, and their intermediating networks derived largely from their prior Soviet positions or from the Soviet criminal underground. Consequently, most markets were initially highly segmented, and quite dependent on the goodwill and facilitation of local and regional political authorities. Those markets that were truly national were subject to similar political influence at the federal level.

The conditional, politicized nature of property rights bequeathed by the Soviet system was also reflected in the absence of any system of corporate governance protecting the interests of minority outside owners. Those with control, the new bosses "owning" and running the enterprise, were initially unconstrained by law, regulation, or market tradition from personal exploitation or expropriation of assets and cash flow; they became new, all-powerful "Soviet" directors, now unbound from ministerial superiors and Party discipline.[30] This undercut the foundations of new investment and any basis for broader legitimacy of business activity, making these owners and their businesses more politically pliable and credibly subject to "just" expropriation by political powers.

These legacies were reinforced by the lack of disinterested (third-party) adjudication of disputes.[31] Just like Soviet first secretaries, administrative and Party functionaries could dictate the terms of resolution of conflict as well as the interpretation and implementation of plans, so political agents throughout the transition period worked to influence regulators and courts, rendering the outcome of property and contract disputes as much a function of political relations and influence as of the content of the dispute.[32]

This was to a large extent just a continuation of Soviet telephone justice. Thus economic agents were forced to rely on themselves or political or criminal "protection" to enforce agreements, contracts, and/or payment in their economic interactions. Activities most requiring a stable legal foundation, such as those involving financial assets, real estate, and the creation or liquidation of a business, initially had to operate in a vacuum, driven only by the daring of their entrepreneurs and their willingness to resort to extraordinary, extralegal means. A natural consequence was the implicit and often overt criminalization of much private economic activity, continuing a Soviet legacy of shadow market behavior.

This dysfunctional economic legacy was initially reinforced by further inherited organizational and institutional characteristics, including:

1. continuing operation for a substantial period of many Soviet economic organizational structures, under control of old *nomenklatura* officials, or their close friends and relatives;
2. initial state "ownership" of almost all productive assets, and the inherent inefficiency of their use (already discussed) that was massively aggravated by the collapse of Soviet planning and controlling structures;
3. monopolization of product-level production, supported by the singular, often economically irrational ties of the collapsing Soviet sellers' market;
4. Soviet-based segmentation of markets, given by those planned ties and the seriously underdeveloped and misdirected transportation and communication infrastructure;
5. the absence of a real, effective money due to continuing "circuit segmentation" (dual monetary system), lack of emission control (including "ruble zone" emissions by other republics), and the absence of intermediating instruments and institutions.

These institutional legacies were naturally subject to pressures for change, and, in varying degrees, shrank and/or faded over the first years of post-Soviet transformation. Yet they initially provided a structural and institutional environment that filled the institutional space and crowded out those institutions necessary for a properly functioning market economy. They reflected economic and social capital, physical, and relational networks that systematically undercut the development of functional market relations, impeding the introduction and development of new market-oriented institutions and their supporting social capital.

The institutions required for a properly functioning market economy, largely missing in the Soviet legacy, have been discussed extensively in the analysis of transition by international organizations.[33] They can be summarized in four groups:

- Foundational institutions, necessary for the very existence of markets: well-defined private property rights; freedom of contract and initiative, upholding the voluntary nature of economic interaction; a stable money that is an effective means of exchange and store of value; flexible prices and valuations, responsive to market pressures; and a criminal code that allows and protects market activities, interactions, and agreements.

- Institutional structures protecting and stabilizing the influence of these foundational institutions on economic activity: legal institutions protecting property, contract, and the rights of owners against extortion, expropriation, fraud, and violence or the threat of violence; institutions supporting the provision of public goods and the infrastructure for effective market intermediation; effective monetary and fiscal policies and instruments (tax, spending mechanisms) maintaining a stable macroeconomic environment in which decentralized economic activity can flourish.
- Guiding and regulatory mechanisms, with disinterested enforcement structures, to support the regular, smooth functioning of the market system: corporate and commercial law; mechanisms for enterprise creation (registration) and dissolution (including bankruptcy); accounting and corporate governance rules; market-supporting civil and commercial codes; securities and investment fund laws; antimonopoly regulations; tax, trade, and banking laws; land laws and registration mechanisms; housing and condominium laws; labor and employment laws; government procurement law; currency and foreign investment (capital account controls) law; and so on.
- Institutions providing appropriate protection for society, consumers, workers, and the "losers" in market competition, allowing the system flexibility to experiment and make mistakes as it moves toward an evolving equilibrium.

Introducing the institutions of the first three groups required struggling against prior Soviet structures. The collapse of Soviet institutions left a true vacuum in the place of the fourth group. Mechanisms of state social support rapidly withered with government revenues and the devolution of responsibility, without funding, to regional and municipal authorities. Furthermore, state enterprises, responsible for much of the social support system, rapidly shed these responsibilities as their markets shrank and they "privatized" and refocused on survival and the extraction of profit/rents for the "owners." Thus a social safety net—providing unemployment benefits and other temporary social support, social insurance, and pension systems—and environmental and safety regulations urgently needed to be put into place.

As transition began, most market arrangements, incentives, and behaviors remained formally criminalized or legally ignored, and even when politically encouraged were often still subject to arbitrary censure, penalty, and reversal by political organs. This contradictory institutional environment lasted almost a decade while awaiting the formal change in institutions, the promulgation of new laws and normative acts, and the creation of structures supporting, enforcing, and hopefully encouraging the new economic system.[34] This lack of an appropriate institutional environment, reflected in all the formal and informal institutions and behaviors inherited from the Soviet Union, made up a primary obstacle to its rapid successful transformation to a modern market economy.

It must be emphasized that the situation was not one of just inefficient, poorly functioning, or underdeveloped market institutions—the typical situation faced by policy reformers. The Soviet system bequeathed a total lack of basic market software (property rights, market experience, noncriminal initiative, civil legal protections and adjudication, etc.) going far beyond dysfunctional or missing physical institutions, such as a court system, financial and equity markets, tax and social support systems, factor markets, and so on, that would be needed for jump-starting a market system. Furthermore, the institutional space, the legal and organizational ground on which new institutions must be built, was occupied by structures embodying dysfunctional social capital—networks and relations built on patterns of interaction and cultural understandings that stood in the place and blocked the generation and growth of institutions supportive of a market economic system.[35]

Political Legacies

Much of this economic institutional environment is derivative of the nature of political governance and power, a direct legacy of the Soviet system, with roots in a deeper Muscovite legacy (Keenen 1986; Hedlund 1999). In that system, vast discretionary authority, unchecked by law or institutional constraint other than the power of higher Party organs, resided in political and administrative organs, whose whim (interpretation of plans and their superiors' intentions) became "law" for all subordinates.[36] This personalization of economic authority, political power, and governance largely survived the demise of the Soviet Union. Indeed, it was enhanced by the elimination of the Communist Party and its discipline, leading to an extraordinary intertwining of economic and political authority and decisions. It continued the system of bureaucratic perquisites for service to the state, going back to the idea of service nobility, which receives benefits ("estates"), largely in kind, for managing the state in the interests of the autocrat.

