ORIGINAL SIN, GOOD WORKS, AND PROPERTY RIGHTS IN RUSSIA

By TIMOTHY FRYE*

> The task that I have set before the government is to make the reforms irreversible.
>
> —*Boris Yeltsin, October 1991*

> Russian President Vladimir Putin has told leading Russian businessmen he does not want a reversal of privatization.
>
> —*BBC, July 28, 2000*

> I am a categorical opponent of a review of the results of privatization.
>
> —*Vladimir Putin, Italian News Agency, November 5, 2003*

> Any allegations that Russia is preparing to revise the privatization results are groundless.
>
> —*Vladimir Putin,* RFE/RL, *April 11, 2005*

> We have quite a number of large, purely privately owned oil and gas companies. . . . Nobody is going to nationalize them.
>
> —*Vladimir Putin, Interfax, January 31, 2006*

ARE property rights obtained through legally dubious means forever tainted with original sin, or can rightholders give legitimacy to their ill-gotten gains by doing good works? Answers to these questions have ramifications well beyond academic debate. Based on the expectation that private ownership generates stronger incentives to produce, policymakers and international financial institutions have advised governments from Asia to Africa to transfer state-owned assets to private hands. Indeed, privatization has become a central component of economic transformation in developing and transition countries.

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Property rights created through privatization are often treated as unproblematic.[1] Having received legal title, rightholders are expected to put those assets to their most productive use. However, the transfer of rights from state to private hands is only a first step in encouraging rightholders to use their assets well. The state, through its monopoly on the use of coercion, retains its ability to redraw property rights in a variety of ways, from expropriation and renationalization to changes in regulation and tax policy. Rightholders who expect the state to alter their rights in the future have weak incentives to use their assets productively today. As is clear from the quotes by President Putin at the beginning of this article, the fear that privatization may be reversed can continue to loom large well into the future despite (or perhaps because of) repeated assurances to the contrary.

The specter of reversing privatization may be heightened where the community views existing definitions of property rights as illegitimate. This underlying illegitimacy may allow political entrepreneurs to bolster their public standing by railing against the current distribution of property rights. Under these circumstances privatization is likely to produce few benefits as rightholders anticipate future limitations on their assets. In contrast, such appeals are likely to fall on deaf ears if the community views property rights as broadly acceptable; this legitimacy, in turn, should allow rightholders to invest with confidence that their rights are unlikely to be challenged. Thus, the extent to which property rights are broadly accepted as being legitimate may have a direct bearing on whether those assets are used productively.

This threat is far from hypothetical. Recent years have seen governments from Ukraine to Belize and from Zimbabwe to Indonesia change or threaten to change the terms under which property rights were transferred to private owners. Most prominently, the YUKOS affair, in which the Russian state ultimately seized assets privatized in 1996 from Russia's largest private oil firm, highlights the politically contingent nature of privatization.

These postprivatization asset redistributions raise important empirical and theoretical questions. Dmitriev and others suggest that select reversals of privatization offer the potential to redress corrupt transfers of property.[2]

[1] Property rights are the bundle of rights that include the power to use, transfer, and generate income from assets, including land, labor, and capital. Yoram Barzel, *The Economic Analysis of Property Rights* (New York: Cambridge University Press, 1982), 2. Much economic reasoning suggests that where rightholders assume the full cost and benefits of their actions, they use their assets most efficiently and generate greater welfare gains for all.

[2] Mikhail Dmitriev, "V zashchitu natsionalizatsii," *Kommersant'*, January 30, 2006, 1.

Stiglitz and Hoff argue that illegitimate privatizations provide few gains in efficiency even where they do not produce great concentrations of wealth.[3] Following this logic, some have argued for reprivatizating select assets on economic grounds.[4] One may point to the reprivatization in 2005 of the massive Krvoryszhstal steel works in Ukraine at a market price of U.S. $4.8 billion—previously sold to the son in-law of President Kuchma for one-fifth the price—as an economically defensible case of reprivatization.

Others disagree. Borrowing from Ronald Coase and the analogy of the U.S. robber barons, they suggest that the manner in which property rights are initially distributed is relatively unimportant. This "Coasian" view suggests that once property rights are transferred into private hands, economic agents will exchange them until they find a stable arrangement. These observers fear that reversing even a bad privatization may call into question all transfers of property and lead to a never-ending cycle of privatization and reprivatization. With a nod to Trotsky's cry of "permanent revolution," Hellman and Sonin refer to this process as "permanent redistribution" and warn of its dire consequences for the economy as a whole.[5] Indeed, Aslund attributes much of the steep decline in Ukrainian GDP in 2004 to the government's decision to undo the privatizations of an unspecified number of firms.[6]

Despite the importance of the legitimacy of privatization, surprisingly little empirical research has focused on the question. Many works have explored the consequences of privatization, but few have examined how property rights come to be seen as legitimate by a community.[7]

[3] Joseph Stligitz and Karla Hoff, "The Creation of the Rule and Law and the Legitimacy of Property Rights: The Political and Economic Consequences of a Corrupt Privatization," NBER Working Papers, no. 11772 (Cambridge, Mass.: NBER, November 2005).

[4] Lee Wolosky, "Putin's Plutocrat Problem," *Foreign Affairs* (March–April 2000); Andrei Bunich, *Osen' Oligarkhov* (Moscow: Yauza Publishing, 2006).

[5] Joel Hellman, "Russia's Transition to a Market Economy: A Permanent Redistribution?" in Andrew C. Kuchins, ed., *Russia after the Fall* (Washington, D.C.: Carnegie Foundation for International Peace, 2002); Konstantin Sonin, "Why the Rich May Favor Poor Protection of Property Rights," *Journal of Comparative Economics* 31 (December 2003).

[6] Anders Åslund, "Betraying a Revolution," *Washington Post*, May 18, 2005, A17. This debate centers on credible commitment. To encourage rightholders to use their assets well, states should commit to protect those rights. Yet because states are sovereign and retain the capacity to change policy at any time, making such a commitment is difficult. The minimization of the credible commitment problem is thought to have led to the growth of credit markets in England, the industrialization of Mexico, and, by one account, to the "rise of the Western world." See, respectively, Douglass North and Barry Weingast, "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth Century England," *Journal of Economic History* 59 (December 1989); Stephen Haber, Armando Razo, and Noel Maurer, *The Politics of Property Rights: Political Instability, Credible Commitments, and Economic Growth in Mexico, 1876–1929* (New York: Cambridge University Press, 2003); and Douglass C. North and Robert Paul Thomas, *The Rise of the Western World: A New Economic History* (New York: Cambridge University Press, 1973).

[7] Simeon Djankov and Peter Murrell, "Enterprise Restructuring in Transition: A Quantitative Survey," *Journal of Economic Literature* 40 (September 2002).

