Are Reputation and the Rule of Law Complements or Substitutes?

Evidence from Survey Experiments in Russia

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Abstract

Are private institutions, such as reputation, and public institutions, such as courts, complements or substitutes? Some argue that trust-based social networks that rely on reputation sap the ability of state agents to provide public goods, while others argue that strong reputation-based social networks are the key to improving state governance. Survey-based experiments conducted in Russia in 2005 and 2008 that manipulate the reputation of business partners and the ability of firms to use courts indicate that reputation has a powerful impact on trade. Courts also influence the decision to trade, but their impact is weaker. In addition, evidence from a survey experiment and a multivariate analysis finds that good courts and a good reputation are complements rather than substitutes. By using a survey-based experiment to manipulate reputation and the quality of courts, this essays mitigates endogeneity and unobservable selection problems that plague many studies of institutions.

I thank the National Council on Eurasian and East European Research, the Mershon Center of The Ohio State University, and the Center for International Business and Research at Columbia University, and the William Davidson Institute at the University of Michigan for generous funding of this project and Sigura Fumikazi, Alexei Grazhdankin, Ichiro Iwasaki, Rick Herrmann, Stan Markus, Will Pyle, Kira Sanbonmatsu, and Andrei Yakovlev for comments.

Who steals my purse steals trash; 'tis something, nothing;
'Twas mine, 'tis his, and has been slave to thousands;
But he that filches from me my good name
Robs me of that which not enriches him
And makes me poor indeed.

William Shakespeare "Othello" (3.3.180-86)

I don't give a damn 'bout my reputation.

Joan Jett

Are public institutions that rely on state sanctions, such as courts, or private institutions that rely on non-state sanctions, such as reputation, more potent spurs to trade?[1] Are reputation and courts complements or substitutes? How valuable is a good reputation? Answers to these questions have important implications for transition and developing countries where many have cited weak institutions - both private and public - as a primary obstacle to economic development and political stability. Some argue that private institutions, like trust, social networks, and reputations are essential to protecting property (De Soto 1989; 2000). Even the most capable state lacks the resources to resolve every dispute over property rights, and most states in the developing and transitional word are quite incapable. Others suggest that public institutions are central to protecting property rights (North 1981; Rauch and Evans 2008). State-backed adjudication and enforcement provides economies of scope and scale that private institutions simply cannot match.

[1] Less benignly, private protection organizations that use threats of violence to enforce trade contracts also a staple of life in many countries. I deal with these issues only tangentially here. See Hendley et al. (2000); Frye and Zhuravskaya (2000) Varese (2002); Volkov (2002); and Frye (2002).

These questions also inform a central debate on state/society relations. Some claim that trust-based social networks that rely on reputation sap the ability of state agents to collect taxes, deliver justice, and provide public goods (Migdal 1988; Frey 1997). Others argue that strong networks based on social trust are the key to improving the quality of governance by state officials (Putnam 1994). Whether private and public are complements or substitutes is a central concern in public policy and academia.

Answering these questions is challenge. First, studies of the impact of institutions on property rights often run up against an endogeneity problem. To identify the independent effect of an institution, the institution itself should be uncorrelated with other factors that may influence the outcome (Acemoglu, Johnson, and Robinson 2001). For example, the strength of private institutions, like reputation, should be uncorrelated with public institutions, like courts. However, in practice the two factors may be jointly determined which makes it difficult to identify the independent impact of each of these factors.[2]

Second, as many have noted, analyzing the impact of courts on behavior by using data about the use of courts is often helpful, but can be problematic because only a small number of cases with specific features end up in court (Macauley 1963; Hendley et al. 2001). Drawing inferences from a sample of court cases can produce insightful analyses of cases that end up in court, but are less useful for making generalizations about the impact of courts on behavior in other cases because they miss exchanges in which both sides hold up their end of the contract. This unobserved selection problem also leads us to miss cases in which contracts are violated, but the aggrieved party does not turn to the courts.

[2] Multivariate regression is one potential solution, but measurement issues and model specification invariably provoke debate. Instrumental variable regression is another potential answer, but finding valid instruments is difficult (Greene and Gerber 2002: 809).

Third, few studies capture the size of the deterrent effect of public and private institutions on behavior. Effective courts and social networks may deter violations in the first place and thereby encourage trade. If we only examine disputes or violations of contracts, we fail to identify the important role of courts and reputation may play in promoting trade by deterring violations in the first place. This is important because in many settings businesses are reluctant to use courts (for the US, Macauley 1963; for Japan, Haley 1978; for Europe, Arrighetti, Bachman, and Deakin 1997).

This essay begins to addresses these potential shortcomings by using survey-based experiments that manipulate reputation and the quality of courts and a multivariate analysis of survey responses to explore how public and private institutions protect property rights to trade. The survey-based experiment helps to mitigate the endogeneity problem by varying the quality of courts and reputation and then measuring responses. Both the experimental analysis and the regression analysis address the selection and deterrent problems of institutional analysis by examining how variations in the quality of courts affect the propensity to trade prior to a dispute. Here I present four results from two surveys of businesspeople conducted in Russia in 2005 and 2008. First, reputation provides a powerful stimulus to trade. A good reputation provides a greater boost to trade than does a 15 percent discount in price. Many studies recognize the importance of a good reputation for trade, but this essay identifies the magnitude of the impact of reputation.

Second, "word of mouth" and the "local press" are equally powerful in conveying information about a firm's reputation. This result is surprising given that most observers emphasize the importance of personal networks rather than the free press in Russia as a source of credible information about business practices (Ledeneva 2006).

Third, state-run courts promote trade between firms. While Russia's courts are often rightfully depicted as weak, the evidence here suggests that nonetheless firms that have more confidence in state courts of arbitration are more likely to engage in trade than those who have less confidence in courts.[3] At least in the run of the mill disputes between firms analyzed here, the state courts of arbitration have an important influence on property rights.