This system was refined in the demonetized Soviet Union to a tight Nomenklatura system in which monetary rewards were negligible relative to the benefits/perquisites available to those in positions of power. This continued in the remuneration of the bureaucracy and governing organs in the early transition of Russia.[37] It allowed personal gain and political considerations to dominate economic choices, disemboweling markets of their economic content by further distorting pricing and other market signals of economic value. By intertwining the personal and the public, the political and the economic, it fostered ubiquitous corruption at all levels, rule by decree rather than law and contract, the predominance of patron–client relations, and the domination of formal institutions by personal relations.[38]

Such a personalized, fealty-based system is the antithesis of one based on the rule of law so essential to the functioning of a modern market economy. Although its roots are undoubtedly historically and culturally deeper than the Soviet system,[39] that system by its very nature amplified the personalized, premodern, and antimarket 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 clearly visible in Boris Yeltsin's Russia with its autocratic, elite (insider)-dominated governance, its exercise of arbitrary discretion at the top, with obsequious submission at the bottom, and with the resort at all levels of government to the use of secret instructions, orders, and decrees that operated above all laws.[40] 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.[41]

Thus, the Soviet Union bequeathed a legacy of personalized, unaccountable political power, answerable only to itself at the highest level and enforced by subordinates only answerable to their hierarchical superiors, unconstrained by universal law or procedures. There was an absence of any checks and balances on the exercise of power, other than its own natural limits in the chaos of the Soviet collapse. Although rudimentary democratic practices and institutions were struggling to develop in the wake of the Soviet collapse and democratic rights and freedoms were beginning to be asserted, this had to take place in an environment without institutional support, without a fully legitimate constitution, without nontotalitarian criminal law,[42] civil code and procedures, juries, electoral system, or legislature. This added to the chaos and uncertainty in the institutional environment in which economic transition and development had to take place, leaving a strong imprint on the course the Russian transition initially took.

Social Legacies

This arbitrariness of political and economic power was reinforced by another critical legacy—the absence of autonomous social institutions and the extreme vulnerability of those that were formed in the early post-Soviet period. The Soviet legacy of state support for and *kontrol'* (close oversight and audit, with the right of corrective intervention) over all legitimate social organization loomed as an obstacle to legitimate self-organization in the post-Soviet era. Independent social organization, without a state imprimatur, remained suspect in the eyes of those with political and economic power, thus narrowing the possibilities for creating and maintaining such organizations.

Until high perestroika in the late 1980s, all organizations that might constitute civil society were either illegal or strictly subordinate to and directly controlled by Party organs or its derivative structures, 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 "*kontrol'*" by some "responsible" Party or state organ. Such control extended to all forms of legal civic association, whether social, political, or work-related. 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 (Ruble 1981). Although a number of independent labor unions from the European mold arose during the early transition period, the large successors to the official Soviet unions remained dominant but weak and unable to (or uninterested in) upholding workers' rights; they appeared 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 had always been an arm of the state, and it remained such, albeit in a stronger position relative to the much weakened state.

The late Gorbachev period saw a flowering of civil society under the protection of official glasnost. Non-Orthodox religious organizations arose from underground, often in the face of political opposition, but either remained disengaged as they reasserted themselves in their spiritual domain or struggled to survive under increasing political pressure. Nongovernmental organizations (NGOs), largely focused on environmental and human rights issues, began to be formed, spurred by the liberalizations of perestroika. They were, however, built on a very narrow social base and an even narrower financial one, many relying to a large extent on foreign support to survive, thus undercutting their legitimacy.[43] Myriad new political parties sprouted and proliferated under Yeltsin's chaotic regime but withered in the face of Vladimir Putin's reestablishment of political order.

Thus the roots of civil society were extremely shallow and weak, as evidenced by its steady marcescence under both Yeltsin and Putin.[44] In general, societal organizations remained ineffective in articulating or representing alternative social interests to those of the ruling elite. There remained a systematic lack of any countervailing social or political power to the arbitrary discretion of the governing elite, facilitating the personalization and idiosyncrasy, and hence self-serving nature, of economic and political decisions and interactions. The only truly independent organizations were in the shadow economy or criminal spheres, providing a model whose emulation could not further the development of a modern market society. Hence the social and political environment remained hostile to open market development, albeit not as hostile as in Soviet times.

This social legacy also stimulated and rationalized a general lack of initiative among the mass of the population and supported the failure of society to assert its rights against the authorities. Instead, authority was generally looked to for initiative and problem solving; the "elites" were expected to decide for all, with democratic formalisms a cover for legitimacy, just as market forms were a cover for political power. Finally, the absence of vigorous civil society stimulated the search for individualized, special relation–based solutions to economic and social problems, particularly to a clan or family-based striving for self-sufficiency.[45] This Soviet legacy seriously undercut the development of generalized, trust- and law-based interaction and its supporting institutions that characterize properly functioning market systems.[46] They reinforced the behavioral and conceptual legacies passed on through social norms and structures complementary to the weltanschauung of the command economy.

Conceptual and Behavioral Legacies

The most deeply buried and long-lasting legacies are perhaps those rooted in the minds of the Russian people and its leadership. The economic, social, and political legacies already discussed reflect these deeper patterns of behavior and their associated understandings of and attitudes toward the economy and markets. These beliefs were inherited from the Soviet period, and indeed the deeper Russian past, and have evidently inhibited market development and market-functional behavior, particularly in the first post-Soviet decade.[47] They comprised an economic culture and an understanding of how an economy works that were profoundly contrary to the necessary relations in and proper functioning of a modern market economy.

These understandings derived, in part, from a number of fundamental beliefs behind the Soviet economic system, including:[48]

- dictatorship of the proletariat—or why the knowing elite must be able to impose its vision and policies on society;
- predominance of the "collective" over the "individual"—or why social control must supersede individual choice and initiative;
- nationalization of the means of production—or why political processes must control the flow of economic activity;
- labor theory of value, with value created only in material production (not services);
- centralized state planning in quasi-physical terms—the only way to truly meet social needs;
- the irrelevance of money and prices to determining what should be done; social and political *needs* should fully determine;
- legitimate wealth and well-being (reward) should derive only from service to the state.

