

Seize the State, Seize the Day

An empirical analysis of State Capture and Corruption in Transition

by

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Seize the State, Seize the Day

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[Abstract]

Corruption has recently risen to the top of the development agenda, particularly in the transition economies. However, existing empirical research has been hampered by the lack of detailed and comparative data on the problem. We use the data from the ongoing Business Environment and Enterprise Performance Survey (BEEPS) to unbundle corruption into its specific constituent components and examine their particular causes and consequences. In addition to conventional measures of *administrative* corruption, we unbundle the measurement of corruption to focus particularly on two corrupt strategies which firms may use in their interactions with the state. First, *state capture*, defined as the efforts of firms to shape the very institutional environment in which they operate, and, second, *public procurement corruption*, the payment of kickbacks for securing public contracts.

We show that the incidence, costs and benefits to the firm of both types of corruption differ. The evidence suggests that while ‘captor’ firms in some environments benefit through higher sales in the short term, such payoff from *state capture* may not be sustainable. Furthermore, the social costs of state capture are high: firms in an environment characterized by state capture face strong incentives to join the fray, leading to a downward development spiral of increasing capture, increased amounts of time spent by the firm with officials, poor protection of property rights, and poor enterprise performance.

In contrast to *state capture*, firms in *all* countries -- whether in a ‘high-’ or ‘low-capture’ environment -- face similar incentives to engage in corrupt *public procurement* practices. By contrast, we examine administrative corruption and find that it is negatively related to firm performance. Finally, the exploration into the socio-economic determinants of state capture points policy suggestions for tackling such challenge-- within the fundamental political constraints that state capture itself places on reform.

Keywords: Corruption, State capture, Transition economies, Procurement

The evidence and opinions presented here are the authors’ responsibility and do not necessarily reflect those of their respective institutions or their Executive Directors. The authors are responsible for errors and omissions. This paper is also a background contribution to the ‘Anticorruption in Transition’ Report under preparation (coordinated by the World Bank’s Europe and Central Asia Region) for presentation at the Annual Meetings in Prague. The descriptive details on the survey and data we utilize in this paper are contained in: ‘Measuring Governance, Corruption and State Capture -- How Firms and Bureaucrats Shape the Business Environment in Transition’, World Bank Working Paper Series # 2312 (April 2000).

Introduction

When thinking about corruption in transition economies, two powerful images come to mind. In one, the hapless owner of a small shop faces a seemingly endless procession of visits by an assortment of official inspectors (health, fire, tax, etc), each one demanding a bribe either to overlook minor (or possibly major) infractions or simply to prevent additional visits. In the other, an influential oligarch at the head of a powerful financial-industrial group buys off politicians to shape the country's legal and regulatory framework to his own advantage.¹

One image presents the state as a “grabbing hand” discriminating against firms with low bargaining power to extract bribes through the discretionary imposition of red tape. Firms are extorted by powerful politicians or by some arbitrary bureaucrats shaping the regulatory regime to maximize their private rents.² The other image depicts powerful firms with the capacity to “capture” the state and, by doing so, to extract potentially substantial rents for such firms at a high social cost. Except for implicitly or explicitly suggesting at times that the corrupt link between the state and the firm originates with the former, most studies of corruption rarely differentiate between these starkly contrasting relationships -- lumping all forms of corruption into a generic, unidimensional phenomenon.³ Yet surely the roots of these very distinct relationships between the state and the firm, as well as their consequences both for the firm and for the broader economic environment, do differ. If so, unbundling the concept of corruption could provide a richer foundation for our understanding of the dynamics of corruption and for policy advice.

Part of the problem is rooted in a curious bifurcation within the political economy literature on corruption and capture. In recent years, one strand of the literature has focused intensively on the causes and consequences of corruption with emphasis on increasingly sophisticated

¹ In a famous quip, one of Russia's best known oligarchs once said: “The best investment in Russia today is in politics.”

² The ‘grabbing hand’ image of the state was proposed and developed by Shleifer and Vishny (1998). The view of bribery as the costly outcome of bureaucratic harassment is elaborated in Kaufmann and Wei (1999). Previous studies focusing on corruption to get around red tape regulations tended to portray corruption as an efficient informal deregulatory device (‘grease’) to get around existing official red tape (Leff 1964; Huntington 1978; and Liu 1986), in contrast with the recent bureaucracy-induced ‘sand’ argument and evidence suggesting that bribery does not alleviate administrative harassment.

³ Some studies of corruption do recognise different forms of the problem – most commonly, grand versus petty corruption -- although the emphasis has tended to be on the overall level of corruption and not the nature of relationship between the state and the firm. Existing studies also tend to assume, often implicitly, that all forms of corruption are

empirical research into the adverse effects of corruption on a host of socio-economic variables.⁴ Another strand of the literature has focused on the concept of regulatory capture emphasizing the role of firms in the formation of regulatory and public policy through increasingly sophisticated positive models in an agency-theoretic framework.⁵ Yet in spite of the obvious overlap between corruption and capture, the two strands of the literature have progressed in parallel without a clear link between them.

In part the problem is also rooted in the available measurements of corruption. Until recently, most empirical studies of corruption have tended to rely on cross-country indices of corruption based mostly upon the assessments of external experts or foreign investors.⁶ Such indicators rarely disaggregated corruption into different forms, and relied on generic, vaguely worded questions about the extent of corruption in the country. Moreover, there are obvious limitations in measuring such high-level forms of corruption as state capture through subjective assessments of outsiders. Without reliable measures of state capture, as distinct from other forms of corruption, empirical research has concentrated by default on conventional forms of administrative corruption, such as bribery to get around red tape.⁷ This has impaired research focusing on specific forms of corruption, such as state capture, regardless of their prominence in countries across the world.⁸

highly correlated and that the causes and consequences of different forms of corruption are roughly similar. See, for example, Ades and di Tella (1997), Kaufmann (2000), and Wei (1999).

⁴ Ades and di Tella, Wei, Mauro, Kaufmann, Frydman et al, and Kaufmann, Kraay and Zoido.

⁵ See the work of Stigler, Peltzman, Laffont and Tirole, among others (bibliographical references for details). Indeed, an extensive literature on regulatory capture emerged following the influential work by Stigler in the early seventies. While today's theory of regulation focuses more on the characteristics and benefits of competition in a world of private sector involvement in infrastructure, in earlier years the emphasis was on the likelihood and costs of regulatory capture by the interests of the influential enterprises subject to regulation in particular sectors (such as those regarded as 'natural monopolies' in infrastructure).

⁶ For an analysis of existing governance and corruption indicators worldwide, see Kaufmann, Kraay and Zoido-Lobaton (1999a and b). While existing worldwide comparative indices are mostly unidimensional proxies for corruption (and mostly reflect its 'pettier' or its administrative manifestations), recently developed country-specific in-depth diagnostic survey tools do unbundle corruption into its detailed constituent components and also measure in detail its governance correlates. See Kaufmann, Pradhan and Ryterman (1998), and the WBI-ECSPE step-by-step Implementation Manual (1999; www.worldbank.org/wbi/governance). However, these (resource-intensive) country specific diagnostics do not lend themselves to cross-country comparative indices for large groups of countries.

⁷ A related empirical challenge -- in addition to the inability to measure high-level corruption -- is that there is a significant margin of error in the measurement of those components of corruption which have been measured, often due to the rather generic and subjective nature of the questions in firm-level (or citizen) surveys, and the potential biases inherent in relying on one (or very few) expert(s) who provide the ratings for risk rating agencies (see KKZ 1999a and b).

⁸ Case study, journalistic and anecdotal evidence on different forms of state capture abounds. From wire news earlier this year, for instance, the case of natural resource interests in Russia does illustrate state capture: the recent formation of an official faction in the Duma, named *Energy*. This faction is composed of about 35 legislators, many of whom were formerly senior managers of energy companies. Its head has publicly stated that, "[The Ministry of Fuel and Energy and the State Duma Committee on Fuel and Energy] should be glad and worship this group, as well as assist it in every possible way. It will be a huge relief for them, since there will no longer be a need to negotiate every proposed law with each separate deputy in the Duma. We will work out a more systematic and efficient method for that." *Energy* already

This paper represents an initial step to bridge the gap between corruption and capture. While most existing studies of corruption focus on the role of politicians and bureaucrats inherent in the conventional definition of corruption -- namely, the abuse of public office for private gain -- we shift attention to the role of firms. We suggest that there are firms that possess sufficient freedom to choose a strategy of corrupt interactions with the state best suited to maximise their rents. We then attempt to measure the costs and benefits to the firm of alternative strategies of corruption as compared with non-corrupt interactions with the state in different environments.