Fourth, both experimental evidence and regression analysis indicate that courts and reputation are better seen as complements that reinforce each other than substitutes that undermine each other. That is, reputation is a more potent stimulus to trade in the presence of strong courts. Thus, reliance on reputation and private norms is not a sign of weak state institutions as is commonly argued. Indeed good reputations and strong state institutions appear to reinforce each other.[4] This suggests that strategies to bolster the security of contracts will benefit dramatically by not only improving public institutions, such as courts, but also by strengthening private institutions, such as reputation.

Many studies have analyzed the spectacular violations of the property rights of strategically important firms in the natural resource sectors in Russia, but here the focus is on non-strategic firms involved in everyday disputes. The findings here tell us little about disputes involving strategic firms, but non-strategic firms employ the bulk of the population in Russia, provide more than half of GDP, and are critical to efforts to diversify the economy away from the natural resource sectors. Thus, these firms merit attention.

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[3] Several studies conclude that state courts of arbitration that resolve business disputes between firms and between firms and state officials work better than the courts of general jurisdiction that handle other types of disputes, but this distinction is often lost in discussion of the quality of the rule of law in Russia (Hendley et al. 2001; Frye 2004).

[4] The analyses only focus on the ability of the courts and reputation to promote trade prior to a dispute and say nothing about whether courts and reputation are substitutes or complements after a dispute occurs.

1. Public and Private Institutions

The exchange of goods and money invariably creates a problem.[5] Unless goods are exchanged simultaneously and quality can be determined on the spot, the party who gives up control of their assets first becomes vulnerable to breach. Sellers who receive payment may abscond with the funds without delivering the good, while buyers who receive the good before payment, may decline to send the money. As each party can anticipate the other's behavior, both sides are likely to decline to trade and miss an opportunity for potential gains.[6] To capture these gains societies have developed a rich variety of private and public institutions that sharpen incentives to trade. Countries that create institutions to prevent disputes and promote trade most efficiently have typically been at the frontier of economic development (North 1990; Knack and Keefer 1995; Acemoglu, Johnson, and Robinson 2001). All societies rely on a mix of private and public institutions to promote these types of exchange and scholars debate the relative importance of each. Public institutions which ultimately rely on state sanctions have the advantage of economies of scope and scale in organizing the coercion necessary to sanction violators of property rights. Few dispute that the development of capable public institutions such as the state is central to economic development (North 1981).

In recent years, however, scholars have paid increasing attention to the role that private institutions in which bilateral or social sanctions play in governing a wide range of trading relationships. Williamson (1985) argues that private firms have considerable scope to design bilateral private institutions to support trade without recourse to state institutions.

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[5] These problems are hardly unique to the economy. Congressional representatives exchanging support for bills introduced sequentially or parents organizing car pools for their children face similar incentives.

[6] The famous debate over the timing of the payment and receipt of the chair in Ilf and Petrov's classic *Twelve Chairs* highlights this problem. "*Den'gi utrom i stulya vecherom*?"

Geertz (1978) identifies information relayed through gossip and social sanctions as critical to promoting trade in the bazaars of Morocco. Others point to social networks, business organizations, professional associations, and ethnic networks that provide means to sanction non-compliance and thereby promote cooperation without relying on the state for enforcement (Granovetter 1985; Milgrom, North and Weingast 1990; Ellickson, 1991; Ostrom 1992; Bernstein 1992; McMillan and Woodruff 1999).[7] Because even the best-governed state lacks the resources to resolve every potential dispute, private solutions to protecting property and promoting trade are widespread (c.f. Macauley 1963).

Such private mechanisms may have advantages over public institutions, particularly where the latter function poorly. Market participants may have more expertise than judges and they can take advantage of information that cannot be used in court (Charny 1990; Johnson, McMillan and Woodruff 2002b: 229). Over the long run the state offers economies of scope and scale that private institutions cannot match, but which is a more potent stimulus to trade in a given setting is not immediately clear.

Observers of Russia have begun to contribute to this debate by studying private and public institutions that shape trading relations. Some have identified trading networks based on long-standing social ties and a concern for reputation as key factors in maintaining production and trade (Gerber and Kharkhodin 1994; Sedaitis 1994; Raiser 1999; Ledeneva 1998, 2006; Hendley et al. 2000; 2001; Frye 2000; Gaddy and Ickes 2003; Pyle 2005). Others have found that state courts in Russia are used more frequently and are more effective than is commonly appreciated (Hendley et al. 2000; 2001; Shvets 2003; 2005; Simachev 2003; Hendley 2004; Frye 2004, but see Hellman et al. 2003; and Berger 2004). As in other settings,

[7] Elsewhere in Eastern Europe, Stark (1998) and McDermott (2002) emphasize the role of social networks.

however, there is considerable debate about which is more important in protecting rights to trade.

Institutions as Substitutes

Another important debate examines the interrelationship between private and public mechanisms for preventing disputes and promoting trade. One view argues that private and public institutions serve as substitutes. A reliance on private institutions "crowds out" demand for state institutions and reduces the resources available to state agents (Frey 1997). When businesspeople in the private sector can overcome the problems that plague trade using private means, like reputation or trust, they express less demand for capable state institutions.[8] Rather than devoting resources to develop the state, businesspeople will invest in the creation of powerful private organizations to support trade. Bernstein (1992) finds that the traders in the tight-knit community of Orthodox Jewish diamond traders in New York City opposed state regulation even when offered and instead preferred to rely on private means to resolve disputes. Ellickson (1991) argues that ranchers and farmers in Shasta County California used private understandings of the law rather than public institutions to resolve disputes. On this view, powerful social networks reduce demand for state institutions that resolve disputes.

On a macro-level, countries with strong social institutions that provide many forms of public goods often have difficulty developing capable states. Most prominently, Migdal (1988) characterizes these polities as having "strong societies and weak states." States and social organizations consistently compete for the authority to make rules for society and

[8] This is a common assumption in public models that require economic agents to invest in either the public or private economy. Investing in the public economy generates a good equilibrium where firms pay taxes and use courts, while investing in the private economy leads firms to avoid taxes and use private protection rackets. See for example, Johnson, Kaufmann and Shleifer (1997).

where social organizations are imbued with dense networks of trust they may have advantages over the state. Thus, the micro-level decision studied here may have implications for larger processes at the level of the state and society. The substitution argument suggests that strong private institutions that support trade should be associated with weak state institutions and vice-versa.