Such ideas fed on deeper cultural traditions, supporting a thorough rejection of economics as a bourgeois pseudo-science, including the economic concepts of opportunity and sunk costs. One consequence was the reification of value in physical structures. This, together with a faith in undiminishing returns to scale and a need to deal with only limited numbers of objects and projects, led to the pursuit of grandiose development schemes, giant production facilities, and endless production runs. Another was the general belief that value is determined by (labor) expenditures (sunk cost) and a subsequent faith in the value and utility of costly inherited structures, regardless of what market signals might indicate.[49]

This absence of economic understanding extended to the role and functioning of markets in general, of prices and financial constraints, and to the general lack of substantial economic meaning in Soviet prices and monetary relations. There was very little understanding of how market value is determined, the informational role of price levels, and more significantly, their changes, in determining what should be done in a market system.[50] In Soviet understanding, money and prices *should* merely *reflect* what needs to be done, and that should be determined by other, "real economic" and social considerations. Indeed, there was a belief that the will of the elite, reflecting social objectives, determines (and should determine!) activity undertaken. Hence money should follow "economic need," rather than limiting and forcing choice among possible alternatives.

This supported the widespread post-Soviet attitude that payment is purely a matter of financial and economic relations, that it depends on the relationship between agents, and not on the economic activity involved. Important economic activity need not be financially viable, activity and payment need not necessarily be related, and failure to cover costs is a problem with prices, not with the activity.[51] Thus, there was an initial lack of acceptance of budget constraints. The Soviet soft budget constraint (Kornai 1992) was fully accepted by society, including the economic elites, as necessary and desirable.

The subordination of economic activity to political authority was understood as natural. Government was believed the critical player, superior to others in the system, rather than a referee; it is legitimately responsible for guiding—indeed, forcing—economic decisions in the social/state interest. State agents were accepted as legitimately above market constraints. Those with the interests of the state at heart, in particular the leader of the state, were seen to operate legitimately outside the rules, to make rules and enforce them on others so that "proper" outcomes are attained. The goals and desires of individuals in society must therefore be subordinated to the collective interest, realized through the decisions and actions of the state and its agents, whose interests have legitimate primacy.

This understanding was reinforced by an inherited legacy of rule aversion whenever rules might constrain the elite; what is "proper" is to be left to the discretion of the authorities. Law was used as an instrument of control; there was no conception of the rule of law as a constraint on all agents, including state actors, regulating social and economic interaction. Further support came from traditional Russian norms of a subservience culture, placing patrimonial obligation above property rights and individual choice, particularly as the Soviet system had erased market concepts of property. This behavior was further reinforced by the traditional *krugovaya poruka*—joint, collective responsibility of all for all, with obligation to denounce deviation, thus maintaining discipline and order in subservience. Finally, inherited attitudes fostered a general lack of social trust, a wariness or fear of outsiders, strangers, and superiors, undercutting the foundations of civil society and market relations; only immediate family and closest friends could be relied on. This lack of social trust was reinforced by the legacy of ubiquitous surveillance and the fostering of anonymous reporting by citizens on each other.[52]

These legacies meant that the only effective way to operate was through the exploitation of personal relations, fed with favors. "During the socialist period, webs of personal relationships were really the principle currency in society … informal social networks were the most important mechanisms for getting things done, obtaining access to goods and services, and attaining and acquiring accurate information about events."[53] These informal networks provided the basis for most social interaction as the post-Soviet period opened, and their ubiquitous exploitation legitimated behavior that, from a Weberian normative perspective, is "corrupt," making corruption the "way things are done"—normal, necessary interpersonal and institutional dealing.

These bequeathed understandings were also associated with the acceptance of different rules of the game for insiders and outsiders, a general hostility toward outsiders, and paternalistic managerial and governmental attitudes toward their enterprises and operations.[54] Thus only trusted insiders, or those who make special arrangements with the authorities, were accepted as legitimate, undercutting the general competition that is so essential to the proper functioning of markets and the proper determination of prices and valuations. Finally, there was a critical misunderstanding of the meaning and function of property rights in a market economic system. Property was understood as conditional (temporary) control granted by authority in return for service or "proper" behavior, and hence privatization was largely understood as the seizure/redistribution of existing property rather than the creation of secure, tradable legal rights facilitating the generation of new value.[55]

These "legacies of understanding," particularly the profound Soviet misunderstanding of fundamental economics and the logic of complex economic development, underlie and nourish the structural and institutional issues already discussed. The blinders of Marxist ideology and the systematic destruction of any independent thought generated perverse principles of development, undercutting the market economic viability of the resulting structures. These consequences are most obvious in the clean slate of Siberia, on which the Soviet Union built a tragic structural legacy that marketizing Russia still faces today (Hill and Gaddy 2003; chapter 28 in this volume).

Lingering Legacies in the Russian Market Economy

The Russian economy has come a long way since the demise of the Soviet Union. The Yegor Gaidar "big bang," its "Gref reforms" continuation, and the decade of strong economic growth (1999–2008) have substantially transformed the economy and economic system, washing away many if not all of the systemic characteristics of its predecessor. Russia clearly now has a "market economy," at least in the sense that most economic interaction is carried out through markets. Indeed, in many respects Russia is now a normal (middle-income developing) country (Shleifer and Treisman 2005). Yet in many of the areas discussed, one can see lingering effects, traces of the command economy, rendering the Russian market economy somewhat different from that of its middle-income peers (McKinsey Global Institute 1999, 2009; Lazarev and Gregory 2007).

Structural Remnants

The structure of economic activity in Russia is now similar to that of upper-middle-income market economies, although the share of the resource industries may be understated through transfer pricing. New service sectors have arisen and flourished, and most other sectors have made substantial strides in modernizing their capital and production structures, with labor productivity rising most in those sectors suffering from the greatest drop in demand, that is, inheriting the greatest plan-induced structural distortion. The economy is now populated with new, sometimes de novo firms in almost all sectors, although many transformed Soviet-era state and privatized enterprises have restructured to varying degrees and remain in operation. Indeed, as Lazarev and Gregory (2007) have shown, most macro-sectoral structural differences from upper-middle-income-level market economies had disappeared by 2006. However, resource extraction and primary processing sectors remained dominant in the economy, with energy sectors, after accounting for transfer pricing, generating some 25 percent of gross domestic product (GDP) and almost 40 percent of exports.[56] These resource extraction and processing sectors provide most of the income of the Russian state and are the primary source of the rents it can dispose of in the pursuit of its objectives.[57] In addition, the regional distribution of this industrial structure is adjusting much more slowly, if at all, and may indeed be growing more distorted, with less efficient operations receiving more protection from market-driven adjustment in the regions outside the center and those specializing in resource extraction (Ickes and Ofer 2006).