Scholars have developed an impressive body of literature that analyzes the impact of formal institutions (courts, police, and regime type) and informal institutions (trust, social capital, and networks) on the security of property rights, but few have examined whether the manner in which states create property rights influences the legitimacy of those rights.[8] Scholars have also produced a rich body of work on the cross-national determinants of secure property rights, but these works are less well suited for addressing the questions at hand as they focus neither on the perceptions of individuals nor on the effects of the origins of property rights.[9] Finally, few studies examine whether and how rightholders themselves can take steps on their own to strengthen the legitimacy and, ultimately, the security of their property.[10]

This article uses an original survey of 660 businesspeople in Russia conducted in January and February 2005 to examine the conditions under which property rights come to be seen as legitimate. An experiment embedded in the survey asks whether the severity of violations of the Law on Privatization shapes perceptions of the legitimacy of property rights. This "original sin" argument suggests that property rights transferred via major violations of the law retain their illegitimacy. It also asks whether recipients of privatized assets can increase the legitimacy of their property rights by investing in their firm or by providing public goods for the community. This argument suggests that businesspeople can make their ill-gotten gains more legitimate by doing "good works." The article then examines a behavioral implication of the argument by examining whether rightholders who provide public goods view their property rights as more secure. It concludes by discussing the theoretical implications of the findings.

[8] Among others, see William Riker and Itai Sened, "A Political Theory of the Origins of Property Rights," *American Journal of Political Science* 35 (October 1990); Andrei Shleifer and Robert Vishny, *The Grabbing Hand: Government Pathologies and Their Cures* (Cambridge: MIT Press, 1998); Simon Johnson, John McMillan, and Christopher Woodruff, "Property Rights and Finance," *American Economic Review* 92 (December 2002); Timothy Frye, "Credible Commitment and Property Rights: Evidence from Russia," *American Political Science Review* 98 (August 2004).

[9] Steven C. Knack and Philip Keefer, "Institutions and Economic Performance: Cross-Country Tests Using Alternative Measures," *Economics and Politics* 7 (November 1995); Daniel Kaufmann, Aart Kray, and Pablo Zoido-Laboton, "Governance Matters," Policy Research Working Paper, no. 2196 (Washington, D.C.: World Bank, 1999); Daron Acemoglu, Simon Johnson, and James Robinson, "The Colonial Origins of Comparative Development: An Empirical Investigation," *American Economic Review* 91 (December 2001).

[10] For an exception, see Timothy Besley, "Property Rights and Investment Incentives: Theory and Evidence from Ghana," *Journal of Political Economy* 103 (October 1995). This article is perhaps closest in spirit to Raymond R. Duch and Harvey Palmer, "It's Not Whether You Win or Lose, but How You Play the Game: Self-Interest, Social Justice, and Mass Attitudes toward Market Transition," *American Political Science Review* 98 (August 2004).

The Politics of Property Rights

Russia presents a prime example of the politically contingent nature of postprivatization property rights. In the 1990s big business and President Yeltsin sought to balance the exchange of political support for economic benefits while avoiding a populist backlash that would threaten them both. The rapid voucher-based privatization of more than 70 percent of industrial enterprises between 1992 and 1995 provided great benefits for firm managers. In 1995 and 1996 the privatization of fifteen very valuable enterprises in the loans-for-shares program to politically connected businesspeople helped solidify the new economic elite. The speed of the voucher privatization and the opacity of the loans-for-shares program raised concerns about the legality of privatization.[11] A 2003 study by ROMIR found that 88 percent of respondents believed that "big capital" in Russia became rich through "dishonest" or "more or less dishonest" means and 77 percent favored a partial or complete revision of privatization.[12] A nationally representative survey of the mass public from October 2006 found that 76 percent of respondents agreed or more or less agreed with the statement: "The privatization of large industrial enterprises in Russia in the 1990s was often conducted with major violations of the Law on Privatization." [13]

President Putin came to power in 2000 with the backing of some members of big business who expected him to continue the policies of his predecessor, but Putin's unexpected rise in popularity allowed him to build an independent base of support. This popularity gave him leverage over his former backers, and shortly after coming to office, he began to chip away at the power of individual big businessmen—many of whom had grown wealthy off privatization deals of dubious legality.[14] With the transfer of power to President Putin, privatization deals conducted by previous administrations received renewed attention.[15]

[11] Bernard Black, Reinier Kraakman, and Anna Tarassova, "Russian Privatization and Corporate Governance: What Went Wrong," *Stanford Law Review* 52 (October 2000).

[12] *Vedemosti*, July 18, 2003.

[13] Timothy Frye, "Property Rights and Property Wrongs in Russia: Evidence on the Legitimacy of Privatization from a Survey of the Mass Public" (Paper presented at the annual meeting of the American Economics Association, Chicago, January 4–7, 2007). Ten percent of respondents disagreed or more or less disagreed with the statement, and 14 percent replied that it was hard to answer.

[14] Wealth redistribution continued after privatization because groups grown powerful from their control over former state assets were especially well placed to shape public policy in their favor. See Andrew Barnes, *Owning Russia: The Struggle over Factories, Farms and Power* (Ithaca, N.Y.: Cornell University Press, 2006).

[15] In an address to the Russian Chamber of Commerce in December 2003, President Putin insisted that not all privatization deals violated the law: "We often hear that laws were complicated and impossible to comply with. These are the statements of those who did not observe them. This is rubbish. Those who wanted to observe the law did so." More ominously, he added: "If five or seven people did not observe the law it does not mean that everybody did the same." This quote sparked a guessing game about which businessmen would be the next to suffer the fate of Khodorkovsky.

The arrest of YUKOS executives Platon Lebedev and Mikhail Khodorkovsky in 2003 on a variety of charges including violations of the Law on Privatization brought the issue into sharp focus. Among other charges the two men were accused of underinvesting in the *Apatit* fertilizer plant whose privatization was conditional upon the owners meeting investment targets. Ironically, both were found guilty on charges related to this privatization, but the judge ruled that the statute of limitations had expired. They were, however, sentenced to eight-year terms based on other charges. The economic and political fallout from this case has been hotly debated. Some argue that the affair had little effect on the economy because investors saw it as a one-shot event and returned to the equities market after several months. Others cite a sharp increase in capital flight in 2003 and 2004 against a backdrop of rapid economic growth as evidence of the short-term effects of the YUKOS affair.[16] There is less debate about the political impact: the prosecutions were very popular. According to the Levada Center, President Putin's approval rating rose from 70 percent in May 2003 to 78 percent in July 2003 after Lebedev's arrest.