Institutions as Complements

A competing argument suggests that private and public institutions are complements. That is, strengthening one increases demand for the other. Strong private institutions and strong public institutions go hand in hand in promoting trade. North (1990: 46) argues that "public rules can complement and increase the effectiveness of private constraints." More broadly, capable state institutions may make reputation and social trust more effective by sharing information about other social actors (Levi 1998; Frye 2000). Moreover, strong social institutions that rely on reputation may help private agents overcome collective action problems and hold public officials accountable and thereby increase the effectiveness of state institutions (Putnam 1994). Finally, capable private institutions that support trade may ease the burden on state officials by reducing the number of disputes than end up in court. This view suggests that the development of private and public institutions should be mutually reinforcing (Putnam 1994).[9]

The relationship between private and public institutions has important ramifications for understanding the development of state capacity. If the use of reputation to promote social cooperation underpins state capacity, then it may be worthwhile to use scarce foreign aid to develop social organizations that promote trust and transmit information about the

[9] There is a growing literature on laboratory experiments that assess the impact of public and private institutions on the propensity to trade. For a good example, see Lazzarini et al. (2004).

reputation of social actors. If, however, a reliance on networks of reputation to support trade undermines state capacity, then such strategies require difficult decision about the tradeoffs between public and private institutions.[10]

2. Survey Descriptions

In 2005, I commissioned survey of 660 company managers in a diverse group of 11 of Russia's (then) 89 regions to address these and other questions.[11] In addition, I followed

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[10] Given the importance of the issue and the advantages of studying it in a transition setting, it is not surprising that scholars have begun to explore this topic. Hendley, Murrell and Ryterman (2000) conducted an innovative study of 328 business managers in six cities in Russia in 1997 which explored their strategies for resolving disputes. Respondents were asked to rate the "importance of each of the following methods for your firm" for resolving disputes on a scale of 1-10 where the rating should "reflect both the frequency of use and effectiveness" of the different mechanisms. Respondents rated negotiations as a 7.39 and arbitration courts as a 5.40 on this ten-point scale. The authors found that three-quarters (76.4%) of firms facing disputes with suppliers used negotiations to help resolve the dispute, and about one-quarter (25.5%) turned to state arbitration courts. In addition, they found little evidence of complementarities among negotiations, private meetings between firm representatives, and the use of courts. Hendley and Murrell (2003) repeated this question in a study of 254 companies in Romania in 2001, and again, found little evidence of complementarities among public and private institutions. Johnson, McMillan and Woodruff (2002) in a 1997 study of 1500 medium-size manufacturing firms in five postcommunist countries find that private institutions, such as personal relationships are a predominant form of contracting, but that courts play a critical role in promoting trade as well. In a related work based on the same survey, McMillan and Woodruff (2000) found that social networks and gossip substitute for public legal institutions, but that business networks and trade associations complement public legal institutions. Pyle (2005) uses data from the Johnson, McMillan and Woodruff survey to find that business organizations help resolve contracting problems, particularly when trading partners are located in other regions. In a study of five markets in Moscow in the 1990s, Frye (2000) finds that when state policy lowered the costs of sharing information sufficiently, brokers created organizations that relied on reputation to support exchange and served as substitutes for state courts.

[11] In 2005, the overall response was rate 53 percent for firms contacted by the interviewer. 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. Respondents were asked a range of questions about the legal and business environment. Cites in the sample include Moscow, Nizhnii Nivgorod, Volgograd, Smolensk, Novgorod, Ekaterinburg, Voronezh, Rostov, Ufa, Khabarovsk, Tula, and Omsk. At least one region from each of Russia's 7 "super-regions" was included in the sample with most firms coming from the more heavily

up with a survey of 500 businesspeople in 2008 in 8 of the 11 regions. Interviewers from the Levada Center spoke face to face with company managers. Chief executive officers, chief financial officers, and chief legal officers were included as potential respondents and interviewers spoke with only one person per firm. To give some sense of the data, I report some descriptive statistics from the 2005 survey. The distribution of firms in the sample roughly mirrors the national population. Most managers (79 percent) were male and more than 90 percent had college-level degrees. The age of the average respondent was 47. The average (mean) firm included 727 works and ranged from a minimum of 4 to a maximum of 70,000. Half the respondents headed firms with fewer than 125 workers and one-quarter headed firms with fewer than 50 workers. Twelve percent of the firms were majority state-owned and 59 percent had undergone some form of privatization. Levels of ownership concentration were high. In 49 percent of the firms more than half of the shares were owned by a single stakeholder. Only five percent of firms had foreign ownership.

Focusing on reputation and courts in Russia is important as business people rely heavily on both bilateral negotiations and courts to help resolve disputes. Seventy-one percent (265 of 372) of respondents that had at least one dispute with a business partner in the last two years turned to a court to help resolve it.[12] Moreover, firms were relatively

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populated European part of Russia. The survey included firms from 23 different economic sectors as categorized by the State Statistical Agency and ranged from industrial giants in metals and energy to retail trading firms and light industry. The sample excluded firms in agriculture, communal services, and health and social services. Firms were chosen using a stratified random sampling technique. Researchers from the Levada Center stratified the sample by size and sector to mirror the population of firms in each region and firms were selected at random from within each of the strata. Each firm within each stratum had an equal probability of being included in the sample.