Furthermore, much of the capital stock—the plant and equipment—in both new and surviving firms remains in place and many firms in almost all sectors remain unrestructured and often unprofitable.[58] Even in priority defense industry, the general obsolescence of capital, and hence product, is a continuing complaint of the Russian military.[59] Studies of efficiency in ten critical Russian sectors, undertaken by the McKinsey Global Institute (1999, 2009), show great strides forward and substantial lags in efficiency behind advanced market economies. Labor productivity in 2007, despite increasing 1.7-fold since 1999, remained only 26 percent that of the United States, with inefficient "business processes" accounting for 30–80 percent of the inefficiency gap. Indeed, the Russian steel industry, which has been subject to substantial restructuring and renovation, had labor productivity of only one-third the U.S. level in 2007, with one-third of the productivity gap resulting from the use of obsolete inherited capacity. Even the three largest, most efficient steel plants have total factor productivity of only 77 percent of the U.S. average, despite the capital productivity of the new equipment being higher, a result of inefficient processes and use of labor (McKinsey Global Institute, 2009, 41–58).[60] Much of this lag in efficiency, including survival of seriously inefficient and unprofitable firms and operations, is a remnant, a lingering legacy of the Soviet command economy and the way those economic structures were built under that system. In addition, the inefficiency of the physical structure is seriously aggravated in most sectors by high levels of political/regulatory intervention and constraints, a further legacy of the Soviet system (McKinsey Global Institute 1999, 2009).

The physical legacy of inherited infrastructure also has a continuing impact (National Intelligence Council 2000). There remains a critical lack of roads, much housing and other physical structures are crumbling, and the railroads, the backbone of both Soviet and post-Soviet industrial transportation, require some $50 billion in new investment over the next five years. Indeed, the state transportation development plan for 2010–15 indicated that a $495 billion investment in infrastructure was needed. Similarly, the development plan to 2030 for the Russian energy complex indicated investment needs of $2 trillion.[61] As with industrial and social capital, the deficiencies in the inherited infrastructure arose as an unavoidable consequence of the nature and structure of the command system and its inability to determine proper economic valuation.

One highly visible structural legacy is the large number of monocities (*monogoroda*).[62] Arising from a peculiar Soviet understanding of rational location, involving maximal regional specialization of production within the autarkic national economy, these represented a triumph of planning and military/security rationality over economic rationality, of will over nature. Built around a single plant or technological cluster, they formed indispensable links in the singular technological chains of planned production with only minimal complementary economic activities absolutely necessary to support the required workforce and population.[63] They were particularly prevalent in the north and east of the Urals, meeting strategic/military and planning needs, and they clearly reflected—indeed, implemented—the "mastery of Siberia" regardless of economic cost. Because of the Soviet price system and pricing principles, with its regional, sectoral, and priority differentials, this cost was largely invisible to planners and the decision-making authorities, if increasingly clear in the growing waste in capital, materials, and natural resources on the spot. With the collapse of the Soviet system and the growing influence of market forces in the 1990s and 2000s, almost two-thirds of these production centers—monocities—were revealed to be nonviable as economic entities, requiring substantial (cross-)subsidization by the state, either through virtual economy chains (Gaddy and Ickes 2002) or directly by the federal or regional governments, to prevent human catastrophe. Some of the remainder became viable when Soviet export and price restrictions fell away, as they were built around the extraction and primary processing of energy or other high-market-value natural resources.

In 2000 the Russian government identified some 467 cities and 332 smaller towns as monocities, over half of which still require special support, either directly from the state or from industrial owners subject to state coercion. Most of these have a narrow, inflexible production base, with obsolete technologies and physical capital, crumbling infrastructure, and an immobile population. Most of these, with firms outside of basic energy and resource extraction and processing, produce the wrong products in the wrong places, even though many appeared viable in 2000–2008 due to high prices for resources and the industrial products they (still inefficiently) produced.[64] The crisis of 2009 thrust this structural legacy of the command economy to the forefront of Russian government attention, which in 2010 allocated 27 billion rubles to twenty-seven different monocities that had submitted comprehensive plans for dealing with their economic and social problems and diversifying their economies. These funds (less than $1 billion) have apparently had little impact, and all such support was withdrawn from the draft federal budget for 2011–13.[65] Monocities thus remain an ongoing, draining legacy of the command economy.

Institutional and Behavioral Remnants

Most of the formal institutions of a modern market economy are in place in contemporary Russia. Market intermediation of economic activity predominates in a well-monetized economy with standard fiscal, monetary, and regulatory institutions. Property rights have been formally established; laws regarding their exercise, including in corporate governance, have been promulgated; and a new civil code and court system has been established for their protection and adjudication. The web of formal permissions, licensing, and regulations affecting small and medium businesses has been simplified and shrunk over the first decade of the twenty-first century. Thus, many of the institutional legacies of command have been formally addressed by reforms over the past nineteen years. Still, a substantial portion of the economy—over 50 percent in 2009—remains outside the fully market sphere, a subtle legacy of command.[66]

Banking and financial intermediation are dominated by state enterprises, despite the existence of more than a thousand private banks.[67] Most utilities and housing services remain in the state sector, despite the breakup of UES, and the railroad and oil and gas transportation pipelines remain in state-controlled monopolies, despite "privatization."[68] The state retains substantial ownership in most large industrial enterprises and a controlling share in most enterprises in the energy and transportation sectors. There are several hundred major "state unitary" enterprises with direct government support, a long list of "strategic sectors/enterprises," and a growing number of priority industrial/technological development projects maintained in special, favorable "hothouse" economic conditions.[69] In the latter cases, the special conditions amount to an attempt to replace inherited Russian economy institutions with an institutional environment similar to that in developed market economies. Finally, a number of state corporations have been created, many over the past five years, to take the lead in major development initiatives. Although these have been subject to some criticism for inefficiency and waste of state resources, there has been little movement toward their reform or transformation. And although privatization remains a continuing policy of the Russian state, it is no longer focused on creating new autonomous economic actors but on raising budgetary funds and investment for still state-controlled enterprises and projects. Thus substantial dirigisme, a dominant state role in the economy, remains an active legacy of the command economy.

This role derives, in part, from a conceptual legacy, a state-oriented ideology that legitimates all economic activity and reward (captured in the ideal of *gossudarstvennost'*). It requires that any significant economic activity must be first and foremost in the interests of the state. This, indeed, is what legitimates substantial private gain. Because political legitimacy (the credibility of political leadership) depends on maintaining and improving economic performance and on raising standards of living, the state requires significant levers through which to direct and control the development (if not its details) of economic activity. It is now recognized that "markets" are not necessarily a barrier to adequate, albeit not absolute, control; most of the fundamental Soviet misunderstanding of markets and prices is gone. Markets are now seen as effective instruments to be managed and prices as carriers of economic value, which, however, must be managed as well, at least in key areas.