Concerns about the legitimacy of privatization have special importance in the postcommunist world, where de-etatization was notable for its unprecedented scope and speed. Having inherited massive state sectors and facing pressure from international institutions to privatize, politicians had vast opportunities to abuse privatization. The former minister of ownership transformation in Poland famously observed: "Privatization is when someone who does not know who the real owner is and does not know what it is really worth sells something to someone who does not have any money."[17] Initial privatization outcomes remain a lightning rod in many countries. In Bulgaria the aptly named protest party "Ataka" received 9 percent of the seats in the 2004 parliamentary elections on a platform of reversing privatization, while charges of crony privatization helped to undermine the Kuchma government in Ukraine.

But concerns about the economic and political consequences of legally dubious privatizations are hardly confined to the postcommunist world. In Bolivia the recent nationalization of oil and gas fields by President Evo Morales "sent shock waves through the international community" but were "widely supported by Bolivians who see the so-called privatization under former President Gonzalo 'Goni' Sanchez

[16] According to the Central Bank of Russia, for only the second time since 1992 more capital flowed into than out of Russia in the second quarter of 2003. In the third quarter, following Lebedev's arrest, capital flight soared to $7.6 billion. In 2004 capital flight exceeded $8 billion in an economy that grew by 7.1 percent.

[17] Cited in Kathryn Verdery, *What Was Socialism and What Comes Next?* (Princeton: Princeton University Press, 1996), 210.

as a ripoff."[18] In Argentina privatization in the 1990s was marked by "favoritism, authoritarianism, and corruption" that "fostered an ethos of executive privilege and cronyism that ultimately undermined both the political legitimacy and the economic efficiency of the privatization."[19] In Zimbabwe, President Mugabe's redistribution of farmland held by white commercial farmers to black farmers was politically popular but had disastrous consequences for the economy.[20] That the market for insurance against nationalization continues to thrive underscores the broad relevance of the issue for developing and transition countries alike.[21] Thus, it is important to ask: what drives the legitimacy of privatization? The next section offers several possibilities.

Theories of the Legitimacy of Privatization

Original Sin and the Coasian View of Privatization

The original sin argument suggests that the manner in which property is transferred from state to private hands influences the legitimacy of property rights. Former state-owned assets obtained through serious illegality suffer from a birth defect that is permanent and untreatable. Property rights seen as ill-gotten by the community may provoke uncertainty among rightholders, who fear future revisions of their rights due to changes in policy. Absent broad acceptance of the procedures by which assets are privatized, transferring property rights from state to private hands may produce few benefits.

It is straightforward to argue that property transferred through legally dubious means would be seen as illegitimate. However, there is considerable reason to expect the contrary. Most privatizations in Russia took place a decade ago and the memory of the gory details of the initial bargain may have dimmed. In addition, the role of private property in a market economy is better understood and more broadly accepted today than it was a decade ago. And many have noted that formal law in Russia is not held in wide respect.[22] Therefore, one might

[18] Joseph Stiglitz, "Who Owns Bolivia?" www.Project-Syndicate.org (accessed July 16, 2006).

[19] W. Rand Smith, "Privatization in Latin America: How Did It Work?" *Latin American Politics and Society* 44 (Winter 2002), 4.

[20] Craig J. Richardson, *The Collapse of Zimbabwe in the Wake of the 2000–2003 Land Reforms* (Lewiston, N.Y.: Edwin Mellen, 2004).

[21] Nathaniel Jensen, "Measuring Risk: Political Risk Insurance Premiums and Domestic Political Institutions" (Manuscript, Department of Political Science, Washington University, St. Louis, Mo., 2006).

[22] Among others, see Alena Ledeneva, *Russia's Economy of Favours* (Cambridge: Cambridge University Press, 1998); but see Kathryn Hendley, Peter Murrell, and Randi Ryterman, "Law Works in Russia: The Role of Law in Interenterprise Transactions," in Peter Murrell, ed., *Assessing the Value of the Rule of Law in Transition Economies* (Ann Arbor: University of Michigan Press, 2001).

expect violations of the Law on Privatization to be quickly forgotten and forgiven.

Moreover, privatizers in Russia, some of whom were not overly concerned about the legal details of privatization, had an intellectual foundation for their stance. Echoing Nobel prize–winning economist Ronald Coase, they suggested that the initial distribution of property rights is relatively unimportant provided that rightholders can exchange their rights in the marketplace.[23] While not condoning illegality, privatizers in Russia were most concerned with transferring rights as quickly as possible in the hope that rightholders would provide a base of political support and that assets would eventually reach the most efficient users. The state official in charge of privatization in Russia, Anatolii Chubais, reported the following about managers in Russia: "They steal and steal and steal. They are stealing absolutely everything and it is impossible to stop them. But let them steal and take their property. They will then become owners and decent administrators of this property."[24] The Coasian view, which undergirds many arguments in favor of rapid privatization, suggests that respondents would downplay violations of the Law on Privatization when judging the legitimacy of property rights.[25] The original sin view suggests the opposite. Both theories presented thus far focus on the government; the next set of arguments explores, by contrast, how rightholders themselves can take steps to increase the legitimacy of property rights by doing good works. The argument comes in two versions.

Good Use as Good Works

The good use view of the good works argument suggests that the legitimacy of property rights depends on how the managers have used the resource granted to them by the state. If a manager has modernized and restructured the firm, then others may be willing to view the property rights as legitimate even if the assets were obtained by cutting legal corners. This argument is often made by Russian business elites who justify their wealth by their ability to promote jobs, investment, and growth. The good use of the asset generates its own justification for initial privatization outcomes.

[23] Ronald Coase, "The Problem of Social Cost," *Journal of Law and Economics* 3 (October 1960).

[24] Chrystia Freeland, *The Sale of the Century: Russia's Wild Ride from Communism to Capitalism* (New York: Random House, 2000)

[25] Stiglitz and Hoff (fn. 3) also treat privatization in Russia as guided by a Coasian view of property rights.

Public Goods as Good Works

The public goods version of the good works argument suggests that managers who provide public goods for the region may generate greater acceptance for their property rights. Rightholders may use the provision of public goods to legitimate their assets. Indeed, in recent years, firms in Russia have sponsored opera performances, rock concerts, museum exhibitions, ballet companies, and a variety of religious and social organizations.[26] They have created think tanks that analyze social and economic problems. In addition, they have contributed directly to a range of social projects from scholarship funds to summer camps and hospitals. The movement is in its early days but goes well beyond the oligarchs. The Putin government has made corporate social responsibility an important theme and encouraged firms across the country to find ways to provide critical services to their communities. And the largest lobby for big business in Russia, the Russian Union of Industrialists and Entrepreneurs, has adopted corporate social responsibility as a key slogan and developed a variety of plans to encourage businesses to provide public goods. Much of these efforts remain at the level of public relations, but there is little doubt that many businesses are using good works to polish their public image. That firms should support public goods is not a new idea in Russia, as during the Soviet period enterprises often provided many social services, including day care, health clinics, and sanatoriums, for their workers and the local population.