[12] Here courts refers to state arbitration courts which are the main public fora for resolving economic disputes between private actors and between private and state actors. State arbitration courts are located in the capital city in almost each of Russia's regions.

successful in recouping their losses when they used courts. In almost seventy percent of the cases, the victors in court cases recouped at least half of their losses. Contrary to popular wisdom, courts are rather commonly used in Russia (but see, Hendley et al. 2000; 2001). In addition, negotiations are prevalent. Eighty-eight percent of respondents (329 of 372) that had at least one such dispute engaged in negotiations with the other side. As reputation is an important element of negotiations there is much to be gained in studying the role of the former in the latter. Only 19, 16, and 15 percent of respondents turned to influential businesspeople, the security forces, or the executive branch, respectively, to resolve a conflict in the last two years. Moreover, as Table 1 below indicates, when respondents used courts and negotiations, they were better able to recoup their losses than when turning to the security forces or an "influential businessman." Of course, respondents may only turn to the security forces or another businessman in especially difficult cases when other solutions have failed so their ineffectiveness may be due to a selection bias.

We did not ask respondents whether they used criminal organizations to resolve disputes, but when we did ask how often do "firms like theirs" use criminal organizations to resolve disputes. Only ten percent of firms said that this happened in more than half of conflicts. Courts and negotiations are by far the most common means of resolving disputes in Russia and merit further examination

Table 1. Effectiveness of Dispute Resolution

When you have had a conflict with a business partner what steps did you take and how effective were these steps?

The scale measures the amount of damages returned where 1 = 0 and 5 = 100

	Method Used in the Dispute Percent Reporting			
Percent of damages returned on average	Negotiations N=360	Court N=324	State Security Forces N= 218	Influential businessperson N=210
Almost nothing 0 %	21	14	67	46
About 25%	16	13	16	24
About 50%	19	25	9	17
About 75 %	19	22	6	8
Almost everything 100%	24	27	3	6

Data from 2005 Survey.

A Methodological Concern

Institutional analyses have made important advances in recent years, but often confront endogeneity problems.[13] If private and public institutions that support trade are jointly determined, then it is often difficult to draw clear inferences about the extent to which each factor is shaping behavior. A researcher may witness that social trust is high, that courts work well, and that individuals comply with contracts. The covariance of public and private institutions makes it difficult to identify the relative effects of each factor in supporting trade. This makes causation difficult to detect in cross-sectional survey analyses.

[13] See Acemoglu, Johnson, and Robinson (2001) and Przeworski (2003) for more on this point.

In addition, cross-section analyses can identify correlations between variables controlling for other factors, but are less useful for making causal claims (Kramer 1983).[14]

This work uses a survey-based experiment to identify relationships among reputation, courts, and the propensity to trade. Random assignment should ensure that variables that may influence the responses are distributed roughly equally across each version of the question and thus should not be able to account for differences in responses between versions of the question. Survey based experiments can alleviate the endogeneity problem by ensuring that public and private institutions do not co-vary.

3. The Value of Reputation

To begin, I explored the value of a good reputation relative to a deep discount in sale price.[15] In the 2008 survey, half the managers were asked whether they would accept an offer to buy a good at a price 5 percent below the market price, and half were offered the same good at a 20 percent discount relative to the market price. In addition, half the managers were told that the seller had a good reputation and half were given no additional information about the reputation of the seller. This set-up allows us to compare the impact of a reputation for honesty relative to not having any information about the reputation of a trading partner. In addition, it permits comparison of the importance of reputation relative to a steep discount in price.

[14] The problem of causal direction is relevant in this paper, as in Kramer (1983), because decisions to invest may color perceptions of the institutional environment rather than the other way around.

[15] These results come from the 2008 survey.

More specifically we asked:

Reputation and Price Discounts

Let's say that a firm with which you had not worked before offered to sell you a high quality product at a price [**5/20**] percent lower than the market price and asked for 50 percent prepayment.[**XXX/In addition this firm has a good reputation in the region in that it almost always fulfills its contractual obligations.]**[16] Would your firm be willing to accept this offer?
1) Yes 2) Probably Yes 3) Probably no 4) No

Table 2 reports the percentage of respondents willing to accept the offer under the four experimental conditions. Here responses of yes and "probably yes" are reported.

Table 2. The Value of Reputation

	No Information About Reputation	**Good Reputation**
5 percent discount	63 (n = 117)	77 (n = 131)
20 percent discount	60 (n = 110)	83 (n = 145)

Percent responses answering "yes" or "probably yes." N = number of observations. Don't knows are counted as "no" responses when calculating the percentages. Data from 2008 Survey.

Having a good reputation is a quite valuable asset. A seller can with a good reputation can increase the percentage of buyers accepting her offer of a five percent discount to the market price by 14 percentage points compared to a similar offer made by a seller about whose reputation little is known (63 percent versus 77 percent). In addition,

[16] Here XXXX indicates that the respondent does not receive any information about the seller's reputation.

with a price 20 percent lower than the market, a seller with a good reputation can increase the number of buyers accepting the offer by 23 percentage points (60 percent versus 83 percent).

It is interesting that when information about the reputation of the seller is not provided reducing the price from 5 to 20 percent below the market does not lead to more acceptances of the offer. It seems that a discount of 20 percent to the market, if anything, produces skepticism about the credibility of the offer and reduces the likelihood that a buyer will accept. However, when the seller has a good reputation, a similar discount is associated with a 6 percentage point increase in the likelihood that the offer will be accepted. Thus, having a good reputation is a more potent stimulus to trade than is a discount of 15 percent of the market price. In addition, price discounts have a larger impact when the seller has a good reputation.

The Sources of Information about Reputation

There is considerable agreement that reputation is an important factor in promoting trade in Russia and other developing economies, but less is known about how different sources of information about a reputation influence outcomes. To explore this issue, I conducted an experiment in 2008 that manipulates whether the source of information about a firm's reputation is "the local press" or an "old business acquaintance." I also manipulated whether the information conveyed led the respondent to believe that the seller had either a good or a bad reputation for abiding by its contractual obligations. More directly, we asked:

Gossip, the Press, and Reputation

Let's say that a company from another region with whom you had not worked before offered to sell you a product that you need for 10 percent less than the market price. Recently you learned [**in the local press/from an old business acquaintance**] that the company had [**always/not always**] fulfilled its obligations to other firms in your region. Would your firm accept this offer?
1) Yes 2) Probably Yes 3) Probably No 4) No

The results from Table 3 indicate somewhat surprisingly that "the local press" and "an old business acquaintance" are equally powerful sources of information about a firms' reputation. When the seller has a bad reputation and the source of information about the reputation is the local press, only 16 percent of respondents accepted the offer, but this figure was only 15 percent when the source of information is an old business acquaintance. Similarly, there are only minor differences in the acceptance rate when the seller has a good reputation (67 percent for the local press versus 69 percent for an old business acquaintance).