The paper focuses on two corrupt strategies of interaction between the firm and the state -- state capture and public procurement corruption. We define state capture as the capacity to influence the formation of the basic rules of the game (i.e. laws, rules, decrees and regulation) through private payments to public officials. Public procurement corruption is defined as efforts to alter the implementation of government policy through high-level kickbacks. To investigate the costs and benefits of alternative strategies both for individual firms and for the broader economic environment, we rely on data from the 1999 Business Environment and Enterprise Performance Survey (BEEPS), a firm-level survey commissioned jointly by the EBRD and the World Bank to assess obstacles in the business environment across 22 transition economies.⁹

The survey data allow us to unbundle the measurement of corruption into specific components, as well as to examine a number of key questions regarding state capture for the very first time. Moreover, the BEEPS survey offers significant methodological improvements over existing corruption indices in that it relies on the direct experience of firms rather than

has more members than established political parties, such as Yabloko, the Liberal Democratic Party of Russian, and the Union of Right forces.

⁹ The BEEPS is the first stage of a world-wide survey of firms on the obstacles in the business environment conducted by the World Bank in co-operation with the European Bank for Reconstruction and Development (EBRD), Inter-American Development Bank and the Harvard Institute for International Development. It is expected that over 80 countries will be included in the survey encompassing countries at all levels of development. An earlier version of the World Business Environment Survey, comprising 69 countries, was carried out 1996 and presented in the World Bank's World Development Report 1997 (www.worldbank.org/wbi/governance). Some of the data from the BEEPS were first published in the EBRD's Transition Report (1999). For a full description of the survey and the main results, see Hellman, Jones, Kaufmann and Schankerman (2000)

external assessments and, wherever possible, relies on cardinal estimates of the degree of various corruption and governance issues.

We find that in countries where there is a market for state capture – i.e. where firms can purchase laws, regulations or decrees from politicians and bureaucrats – “captor” firms do perform substantially better than other firms in terms of increased sales growth. However, firms do not expect these performance advantages to be maintained over time. More importantly, engaging in state capture entails costs in terms of a greater insecurity of property rights among captor firms.

In contrast, in countries where the market for state capture is restricted, captor firms show worse performance than other firms. In these environments, firms that choose rent-seeking strategies in dealing with the state based on kickbacks for public procurement preferences show substantially greater gains than other firms. However, again there are costs in terms of more time spent dealing with state officials. We also find that there are significant social costs of state capture.

What affects the extent of the market for state capture? We demonstrate that partial political and economic reforms generate the highest levels of state capture. Yet there is a threshold beyond which enhancing civil liberties and advancing economic reforms systematically lowers the level of state capture among the transition countries.

While the paper is empirically-oriented paper and does not provide a conceptual model of the complex interaction between firms and the state, we advance an approach that moves beyond the grabbing hand model of corruption to recognize the role of the firm in shaping the legal, policy and regulatory framework to its own advantage through alternative strategies of corruption in its interactions with the state.

The Survey

The BEEPS questionnaire for the transition economies was developed jointly by the World Bank¹⁰ and the Office of the Chief Economist at the EBRD.¹¹ The survey was conducted on the basis of face-to-face interviews with firm managers or owners in site visits during the period June through August 1999 in the following countries¹²:

Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Poland, Romania, the Russian Federation, the Slovak Republic, Slovenia, Ukraine, Uzbekistan.

In each country, between 125 and 150 firms were interviewed with the exception of three countries where higher samples were used: Poland (250), Russia (550) and Ukraine (250). The sample was structured to be fairly representative of the domestic economies with specific quotas placed on size, sector, location, and export orientation.¹³

By unbundling the problem of corruption and examining it from the firm-level perspective, the BEEPS provides a number of important advantages. First, it allows us to explore whether firms with different characteristics (such as FDI vs. domestic firms) interact differently with the state or not. Second, it provides an opportunity to investigate in-depth the types of “services” for which firms pay bribes and the characteristics of these transactions. Third, it provides a micro-economic perspective on the costs and benefits to firms associated with different forms corruption. And fourth, it allows to investigate the determinants of different forms or corruption.

Forms of Corruption

The most general measure of corruption in the survey is the proportion of annual revenues of the firm paid in unofficial payments to public officials in order “to get things done.” The question primarily refers to petty or administrative corruption. It was posed in terms of firm

¹⁰ The team at the World Bank comprised Daniel Kaufmann, Homi Kharas, Syamm Khemani, Guy Pfefferman, Andy Stone and Geeta Batra. We are grateful to Randi Ryterman for contributing to the BEEPS questionnaire.

¹¹ The team at the EBRD comprised Steven Fries, Joel Hellman and Mark Schankerman.

¹² In all countries the survey was conducted by local staff of the international survey firm, A.C. Nielsen, to ensure consistency of training and approach across countries.

revenues rather than profits since estimates of revenues are more reliable. Table 1 presents the results.

Table 1: Average Bribery Payments as Share of Gross Firm Revenues

Country	Level of bribery (% of firm revenues)
Albania	4.0
Armenia	4.6
Azerbaijan	5.7
Belarus	1.3
Bulgaria	2.1
Croatia	1.1
Czech Rep	2.5
Estonia	1.6
Georgia	4.3
Hungary	1.7
Kazakhstan	3.1
Kyrgyzstan	5.3
Latvia	1.4
Lithuania	2.8
Moldova	4.0
Poland	1.6
Romania	3.2
Russia	2.8
Slovakia	2.5
Slovenia	1.4
Ukraine	4.4
Uzbekistan	4.4
Overall	3.0

The results suggest considerable variation in the level of unofficial payments across transition economies ranging from 1.1 per cent in Croatia to over 5.7 per cent in Azerbaijan. The data reveal clear differences not only between the CIS and Central and Eastern Europe, but within

¹³ The sample was heavily weighted towards privately owned firms, though there were quotas for state-owned firms and firms with foreign ownership. However, no attempt was made to construct a representative sample across these

each region as well. Unofficial payments in the CIS countries average 3.7 per cent of firm revenue, but fall to 2.2 per cent of firm revenues in Central and Eastern Europe. Yet within the CIS, the high regional average is driven by the very high levels in the Caucasus countries and Kyrgyzstan. Other CIS countries fall within ranges more comparable with Eastern Europe.

The survey also measures two forms of what is often referred to as “grand corruption,” namely call *state capture* and (public procurement-related) *kickbacks*. Capture refers to the efforts of firms to influence the contents of legislation, rules, laws, decrees or regulations (i.e. the basic rules of the game) through unofficial payments by private actors to public officials. Kickbacks refer specifically to high level public procurement corruption defined as unofficial payments by private actors to public officials in order to gain government contracts. With capture, firms seek to extract rents from the state by distorting the basic rules of the game to their own advantage. With kickbacks, firms seek to extract rents by skewing the implementation of government policy to their own advantage.

The survey enables us to identify *captor firms* and *kickback firms* and then investigate the implications of these strategies of extracting rents from the state on firm performance.¹⁴ Table 2 lists the share of captor and kickback firms in the sample. For comparative purposes, the share of firms in each country that report trading with the state sector is also included.

ownership strata and the quotas were designed only to ensure representation.

¹⁴ Firms were asked how often they made extra, unofficial payments for public officials: (1) to influence the content of new laws, decrees or regulations and (2) to gain government contracts. Firms were also asked to define what share these different forms of bribery constitute of all unofficial payments to public officials in a typical year.

Table 2: Share of Firms that are ‘Captors’ and provide Kickbacks

Country	Full Sample		Trade with state	
	Captors (% of sample)	Kickbacks (% of sample)	Trade with state (% of sample)	Kickbacks (% of firms)
Albania	11	21	45	48
Armenia	7	6	23	26
Azerbaijan	24	11	23	49
Belarus	2	3	74	4
Bulgaria	11	5	46	11
Croatia	10	16	63	25
Czech Rep	7	18	46	38
Estonia	5	20	71	28
Georgia	8	8	47	17
Hungary	4	5	38	14
Kazakhstan	6	7	40	18
Kyrgyzstan	7	7	43	16
Latvia	14	11	50	21
Lithuania	14	2	24	9
Moldova	12	5	65	8
Poland	9	17	58	30
Romania	13	14	41	35
Russia	9	12	56	22
Slovakia	12	17	54	31
Slovenia	10	15	58	25
Ukraine	12	20	67	30
Uzbekistan	2	19	79	24
Overall	9	12	52	24

The costs and benefits of alternative firm strategies to extract rents from the state should not be independent of the nature of state-firm relations in a given country. Where there is a market for state capture, i.e. where state actors engage in “selling” laws, rules and regulations, a strategy of seeking to influence the basic rules of the game might be the most effective strategy of extracting rents from the state. Where the market for state capture is constrained, perhaps by public accountability or political competition, a strategy of distorting the

implementation of government policy might generate greater gains to the firm. To measure the extent of state capture at the country level, the survey asked firm managers to assess the extent to which the sale of state, judicial and regulatory decisions to private interests has had a direct impact on their business. The question does not gauge whether capture has had a positive or negative impact, but simply attempts to get a rough measure of how broad is the impact of capture throughout the economy.