Conceptions of Property Rights

The more political treatment of property rights in these theories brings to the fore aspects of privatization that have received less attention in the literature. First, it suggests the importance of gauging the acceptance of existing definitions of property rights in the broader community. Studies of property rights often focus on the perceptions of individual rightholders about their property. However, whether the state challenges existing property rights and whether those challenges are successful is likely to be influenced by how well those property rights are accepted in the community. Thus, it is useful to shift the analysis to perceptions about property rights more generally.

Second, rather than viewing property rights in a static fashion as protected by law, this interpretation suggests that property rights are continu-

[26] For a description of good works by the holding companies Interros and Evraz-Holding, see http://www.interros.ru/eng/human/ and http://www.evrazholding.ru/ru/ecology/charity.

ally redefined through political competition. Political challenges to existing property rights are likely to be more successful where the initial transfer of rights is seen as illegitimate. Moreover, when rightholders anticipate that the rights they receive are politically vulnerable, they may prefer to strip these assets than to use them productively. Far from being fixed in law, property rights are highly dependent on the political climate.

Third, this conception of property rights grants rightholders the capacity to influence the legitimacy of their holdings. This sense of agency is largely lacking in existing literature that typically depicts rightholders as passively responding to institutional constraints. Here rightholders have the potential to take matters into their own hands and shape the legitimacy and perhaps, ultimately, the security of their property rights.

The Data

To begin to investigate these and other arguments, I commissioned a survey of 660 company managers in eleven of Russia's eighty-nine regions, including at least one from each of Russia's seven recently created "super-regions."[27] The survey was conducted in January and February 2005 by the Levada Center, a Moscow-based polling firm with more than fifteen years of experience. Using data on the population of firms from the Russian State Statistical Agency and other sources, researchers stratified the sample by size and sector to mirror the population of firms in each region. Firms from twenty-three economic sectors were included, with representation from industry, construction, transportation, communications, finance, and trade. Excluded from the sample were agricultural enterprises, communal services, health services, and social services. Researchers selected firms at random from within each stratum so that each firm within each stratum had an equal probability of being included in the sample. Only chief executive officers, chief financial officers, and chief legal officers were potential respondents and the selection rule followed the principle of "one interview, one firm." The distribution of firms in the sample by size and sector is roughly consistent with the national population of firms.

Most managers (79 percent) were male, and the age of the average respondent was forty-seven. The mean number of workers in a firm in the sample was 727, and ranged from a minimum of 4 to a maximum of 70,000. Half the firms in the sample had fewer than 125 workers and one-quar-

[27] See the appendixes for descriptive statistics of the firms in the sample, the distribution of firms by sector, the text of the public goods question, and descriptive statistics of the variables.

ter of the firms had fewer than 50. Twelve percent of firms were majority state-owned and 59 percent had undergone some form of privatization.

The interview subjects here are business elites. Although it would be inappropriate to generalize these views to the general population, understanding the perceptions of business managers is important in its own right.[28] They likely have given these issues much thought and should have reasoned views on the matter. In addition, they are often well placed on the boards of media companies and have considerable ability to shape public opinion. Many scholars recognize the political importance of business elites and some argue that they have "captured the state" in Russia.[29] Finally, they are a diverse group that includes managers from across the country with different experiences and perceptions. When compared with the mass public, business elites might be expected to express less concern for abiding by the legal niceties of privatization and to give themselves more credit for doing good works. The responses from business elites should establish a lower bound for the original sin theory and an upper bound for the good works theories.

To focus on the three theories, the survey included a question with an experimental design. This technique randomly assigns one of several different versions of a question to a respondent. Because the versions of the questions are distributed randomly, the responses should not be correlated with other factors that may be influencing the results, such as the type of firm or the personal characteristics of the respondent. The differences in responses should be due only to the variables manipulated in the scenarios. Survey-based experiments are a powerful tool because they isolate the effects of the variables of interest—in this case the actions of rightholders. They provide clean tests of the argument, in part because they require less stringent assumptions about the data than do standard multivariate analyses.[30] The experiment aims to capture a

[28] Frye (fn. 13) repeated the survey experiment with the mass public in a nationally representative survey in October 2006. In both surveys, responses to the manipulations were similar, but the mass public viewed privatized property as less legitimate than did the managers.

[29] Joel Hellman, Geraint Jones, and Daniel Kaufmann, "Seize the State, Seize the Day: An Empirical Analysis of State Capture and Corruption in Transition Economies," *Journal of Comparative Economics* 31 (December 2003).

[30] Survey-based experiments raise issues of internal and external validity. Concerns about internal validity arise "when the treatment does not exactly correspond to the construct that is envisioned as the independent variable." Donald P. Green and Alan S. Gerber, "Reclaiming the Experimental Tradition in Political Science," in Ira Katznelson and Helen V. Milner, eds., *Political Science: The State of the Discipline* (New York: Norton Press, 2002), 811. Internally valid experiments capture the true causal process claimed by the researcher. External validity generates concerns about whether the results produced in an experiment travel outside the setting in which the experiment is conducted. This is a greater threat to the validity of experiments conducted in a laboratory setting, but the threat is also present in field experiments.

familiar situation in Russia.[31] Most firms were privatized in the early to mid-1990s in an environment of weak legal norms, and observers have spent much of the past decade discussing the legitimacy of these transfers of property. In line with the theories presented above, the experiment manipulates the actions of rightholders by varying whether or not they have used their asset well and whether or not they provided public goods for their region. In addition, all respondents were asked to evaluate the legitimacy of property rights when violations of the law were major and minor.[32]

The question with the experimental design looks as follows:

> —Let's say that an industrial firm was privatized in the mid-1990s. After privatization, the managers invested *[very little/a great deal]* in the modernization and restructuring of their firm and they have also realized *[no/many]* social programs for the public in the region.
>
> —If it turned out that the firm was privatized with *major* violations of the Law on Privatization, do you think that this matter should be turned over to the courts?
>
> (1) Yes (2) More or Less Yes (3) More or Less No (4) No
>
> —If it turned out that the firm was privatized with *minor* violations of the Law on Privatization, do you think that this matter should be turned over to the courts?
>
> (1) Yes (2) More or Less Yes (3) More or Less No (4) No

Table 1 reports the responses when violations were depicted as major. The lower-right number shows a worst-case scenario in which managers neither invested in the firm nor provided public goods for the region and violations of the Law on Privatization were major.[33] In this scenario, 71.8 percent of respondents agreed that the courts should review the privatization. Moving to the upper-right number, which indicates that the manager provided public goods but did not invest in the firm, 61.5 percent agreed that the matter should be turned over to the courts. This increase of more than ten points is statistically significant and indicates that the provision of public goods on its own can bolster the legitimacy of property rights (t = 2.1).