Table 3. The Sources of Reputation

	Bad Reputation	**Good Reputation**
Local Press	16 (n = 124)	67 (n = 120)
Old Business Acquaintance	15 (n = 131)	69 (n = 128)

Figures represent percent responses "yes" or "probably yes." N = number of observations. Don't knows are counted as "no" responses when calculating the percentages. Data from 2008 survey.

Regardless of the source, sellers with a good reputation were far more likely to have their offer accepted than sellers with a bad reputation (67 percent versus 16 percent if the source is the local press and 69 percent versus 15 percent if the source is an old business acquaintance). The impact of reputation is much larger than in the preceding experiment. This may be a reflection of the comparison group. In this experiment, the impact of a seller with a good reputation is relative to a seller with a bad reputation, but in the preceding experiment the impact of a seller with good reputation is relative to a seller having no reputation. This suggests that the costs of having a bad reputation appear to outweigh the benefits of having a good reputation.

The Interaction of Public and Private Institutions

I explored the relative impact of reputation and the use of courts on the propensity to trade by including an experiment that randomly assigned the reputation of the buyer and the ability of the seller to use the courts. Interviewers asked each respondent one of the four versions of the following experiment.

Substitutes or Complements

> Let's say that a retail trading company is planning to place a large order at a large manufacturing company at an acceptable price. The retail trading company has a **[good reputation in the region in that it always fulfills its contracts/a bad reputation in that doesn't always fulfill its contracts].**
>
> What do you think, will the manufacturing firm accept this order bearing in mind that it has almost **[always/never]** been able to use the state courts of arbitration to protect its interests? If yes, then with what conditions?
>
> 1 Refuse the order
> 2. Accept the order with conditions, such as prepayment or credit check
> If prepayment, then how much? ___
> Only with credit check
> 3. Accept the order without conditions

Interpreting the answers requires some clarification given the variance in the size of prepayment requested by the manufacturing firm. I code requests for prepayment greater than 50 percent as equivalent to "refusing the offer" as this indicates that the seller is unwilling to assume the bulk of the risk of engaging in this trade.[17] Requests for prepayment less than 50 percent and acceptances pending a credit check are treated as conditionally accepting the deal as in these cases the seller is quite vulnerable to breach by the buyer. Table 4 reports the responses for each of the four different versions of the question. For example, in the best-case scenario reported in Condition 1 in the top rows of Table 4 in which the buyer has a good reputation and the seller has almost always used the courts successfully in the past, twenty percent of respondents rejected the offer outright, while most of the respondents (60 percent) accepted the offer with conditions and twenty percent accepted the offer without conditions. In the worst-case scenario reported in Condition 4 in the bottom rows of Table 4 in which the buyer has a bad reputation and the seller has not used courts successfully in the past, 60 percent of respondents rejected the offer outright; 37 percent agreed conditionally, and only 3 percent of respondents agreed without conditions. These figures highlight the difficulty of doing business in contemporary Russia.

[17] Other coding schemes change the raw figures in each cell, but produce substantively similar findings. Coding all prepayments as conditional accepts or coding only 100 percent prepayments as refusals still leads to the conclusion that reputation is a powerful predictor of trade and courts are associated with more trade only when reputation is weak. The responses asking for prepayment cluster around 50% and 100%.

Table 4. Propensity to Trade

	Percent	N
1. Good Reputation/Can Use Courts		
Refuse	20%	33
Accept with conditions	60%	99
Accept without conditions	20%	33
N=165		
2. Good Reputation/Cannot Use Courts		
Refuse	25%	43
Accept with conditions	56%	97
Accept without conditions	19%	32
N= 172		
3. Bad Reputation/Can Use Courts		
Refuse	46%	76
Accept with conditions	47%	79
Accept without conditions	7%	11
N= 166		
4. Bad Reputation/Cannot Use Courts		
Refuse	59%	96
Accept with conditions	38%	63
Accept without conditions	3%	4
N=163		
5. ANOVA F(3, 663 obs) = 31.52 , p<.001		

Data from 2005 Survey.

The results in Table 4 provide strong evidence that reputation by itself influences the propensity to trade. For example, compare the responses in Condition 1 and Condition 3. In both cases, the seller has used courts successfully in the past, but in Condition 1 the seller has a good reputation and in Condition 3 the seller has a bad reputation. When the buyer has used courts in the past, moving from a bad reputation to a good reputation decreases the outright refusals from 46 percent to 20 percent of responses and increases the "accept without conditions" responses from 7 percent to 20 percent. The impact of reputation on the probability of making the trade is even larger when the seller has been unable to use the

courts in the past, as indicated by the responses in Conditions 2 and 4. The impact of reputation on trade in this experiment is statistically significant [F (1,664 = 86.45, p<.0000)]. Moreover, the size of these increases is substantial. Moving from a bad to a good reputation when the seller has been unable to use courts decreases the outright refusals by 34 percentage points – from 59 percent to 25 percent of respondents.

Next, consider courts. Comparing responses in Conditions 1 and 2 indicates that when the buyer has a good reputation, the ability of the seller to use courts increases the propensity to trade only at the margins. For example, moving from Condition 1 when the seller has used courts successfully to Condition 2 where the seller has not, increases the outright refusals from 20 percent to 25 percent and has little impact on the accept unconditionally responses (20 percent versus 19 percent). Courts play a more prominent role when the buyer has a bad reputation. In Condition 4 where the buyer has a bad reputation and the seller has been unable to use the courts, 59 percent of responses were outright refusals, 38 percent of responses were accept with conditions, and only 3 percent of responses were accept unconditionally. Moving to Condition 3 where the buyer still has a bad reputation, but the seller has used courts successfully decreases the outright refusals to 46 percent, increases the conditional acceptances to 48 percent and increases the accept without conditions to 7 percent. The impact of using the courts successfully on the probability of trading is statistically significant [F(1, 664) = 4.81, p = .0286].