The current, practical approach to implementing this ideology is through finance, rather than through physical allocation, as in the Soviet economy. Significant economic activity is thus to be directed from financial "commanding heights," built around the five key state banks: VTB, VEB, Gazprombank, Sberbank, Rossel'khozBank. Deeper control of banking and financial activity is then implemented through subservient industrial conglomerates: Alfa Group, Rusal, Nornikel, Rosneft, Gazprom, and so on, and their "pocket banks," using "personalized" (*adres'noe*) management of credit flows. Major business developments require "official" approval, particularly if foreigners are to be involved. And major, development-impacting investment decisions, in particular, require (at least tacit) approval at the highest political level.[70] Important business leaders thus report to the president regularly with details of their private businesses' development discussed. Major company heads are regularly called to report individually, just as are political subordinates, to the level (federal, regional, local) appropriate to the importance of their economic activity, continuing the role of Party first secretaries in the Soviet economy. Those who resist, who are not amenable to direct state control, are subject to removal either through legal action or not-so-subtle pressure to sell out to more amenable or state entities. This has been the fate of YUKOS, Sibneft, Rusneft, and Western Oil Majors, including TNK-BP's loss of control over Kovytka natural gas deposits and forced restructuring.[71]

State control, if not always direct management, also extends to commanding heights beyond banking and finance, with a particular focus on the extraction and processing of natural resources, especially energy carriers, and on industrial/resource transportation: railroads, pipelines, and shipping.[72] Of particular concern to the Russian state for their role in determining the development of the economy are the sectors generating the highest value added, the greatest rents (export revenue earning), and the critical intermediating and infrastructural sectors (e.g., transportation, communications) that hold the economy together. A law passed May 5, 2008, established a list of critical manufacturing and strategic industries (see table 3.1) in which the state has a direct interest, and in particular a decisive say in any interactions with foreigners.

Each of these is explicitly subject to state *kontrol'* of its development and, particularly over ownership changes in the sector. As in Soviet times, a fear of "loss of control" still overrides efficiency considerations.

In addition, state and state-directed investment remains the primary source of new development, even when the financial resources tapped for the investment are private. Businesses are expected by all political levels to contribute beyond taxes to the pursuit

Table 3.1 Strategic Industries

Hydrometeorology, geophysics
Nuclear energy (materials, waste handling, research, equipment design and construction, safety studies)
Manufacture, maintenance, and sales of technology used for intelligence or code encryption
Design, manufacture, maintenance, sales, and use of weapons systems and arms
Design, testing, manufacture, and maintenance of aerospace technology, air safety, space activities
Large circulation publishing, TV and radio broadcasting
Natural monopolies (excluding electrical power and municipal heating distribution, postal services)
Major telecommunications companies (excluding Internet providers)
Major metals producers if their products are used by defense industries
Prospecting and quarrying of important minerals
Fisheries

Source: Article 6 of Federal Law 57-FZ, dated April 29, 2008 (http://base.garant.ru/12160212/#6). See discussion in "Law on Foreign Investment in Strategic Industries Gets Final Confirmation," *BOFIT Weekly* 19 (May 9, 2008).

of political and developmental objectives.[73] In the late 2000s, national projects to realize Putin's plan were established, to be implemented through a series of new federal corporations. They are explicitly to promote the diversification of Russia's production structure, infrastructure, and thereby economic development. By mid-2008 there were six such major corporations: Rosatom; VEB, the state development bank; Rostekhnologiia; Rosnanotekh; Olimpstroi; and the Housing, Municipal Infrastructure Development Fund. Since then, Russian Venture Capital, Rosagrotop, Avtordor, and now Dmitry Medvedev's Russian Development Fund, have been added.

Two of the most important new corporations are Rosnanotekh, which is to organize and fund basic research in frontier technologies, and Rostekhnologiia, whose mission is to modernize Russia's machine tool and engineering industries. Rostekhnologiia was formed by combining Rosoboroneksport, which had earlier taken over AvtoVAZ, and several defense industry firms. It has since aggressively moved to take over other, often private machine-building, engineering, and other industrial firms. In early July 2008, President Medvedev signed a decree giving Rostekhnologiia ownership in 426 firms in different branches of industry, 246 of which were largely privately owned. Although most acquisitions are related to the defense sector, ownership in airlines, spas, and trading companies has also been acquired.[74] Though capitalized out of the state budget, these "corporations" are supposed to leverage private funds toward the achievement of state development priorities.

In addition, development/investment plans are coordinated and implemented through national champions, both state and privately owned, operating in critical, strategic sectors. These firms include Gazprom, Rosneft, Lukoil, Rusal, Polyus Gold, Alrosa, and Severstal', among others.[75] Together with the national projects run by the new federal corporations, these enterprises give the political leadership of the Russian state extraordinary control over the direction and shape of economic development, a continuing legacy of the command economy.

Further legacies, remaining after nearly two decades of transition and recovery, are subtler but no less damaging than these physical and institutional legacies of the command economy. They are rooted in the informal institutions of the prior system, the patterns of behavior and understanding, the social and political norms, that animate the operation of the often new, formal, market-oriented institutions. They are most clearly visible in the political, legal, and social spheres and in how those impact the functioning of the market system. They include, as discussed, continuing acceptance of the primacy of the state and its top representatives/leaders, implying a very limited role for autonomous private and social institutions. State service remains the highest (fully legitimate) calling and the primary legitimate basis for material well-being.

In service to the state the personal and public become intertwined, and authority becomes "personalized," reflected in personal relations in which fealty is the ultimate virtue deserving of full protection. This situation is reinforced by Soviet concepts of public property, which still cloud the distinction between the public and private realms. Thus, fortunes are made with the support of the state and informal channels, which implies that "owners" cannot be fully in possession of their property.[76] This is also a continuing legacy of the Soviet downward "unaccountability" of political and economic power/authority, of the legitimate arbitrariness (*proizvol*) of the elite, of those in positions of power. And it is a continuing cornerstone of the absence of any real rule of law, of its replacement by Putin's dictatorship of law as an instrument of political, economic, and social control.

This can be seen in the lack of success, despite presidential initiatives, to reform Soviet criminal law to be fully consistent with a market economy and with the new, more market-friendly civil code. Indeed, the criminal code is still "Soviet" in relation to economic crimes, ignoring the reforms in the civil code, as was pointed out September 16, 2010, in a study presented to the Duma.[77] As Ledeneva (2011) has argued, the rule of law in Russia has been diverted by a powerful set of informal practices. In its place we see patrimonial power structures where decisions are made on the basis of people's relationships and traditional forms of authority. Patrimonial governance mechanisms remain in place, only weakly challenged by the democratic forms introduced under Gorbachev and Yeltsin but increasingly "hollowed out" under Putin and Medvedev. Thus ubiquitous, and indeed growing, corruption should be seen less as criminal than as the use of personalized trust, compensating for defects resulting from "selectivity" in the workings of formal institutions; it is a means of coping with the larger, largely inherited system. Participation in corruption is then rationalized by all involved as necessary—for survival, to increase efficiency, to maintain trust in face of arbitrary and changing "rules," to maintain competitiveness—as recent surveys have shown (Tulaeva 2011).