[31] As managers are typically the largest shareholders in the firm, it is appropriate that they be held responsible for the firm's actions.

[32] One way to improve the experiment would be to randomly assign whether violations of the Law on Privatization were major or minor. This would provide a cleaner test of the original sin argument, but doing so would make it more difficult to identify relationships by reducing the number of observations in each cell. Given the novelty of embedding experiments in a survey in Russia and the relatively small number of respondents, I took a conservative approach by manipulating only the two types of good works.

[33] This is a minimalist treatment of the legitimacy of property rights that requires only that respondents oppose a review of the privatization described in the experiment to be seen as viewing the privatization outcome as legitimate.

TABLE 1
MAJOR VIOLATIONS OF THE LAW ON PRIVATIZATION[a]

	Good Use of Asset	Bad Use of Asset
Public goods provided N =150, 148	48.0	61.5
No public goods provided N= 145, 149	69.0	71.8

ANOVA test: f (3, 603) = 3.61, p< .01

[a]Numbers are percentage of "Yes" or "More or Less Yes' responses. Yes responses indicate that the state court should review the privatization. Higher scores mean less legitimacy. N = number of responses for each version of the survey experiment.

The lower-left number presents a scenario in which managers invested in the firm but did not provide any public goods for the region. Here 69 percent of managers said that court should review the privatization. This represents only a slight increase in legitimacy.

The upper-left results are more striking. When managers both used the asset well and provided public goods for the region, 48 percent of respondents agreed that the courts should review the matter. Doing both forms of good works in combination increases the legitimacy of property rights by almost 24 percentage points.

The results in Table 2 provide a further test of the argument by comparing responses to the same scenarios, but here managers were asked to consider that violations of the Law on Privatization were minor. The lower-right number shows that the manager neither used the asset well nor provided public goods—36.2 percent of respondents believed that that the matter should be turned over to the courts. Doing either form of good work on its own produced small and statistically insignificant increases in legitimacy as indicated by the upper-right and lower-left responses. The upper-left number indicates managers who used the asset and provided public goods for the region, and only 22.8 percent of respondents believed that the case should be reviewed. As in the preceding case, doing both forms of good works provided a dramatic increase in the legitimacy of property rights.

To test the original sin argument, Table 3 reports the means for the percentage "yes" or "more or less yes" responses for the sample as a whole when violations of the Law on Privatization were major and minor.[34]

[34] It is important to note that these responses were not generated using random assignment. Each respondent was asked about both major and minor violations; I simply compare the mean response. These results depend in part on question format. In a survey of the mass public that used the same experiment but also randomly assigned the severity of the violations of law, the original sin argument was insignificant when public goods were provided but was significant when they were not; Frye (fn. 13).

TABLE 2
MINOR VIOLATIONS OF THE LAW ON PRIVATIZATION[a]

	Good Use of Asset	*Bad Use of Asset*
Public goods provided N = 145, 158	22.8	33.5
No public goods provided N = 148, 152	33.1	36.2

ANOVA test: F (3,592), = 7.63, p <.01

[a] Numbers are percentage of "Yes" or "More or Less Yes' responses Yes indicates that the state court should review the privatization. Higher scores mean less legitimacy. N = number of responses for each version of the survey experiment.

The results indicate stark differences in the two groups. When violations of the Law on Privatization were minor, 31.5 percent of respondents favored a review. The figure was almost twice as high (62.5 percent) when violations of the Law on Privatization were major. Thus, while more than one-third of respondents were willing to let stand a privatization with major violations of the law, the manner in which privatization was conducted nonetheless had a strong impact on the legitimacy of property rights.

Two main results emerge from these analyses. First, rightholders have some agency to change the legitimacy with which their rights are viewed. In particular, managers who provide public goods *and* use their asset well can sharply increase the legitimacy of their property rights. In addition, there is evidence from Table 1 that providing public goods on its own can significantly bolster legitimacy. Using the asset well on its own, however, provides only minor increases in legitimacy. Thus, even without a change in the formal legal status of their property, managers can make their holdings more legitimate.[35] Second, the severity of the violations of the Law on Privatization had a strong impact on the legitimacy of property rights. This supports the original sin rather than the Coasian view of privatization.

On the positive side, these results indicate that the formal law matters. The prevailing wisdom is that businesspeople in Russia pay little attention to the formal law, but the findings suggest that violations of the law undermined the legitimacy of property rights. On the negative

[35] In analyzing the individual determinants of responses to these scenarios, I found some evidence that younger managers have a "more conditional" view of property rights controlling for a variety of firm- and individual-level factors. They were more likely to reward "good works" and more likely to punish "bad works" than were their older counterparts, suggesting that a socialization process is at work. Results available from the author.

TABLE 3
ASSESSING THE ORIGINAL SIN ARGUMENT[a]

	Percentage "Yes" or "More or Less Yes"
Minor violations of the Law on privatization N = 603	31.5
Major violations of the law on privatization N = 592	62.5

[a]Numbers are percentage of "Yes" or "More or Less Yes" responses. Yes responses indicate that the state court should review the privatization. Higher scores mean less legitimacy. N = number of responses.

side, a privatization seen as legally flawed suffers from a birth defect that endures.

PUBLIC GOODS AND PROPERTY RIGHTS

The experiment assesses managers' perceptions about the legitimacy of privatization under scenarios familiar to many in Russia. The experiment, however, does not explore the behavior of managers or the security of property rights directly. The next section probes whether implications from the theories are reflected in the actions of managers. Ideally, one would identify firms privatized with major violations and firms privatized with minor violations and see whether the security of their property rights varies. There is evidence consistent with this original sin argument. Based on an analysis of changes in stock market prices for different types of firms following YUKOS-related news events, Goriaev and Sonin conclude that "companies that took part in the notorious loans for shares auctions are more sensitive to political risks."[36] It is, however, difficult to assess this claim in a survey because respondents are rarely wont to reveal the sordid details of the legal aspects of their privatizations to interviewers, making it difficult to identify firms privatized with major and minor violations of the law.