Table 5 provides a different perspective on the same data. Here I code the responses as follows: reject the offer equals 1, accept with conditions equals 2, and accept without conditions as 3 and calculate the mean of the responses in each of the four versions of the question.[18] This provides information on the changes in the mean response across each of

[18] The responses are not strictly ordinal, but are treated as such for presentation.

the four experimental conditions. Higher scores indicate a greater propensity to trade and more confidence in the security of property rights.

Table 5. Courts and Reputation

	Can Use Courts	Cannot Use Courts
Good Reputation	2.00 (.64)	1.94 (.66)
Bad Reputation	1.60 (.61)	1.43 (.55)

Data from 2005 Survey
Table reports mean responses where the propensity to trade is coded as follows:
Refuse = 1
Accept with Conditions = 2
Accept without Conditions = 3

In the case at hand, a good reputation is a strong stimulus to trade regardless of the quality of courts. Confidence in the courts also has a statistically significant impact on the propensity to trade, but the impact is less pronounced. In addition, Table 6 which reports an analysis of variance finds that the interaction of reputation and courts is also statistically significant which, in combination with the results from Table 5, suggest that the two are complements rather than substitutes.

Table 6. Analysis of Variance

	Partial SS	MS	Prob >F
Reputation	1.43	1.43	.07
Courts	2.25	2/25	.02
Reputation*Courts	3.12	3.12	.01
Model	3.25	1.08	.06
Residual	282.37	.43	
Total	286.62	.43	
N=	666		
R.sq	.01		
Root MSE	.65		

These results are important because the experimental approach helps to mitigate endogeneity and selection issues, but are vulnerable to charges that the responses to the hypothetical scenarios may not be valid measures of actual behavior. Whereas this analyses examined how managers responded to hypothetical situations, the next analyses consider how reputation and perceptions of courts have shaped the reported behavior of managers.[19]

4. Reputation, Courts and Giving Credit

In this section, I examine how expectations that other managers will punish trading partners with a bad reputation influence the probability of giving credit. In addition, I explore whether reputation and perceptions of the quality of courts are better seen as substitutes or complements. Examining the decision to give credit has important theoretical implications (McMillan and Woodruff 1999; Johnson, Macmillan, and Woodruff 2002b). Whether firms give credit to other firms is an important indicator of confidence that their rights will be protected. The giver of credit suffers an up-front loss for the prospect of a

[19] In 2008, I repeated the survey experiment, but instead of comparing the impact of a good reputation versus a bad reputation, I compared a good reputation versus no information about the potential trading partner's reputation. The impact of reputation is smaller, but the overall pattern of results holds. This suggests that the punishment of a bad reputation is more powerful than the reward of a good reputation. See Appendix 3.

greater return in the future and is vulnerable to violation of breach by the debtor. In addition, by promoting exchanges that otherwise would not take place, the creation of institutions to support the expansion of credit plays a critical role in economic development (North 1990; Greif 2004). Using data from the 2005 survey, I create four measures of credit-giving that serve as the dependent variables in the statistical analysis. The first indicates whether respondents gave credit to either suppliers or buyers. Forty-nine percent of respondents said that they had done so. Second, I analyze whether respondents gave credit to buyer (29 percent). Third, I explore whether respondents gave credit to a supplier (43 percent). Finally, I examine whether respondents gave credit to no one, to either a buyer or a supplier or to both.

Measuring reputation is a challenge. Borrowing from MacMillan and Woodruff (1999), I created a variable, *Reputation*, based on the responses to the question reported below in Table 6. This question asked "What do you think, what steps will other businesses in your region take if it became known that a firm has violated its obligations toward other firms in your region?"

Table 6. Measuring Reputation

What do you think, what steps will other businesses in your region take if it became known that a firm has violated its obligations toward other firms in your region?

	Yes (%)
1) Do Nothing	27.5
2) Change terms of relationship, e.g., 100% prepayment	51.4
3) Gradually unwind the relationship	19.5
4) Immediately stop the relationship	1.7

N = 590

Just over half the respondents (51.4%) said that other firms were likely to insist on 100% prepayment, among other means. Only a handful of respondents expected another businessperson to end the relationship immediately, but most expected their counterparts to change the terms on which they traded with a known offender. This variable represents the extent to which respondent expected other managers in the region to sanction a violator and ranges from 1 to 4 with 1-4 with a mean of 1.95 and standard deviation of .73. This measure offers a fairly precise treatment of reputation by focusing on expectations about the behavior of other businesspeople in the region.[20]

I include a variable, *Courts*, which measures whether a respondent rated the quality of the state arbitration court in their region as satisfactory based on a scale of 1-5. The mean value here is 3.2 with a standard deviation of .83. I also create an interaction term by multiplying *Reputation*Courts*. This variable allows us to examine whether the impact of reputation on the probability of giving credit differs when courts are strong and when they are weak. This variable should help determine whether reputation and courts are substitutes or complements.

Other factors may also influence decisions to give credit. I add a dummy variable for members of business organizations because they may be more likely to give credit, if only to other members of the organization. I add dummy variables for wholly state-owned firms; dummy variables for each of 8 different economic sectors and each of 10 regions in which a firm is located; and a continuous variable (logged) for the number of employees in a firm.[21] To control for the personal characteristics of the manager I also add variables for the age, gender, and education level of the respondent. I added a dummy variable for firms who sell

[20] Measures of reputation often only bear a faint resemblance to the concept. In some cases, it is reduced to long time-horizons, in other cases it is a broad measure of social trust.

[21] The excluded category is private firms.

outside most of their goods outside the region to account for geographic distance as a predictor of giving credit (Pyle 2005). Finally, to capture the performance of the firm, I included a variable measuring whether the firm had a profit or not in the previous year. I estimated a probit model with robust standard errors.