A general index of state capture can be constructed on the basis of the firms' responses on the extent to which the following five forms of corruption (measured in the BEEPS survey) have had a direct impact on their business:

- sale of Parliamentary votes on laws to private interests;
- sale of Presidential decrees to private interests;
- Central Bank mishandling of funds;
- sale of court decisions in criminal cases;
- contributions paid by private interests to political parties and election campaigns.

Table 3 presents the percentage of firms in each country which claim that the respective form of state capture has had a *direct impact* on their business. A state capture index for each country is then constructed by taking the average across all the categories.

Table 3: Reported Direct Impact of State Capture on the Firm

Country	Parliamentary legislation (% of firms)	Presidential decrees (% of firms)	Central Bank (% of firms)	Criminal Courts (% of firms)	Party finance (% of firms)	Capture index (% of firms)	Classification
Albania	12	7	8	22	25	16	Lo
Armenia	10	7	14	5	1	7	Lo
Azerbaijan	41	48	39	44	35	41	Hi
Belarus	9	5	25	0	4	8	Lo
Bulgaria	28	26	28	28	42	28	Hi
Croatia	18	24	30	29	30	27	Hi
Czech Rep	18	11	12	9	6	11	Lo
Estonia	14	7	8	8	17	10	Lo
Georgia	29	24	32	18	21	24	Hi
Hungary	12	7	8	5	4	7	Lo
Kazakhstan	13	10	19	14	6	12	Lo
Kyrgyzstan	18	16	59	26	27	29	Hi
Latvia	40	49	8	21	35	30	Hi
Lithuania	15	7	9	11	13	11	Lo
Moldova	43	30	40	33	42	37	Hi
Poland	13	10	6	12	10	12	Lo
Romania	22	20	26	14	27	21	Hi
Russia	35	32	47	24	24	32	Hi
Slovakia	20	12	37	29	20	24	Hi
Slovenia	8	5	4	6	11	7	Lo
Ukraine	44	37	37	21	29	32	Hi
Uzbekistan	5	4	8	5	4	6	Lo
Overall	24	21	25	18	20	22	

On the basis of the state capture index, the transition countries can be divided into high capture and low capture countries. The index shows a rather sharp gap between those with a high and low level of state capture. This would suggest that once a state becomes subject to some threshold level of capture, a self-reinforcing dynamic is generated that propels state capture to even higher levels. The low capture group includes: Albania, Armenia, Belarus, Czech Republic, Estonia, Hungary, Kazakhstan, Lithuania, Poland, Slovenia and Uzbekistan. This is an unusual group as it includes some of the most reformist and least reformist countries on both political and economic transition in the sample. An approach to this anomaly is outlined below and discussed in more detail in a later section of the paper.

In countries where there has been only minimal privatisation, the private sector remains small, and important elements of the command system are still in operation (e.g. Belarus and

Uzbekistan), the capacity of private sector interests to capture the state might be expected to be low (and indeed the concept may have little meaning in this context). In contrast, the most reform-minded countries (e.g. Hungary and Poland) have achieved the greatest progress in liberalising the economy, strengthening bureaucratic accountability and promoting political contestation – all factors that might be expected to place limits on the capacity of powerful firms to capture the state.

The high capture group includes: Azerbaijan, Bulgaria, Croatia, Georgia, Kyrgyzstan, Latvia, Moldova, Romania, Russia, Slovakia and Ukraine. Most of these countries could be considered partial reformers in both the political and economic transitions. They have generally made significant advances in liberalization and privatisation with much less progress in concomitant institutional reforms to support a legal and regulatory framework for the emerging market. Though most have adopted the basic rules of democratic elections, there remain concerns in nearly all of these countries regarding the concentration of political power and limitations on political competition. Capture might be expected to thrive in an environment of partial economic reforms and concentrated political power.

Capture, Kickbacks and Firm Performance

What are the benefits and costs associated with alternative strategies for extracting rents from the upper levels of government? Do some transition economies produce a bigger bang for the grand corruption buck?

As suggested above, measuring firm performance in transition economies is particularly difficult given the incentives for firms to under-report profits and the lack of international accounting standards in most countries of the region. Moreover, as a result of well-known corporate governance problems, managers might be able to extract private gains from the state through various forms of grand corruption that would not be detected in firm-level performance. Such private gains to managers cannot be measured. We use actual and expected real growth in sales as the best available indicator of firm performance, though its limitations must be recognised.

On capture, Table 4 presents the unconditional means of the actual growth of sales, investment and employment over the past three years and the expected growth in these indicators over the next three years for both captor and non-captor firms. Captor firms demonstrate a considerably higher rate of real sales growth over the past three years than other firms, as well as higher rates of investment and employment. However, they do not predict that their higher growth rates will be sustained in future.

The performance differences between captor and non-captor firms sharpen even further in high capture countries. Captor firms have grown nearly four times as fast as non-captor firms in such countries with similarly substantial differences in investment and employment levels. Again, the gap between these captor and non-captor firms narrows considerably with regards to expected growth rates.

In sharp contrast, captor firms in low capture countries exhibit worse sales performance than other firms with a roughly similar level of investment and a modestly higher level of employment. Moreover, captor firms expect their lower growth rates to continue in future as they invest less and maintain a lower employment rate. The gains to capture in high capture countries appear to be quite considerably higher than those in low capture countries.

Table 4 also illustrates a crude measure of the social costs associated with capture. The average rate of sales growth for all firms in high capture countries is only 11.1% compared to 21.4% in low capture countries, despite the specific gains enjoyed by the captor firms. The growth rate of investment shows a similar pattern. A fuller assessment of the social costs of capture will be presented later, when less direct costs are also considered.

Table 4: Capture and Firm Performance

	Actual growth last three years (per cent)			Expected growth next three years (per cent)		
	Sales (real)	Investment (real)	Employment	Sales (real)	Investment (real)	Employment
All Countries						
Captor	24.5	22.6	20.3	24.4	19.9	9.2
Non Captor	14.5	14.6	7.1	25.3	16.8	6.9
Overall	15.6	15.6	8.7	24.6	16.9	7.5
High Capture Country						
Captor	31.1	23.0	22.7	29.6	25.7	13.6
Non Captor	8.3	9.4	5.2	26.7	17.5	7.8
Overall	11.1	11.5	7.2	25.1	16.8	8.1
Low Capture Country						
Captor	13.0	21.8	16.0	15.7	10.1	1.8
Non Captor	20.9	20.0	9.0	23.8	16.1	6.0
Overall	21.4	21.1	10.8	24.1	17.0	6.8

The survey results show that capture is not the only way in which firms extract gains from the state. Table 5 presents the growth rates for firms grouped on the basis of their trading relations with the state, including: (i) those that do not trade with the state; (ii) those that trade with the state, but do not pay kickbacks to public officials for government contracts, and; (iii) those that trade with the state and pay kickbacks for government contracts. Across the entire sample, firms that trade with the state have higher growth rates than those that do not trade with the state and these higher rates are expected to be sustained over time. Yet firms that engage in public procurement corruption exhibit growth rates nearly twice as high as firms that trade with the state without kickbacks and three times as high as those that do not trade with the state at all. These considerably higher gains are also expected to be maintained over time.

Table 5: Public Procurement Corruption and Firm Performance

	Actual growth last three years (per cent)			Expected growth next three years (per cent)		
	Sales (real)	Investment (real)	Employment	Sales (real)	Investment (real)	Employment
All Countries						
Kickbacks	31.1	22.7	22.6	36.7	23.8	12.0
No kickbacks	15.7	13.0	4.4	25.2	15.6	4.5
Don't trade with state	10.2	15.2	7.7	19.7	15.3	8.4
Overall	15.6	15.6	8.7	24.6	16.9	7.5
High Capture Country						
Kickbacks	25.9	14.0	20.1	44.2	31.9	17.1
No kickbacks	7.6	6.0	0.8	24.7	14.0	5.1
Don't trade with state	8.0	13.8	7.8	20.5	14.8	8.2
Overall	11.1	11.5	7.2	25.1	16.8	8.1
Low Capture Country						
Kickbacks	35.9	31.3	25.1	29.7	16.2	7.0
No kickbacks	24.8	21.0	8.6	25.7	17.4	3.7
Don't trade with state	12.5	16.8	7.6	18.8	15.8	8.7
Overall	21.4	21.1	10.8	24.1	17.0	6.8

On the basis of the simple averages presented in table 5 above, the gains to trade with the state and to public procurement corruption appear to be different than for engaging in the strategy of being active in the market for state capture. There appears to be substantial gains to kickbacks in both high *and* low capture countries, and such gains may be even higher in low capture environments -- particularly in dimensions such as investment (where its actual growth rate has been more than twice as high as compared with its counterparts providing kickbacks in high capture countries).¹⁵

The results suggest that trading with the state does provide advantages for firms that vary, however, in different environments. In high capture countries, firms appear to realize gains from trading with the state only if they are willing to pay kickbacks to public officials. Firms that do not pay kickbacks in such countries also seriously underperform in terms of investment and employment growth. In low capture countries, these simple averages suggest that firms appear to gain advantages from trade, yet we need to econometrically explore these relationships in more depth controlling for other factors (including kickbacks) as well.