This behavior is facilitated by a further lingering legacy—the acceptance of different rules of the game for those in different political and social positions. This preserves what has been called *soslovnoe obshchestvo* (Zaborov 2009), an "estate"-based society, where roles, opportunities, and rewards are differentiated by position in society. This reinforces the ability of the state to control what it feels it must in the economy and increases the importance of personal connections and relations. It also places a barrier before outsiders, whether Russian or foreign, who might want to undertake any initiative, launch any new activity, in the economy. Without connections (at least tacit political approval and/or protection), entrepreneurship is difficult, particularly in areas that the state finds important or "strategic." Ownership control must remain in state or at least trusted Russian hands in all such areas. Where foreigners earlier gained control of a firm in a strategic industry, they have been systematically squeezed out, or into minority positions.[78] Minority ownership without control, contractual relations providing capital, know-how, and technology are welcome, but the Russian state and/or its champions must have ultimate authority. Major deals between Russian state and foreign entities are considered strategic and beyond legitimate challenge by other Russian business interests.[79] All of this protects the role of the Russian state and its highest leadership in determining the nature and directions of economic development, a role assumed, if in weakened form, from the Soviet command economy.

This behavioral legacy was also reflected in the Russian state's response to the financial crisis of 2008–9. There was a clearly displayed and expressed fear of foreign dependence, of loss of control over Russian assets and hence over the direction and nature of the development of the economy; the experience of the 1990s, showed the danger of foreign creditors' influence over policy! The Russian state thus stepped in to "rescue" industrial assets that had been pledged as collateral for foreign loans, sometimes directly and sometimes through legal action, freezing assets so they could not be used to pay debt to foreign banks.[80] Major debtors were forced to sell foreign assets, rather than using further Russian assets as collateral.[81] As in the past, support for households/individuals was primarily undertaken through the workplace, supporting producers to avoid layoffs and maintain operations and services to their workers and communities, falling back on the Soviet tradition of work-based social support.

Finally, one can see the legacy of command in both Putin's and Medvedev's approaches to modernization. Behind all the rhetoric of liberalization, openness, and democracy still stands an understanding of the process as state-directed and state-driven.[82] What constitutes a modern, innovative economy is to be determined by the state and created through priority "innovation" projects and special "experimental" cities and zones. Although the Russian leadership's vision statements contain all the right words about freedom and innovation, the bottom line remains that these should be supported by state funds, which must be used properly, to meet the needs and demands of the state. Of course they must always be moderated, channeled by social concerns; true experimentation must only be allowed in special, state-protected environments and "incubators."

Thus the command economy has bequeathed to Russia a constrained market economy, one that is largely politically motivated and directed. Although markets are ubiquitous and retain their primary microeconomic coordinating and motivating functions, their role in directing economic activity toward opportunity, signaling long-run desirability and pushing away from unprofitable directions, is limited in key sectors of the economy, that role being substantially assumed by political authorities. Initiative is no longer generally punishable, but major initiatives require approval of higher authority to go forward and become punishable if pushed against disapproval, as happened to Yukos. The highest authorities remain unaccountable; law remains an instrument of control rather than regulator of relations; property rights remain, to a significant extent, conditional on economic behavior and relations; and the state remains the engine of growth.

Russia also has an opaque, personalized (informally regulated) rent redistribution system, supporting the elites and a large number of largely inherited inefficient production operations. These include monocities and strategic producers (whether because of product or location) supported by the transfer of massive rents from the energy and metals resources sectors (see chapter 13 in this volume). This is a natural legacy of the command economy with its inability to evaluate economic activities and its inherent lack of alternatives to wasteful development for use of its resource rents. This system has been recently characterized as neofeudal (Inozemtsev 2011), rent-addicted (Gaddy and Ickes 2010), and Muscovite (Rosefielde and Hedlund 2009). All such characterizations capture aspects of and ultimately derive from, even if they perhaps exaggerate, these lingering legacies of the prior command economy and its deeper social and cultural roots.

NOTES

1. Mikhail Gorbachev's perestroika launched serious systemic "reform" with the implementation of the Law on State Enterprise and its supporting Basic Provisions (*Osnovnye napravleniia*) and the promulgation of the Law on Cooperation in 1988. Although in a number of ways (lingering legacies) the "transition" is not yet over, in most respects it can be considered over by Vladimir Putin's second term.
2. It has been argued that this was necessitated by the harsh environment and perpetual external threat, placing society on the edge of survival, requiring coordinated, redistributive social action to ensure that survival. See Keenen (1986) and Hedlund (2005).
3. This is most vividly illustrated in the discussions of plan allocations, their implementation, and incentives for plan performance in Nove (1986).
4. A discussion of these essential characteristics and their systemic implications is contained in Ericson (1991). A more elaborate discussion, focusing on the political nature and shortage economy consequence of this system is contained in Kornai (1992).
5. As experience had shown, outside of emergency war time rationing, the direct planning of consumption allocations was an impossible task, so money was given a limited "active" role in the ex post implementation of planned allocations of consumers' goods and services. See later discussion.
6. The second economy provided a largely illegitimate, if increasingly allowed, alternative for well-being as the system aged. See later discussion.
7. Informal "institutions" and patterns of behavior of those forced to live within these institutions of course softened the impact of the command logic and structure, allowing

corruption and a second economy to aid in managing the impossible central planning and coordination tasks required to truly implement a command economy.