One might also like to identify the impact of doing both forms of good works in tandem on behaviors associated with more security rights. This is a direct implication of the experiment, but it is difficult to test the good use version of the good works argument. The problem is that the good use of an asset is closely related to the most common

[36] Alexei Goriaev and Konstantin Sonin, "Is Political Risk Company-Specific? The Market Side of the YUKOS Affair" (Manuscript, Center for Economic and Financial Research [CEFIR], Moscow, 2005), 1.

proxy for secure property rights—investment. In essence, testing the combined effects of both forms of good works on the security of property rights runs the risks of putting "investment" on both sides of the equation. To assess the good use argument with precision, one would need a different proxy for the security of property rights.[37]

It is possible, however, to examine one aspect of the experiment more directly: the relationship between the provision of public goods and the security of property rights. This analysis corresponds well to the experimental results in Table 1, where the provision of public goods by itself was directly associated with more legitimate property rights. Given the widespread belief that firms were privatized with major violations of the law and the difficulty of demonstrating that one's rights were obtained legally, managers may have incentives to provide public goods to increase the legitimacy and, perhaps, the security of their property.[38] This section examines whether the provision of public goods is associated with more secure property rights as proxied by different forms of investment. (See Table 4.)

Three behavioral measures serve as indicators for the security of property rights. Respondents were asked whether they made a significant new capital investment (such as a major renovation, a purchase of new equipment, and so on) in the last two years; whether they intended to make a significant new capital investment in their firm in the coming year; and whether they had built a new building in the

Table 4
Private Investment in the Firm and Public Goods[a]

	Percentage Yes
1. Made significant new capital investment in last 2 years	54.9
2. Plan significant new capital investment in coming year	39.7
3. Constructed new building in last 2 years	26.4
4. Provided any type of public good for the region in last 2 years	71.3

[a]See Appendix 4 for wording of question.

[37] More specifically, one might like to estimate a statistical model that regresses a proxy for the security of property rights on a dummy variable for the good use of an asset (proxied here by investment), a dummy variable for public goods provision, and the interaction of these two dummy variables. This specification would require a behavioral proxy for secure property rights other than investment.

[38] Firms privatized with minor violations of the law may also have incentives to provide public goods, given the difficulty of distinguishing firms privatized with minor violations of the law from those privatized with major violations of the law. Thus, firms that provide public goods are not necessarily revealing that their rights were obtained with significant violations of the law. Indeed, they may view the provision of public goods as a costly signal to try to distinguish themselves from those who benefited most from a corrupt privatization.

last two years. These are tangible, long-term investments that indicate confidence in the security of property rights. Absent this confidence, respondents are unlikely to take these risks. Just over one-quarter of respondents (26.4) put up a new building in the last two years. Just over half (55 percent) made a significant new capital investment in the last two years, while almost 40 percent of respondents were planning to do so in the coming year.

Interviewers also asked respondents whether their firm provided a variety of public goods for the region, including support for educational and health institutions, aid to orphanages and pensioners, and other forms of charity. Seventy-one percent said that their firm took part in at least one such program. Almost 40 percent reported giving aid to health, educational, cultural, or sporting programs. Other forms of public goods were less common. Like the experiment, the survey distinguished between public goods provided by the firm for the region and private benefits provided by the firm exclusively for their workers.

In general, public goods provision by firms is more common in Russia than in the United States or Europe.[39] This is not surprising, as firms had commonly provided public goods during the Soviet period. In addition, firms in Russia are more vulnerable to pressure from state officials to provide public goods than are their OECD counterparts. Moreover, the desire to legitimate property through provision of public goods is likely higher in Russia than elsewhere.

Using multivariate analysis, I explore whether firms that provided public goods for the region invested at higher rates. The dependent variable in model 1 in Table 5 is whether firms made a new investment in the last two years. I use a probit estimation because the dependent variable is dichotomous, and I employ robust standard errors to account for heteroskedasticity. To test the public goods argument, I add a dummy variable for firms that provided public goods.[40]

I also include a variety of controls. This is important because public goods and investment may both be driven by a common cause. For example, pressure from regional governments to provide public goods

[39] Leonid Polishchuk, "Biznesmeny i Filantropy: korporativnaya blagotvoritel'nost v Rossii" (Manuscript, Center for Economic and Financial Research, Moscow, 2005).

[40] The dummy variable treatment of public goods provision is crude, but asking for estimates of funds spent on public goods would likely have produced unreliable responses. An additive index that tallies each type of public good provided produces similar results. These responses may be biased upward, as managers may have wanted to paint themselves in a positive light. To the extent that some respondents overstated the provision of public goods but not levels of investment, this bias should make it harder to find a relationship between the two.

TABLE 5
PUBLIC GOODS AND PROPERTY RIGHTS[a]

	New Equipment in Last Two Years 1	*New Building in Last Two Years* 2	*Plan New Investment in Coming Year* 3
Public goods	.69***	.45**	.69***
	(.18)	(.20)	(.18)
Bribes to regional government as a problem	−.05	.06	−.11**
	(.05)	(.05)	(.05)
Worked as manager in state-owned firm	−.21	.14	.08
	(.16)	(.17)	(.15)
Low labor quality as a problem	−.17***	−.01	−.05
	(.05)	(.06)	(.05)
Courts	−.10	.03	−.17*
	(.09)	(.10)	(.09)
Trust	.06	.09	.15
	(.11)	(.11)	(.10)
Privatized firm	−.03	−.28	−.11
	(.17)	(.19)	(.17)
State-owned firm	−.82***	−.79**	−.60**
	(.29)	(.34)	(.29)
Age	.00	−.02***	−.01
	(.00)	(.01)	(.01)
Education	.23*	−.17	.23
	(.13)	(.15)	(.15)
Log # of employees	.10*	.27***	.16***
	(.06)	(.06)	(.06)
Change in sales	.01***	−.00	.01***
	(.00)	(.00)	(.00)
Member of business organization	.31**	.39**	.09
	(.15)	(.16)	(.16)
Access to credit as a problem	−.06	−.12***	−.03
	(.05)	(.05)	(.05)
Competition as a problem	.12**	−.10*	.04
	(.06)	(.05)	(.05)
Constant	−1.00	.46	−.64
	(.73)	(.73)	(.70)
Prob >chi^2	.0000	.0000	.0000
Pseudo R^2	.20	.20	.16
N	432	432	425

* = p<.10; ** = p<.05; *** = p<.01

[a]Controls for 10 regional dummies and 9 sectoral dummies included, not reported.

may influence investment and the provision of public goods.[41] On the one hand, this "bribe/extortion" might reduce investment because firms have fewer funds left over to buy capital. On the other hand, politicians may demand that firms provide public goods in exchange for allowing the firm to invest, which would lead to a positive relationship between public goods and investment. To begin to control for these possibilities, I include a variable that measures the extent to which respondents perceive bribes to the regional government as a problem for businesses like theirs.[42] Managers subject to these extortion/bribes are likely to rate this as a serious problem. In addition, I include dummy variables for each region that aim to capture the possibility that a regional government demands that all firms provide public goods for the region. More generally, these dummy variables should help account for any local factors affecting investment.