¹⁵ Some of these simple average differences could not be distinguished *statistically* when controlling for other firm characteristics (see next section on econometric results).

It is also worthy of note that on the basis of comparisons of simple averages there appears to be no payoffs for firms that choose to engage in strategies of ‘pettier’ administrative bribery (instead of state capture or kickbacks). The simple tables on such forms of bribery are reported in Annex A., while such bribery is also included in the multivariate regressions below.

Econometric Results

We now examine the consequences of these different forms of corruption conditioned upon other factors that might affect firm-level growth rates. The survey provides information on a number of firm characteristics, including sector, size, origins (i.e. *de novo*, privatized or state-owned) and degree of foreign ownership that are included in the regressions as controls on firm performance. The regressions estimate the effects on performance of different strategies of extracting rents from the state – i.e. captor firm vs. kickback firm – with interaction terms to identify the gains to each strategy in high capture and low capture countries.

Table 6 presents the regression results. The dependent variables for the firm performance regressions are *logarithms of firm-specific growth rate indices*¹⁶. All the regressions control for country fixed effects and firm sectors, though the coefficients are not reported.¹⁷ The reported t-statistics (in parentheses) and R² values refer to the regressions with the dependent variable in logarithms, but the reported coefficients have been converted back to an index.¹⁸ A variable with no impact on growth rates would have a reported coefficient of 1 after being converted into an index. The combined impact of two variables is given by multiplying the indices. Since all the independent variables, except the level of bribery are indicator variables, the

¹⁶ Thus given the raw data in the form of percentage real growth rate of sales, for example, over the last three years, the dependent variable is $\log(1 + (\text{sales growth}/100))$.

¹⁷ Dummy variables for 22 countries were included in the regressions as well as for the following sectors: mining, manufacturing and services.

¹⁸ In addition to accommodating observations in the untransformed data which would be considered outliers with respect to a normal distribution (with high rates of sales growth), this log-normal specification ensures that a *marginal change* in each independent variable produces the same *percentage change* in the sales growth index over the three year period of measurement whatever values the other dependent variables take. Since most of the variables above are dummy variables, such a marginal change corresponds to the percentage change in the index for a firm in a given category relative to the base category. A coefficient greater than 1 represents a positive impact and a coefficient less than 1 represents a negative impact. Specifically, if we estimate the regression (where for simplicity we assume there are only two independent variables): $\log y = a + \beta \cdot x + \gamma \cdot z$

Then a marginal change in x of 1 unit leads to $\log y_1 - \log y_2 = \beta$ or $\log(y_1/y_2) = \beta$.

predicted growth index for a firm in a given category is obtained by multiplying the relevant index numbers for the firm's profile. The base category for each set of dummy variables is given in parentheses.

The size and origin of firms do have a significant impact on sales and investment, though firm sector does not. Small and medium-sized firms have lower rates of real growth than large firms. *De novo* firms have higher rates of sales and investment growth than both privatized and state firms.¹⁹ These variables have a similar impact on expected sales growth over the next three years. Firms with foreign direct ownership also show some increase in actual and expected sales in comparison with purely domestically owned firms. However, when the FDI dummy is interacted with a dummy variable for the high capture countries, the effects of FDI on growth rates is lost. The positive impact of FDI on firm growth holds only in low capture countries, which has potentially interesting implications about the role of foreign investment in poorly governed countries.

Then $y_1 = y_2 \cdot 10^b$ and $(y_1 - y_2) / y_2 = 10^b - 1$, a constant percentage change. The coefficients reported in the above table correspond to 10^b in this example, and the combined effect of simultaneous marginal changes in several independent variables is obtained simply by multiplying the reported coefficients to give $y_1 = y_2 \cdot 10^b 10^c \dots 10^g$

¹⁹ The impact of different forms of ownership and control were also tested in separate specifications of the model, but did not have any statistically significant effects.

Table 6 - Regressions of firm performance on firm characteristics and strategies

		Dependent variables					
		Index of real change of level over 3 years		Index of real change of level over 3 years		Index of real change of level over 3 years	
Independent variables ¹	Sub-category	Actual sales	Expected sales	Actual investment	Expected investment	Actual employment	Expected employment
Size	Small	0.83** (-4.14)	0.94* (-1.89)	0.90** (-2.25)	1.01 (0.35)	0.86** (-3.93)	1.04** (1.65)
	Medium (Large)	0.92** (-2.06)	0.95** (-2.00)	0.96 (-1.02)	0.99 (-0.57)	0.93** (-2.27)	0.99 (-0.26)
Origin (State)	De Novo	1.18** (4.74)	1.09** (3.70)	1.17** (4.49)	1.02 (0.73)	1.30** (8.56)	1.08** (4.36)
	Privatized	1.01 (0.33)	1.01 (0.24)	1.05 (1.38)	0.99 (-0.58)	0.99 (-0.34)	0.98 (-0.96)
FDI (No FDI)		1.08** (2.29)	1.11** (4.81)	1.03 (1.03)	1.05** (2.22)	1.04 (1.39)	1.03* (1.78)
Captor (Non captor)	Lowcapture environments	0.88** (-2.06)	0.96 (-0.91)	1.03 (0.45)	0.97 (-0.66)	1.05 (0.91)	0.96 (-1.35)
	<i>Additional</i> impact in high capture	1.24** (2.73)	0.99 (-0.17)	1.05 (0.59)	1.04 (0.76)	0.99 (-0.15)	1.03 (0.70)
Public Procurement Kickback (No kickbacks)	Low capture environments	1.12** (2.27)	1.04 (1.12)	1.05 (0.95)	0.96 (-1.31)	1.07* (1.67)	0.99 (-0.37)
	<i>Additional</i> impact in high capture	0.97 (-0.39)	1.09** (2.05)	0.97 (-0.45)	1.15** (3.31)	1.00 (0.03)	1.04 (1.16)
Bribes		0.99** (-2.54)	1.00 (-1.55)	1.00 (-1.42)	1.00 (-0.50)	0.99** (-2.48)	1.00 (-0.74)
R ²		0.11	0.10	0.07	0.06	0.12	0.09
Number of observations		1974	1938	1947	1921	1977	1947

¹ Country fixed effects and firm sector variables are included, but not shown.

** significant at 5% level; * significant at 10% level.

Also note that dependent variables for firm performance regressions are in (log of growth rate) **index** form, and thus deviations from one signify positive or negative impact on growth rates.

To investigate the effects of grand corruption, we include dummy variables for captor firms and for kickback firms and interact them with an indicator of high capture environments. The coefficients of these variables represent the *additional* impact of these variables in a high capture environment and the overall effect of a variable in high capture environments is obtained by multiplying the coefficients in low capture environments by the coefficient for the additional impact.²⁰

On state capture, the results show a sharp contrast in the effects on sales growth in high capture versus low capture countries. Captor firms in low capture countries grow less than non-captor firms, though the coefficient is only marginally significant. But in high capture countries, the gains to capture in terms of past sales growth are strongly positive and significant. Capturing the state does generate gains for the firm, but only once some threshold of state capture has been reached within a given country.²¹

The gains to capture in terms of sales growth, as derived from the regression estimates, are substantially less for actual investment growth (and are not statistically significant), while non-existent for actual employment growth (table 6). Moreover, even for the gains in sales they do not carry over into expected sales in the future. While captor firms have managed to extract advantages from the state to increase sales in the short term, the advantages appear to be fleeting and do not generate increased investment and employment.

In contrast, the impact of public procurement corruption on sales appears to apply across-the-board. Although the additional impact of kickbacks on sales in a high capture environments is negative (as suggested by table 5), the coefficient is not statistically significant. Similar to the results for capture, firms engaged in public procurement kickbacks do not expect gains sustained in the future (table 6).²²

²⁰ Thus, the impact of being a captor firm in a high capture environment on the sales growth index is given by $1.22 \times 0.88 = 1.1$, or 10% higher sales at the end of the three year period than would otherwise obtain.

²¹ For an interesting analysis of thresholds effects on the incentives for corrupt behavior, see Tirole (1992).