8. See Grossman (1963). Ericson (2006b) develops the threat of "active" money to the proper functioning of the command economy.
9. See the discussion of Alexeev (2007).
10. The logic behind this is clearly laid out in Grossman (1963).
11. For a detailed discussion of how reforms inconsistent with these characteristics were undermined and reversed, see Kontorovich (1988) on the Kosygin reforms and his broader analysis in Kontorovich (2007).
12. This problem of pricing and its implications is discussed in Ericson (1999).
13. The argument is developed in Ericson (1990, 1991).
14. Why should this be a problem? The dimensions of the chains of nonviable production made shutting them down both politically and socially impossible—these production activities were the core of the Soviet social safety net, and there was no substitute market-oriented safety net in place. Shutdowns would snowball in these economically irrational, yet physically necessary "technological chains" if any piece were to close, depriving an unacceptably large part of the population of employment and most other industry of needed inputs to keep operating, unless they were in a financial position to import, a luxury only a few, resource-based firms enjoyed.
15. See Joskow, Schmalensee, and Tsukanova (1994) for a discussion in the context of competition policy in post-Soviet Russia.
16. See Commander and Schankerman (1997) and the discussion and enterprise survey data in Haaparanta et al. (2003).
17. The viability of many of these cities, and the political and human repercussions of their possible failure, was cause for serious concern in the 2009 recession. See "Pikalyovo Touches on Plight of Russia's "Monocities,"" RT.com, June 17, 2009.
18. See Åslund (1995) and Lazarev and Gregory (2007) for classic tables showing relative sectoral size. Also see Gregory and Stuart (2001).
19. See the analysis of the Soviet materials and equipment supply system in Ericson (1979). Nove (1986) catalogs these phenomena in industry.
20. In 1990, 46.4 percent of the capital stock was worn out, with less than 7 percent being replaced each year; over 26 percent of machinery and equipment had been in place over fifteen years, with less than 2 percent being retired each year. See IMF et al. (1991) and the Rosstat (2003) statistical handbook tables, chapter 14, 253–54.
21. This was nicely illustrated in the annual Russia survey by Edward Lucas, "Putin's Choice," *The Economist*, July 19, 2001.
22. 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. Some of these are elaborated in Gaddy (2001) and Hill and Gaddy (2003).
23. Monocity problems were highlighted by Putin's direct intervention in Pikalëvo in 2009. See, for example, "Rossiiskie monogoroda ne khotiat povtoriat' sud'by Pikalevo," Gazeta.ru, July 20, 2010, or Kostomarova and Blake (2009).
24. See the study of Soviet Siberian development by Hill and Gaddy (2003).
25. Hedlund (2001) contains a trenchant discussion of how institutional and behavioral legacies perverted the privatization process and its outcomes. Also see Black, Kraakman, and Tarasova (2000).

26. See the discussion in Ericson (2006a) for some detail and references. On the use of force in business relations, see, for example, Radaev (1998). Examples in retailing in three Russian cities are analyzed in Frye and Zhuravskaya (2000). The long continued use of contract killings in enforcement has been highlighted in the *Jamestown Foundation Monitor*, for example in its August 10, 2001, article, "From Moscow to Vladivostok, Contract Killings Are Common," *Jamestown Foundation Monitor* 7(154).
27. There were, of course, always exceptions, particularly in the nonpriority sectors where a certain entrepreneurship was needed for success in the command economy. For transition examples, see Krueger (2004).
28. OECD (1997). In Poland, in contrast, the private sector accounted for 29 percent of industrial and 40 percent of all employment, and 16 percent of industrial and 30 percent of overall output. See Ernst, Alexeev, and Marer (1996).
29. See Handleman (1995), Dolgopyatovo (1998), and Volkov (2002).
30. The continuation of these behaviors late into the transition period is nicely cataloged by Black, Kraakman, and Tarasova (2000).
31. See Ryterman and Weber (1996), Hendley et al. (1997), and Sachs and Pistor (1997) for articles discussing the legal legacies and situation in the early transition.
32. The 2004–6 destruction of the leading private oil company, Yukos, is a late example of this.
33. The institutional foundations of a properly functioning market economy extend well beyond the economic sphere. See EBRD (1999) and the evolution of the World Bank's Development Reports (1996, 1999, 2002, 2006).
34. It was only under the German Gref reforms (2001–3) that a legal foundation was fully put under Boris Yeltsin's decrees and civil code supporting market institutions. Even in 2010 the criminal code remained market-unfriendly, casting suspicion on any unauthorized private activity (Pomerantz 2011).
35. See the chapter 8 on institutional performance for a discussion of the "misuse" of institutions in the post-Soviet Russia.
36. See Ericson (1991, 2007) on the economic logic of this in a command economy.
37. See Voslensky (1984) and Matthews (1978) on this elite and its remuneration, and Sergei Khaitin, "New Russian Nomenklatura," *Moscow News*, April 28–May 4, 2004, on its successor.
38. Though in many respects resembling east Asian and Latin American crony capitalism, the phenomenon in Russia was initially much more pervasive and destructive of market economic activity, as it is unencumbered by tradition, moral constraint, and preexisting markets, both domestic and foreign. See Hedlund (1999).
39. For some discussion of these roots and their impact on reform, see articles in Sachs and Pistor (1997) and the development in Hedlund (1999).
40. 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.
41. See the discussion in Åslund (1997), Shleifer (1997), and Wegren (1998).
42. This is law that is instrumental in supporting a totalitarian system; it criminalizes any unauthorized activity.
43. This was used by Putin in 2005 to tame most NGOs through mandatory reregistration, bringing them under close state oversight, albeit not control. See Horvath (2011).
44. For a vivid 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.

45. This is much of the basis for Russia's historical and continuing economy of favors. See Ledeneva (1998).
46. 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 that provide a rich, heavily redundant set of outside options ensuring that voluntarily entered special relations are value-adding for the individuals, not stifling or exploitive.
47. This is emphasized in Hedlund's (1999) study of Russia's predatory capitalism. See also Hendley (1999), who argues that this lies behind the lack, on the part of Russian business and society, of a sufficient "demand for law" to enable the reform of both laws and the legal system to become effective. Another monograph that addresses this issue is Rosefielde (2007).
48. See Åslund (2002), p. 38, which influenced this partial list.
49. Of course, in the early chaotic years of transition, volatile inflation and price instability rendered market signals extremely noisy and unreliable, allowing decision makers to avoid the issues of the true value of their inherited assets and operations.
50. Naturally, there were a few individuals in government and business, as well as some economists, who did understand these aspects of economics, but they were far from a majority in policy, business, and political circles in early post-Soviet Russia.
51. These beliefs were clearly reflected in interviews in Woodruff (1999), and in discussions of disputes between electricity suppliers and municipalities over payment for energy. See A. Korvin, "Cold War Breaks Out in Lenin's Hometown," http://www.gazeta.ru, March 18, 2002. They can also 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 or sector in a specific region. Instead of questioning the value of operations that are apparently nonviable at market prices, the call is for prices to be fixed so that the operations appear viable.
52. Jacob and Tyrell (2010) find a strong economic impact of this legacy in the former East Germany.
53. "Better a Hundred Friends than a Hundred Rubles," *Kennan Institute Meeting Report* 20, no. 2 (2002).
54. Thus can be seen in the revealed attitudes of managers, businessmen, and politicians in their statements quoted in Blasi, Kroumova, and Kruse (1997) or Woodruff (1999), for example.
55. These attitudes and understandings were reflected in the way bankruptcy law, in its various reformed versions, was implemented. See Lambert-Mogiliansky, Sonin, and Zhuravskaya (2000). Though some surveys indicated that workers and managers looked on enterprise assets as employee (rather than state) property, it was not understood as free and clear ownership with disposal rights. It was seen as their property conditional on legitimate, including some private, use; formally the state and its agents had ultimate control.
56. World Bank (2004). This is similar if greater than other middle-income resource-rich countries such as Venezuela, but substantially less than more developed resource exporters such as Australia.
57. Rents from the oil and gas industries averaged near $500 billion in 2006–8 (Gaddy and Ickes 2010). Also see the chapter by Gaddy and Ickes (13) in this volume.
58. Even in 2008, about 35 percent of Russian manufacturing firms were unprofitable, Rosstat (2010).