The quality of the workforce may also shape decisions about public goods and investment. Managers may be reluctant to invest if they have doubts about the quality of the workforce, doubts that also may prompt firms to provide public goods to improve the skills of labor in the region. Thus, I add a variable that measures the extent to which firms view a shortage of qualified labor as a problem for their business.[43]

Because firms with strong economic performance may be more likely to invest and to provide public goods, I include a variable that captures the percentage change in sales in the last twenty-four months.[44] I also add a variable that measures the respondent's access to credit, as firms may borrow funds both to invest and to provide public goods.

Monopolists may have incentives to provide public goods in the knowledge that they may garner the lion's share of the returns of these goods. The absence of competition may also shape investment decisions. To capture this possibility, I include a variable for the extent to which respondents viewed competition as a problem for their firm.

I include as well variables for factors specific to the respondent such as their age, education, and prior managerial experience in the state

[41] In a nonrepresentative 2006 survey of 210 business leaders, government officials, and researchers in Russia, respondents cited "administrative pressure from authorities" and "business development strategies" as common reasons for the participation of firms in social programs. Maria Levitov, "State Pressure Motivates Most Corporate Giving," *Moscow Times*, February 14, 2006.

[42] Similar results are produced by other proxies for relations with the government, including ratings of the performance of the governor and ratings of the extent to which the governor is motivated by the good of the region.

[43] The results are unchanged if a variable that captures concerns for the quality of managers, rather than workers, is included. The two measures are highly correlated.

[44] Results are not altered by other proxies for performances, such as a subjective measure of the financial condition of the firm and a variable for whether a firm made a profit, broke even, or lost money in the last year.

sector. These factors are common indicators of entrepreneurship, a trait that may influence both variables of interest. Age and prior managerial experience in the state sector may also proxy for the strength of Soviet-era norms that condition investment levels and public goods provision. I add controls for the perceived quality of the court system and perceived levels of trust as the capacity of formal and informal institutions to protect property may influence investment. I include controls for factors specific to the firm (property type, membership in a business organization, and number of employees). I also include nine dummy variables for economic sectors, as sectoral conditions may influence both investment and public goods provision.

Results from model 1 indicate that managers who provided public goods were significantly more likely to have made a new capital investment in the last two years. Firms that were members of business organizations, had many employees, or had large increases in sales were more likely to invest, while firms that viewed the quality of the labor force as a problem and state-owned firms were less likely to invest. Model 2 yields a similar result. The coefficient on *PublicGoods* is positive and significant, indicating that public goods providers were more likely to have built a new building the last two years. Finally, model 3 indicates that providers of public goods were significantly more likely to be planning a new investment in the coming year. This result is important because it suggests that the provision of public goods precedes investment and reduces somewhat the possibility of reverse causation. That is, the provision of public goods appears to be a cause of, rather than a consequence of, investment.

Simulating the results suggests that the provision of public goods is associated with rather large increases in the security of property rights as proxied by the probability of investing. Table 6 reports the change in the probability of having made an investment associated with the provision of public goods when all variables are held at their means and dummy variables. Columns 1, 2, and 3 find that providing public goods is associated with a .25 increase in the probability that a firm had bought new capital equipment, a .12 increase in the probability that a firm had built a new building, and a .24 increase in the probability that a firm was planning a new investment in the coming year.[45] On average, firms that did not provide public goods had a .50, .15, and .21 probability of having invested in the last two years, having built a new

[45] Dropping variables related to bribes to the regional governor increases the number of observations by about 10 percent. Doing so does not affect the results of the variables of interest.

TABLE 6
SIMULATION OF RESULTS[a]

	Buying New Capital Equipment	*Constructing New Building*	*Planning to Buy New Capital Equipment*
Change in probability of…	.24	.12	.25
(SE)	(.06)	(.05)	(.06)
[90% confidence interval]	[.14–.33]	[.04–.20]	[.15–.36]

SOURCE: This table reports the results of a simulation using CLARIFY based on coefficients from the probit estimation reported in Table 5; Gary King, Michael Tomz, and Jason Wittenberg, "Making the Most of Statistical Analyses: Improving Interpretation and Presentation," *American Journal of Political Science* 44 (April 2000).

[a]The top number in each column represents the increase in probability of having invested based on the provision of a public good. The standard error of the estimate is in parentheses. Finally, a 90 percent confidence interval is reported in the brackets.

building in the last two years, and having planned a new investment for the coming year, respectively. Similar figures for firms that did provide public goods were .75, .27, and .45. These results hold controlling for a range of firm-specific and manager-specific factors commonly associated with investment. They are consistent across three measures of the security of property rights, which suggests that the results are robust to different measures.[46] Most important, they are consistent with the more political view of property rights offered above. Perhaps doing goods works is its own reward.[47]

These results also raise a number of questions worthy of attention. Do perceptions of the legitimacy of privatization vary according to whether assets were sold or given away? What is the relationship between inequality and privatization? Is privatization simply a scapegoat for economic inequality generated by other sources? Having found that a privatization violated legal norms, what remedies does the public prefer? Do they favor renationalization, reprivatization to new owners, more good works, or a significant fine?[48] These are topics for future research in Russia and beyond.

[46] The results also hold using continuous measures of changes in investment in capital goods and new technologies, respectively. Results are available from the author.

[47] The provision of public goods is no guarantee that rights will be respected. YUKOS conducted a highly visible campaign to improve its image but ultimately lost its property. Given the great public enmity toward the owners of YUKOS, perhaps no amount of good works could have changed the outcome.

[48] Some of these questions are addressed in Frye (fn. 13).

Conclusion

Many studies examine the institutional, political, and social roots of property rights, but these works rarely examine how the manner in which property was obtained or the actions of rightholders influence the legitimacy of these rights. These are critical issues for developing and transition countries, where privatization is rarely transparent. This article finds that in the case of Russia the original sin of a legally dubious privatization can undermine the legitimacy of property rights. In addition, there is solid evidence that rightholders can increase the legitimacy of property rights by providing public goods in tandem with using an asset well. There is somewhat weaker evidence that the provision of public goods can bolster legitimacy on its own. There is little evidence that the good use of a privatized asset by itself increases legitimacy. Finally, the provision of public goods is associated with more secure property rights as proxied by investment.

Further research is necessary to learn how well these insights on privatization travel outside of Russia and the postcommunist region. The sheer scope and rapidity of industrial privatization in the postcommunist region is far larger than in other settings, making generalizations difficult. However, given the frequency of corrupt privatizations and weak property rights in developing countries, it is likely that the empirical results have theoretical importance beyond the case at hand. For example, data from Latin America suggest that the public is far less supportive of privatization than of other dimensions of economic reform, such as the liberalization of foreign trade.[49] This has led some scholars to argue that there is a "privatization paradox" in Latin America.[50] In this view privatization increases various aspects of social welfare even as it remains very unpopular.[51] One hypothesis worth exploring is whether this unpopularity may be traced in part to the manner in which privatization was conducted.