²² In addition to these results, regressions mirroring table 5 were also run, in which the firms not paying kickbacks were further subdivided into those trading with the state and those not (in both high and low-capture environments). The results are not reported here as the coefficients were found to be statistically insignificant although their magnitudes and signs supported the conclusions presented under table 5 - i.e. trading with the state even without paying kickbacks has a positive impact on sales, but only in low-capture environments, and the impact of kickbacks was greater in low-capture environments.

To compare the impact of these alternative forms of high-level corruption with the effects of administrative corruption (or what is often referred to as petty corruption), we have added a variable of bribes paid by firms as a share of annual revenues excluding the proportion of bribes paid for capture and kickbacks. In other words, this variable measures all other forms of bribery by the firm encompassing various forms of lower level administrative corruption.²³ Though administrative corruption does have a negative effect on actual sales and employment growth, the magnitude of both coefficients is quite small. Moreover, such bribery has no apparent effects on investment levels or expected performance.²⁴ There does not appear to be any firm-specific benefits in terms of performance associated with administrative corruption.

By unbundling corruption, we have shown that the advantages to firms from corruption, such as they are, come from particular forms of high-level corruption and not all types of bribery. Yet even this needs to be differentiated to determine which forms of rent-seeking from the high levels of state generate gains in different contexts. The survey results suggest that when there is a market for state capture, the most successful means by which firms extract rents from the state is through their influence in skewing the basic rules of the game to their advantage as a result of private payments to public officials. Where the market for state capture is more constrained, firms continue to seek rents from high levels of the state, but find the greatest advantage from influencing the implementation of government policy, such as through public procurement kickbacks. The gains in sales growth from both forms of corruption are not associated with increased levels of investment or employment by the firm. Those advantages that are realized by firms are considered to be fleeting.

The Costs of Capture and Kickbacks

The analysis so far has focused on identifying the gains to the firm from different forms of corruption, but what about the costs? The survey results provide an opportunity to determine not only the direct costs in terms of higher bribe payments and time spent dealing with government officials, but also indirect and less tangible costs to the firm potentially associated with greater uncertainty and insecurity.

²³ The reported coefficient of the bribes variable is the index number (10^6) for every per cent of revenues. For a bribery level of x per cent of revenues, the index number is 10^{6x}

²⁴ When bribery is interacted with a dummy variable for high capture countries, the results do not change substantially.

Capturing the state could potentially be seen as a way of economizing on overall bribe payments. By bribing high level public officials to shape the basic rules of the game, firms might be able to influence the propensity of public officials at different levels of government to demand bribes, thus concentrating bribe payments to captured officials and gaining protection from competing bribe demands from other government agencies.²⁵

Table 7 presents the average bribe payments as a share of annual revenues by both captor and non-captor firms in different environments. Across the entire sample, captor firms pay more than twice as much of their annual revenues in bribes than non-captor firms. In high capture countries, the gap is even greater. Captor firms report paying 6.6 per cent of their annual revenues in bribes, which, on top of the already high tax obligations of firms in this region, constitutes a considerable additional financial burden.²⁶ Though captor firms in low capture countries appear to gain few benefits from capture in terms of improved performance, their bribery burden is still considerably higher than non-captor firms.

In addition to higher bribes paid, captor firms also spend substantially more senior management time dealing with government officials. In high capture countries, captor firms spend nearly 50 per cent more of their management time dealing with the government than non-captor firms. This “time tax” tends to be lower in low capture countries, though again, the captor firms spend more time with government than the non-captor firms. The results suggest that capturing the state does not appear to buy firms greater protection from government incursions on management time. In fact, it could well be that we are measuring a proxy for a deliberate corporate strategy of investing in time with politicians and high officials in order to affect state capture (in contrast with the time wasted by firms due to arbitrary red tape harassment by bureaucrats).

²⁵ Shleifer and Vishny (1993) argue that the level of bribe payments will increase if the central government is weak, which allows various government agencies to impose independent bribes on private agents.

²⁶ Though profits data are notoriously unreliable, firms throughout the region report an operating margin of approximately 16 per cent suggesting that the additional bribe costs constitute a considerable share of profits for captor firms.

Table 7: Costs to Capture: Time with Officials, and Bribe Payments

		Captor	on-Captor	All firms
High capture environment	Time	14.7%	10.1%	10.7%
	Bribes	6.6%	2.4%	3.3%
Low capture environment	Time	11.0%	9.3%	5.4%
	Bribes	5.2%	2.1%	2.6%
All countries	Time	13.4%	9.7%	10.1%
	Bribes	6.1%	2.3%	3.0%

Public procurement corruption has a similar pattern of costs to the firm across different firm types and general environments, though the contrast between kickback and non-kickback firms is somewhat less stark. Kickback firms also pay more than twice as much of their annual revenues in bribes than non-kickback firms, though the levels and extent of the gap are lower in comparison with captor firms. Regarding management time spent dealing with government officials, kickback firms spend nearly 20 per cent more of their time than non-kickback firms in high capture environments. However, in low capture environments, paying kickbacks appears to be associated with a minor reduction in this time tax. Capture generates more costs to the firm in terms of bribe payments and time than public procurement corruption.

Table 8: Costs to Public Procurement Kickbacks

		Kickbacks	o kickbacks	All firms
High capture environment	Time	12.2%	10.1%	10.7%
	Bribes	5.8%	2.8%	3.3%
Low capture environment	Time	8.7%	9.5%	5.4%
	Bribes	4.8%	2.3%	2.6%
All countries	Time	10.6%	9.8%	10.1%
	Bribes	5.3%	2.6%	3.0%

Having explored the direct benefits and direct costs of grand corruption, we explore whether this yields indirect gains in the form of protecting firms from the weaknesses in the general business environment characteristic of most transition economies. One of the most serious

problems in the region has been the insecurity of property and contract rights.²⁷ Given the institutional weaknesses underlying this insecurity, firms might try to compensate by establishing individual relationships with high-level government officials fuelled by unofficial payments to purchase firm-specific protection of their property and contract rights.

The survey provides an opportunity to test perceptions of firm managers of the security of property and contract rights. In Table 9, the results of an ordered probit regression on the security of property rights are reported with the same independent variables of the performance regressions described above. Firms were asked to rate the security of property and contract rights in cases of business dispute on a scale of 1 to 6. A positive coefficient in the regressions below represents more *secure* property rights.

The results for the control variables on firm characteristics show that small firms and *de novo* and privatized firms have greater insecurity about their property and contract rights than large and state-owned firms as might be expected in transition economies. Foreign ownership does not appear to have any impact on property rights. The effects of corruption on property rights again vary according to the strategy of the firms for extracting rents from the state in different environments. Captor firms in high capture countries have substantially *less secure* property and contract rights than non-captor firms, while these costs to capture are not present in low capture countries. In contrast, firms that pay kickbacks for state contracts also have less secure property and contract rights, but only in low capture countries. The coefficient for the interaction with high capture is significant, but close to zero (0.03). Petty corruption has a very small, negative impact on the security of property rights.

²⁷ For a review of this problem, see the assessment of the investment climate in 26 countries of central and eastern Europe and the former Soviet Union in the EBRD's *Transition Report*.

Table 9: State Capture and Kickbacks Effects on Property Rights (OLS regression)

Independent variables ¹	Sub-category	Security of Property rights ²⁸
Size	Small	-0.23** (-2.21)
	Medium	-0.17 (-1.92)*
	(Large)	
Origin	De Novo	-0.34** (-4.21)
	Privatized	-0.19** (-2.56)
	(State)	
FDI		0.05 (0.64)
(No FDI)		
Captor	Low capture environments	-0.01 (-0.07)
	<i>Additional</i> impact in high capture environments	-0.46** (-2.61)
(Non captor)		
Public Procurement Kickback	Low capture environments	-0.27** (-2.49)
	<i>Additional</i> impact in high capture environments	0.30** (1.97)
(No kickbacks)		
Bribes		-0.05** (-7.71)
Pseudo R ²		0.07
Number of observations		2030
¹ Country fixed effects and firm sector variables are included, but not shown. ** significant at 5% level * significant at 10% level		

²⁸ This is a standard OLS regression, in contrast to the index-number regressions presented in Table 6.

Firms that engage in both types of high-level corruption face less secure property rights. Yet the costs are differentiated by the nature of the overall environment. The highest costs to captor and kickback firms come in those environments where each form of corruption generates the highest gains. This suggests that in addition to paying higher bribes and spending more time dealing with government officials, firms that engage in grand corruption pay an additional cost in terms of less secure property and contract rights. One possible explanation for this pattern of costs and benefits is that in exchange for granting rents to specific firms, public officials demand, in addition to bribes, greater informal control rights over the firm, thus reducing the security of its property and contract rights.²⁹

To summarize, though the gains to the firm from capture and kickbacks can be substantial in certain contexts, they are also: (i) perceived to be unsustainable over time; (ii) reduced by the direct costs of significantly higher bribes and management time spent with government officials, and; (iii) coupled with greater insecurity of property and contract rights that could negatively affect a wide range of firm operations and decisions. Even from the standpoint of the firm that engages in these types of corruption, the private cost-benefit analysis may not appear particularly favorable once a longer view is taken. However, it is important to note that the survey does not provide any information on the potential private benefits to firm managers themselves resulting from such forms of corruption, which given the weakness of corporate governance structures in the region could deviate significantly from the firm's (owners) benefits. This might play an important role in understanding the incentives to engage in high-level corruption.