59. Machine tools in use are up to 90 percent obsolete, as are procedures and work flow management, yielding productivity one thirtieth that of the European Union and the United States, according to a MinRazvitiia study in 2008. See McDermott (2011).
60. This productivity gap in industry is larger than that of most upper-middle-income economies, such as Venezuela, Chile, and Mexico.
61. Energy Strategy 2030, approved by Russian government August 27, 2009, http://www.energystrategy.ru/projects/docs/ES-2030_(Eng).pdf.
62. These came to the world's attention in 2009 when workers in Pikalyovo in the northeast blocked a major highway and railroad line between Moscow and St. Petersburg, bringing Putin to town to demand that Deripaska, the owner, continue to support the factories there. See Kostomarova and Blake (2009).
63. Monocities are officially defined as those with over 25 percent of the workforce employed in or over 50 percent of the value of output produced by a single firm or technologically related cluster of firms. They include not only a broad spectrum of manufacturing cities but also energy/metals cities with export opportunities, academic cities, and former closed/military cities.
64. World Bank (2010), 21–25. Also see chapters 27 (Markevich and Mikhailova) and 28 (Thornton) in this volume.
65. "Russia to Reduce Funding to Industrial Towns," *RIA Novosti*, September 16, 2010.
66. This was asserted by Finance Minister Alexei Kudrin and Deputy Minister of Economic Development Andrei Klepach in interviews, RIA-Novosti, October 5 and July 2, 2009, respectively.
67. Starobin and Belton (2001); "In the Shadow of Giants," *The Economist*, February 17, 2011. See the discussions of Russian banking and finance in chapters 23 (Schoors and Yudaeva) and 24 (Sutela) in this volume.
68. These include RZhD (Russian Railroads), MinAtom, Electric Transmission, Transneft, Gazprom, and the communal housing and services sector, among others. See the discussions of the oil sector (chapter 14 by Kryukov and Moye), the natural gas sector (chapter 15 by Kryukov and Moye), the electricity market (chapter 16 by Vasin), the railroads (chapter 21 by Pittman), and communal services (chapter 32 by Yemtsov and Lokshin) in this volume.
69. See the list of strategic sectors in table 3.1. The most prominent recent "project" is the attempted Silicon Valley clone in Skolkovo. See http:/www.i-gorod.com/future.
70. Key among the sins of Mikhail Khodorkovsky were his plans to build private oil export facilities in the northwest for direct export to the United States and Europe and to build a private pipeline to export oil to China, both bypassing the state monopoly exporter, Transneft. See, for example, Goldman (2008), 111–12.
71. See Goldman (2008) for vivid discussions of this pressure, and Ericson (2009), 54, with regard to control over natural gas.
72. See chapters 13, 14, 15, and 17 in this volume on resource dependence and the oil, natural gas, and metals sectors, respectively.
73. Olympic structures around Sochi, including physical infrastructure, are being supported by voluntary donations of the major Russian companies and their oligarchs. Indeed, in the wake of an announced 10 percent cut in the budget financing of Olympstroi, Gazprom pledged $20 million to support construction in 2009. See "Russia Slashes Sochi 2014 Winter Olympics Budget," *The Guardian*, February 24, 2009, available at http://www.guardian.co.uk/sport/2009/feb/24/, on the budget cut, "Rosneft Largest 2014 Olympics Sponsor among Oil Companies," *RIA-Novosti*, February 24, 2009, available at http://en.rian.ru/

analysis/20090224/120281020.html, and *Vedomosti*, April 6, 2009, on the Russian oil companies and Gazprom stepping up support for construction.

74. "Structure of State Conglomerate Emerges," *BOFIT Weekly* 29, July 18, 2008, available at http://www.suomenpankki.fi/bofit_En/seuranta/viikkokatsaus/Pages/default.aspx.
75. The role of these companies in the energy sector is nicely discussed in Goldman (2008). In all cases, these companies' leaders regularly report to Putin and discusses their strategic plans, particularly regarding international operations.
76. In a July 2010 interview in the *Financial Times*, Oleg Deripaska announced that he was ready to give it all back, if Putin asks. Gideon Rachman, "Lunch with the FT: Oleg Deripaska," *Financial Times*, July 16, 2010, available at http://www.ft.com/cms/s/2/a2ba7bf6-9069-11df-ad26-00144feab49a.html#axzz1G7m037J2.
77. The Interior Ministry and Procuratura have worked to delay and nullify Medvedev's proposed and decreed legal reforms. See Pomerantz (2011).
78. Various forms of political and legal pressure, including arbitrary use of environmental laws, have been applied. See Goldman (2008) for a survey and Ericson (2009) for this process in the oil and natural gas sectors.
79. See the Igor Sechin interview in the *Wall Street Journal* on the BP–Rosneft equity swap for arctic drilling. There he warns AAR (owners of TNK-BP) and BP not to let commercial interests get in the way of a strategic project. Gregory White, "Russia's Sechin Defends Investment Climate," *Wall Street Journal*, February 22, 2011.
80. Some $62 billion was funneled through VEB to support business capital and refinance foreign debt; see O. Kuvshinova, "Dve treti biudzheta," *Vedomosti*, October 21, 2008. On the latter, the Omsk Court froze Vimpelcom assets, owned by Alfa Group, preventing their use to pay debt to foreign banks (G. White, "Court Freezes Altimo's Stake in Vimpelcom," *Wall Street Journal*, October 28, 2008). That freeze was lifted after Alfa received a state loan to pay off the debt. The same court is apparently being used by Alfa Group to seize the Norwegian Telnor's share of Vimpelcom. See G. White, "Russia Raises Legal Pressure on Telnor," *Wall Street Journal*, April 4–5, 2009.
81. Deripaska was forced to sell off foreign acquisitions Hochtief (German construction company) and Magna Industrial (Canadian auto parts manufacturer); see *Wall Street Journal*: G. White, "Russian Tycoon Turns Big Stake Over to Creditors," October 4–5, 2008; G. Simpson and S. Schmidt, "Russia's Deripaska Faces Western Investigations, 10 October 10, 2008; G. White and D. Cimilucca, "An Oligarch's Struggle," December 22, 2008. Metals oligarchs Mikhail Prokhorov and Vladimir Lisin were also forced to sell assets or abandon acquisitions; see A. Kramer, "Empires Built on Debt Start to Crumble," *Wall Street Journal*, October 18, 2008.
82. See Medvedev's Go Russia white paper, http://archive.kremlin.ru/eng/speeches/2009/09/10/1534_type104017_221527.shtml, and his address to the Federal Assembly in 2009, http://archive.kremlin.ru/eng/speeches/2009/11/12/1321_type70029type82912_222702.shtml.

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