Table 7. Reputation and Giving Credit to a Supplier

	4.1 Supplier or Buyer Credit	4.2 Buyer Credit	4.3 Supplier Credit	4.4 Supplier and Buyer Credit
Reputation	-.60*	-.43	-.37	-.40
	(.31)	(.32)	(.30)	(.28)
Courts	-.44**	-.39*	-.34*	-.36**
	(.21)	.(21)	(.20)	(.255)
Reputation*Courts	.21**	.17*	.16*	.17**
	(.09)	(.10)	(.09)	(.08)
State-Owned	-.49**	-.59***	-.28***	-.48**
	(.24)	(.24)	(.26)	(.24)
Age	-.02**	-.02**	-.01*	-.02***
	(.01)	(.01)	(.00)	(.01)
Education	.30**	.33**	.18	.26*
	(.12)	(.125)	(.12)	(.10)
Employees, logged	.00	.02*	.01	.00
	(.00)	(.01)	(.01)	(.00)
Business Organization	.29**	.19	.37***	.30**
	(.13)	(.13)	(.14)	(.12)
% Sales in Region	.10	.06	.30	.21
	(.32)	(.31)	(.31)	(.39)
Profit in 03	.18*	.10	.16*	.14
	(.09)	(.09)	(.19)	(.08)
Male	.25	.20	.04	.14
	(.17)	(.17)	(.17)	(.16)
	Probit	Probit	Probit	Oprobit
Wald Chi2	117.78	110.15	77.90	122.90
Prob >chi2	.0000	.0000	.0000	.0000
Pseudo R2	.19	.18	.12	.12
N	489	489	491	489

The excluded property category is private firms. Eight sectoral dummies and 10 regional dummy variables are included, but not reported. *p<.10, ** p<.05, ***p<.01. Data from 2005 survey.

In Model 4.1 the dependent variable takes a value of 1 if the respondent had given credit either to a supplier or a buyer in the last two years. The results indicate that the impact of *Reputation* on the probability of giving credit to either a customer or a supplier is conditional on the perceived quality of courts. When courts are perceived to be capable, each increase in confidence that others punish violators is associated with higher levels of credit giving as indicated by the coefficient on *Reputation*Courts*.

Thus, businesspeople perceive reputation and courts as complements rather than substitutes when making decisions to extend credit. In addition, older managers were less likely to give credit while better-educated managers and members of business organizations were more likely to do so. Compared to the managers of new private firms, managers of state-owned firms were significantly less likely to give credit. In Models 4.2 and 4.3 I repeat the analysis using the probability of giving credit to a buyer as the dependent variable and a supplier as the dependent variable, respectively. In Model 4.4, I create a three-category dependent variable that measures whether respondents gave credit to customers, suppliers or to both, and then estimate an ordered probit model. These results appear to be robust to a range of codings of the dependent variable of interest.

To give some sense of the substantive effects of the analysis depicted in Table 7, I simulated the impact of reputation on the probability of giving credit conditional on the perceived capacity of the courts using the coefficients from Model 4.4. Holding other variables constant, I varied the level of reputation when courts were perceived to be weak (a value of 1), moderate (a value of 3) and strong (a value of 5). Table 8 presents the results. When *Reputation* is at its lowest value of 1 and *Courts* is at its lowest value of 1, the probability that the respondent did not give credit to anyone is .60 with a confidence interval of 90 percent of [.24-.92]. Increasing the value of reputation from 1 to 3 increases the likelihood

that the respondent did not give credit to .74 [.38-.96]. The confidence intervals are large, but when courts are relatively weak increasing the value of reputation appears to decrease the likelihood of giving credit.

In contrast, reputation appears to have a positive impact on the probability of giving credit when courts are perceived to be effective. When *Reputation* equals 1 and *Courts* equals 5, the probability of not giving credit is .82 [.47-.99], while increasing the value of reputation to three decreases this possibility to .57 [.20-.88]. Again, the confidence intervals are large, but the pattern of responses indicates that, if anything, increasing the value of reputation increases the likelihood of giving credit when courts are perceived to work well, but not when courts work badly.

Table 8 Simulation Results

	Probability of Response	**Courts = 1**	**Courts = 3**	**Courts =5**
Reputation = 1	0	.60 [.24-.92]	.72 [.38-.96]	.82 [.47-.99]
	1	.22 [.07-.32]	.17 [.04.-31]	.12 [.01-.29]
	2	.18 [.01-.46]	.10 [.01-.31]	.06 [.01-.23]
Reputation =3	0	.74 [.37-.97]	.66 [.31-.94]	.57 [.20-.88]
	1	.16 [.03-.31]	.22 [.06-.31]	.23 [.09-.32]
	2	.10 [.06-.32]	.14 [.00-.39]	.20 [.02-.52]

Where = 0 = no credit, 1 = credit to either supplier of buyer, 2 = credit to both, confidence intervals of .9 in brackets

These results are subject to a number of caveats. Like all surveys, the data provide only a snapshot of a fairly dynamic environment. In addition, not all private institutions are alike. Here I focus on reputation as a much-studied phenomenon, but other types of private

institutions may interact differently with public institutions.[22] Moreover, while courts do not appear to be especially powerful in shaping decisions to provide credit, they may be more effective in protecting property rights in other ways. For example, courts may play an even greater role in more complex disputes or in conflicts over sizeable, asset-specific investments. Finally, the results here apply only to run of the mill firms in the manufacturing and the service sector and have little to say about other behavior in other sectors, such as natural resources or agriculture. In addition, the generality of the results merit greater attention. Russia is hardly unique among transition and developing countries in having rather weak public and private institutions, but further study is needed to determine how well these empirical findings generalize to other settings.

These findings are consistent with a critique of "technocratic" strategies for promoting the rule of law and property rights that emphasize strengthening state institutions without taking local private institutions into account (Golub 2006; Upham 2006). This line of argument encourages policymakers to take advantage of local private institutions as an important means for promoting property rights (Qian 2003). This essay not only emphasizes the value of private solutions to help promote trade, it also takes a next logical step by examining how public and private institutions interact to shape property rights.