The Socials Costs of Capture

Regardless of the private costs and benefits to these different forms of corruption, it is clear that the social costs are significant. As reported in Table 4 above, the average real rate of sales growth over the past three years for firms in low capture countries is 21.4 per cent. The growth rate falls to 11.1 per cent in high capture countries despite the considerable relative gains for captor firms in these countries. Real investment rates differ substantially as well falling from 21.1 per cent in low capture countries to 11.5 per cent in high capture countries.

²⁹ Such an arrangement is a modification of Shleifer and Vishny's (1998) model of politicians and firms, where firms extract subsidies from the state in exchange for the politician's demand to maintain excess employment.

Controlling for firm characteristics, the impact on growth of a high level of state capture remains negative. Table 10 below presents the regressions for sales and investment, where the country dummies have been replaced by a dummy variable denoting high or low capture countries³⁰. The coefficient of this variable gives an estimate of the social costs of capture, in terms of the lower rate of sales and investment growth borne by all firms as a consequence of operating in a high-capture environment. The coefficient for sales growth in high capture countries, at 0.94 is less than 1, connoting a lower rate of sales growth for otherwise identical firms in high capture countries. The actual percentage decrease in sales depends on the firm, but for example, for a firm achieving sales growth of 20% (so with a sales growth index of 1.2) in a low capture environment, the regression predicts that in a high capture environment the same firm would have a sales growth of only 13% (given by 1.2×0.94). This is significantly lower and mirrors the uncontrolled results in Table 4. The coefficient for investment growth is less than 1, but statistically insignificant.

³⁰ For consistency and comparability with the regressions in table 6, the same specification of firm characteristics has been employed.

Table 10: The Impact of State Capture

		Index of change of level over 3 years ³¹	
Independent variables	Sub-category	Actual sales	Actual investment
Size (Large)	Small	0.80** (-4.71)	0.88** (-2.70)
	Medium	0.92** (-2.14)	0.95 (-1.30)
	De Novo	1.21** (5.41)	1.18** (4.79)
Origin (State)	Privatized	1.03 (0.89)	1.04 (1.24)
	FDI	1.11** (3.09)	1.05 (1.53)
FDI (No FDI)	Captor	0.87** (-2.14)	1.04 (-0.62)
	<i>Additional</i> impact in high capture environments	1.24** (2.66)	1.04 (-0.43)
(Non captor)	Low capture environment	1.19** (3.48)	1.11** (2.10)
	<i>Additional</i> impact in high capture environments	0.92 (-1.3)	0.92** (-1.26)
Public Procurement Kickback (No kickbacks)	Bribes	0.99** (-3.74)	1.00** (-2.73)
High Capture		0.94 (-2.67)	0.97 (-1.12)
R ²		0.05	0.03
Number of observations		1974	1947
** significant at 5% level			
* significant at 10% level			

³¹ This regression is an index-number regression of the same form as those presented in Table 6. Thus a coefficient greater than 1 represents a positive impact and a coefficient less than 1 represents a negative impact. The combined effect of two variables is given by multiplying their coefficients.

Factors shaping the market for state capture

Previous sections have discussed the incentives which underlie the decisions of firms to attempt to capture the state, leaving open the question of what factors affects the state's susceptibility to capture in the first place. Put differently, having discussed the demand for state capture, we now examine the determinants of supply. This section presents some tentative explanations of state capture in terms of liberalization in the civil and economic spheres. These variables are viewed as influencing a private cost-benefit calculation on the part of politicians when deciding whether to be complicit in state capture. Civil liberties are a proxy for the cost of capture to politicians, reflecting an increasing chance that corrupt politicians will be removed from office or otherwise punished. The level of economic reforms can be viewed as a proxy for the rents that the state can distribute as a result of distortions in the institutional environment and is hence a proxy for the benefits of capture to state officials. We present measures of the extent of civil liberties and economic reforms and then regressions relating these variables to state capture.

Civil liberties are measured according to the index developed by Freedom House, which states that "civil liberties include the freedoms to develop views, institutions, and personal autonomy apart from the state"³². Each country is assessed on a scale ranging from 1 representing the most free and 7 representing the least free. The index has been compiled annually since 1972 and we use here the average score for the three most recent years.

Economic reforms are measured according to the EBRD's transition indicators. Economic liberalization is assessed across 8 dimensions and each country is assigned a score ranging from 1 representing little or no progress to 4+³³ representing standards comparable to a developed market economy.³⁴ We use here the average score across all 8 dimensions for the most recently measured year (1999). Table 11 reports the scores for each country.

³² See <http://www.freedomhouse.org> for more details on the index and methodology. In brief, each country is assessed according to criteria grouped under: freedom of expression and belief; association and organizational rights; rule of law and human rights; personal autonomy; and economic rights.

³³ Here scored as 4.3.

³⁴ See *Transition Report 1999*. The 8 dimensions comprise: large-scale privatisation; small-scale privatisation; corporate governance and enterprise restructuring; price liberalisation; trade and foreign exchange system; competition policy; banking reform and interest rate liberalisation; and securities markets and non-bank financial institutions.

The extent of state capture is measured according to the capture index in Table 3. To motivate the formal regressions, Chart 1 illustrates informally the empirical relationship between state capture and civil liberties with the countries grouped into low, medium and high levels of economic reform. The key points to be reflected in the regressions are the inverted U-shape of the relationship and the tendency of state capture to be lower in countries with more advanced levels of reform.

Table 11: Measures of economic and social liberalization

Country	Civil liberties	Economic reform
Albania	4.3	2.6
Armenia	4.0	2.7
Azerbaijan	4.3	2.2
Belarus	6.0	1.5
Bulgaria	3.0	2.8
Croatia	4.0	3.0
Czech Rep	2.0	3.5
Estonia	2.0	3.5
Georgia	4.0	2.7
Hungary	2.0	3.7
Kazakhstan	5.0	2.7
Kyrgyzstan	4.3	2.8
Latvia	2.0	3.2
Lithuania	2.0	3.1
Moldova	4.0	2.7
Poland	2.0	3.5
Romania	2.3	2.8
Russia	4.0	2.5
Slovakia	3.3	3.3
Slovenia	2.0	3.2
Ukraine	4.0	2.5
Uzbekistan	6.0	2.0
Interpretation of Indices:	Index ranges from 1 to 7 where 1 represents most free and 7 represents least free.	Index ranges from 1 to 4+ (4.3) where 1 represents least reformed and 4+ represents most reformed.