More generally, the results have implications for business-state relations in transition and developing economies. Existing literature has paid considerable attention to the role of the state in shaping the legiti-

[49] Andy Baker, "Consuming the Washington Consensus: Mass Responses to the Market in Latin America" (Manuscript, Northeastern University, Boston, 2006), chap. 4.

[50] Research Department Inter-American Development Bank, "The Privatization Paradox," *Latin American Economic Policies* 18 (2002).

[51] Eduardo Lora and Ugo Panizza, "The Future of Structural Reform," *Journal of Democracy* 14 (April 2003); Ugo Panizza and Monica Yanez, "Why Are Latin Americans So Unhappy about Reforms?" *Journal of Applied Economics* 8 (May 2005); Carles Boix, "Privatization and Public Discontent in Latin America" (Manuscript, Inter-American Development Bank, Washington, D.C., 2005).

macy of property rights.[52] The results here indicate that the state and business elites share the capacity to have an impact on the legitimacy of property rights. Rather than viewing rightholders as passively responding to institutional constraints, this article suggests that they can shape the legitimacy of their property rights. Even without a change in the formal legal status of their property, rightholders can take steps to increase the legitimacy of their property. This result introduces agency into a literature in which it has been largely absent.

The findings also generate insight into the provision of public goods. In light of the logic of collective action, why private actors ever provide public goods is a puzzle. Collectively, managers may prefer more public goods. But because they can be enjoyed by all, managers more strongly prefer that someone else bear the cost of providing them.[53] The argument here suggests a political rationale for the provision of public goods by private firms. This dynamic, however, leads to the irony that firms that benefit initially from a corrupt privatization may face the prospect of having to provide public goods in the future to give some legitimacy to their assets.

More speculatively, the results may provide insights into the disappointing results of privatization in some settings.[54] To the extent that the legitimacy of privatization is reflected in the security of property rights, the birth defect of an illegitimate privatization may have a similar effect. A legally dubious privatization may lead rightholders to perceive their ill-gotten assets as illegitimate and, therefore, vulnerable to political attack. Even where privatizations are not reversed, the illegitimacy of rights may, ultimately, impair economic performance. This, too, is a topic for more research.

Finally, the results have some implications for policy. In contrast to the policy implications of the Coasian view of privatization, the findings here suggest that the design and implementation of privatization programs are important determinants of the subsequent legitimacy of property rights. To the extent possible, privatizers should favor designs that are broadly acceptable to the community. This may involve greater transparency, simplicity, and public discussion of privatization policies than has often been the case to date.

Second, the results suggest a possible, but long, path out of the current illegitimacy trap that bedevils privatization in many countries. Governments may encourage the private provision of some public

[52] Douglass North, *Institutions, Institutional Change and Economic Performance* (New York: Cambridge University Press, 1990).

[53] Mancur Olson, *The Logic of Collective Action* (New Haven: Yale University Press, 1965).

[54] Sergei Guriev and William Megginson, "Privatization: What Have We Learned?" (Paper presented at the Annual Bank Conference on Development Economics, St. Petersburg, 2005).

goods and the good use of assets, in part so that rightholders can increase the legitimacy of their property rights. There are limits to this policy, however, as the state is a more efficient provider of public goods than are private firms. But the private provision of public goods may be less socially costly than renationalization or reprivatization.

Appendix 1
Survey Details

The overall response rate was 53 percent for firms contacted by the interviewer. As is common in business elite surveys conducted in Russia, the city with the lowest response rate was Moscow (28 percent). Fully one-third of all refusals came from the capital city. Absent Moscow the response rate increases to 62 percent. The analyses are unchanged if responses from Moscow are dropped from the sample. Twenty percent of respondents were called back to ensure quality control. Many questions have been used in previous surveys and all were pretested in pilot surveys. For the sake of comparison, I note that response rates for the National Election Studies in the U.S. in 2000 was 60 percent.

Cities in the sample were Moscow, Nizhnii Nivgorod, Volgograd, Smolensk, Novgorod, Ekaterinburg, Voronezh, Rostov, Ufa, Khabarovsk, Tula, and Omsk.

Appendix 2
Descriptive Statistics of Firms in the Samples

Firm Characteristics	*Responses*
Average number of employees	727
Median number of employee	125
Industrial firms	58%
Retail and wholesale trading firms	15%
Construction/transport/ communications firms	29%
Members of business organization	37%
Average age of the manager (yrs)	47
Managers with college degree	90%
Privatized firm	59%
State-owned firm	12%
Denovo private firm	29%
No competitors	7%
Competition from foreign firms	7%
Member of production association, trust, holding	24%
Profit in preceding year	69%

Appendix 3
Businesses by Sector

Sector	*Percentage of All Firms in Survey*
Construction	18.0
Machinery	18.0
Retail	10.0
Food processing	9.6
Transportation	7.1
Light industry	6.8
Wholesale	5.0
Communications	3.9
Forestry	3.9
Publishing	2.9
Metallurgy	2.4
Chemical	2.1
Electric	2.0
Bank	1.8
Bldg. materials	1.7
Insurance	1.5
Medical	0.9
Real estate	0.8
Grain	0.5
Investment	0.3
Commercial firm	0.3
Fuel	0.3
Glass	0.2
Total	100

Appendix 4
Public Goods Question

Did your firms provide any social programs designed to help promote the development of the region in the last two years? If so, what types of assistance were provided?

	Yes (%)
1. Did not take part in any programs to help develop the region	28
2. Aid for education, health, culture, or sports	37
3. Temporary assistance for the unemployed	16
4. Aid for orphanages	34
5. Aid for pensioners or other socially vulnerable categories	25
6. Build public housing	15
7. Participate in ecological programs	13
8. Charity	42
9. Other	1

Appendix 5
Descriptive Statistics of the Variables

	Observations	*Mean*	*Std. Dev*	*Min/Max*
Public goods	652	.72	.45	0/1
Bribes to regional gov't as problem	544	2.71	1.39	1/5
Ex manager of state firm	666	.62	.48	0/1
Labor quality as problem	662	3.71	1.35	1/5
Courts	565	3.21	.83	1/5
Trust	640	1.8	.66	1/4
General corruption as problem	613	3.31	1.38	1/5
% change in sales (last 24 months)	666	44.57	16.66	−50/200
Access to credit as a problem	629	3.43	1.48	1/5
Competition as a problem	657	3.37	1.35	1/5
Invest in last 2 years	660	.55	.49	0/1
New building last 2 years	658	.26	.44	0/1
Plan new invest in coming year	645	.40	.49	0/1