More generally, this essay answers the call for basic research on the operation of legal institutions in developing and transition countries, especially those who have been the target of intensive efforts to promote the rule of law and property rights. Carothers (2006) rightfully notes that many standard prescriptions to promote the rule of law have remarkably

[22] For example, Frye and Zhuravskaya (2000) and Frye (2002) indicate that private protection organizations substitute for courts when the plaintiff is engaged in illegal activity.

little empirical support in large part due to a lack of basic research.[23] Tellingly, Carothers subtitled a volume of essays on recent work on rule of law reform: *In Search of Knowledge*.

5. Conclusion

Scholars have developed a rich literature on the significance of public institutions, such as courts and bureaucracies for the creation of markets and states. They have also created an impressive body of scholarship on the role that private institutions, such as reputation and trust, play in these processes. However, we know less about the relative importance of public and private institutions or about how these institutions interact in different settings (but see c.f., Kohli and Shue eds. 1994). This drawback is unfortunate as the quality of institutions -- both public and private -- is a critical issue for transition and developing countries in general and Russia in particular. Evidence from a 2005 survey of businesspeople in Russia contributes to these debates. Experimental and cross-section analyses of survey responses indicate that in Russia a good reputation is a potent stimulus to trade, while courts have a less powerful impact on exchange. There is also evidence that good reputations and capable courts are complements rather than substitutes. The impact of reputation on the decision to give credit to suppliers or buyers is significantly stronger when courts are strong than when they are weak. That reputation and courts are mutually supporting is broadly consistent with Putnam (1994), but not Migdal (1988).

This result also suggests that improving public institutions will produce a much greater impact if private institutions are also strengthened. It is the combination of a strong private institution and an effective public institution that dramatically increases the

[23] Carothers (2006:15) quotes one long-time rule of law reform specialist: "We know how to do a lot of things, but deep down don't really know what we are doing."

propensity to give credit. Thus, reform packages that focus on both private and public institutions may be especially effective.

Given the importance of reputation for promoting trade, future research would do well to analyze precisely how reputations travel. How do business elites gain information about contract violations if the disputes do not end up in court? Why are some business elites better informed about the reputations of potential trading partners than others? How do managers verify information about a particular dispute absent an impartial third-party arbiter? These are questions that merit greater attention.

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Appendix I. Descriptive Statistics of Firms in the 2005 Sample

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
College Degree or Equivalent	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%

Data from 2005.

Appendix 2. Disputes Resolution Strategies

What steps has your firm taken in the last two years to defend your legal interests and recover losses during disputes with other firms?

	Percent Yes
Negotiations	88
Used Courts	71
Business Organization	10
Federal Government	15
Regional Government	11
Mayor	12
Siloviki (State Security Forces)	16
Influential Business Person	19
Other	02
Did Nothing	05

Question posed to the 372 respondents who experienced at least one economic conflict in the last two years. Data from 2005.

Appendix III. Good, Bad, and No Reputation

I essentially repeated the last experiment in a survey of 500 firms conducted in 8 regions in Russia in 2008, but rather than telling respondents that a potential trading partner had either "a bad reputation," or a "good reputation" in the region, I told half the respondents that the potential trading partner was "reliable" and the other half of the respondents received no information about the reputation of the potential trading partner. By comparing responses between these two experiments, we can begin to explore whether good reputations have the same impact as bad reputations.

Reputation, Courts, and Trade

Let's say that a firm in retail trade plans to place a big order at a large manufacturing plant in your region at a market price. This retail trading firm recently opened **[XXXXXX./, but in the region it is considered to be a reliable partner**.]

What do you think, will the manufacturing firm accept this trade given than it has **[rarely/often]** been able to defend its interests in the state courts of arbitration?

1) It will refuse the offer
2) It will accept the offer, but only the condition of a prepayment of ____ percent of the order. Please indicate the amount of prepayment
3) It will accept the offer without any prepayment

Table reports the results for each of the four scenarios. For example, when the respondent is given no information about the reputation of the buyer and the seller is not expected to be able to use the courts 22 percent of the respondents said that the manufacturer would refuse the offer outright, 24 percent said that the manufacturer would request at least 50 percent prepayment and 53 percent said that the manufacturer would accept the trade without preconditions.

Reputation and Courts Results from 2008

	2008 Percent	2005 Percent
1. Good Reputation/Can Use Courts		
Refuse	28	20
Accept with conditions	53	60
Accept without conditions	19	20
N=98		
2. Good Reputation/Cannot Use Courts		
Refuse	41	25
Accept with conditions	48	56
Accept without conditions	11	19
N= 103		
3. No Information/Can Use Courts		
Refuse	30	46
Accept with conditions	52	47
Accept without conditions	18	7
N= 94		
4. No Information/Cannot Use Courts		
Refuse	48	59
Accept with conditions	44	38
Accept without conditions	8	3
N=109		

Percentage responses in each category. Demands for prepayment greater than 50 percent are treated as refusals and buyers are assumed to be much less likely to except this offer.

To make the results reported above easier to understand, I recoded the responses.

Results from 2008.

	Seller Can Use Courts	**Seller Cannot Use Courts**
Buyer has good reputation	2.19 (n = 98)	1.69 (n = 103)
Buyer has no reputation	1.87 (n = 94)	1.60 (n = 109)

n = number of observations.

Compared to the results in 2005, we find that the impact of a good reputation relative to no information about reputation is smaller than the impact of a good reputation relative to a bad reputation. But again, on balance, courts and reputation are complements.

Appendix III. Effectiveness of Dispute Resolution

When you have had a conflict with a business partner what steps did you take and how effective were these steps?

The scale measures the amount of damages returned where 1 = 0 and 5 = 100

	Method Used in the Dispute Percent Reporting			
Percent of damages returned on average	Negotiations N=360	Court N=324	Security Forces (Siloviki) N= 218	Influential businessperson N=210
Almost nothing 0 %	21	14	67	46
About 25%	16	13	16	24
About 50%	19	25	9	17
About 75 %	19	22	6	8
Almost everything 100%	24	27	3	6