Chart 1: State capture, civil liberties and economic reforms

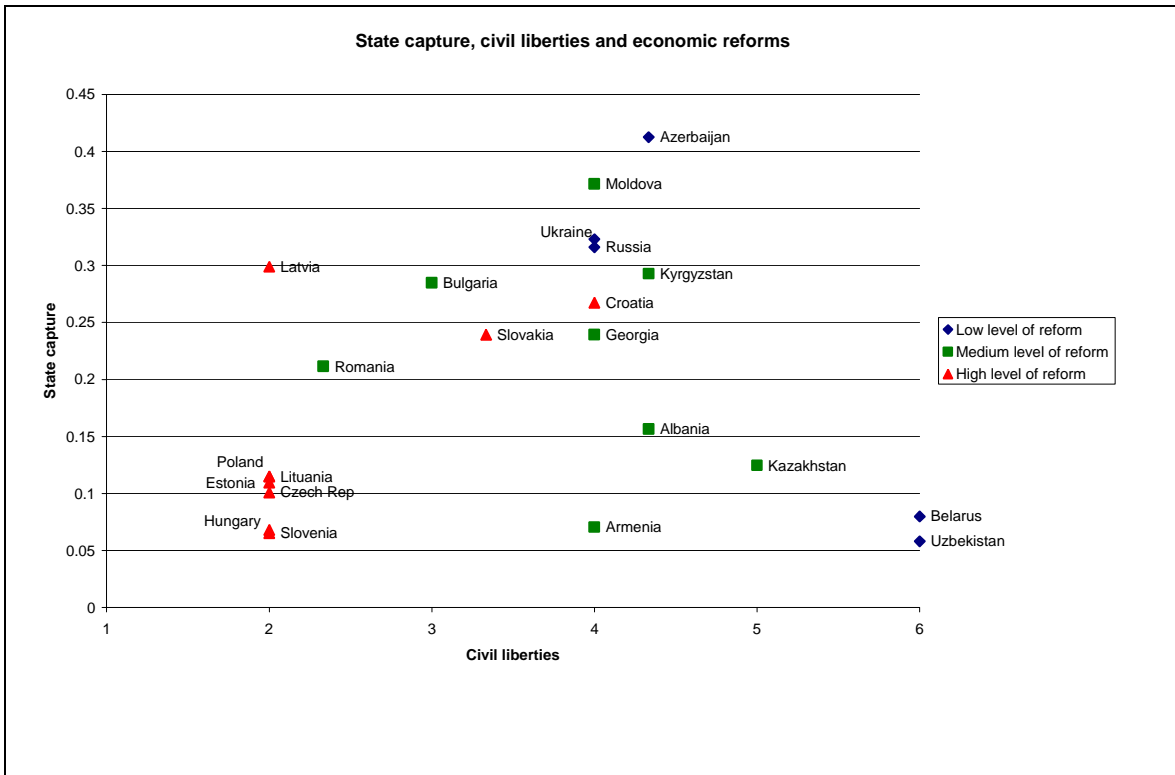


Table 12 presents the regression results investigating the relationship between state capture, civil liberties and economic liberalization. The first set of five regressions on the extent of state capture includes all 22 countries. The second set of five regressions on this dependent variable excludes Belarus and Uzbekistan, since as discussed under Table 3, the development of their private sectors has been very limited and the very notion of state capture in these countries is potentially different. As chart 1 illustrates, both these countries have low levels of civil and economic liberalization.

Table 12: Regressions of state capture vs. economic and political liberalization

Dependent variable	Countries in sample	Independent variables				R ²
		Civil liberties	(Civil liberties) ²	Economic Reform	(Civil libs) x Reform	
Extent of state capture	22	0.010 (0.529)	-	-	-	0.014
	22	0.336** (4.08)	-0.044** (-4.02)	-	-	0.467
	22	0.320** (4.19)	-0.049** (-4.690)	-0.136* (-2.083)	-	0.571
	22	0.512** (4.30)	-0.062** (-4.51)	-	-0.033* (-1.93)	0.559
	22	0.324 (1.08)	-0.049** (-2.10)	-0.001 (-0.02)	-0.133 (-0.69)	0.571
Extent of state capture	20†	0.049** (2.33)	-	-	-	0.232
	20†	0.470** (2.48)	-0.066** (-2.32)	-	-	0.406
	20†	0.359* (1.93)	-0.056* (-1.97)	-0.143* (-1.87)	-	0.513
	20†	0.559** (3.07)	-0.066** (-2.40)	-	-0.044* (-1.91)	0.516
	20†	0.492 (1.22)	-0.062* (-1.82)	-0.049 (-0.19)	-0.030 (-0.38)	0.517
† the smaller sample excluded Belarus and Uzbekistan * significant at 10% ** significant at 5% t-statistics in parentheses.						

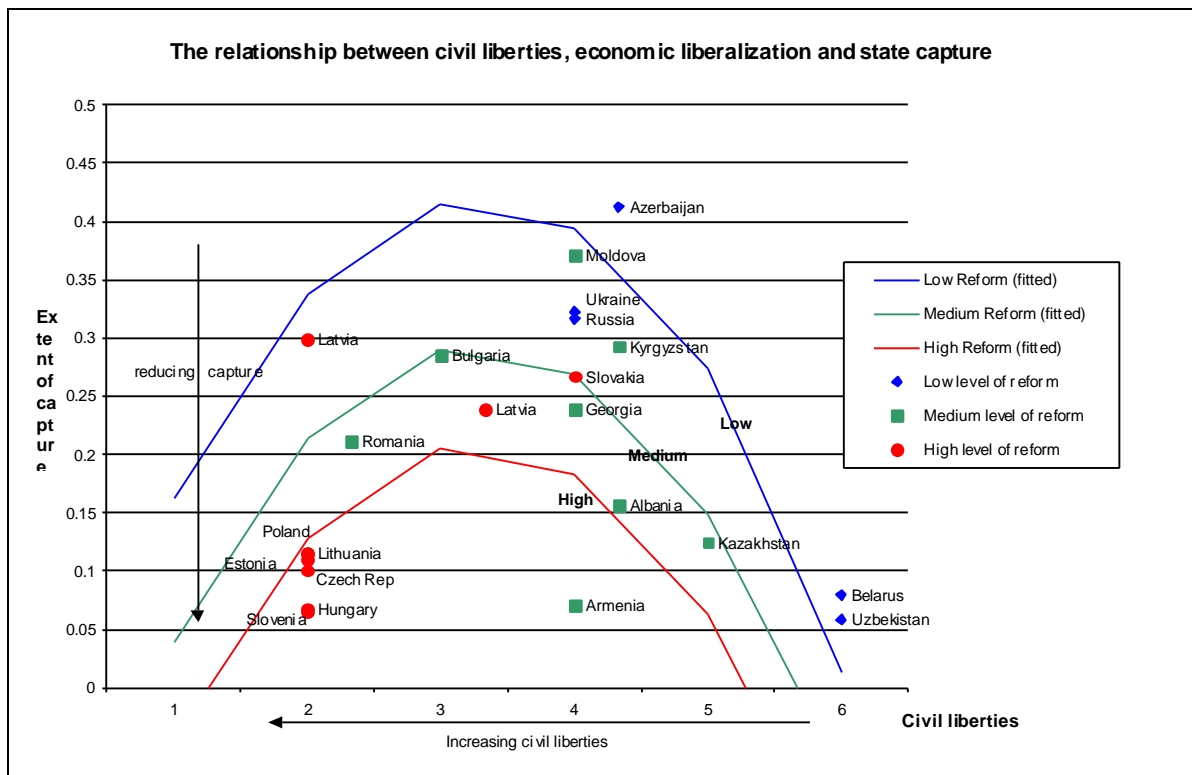
The regressions are suggestive of four inter-relationships, although since all variables are measured contemporaneously, the direction of causality cannot be established:

- The relationship between civil liberties and state capture, in the full sample of 22 countries, is fundamentally non-linear and can be characterized as an inverted-U which we encapsulate with a quadratic term. The partial introduction of civil liberties in some countries is associated with the *emergence* of state capture. This can be interpreted as suggesting that in these countries, the extent of civil liberties (and other checks on abuse of power) are insufficient to counterbalance the loss of control that has resulted from the dismantling of the controlling apparatus of the Communist Party. In contrast, once a threshold of basic civil liberties are more has been reached further reforms in this area are associated with much *lower* levels of state capture

- Excluding Belarus and Uzbekistan, the relationship between civil liberties and state capture is still non-linear (although the ability of a linear relationship to represent the data is improved, since by construction we exclude the least liberal countries). This suggests that the association of partial civil liberalization and *increased* capture is not dependent solely on these countries.
- Economic reforms are associated with *lower* levels of capture. This can be interpreted to suggest that economic liberalization creates a counterbalancing pressure on state capture in countries with partially introduced civil liberties and can act as a substitute for further civil liberalization in countries with higher levels of civil liberties. A complementary interpretation is that countries 'trapped' in situations of partial economic reform and high levels of capture might succeed in reducing state capture with increased civil liberties.
- There is some evidence that civil liberties interact with economic reforms in the sense that economic liberalization has a larger impact on capture at lower levels of civil liberties.

Chart 2 illustrates the estimated relationship based on all 22 countries and all 4 explanatory variables.

Chart 2



As noted, the direction of causality has not been established and these results should be regarded only as illustrating an interesting inter-relationship between state capture, civil liberties and economic liberalization.³⁵ It can be argued that the paths of economic and social liberalization are themselves dependent on state capture and indeed herein lie the roots of the 'trap of partial reform' alluded to above, in which the 'winners' of the early stages of transition seek to codify their advantages, via state capture, in the evolving institutional framework and block further reforms³⁶. However, despite this note of caution, these results are nevertheless suggestive of the nature of the non-linear correlations and as avenues for further research.

Summary and Conclusions

Unbundling the concept of corruption into specific components on the basis of the BEEPS instrument, and focusing in particular on state capture and public procurement corruption, yielded a number of empirical results and insights. In particular, we found that:

1. Capturing the state yields benefits to the firm in terms of increased sales performance, but only in countries with an active market for state capture.
2. However, even where there is an active market for capture, captor firms do not expect their performance advantages to be maintained over time. Furthermore, for the captor firm, state capture is also associated with substantial costs in terms of higher bribes paid, more management time spent with officials, and greater insecurity of property and contract rights.
3. In sharp contrast, there are no performance gains to capture for captor (as compared with non-captor) firms in "low capture" environments. In countries without an active market for state capture, the outlier firms engaging in such practice do not benefit. To the contrary, high performing firms that do not engage in capture in such environments do expect their higher sales levels to be maintained over time.

³⁵ In fact, similar regressions with civil liberties and economic reform measured earlier in the transition were not very successful in explaining current levels of state capture.

³⁶ See Hellman (1998).

4. Capturing the state does not shield individual firms from the weaknesses in the general business environment in which they operate. “Captor” firms do not report any advantages in terms of greater predictability of government policy or less bureaucratic discretion.

5. Public procurement corruption resulted in substantial sales gain overall (in both high and low capture environments), yet these gains are also not expected to be sustained in the future.

6. Firms that pay higher levels of bribes in administrative corruption but do not engage in capture or kickbacks, show significantly weaker performance across the sample than firms that engage in the latter forms of corruption, suggesting that only certain forms of corruption confer (short-term) performance advantages to firms.

7. The market for state capture is affected by the extent of civil liberties and economic reforms, though in a non-linear relationship. Partial political and economic reforms appear to generate the highest levels of capture.

The need to have a sharp focus on strategies for addressing state capture and corruption in large scale procurement are the main implication of the work presented in this paper. This, in turn, implies at the national level implementing measures deepening economic and socio-political liberalization. In other words, a strategy of realistically introducing a combination of societal ‘voice’, transparency reforms, and economic competition is required.

Particular emphasis should be placed on countries afflicted by a high degree of state capture. In those countries, in addition to the very high social costs of capture, the incentives for ‘captor’ enterprises to continue engaging in such a relationship with the state may still be significant – in contrast with countries where the market for capture is rather inactive, and where there are few private gains to such capture. Further, any strategy needs to significantly increase the costs of engaging in procurement corruption. Transparency-related reforms, with an activist stance by NGOs and civic organizations, and introducing innovations already prevalent in Latin America such as public hearings to agree on the rules of the game in large procurement contracts, as well as public audiences and NGO monitoring of the public procurement bidding itself, could be considered.

Regarding economic liberalization, the mantra of demonopolization, deregulation, fuller trade liberalization, and facilitating entry to the enterprise sector are conventional recommendations which, were feasible, obviously need to be backstopped further. However, the reality in some countries where state capture has led to entrenched interests is that efforts to break monopolistic structures will be particularly daunting challenges, placing particular importance on the role of a political leadership prepared to take on such monopolies. Where this is not feasible in the short-term, strategies need to be formulated combining a more gradual demonopolization strategy with an activist stance on competition (and ‘entry’) policy, coupled with mobilizing societal ‘voice’ – and *inter alia* making transparent the social cost of state capture to the population and pro-reform groups and NGOs.

Consequently, where the level of state capture is high, it is important to develop more nuanced and integrated reforms strategies that reflect the reality of the existing division of political power (between the leadership and the elite enterprise groups), and thus stand a reasonable chance of implementation. Detailed proposals are beyond the scope of this paper, yet some suggestive implications do emerge from the framework and results reported here. For instance, in a country where a handful of oligarchs have come to exercise control via state capture over the lion’s share of the productive assets, a multi-year strategy of competition, privatization of remaining state assets, and FDI policies could be aimed at strategically empowering a ‘second-and-third tier’ domestic industrial and financial groups and enterprises that would become more prominent over time.

Further, the ongoing revolution in internet and knowledge-based services can foster the emergence of a new cadre of potentially powerful entrepreneurs. The internet revolution also allows for the wide dissemination of data on corruption and state capture, helping to expose the extent of the problem and mobilizing public opinion. Internet computing also offers revolutionary new ways to increase transparency and reduce corruption and costs in public procurement (such as in Chile and Mexico). Finally, the internet offers new avenues to introduce competition in the (oft-monopolized) media and more generally, in information dissemination.

Empowering civil society and increasing transparency and information dissemination can be equally important. Local NGOs (possibly in collaboration with external donors) could conduct and disseminate periodic in-depth diagnostic surveys with data on state capture and public procurement corruption, detailing the extent and manifestations of such costly practices in different institutions and by different industrial groups. The rigorous gathering, analysis and wide public dissemination of these data – heretofore underemphasized – is increasingly being seen as an important pro-transparency tool empowering reformers and civil society and backstopping collective action to improve governance and address corruption.³⁷

In sum, a recognition of the serious problem of state capture and public procurement corruption suggests, firstly, that the strategy of economic liberalization may need to be more complex than merely promoting fair competition and demonopolization *per se* – given the reality of state capture in some settings. Yet, second, it is also emphasized that the gains to promoting activist citizen ‘voice’, political liberalization and transparency reforms (including an independent and well informed media) can be very substantial. Indeed we do find that merely *partial* political (and economic) reforms can exacerbate the problem of capture.

In this context, it will be of particular importance to introduce transparency in Parliaments, with initiatives such as disclosure and public dissemination of votes in parliament by each deputy (as well as the review of the wisdom of immunity protection for parliamentarians). More broadly, for politicians and public officials alike, introduction of periodic mandatory public declaration of assets and income sources by them and their dependents provide another illustration from other regions in the world that can help in this type of strategy.

We end with a word of caution. This paper is a first effort into the empirical investigation of state capture and other forms of high-level corruption in transition. Thus, the robustness of its results and conclusions will need to be scrutinized in further research with additional data. Future research also ought to develop fully a conceptual framework modeling an interaction between firms and politicians where, as emphasized in this paper, the firm does play an active ‘captor’ role (as well as recognizing the activist role that some predatory politicians may also

³⁷ See details on diagnostic methodology and experiences so far and in the references and in www.worldbank.org/wbi/governance

play, of course). The literature on regulatory capture, suitably integrated with the recent work in the field of corruption, offers particular promise in this context.

Finally, further research work with the BEEPS data set will focus on the potential impact of different characteristics of the firm – such as foreign direct investment, ownership, size and on the potential importance of location – on the propensity to engage in state capture and procurement corruption and on variation in the pattern of costs and benefits of these different forms of corruption. The data and sample size will also permit to delve in-depth (and into regional variations) in selected countries in transition for which a larger sample was taken, such as Russia, Ukraine and Poland.

Annex A: Overall and Administrative Bribery and Firm Performance

The tables below provide evidence on the uncontrolled relationship between the level of bribery and firm performance. Firms have been classified as high or low bribe payers according to whether their annual bribe payments are greater than or less than 2 percent of their revenues. In contrast to the results reported in tables 4 and 5 in the main text for the specific cases of state capture and public procurement (and also in the econometric evidence in table 6), the evidence in Annex Table 4/5a below on overall bribe payments does not suggest that on balance there are payoffs to firms from bribery per se.

Annex Table A4 5a: Overall Bribery and Firm Performance

	Actual growth last three years (per cent)			Expected growth next three years (per cent)		
	Sales (real)	Investment (real)	Employment	Sales (real)	Investment (real)	Employment
All Countries						
High Bribes	11.2	10.2	7.9	25.8	17.9	10.7
Low Bribes	17.3	17.4	9.7	23.4	17.0	6.9
Overall	15.6	15.6	8.7	24.6	16.9	7.5
High Capture Country						
High Bribes	8.3	5.7	5.2	25.2	15.4	9.9
Low Bribes	12.3	12.8	8.9	23.2	17.1	8.1
Overall	11.1	11.5	7.2	25.1	16.8	8.1
Low Capture Country						
High Bribes	16.0	18.3	12.6	26.7	22.3	12.2
Low Bribes	23.3	23.0	10.6	23.6	16.8	5.4
Overall	21.4	21.1	10.8	24.1	17.0	6.8

Furthermore, we analyze the evidence on *'pettier'* administrative forms of bribery, as per Annex Table A4/5b below, where in this case we remove from overall bribery any payments related

to state capture and to public procurement kickbacks, prior to classifying firms as high or low bribe payers. The negative impact of administrative bribery in this case becomes rather clearer. This is consistent with the more 'neutral' payoff of overall bribery findings coupled with the selected positive impact of state capture and kickbacks on growth reported in the main text.

**Annex Table A4 5b - Petty (Administrative)
Bribery and Firm Performance**

	Actual growth last three years (per cent)			Expected growth next three years (per cent)		
	Sales (real)	Investment (real)	Employment	Sales (real)	Investment (real)	Employment
All Countries						
High Bribes	9.2	8.1	5.8	25.8	16.8	9.1
Low Bribes	17.4	17.5	9.9	22.9	16.7	6.8
Overall	15.6	15.6	8.7	24.6	16.9	7.5
High Capture Country						
High Bribes	8.0	6.1	5.4	26.3	16.7	9.8
Low Bribes	12.3	12.4	8.7	22.6	17.2	8.2
Overall	11.1	11.5	7.2	25.1	16.8	8.1
Low Capture Country						
High Bribes	11.2	11.4	6.5	25.1	17.0	7.9
Low Bribes	23.0	23.4	11.3	23.2	16.2	5.3
Overall	21.4	21.1	10.8	24.1	17.0	6.8

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