

# “Seize the State, Seize the Day”

## State Capture, Corruption, and Influence in Transition

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In a decade of transition, fear of a *leviathan state* is giving way to increased focus on *oligarchs* who “capture the state.” In the capture economy, the policy and legal environment is shaped to the captor firm’s huge advantage, at the expense of the rest of the enterprise sector. This has major implications for policy.

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## Summary findings

The main challenge of the transition has been to redefine how the state interacts with firms, but little attention has been paid to the flip side of the relationship: how firms influence the state—especially how they exert influence on and collude with public officials to extract advantages. Some firms in transition economies have been able to shape the rules of the game to their own advantage, at considerable social cost, creating what Hellman, Jones, and Kaufmann call a “capture economy” in many countries. In the capture economy, public officials and politicians privately sell underprovided public goods and a range of rent-generating advantages “a la carte” to individual firms.

The authors empirically investigate the dynamics of the capture economy on the basis of new firm-level data from the 1999 Business Environment and Enterprise Performance Survey (BEEPS), which permits the unbundling of corruption into meaningful and measurable components.

They contrast *state capture* (firms shaping and affecting formulation of the rules of the game through private payments to public officials and politicians) with *influence* (doing the same without recourse to payments) and with *administrative corruption* (“petty” forms of bribery in connection with the implementation of laws, rules, and regulations). They develop economywide measures for these phenomena, which are then subject to empirical measurement utilizing the BEEPS data.

State capture, influence, and administrative corruption are all shown to have distinct causes and consequences. Large incumbent firms with formal ties to the state tend to inherit influence as a legacy of the past and tend to enjoy more secure property and contractual rights and higher growth rates. To compete against these influential incumbents, new entrants turn to state capture as a strategic choice—not as a substitute for innovation but to compensate for weaknesses in the legal and regulatory framework. When the state underprovides the public goods needed for entry and competition, “captor” firms purchase directly from the state such private benefits as secure property rights and removal of obstacles to improved performance—but only in a capture economy.

Consistent with empirical findings in previous research on petty corruption, administrative corruption—unlike both capture and influence—is not associated with specific benefits for the firm.

The focus of reform should be shifted toward channeling firms’ strategies in the direction of more legitimate forms of influence, involving societal “voice,” transparency reform, political accountability, and economic competition. Where state capture has distorted reform to create (or preserve) monopolistic structures supported by powerful political interests, the challenge is particularly daunting.

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This paper—a product of the Governance, Regulation, and Finance Division, World Bank Institute; the Public Sector Group, Europe and Central Asia Region; and the Office of the Chief Economist, European Bank of Reconstruction and Development—is part of an empirical project on governance in transition. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Diane Billups, room J3-131, telephone 202-473-5818, fax 202-334-8350, email address [governancewbi@worldbank.org](mailto:governancewbi@worldbank.org). For an electronic version of this paper and related research papers and governance data, visit [www.worldbank/wbi/governance/](http://www.worldbank/wbi/governance/). Policy Research Working Papers are also posted on the Web at [www.worldbank.org/research/workingpapers](http://www.worldbank.org/research/workingpapers). The authors may be contacted at [jhellman@worldbank.org](mailto:jhellman@worldbank.org) or [dkaufmann@worldbank.org](mailto:dkaufmann@worldbank.org). September 2000. (44 pages)

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# Seize the State, Seize the Day:

## *State Capture, Corruption and Influence in Transition*

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*“I only want to draw your attention straightaway to the fact that you have yourselves formed this very state, to a large extent through political and quasi-political structures under your control. So perhaps what one should do least of all is blame the mirror.”*

Vladimir Putin’s opening remarks to a roundtable of 21 of Russia’s leading oligarchs  
(Washington Post, July 29, 2000)

## 1. Introduction

In designing reform strategies in the initial stages of transition in Eastern Europe and the former Soviet Union, the dominant challenge was to reduce and reorient the state’s role in the economy. In particular, the strategies of liberalization and privatization were intended to change the way in which the state interacts with firms, shifting from command methods to market mechanisms. Throughout the transition, little attention has been paid to the flipside of this relationship, namely the ways in which firms exert influence on the state. Yet in the context of weak states and underdeveloped civil societies, such forms of influence have had a powerful impact on the pace and direction of reforms, on the design of economic and political institutions and, ultimately, on the general quality of governance in the transition countries. After only a decade of transition, the fear of the *leviathan state* has been replaced by a new concern about powerful *oligarchs* who manipulate politicians, shape institutions, and control the media to advance and protect their own empires at the expense of the social interest.

From a political economy perspective, our understanding of the main obstacles in the path of transition has generally been guided by an image of the state as a “grabbing hand” discriminating against firms with low bargaining power to maximize the private interests of politicians and bureaucrats.<sup>1</sup> Yet a recognition that powerful firms have been able to capture the state and collude with public officials to extract rents through the manipulation of state power suggests that there are other dimensions of the relationship between the state and firms that could further enrich our understanding of the political constraints on the reform process. By analyzing the dynamics of the *capture economy*, we can build a stronger foundation for incorporating the political constraints on reform into the development of feasible strategies to advance the transition.

In addition, a focus on the ways in which firms interact with the state has important implications for our understanding of the dynamics of corruption. Existing studies tend to treat corruption as a generic, one-dimensional phenomenon without distinguishing between forms of extortion in which rents are monopolized by public officials and forms of influence and collusion between firms and public officials in which the rents are shared.<sup>2</sup> Yet surely the roots of these relationships differ, as well as their consequences for the firm and for the

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<sup>1</sup> 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 (the ‘grease’ argument, see 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.

<sup>2</sup> 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 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).

broader economic environment. Unbundling the concept of corruption in transition economies should provide a richer basis for our analysis of the problem and for policy advice.

This paper is an initial step to investigate empirically what characterizes different types of relationships between firms and the state, and how they affect the performance of the firm, the state's role in the economy, and the development of a dynamic enterprise sector. We distinguish between three types of relationships marked by different distributions of rents between the firm and the state. – state capture, influence and administrative corruption. State capture is defined as *shaping the formation of the basic rules of the game* (i.e. laws, rules, decrees and regulations) through *illicit* and non-transparent private payments to public officials.<sup>3</sup> Influence refers to the firm's capacity to have an impact on the formation of the basic rules of the game *without* necessary recourse to *private* payments to public officials (as a result of such factors as firm size, ownership ties to the state and repeated interactions with state officials). Administrative corruption is defined as *private* payments to public officials to distort the prescribed *implementation* of official rules and policies.

Capture, influence and administrative corruption are examined from two perspectives – the firm level and the country level. First, we attempt to measure and compare the extent of these different phenomena across the transition countries. Then, we seek to determine the factors at the firm level that shape the degree of the firm's influence on the state and its propensity to engage in capture. Finally, we assess the private costs and benefits of different forms of influence to the firm and contrast them with the social costs at the country level.

The analysis of capture, corruption and influence is based 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.<sup>4</sup> The survey data allow us to unbundle the measurement of influence and 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 governance and corruption indices in that it relies on the direct experience of firms rather than external assessments and, wherever possible, uses cardinal estimates of the extent of corruption.<sup>5</sup>

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<sup>3</sup> Of course, firms are not the only organizations that can capture the state. However, we are primarily interested in the relationship between firms and the state as a foundation for understanding the political dynamics of economic reform.

<sup>4</sup> 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](http://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).

<sup>5</sup> 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. Such indicators did not disaggregate corruption into different forms and relied on generic questions about the extent of corruption. 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. For an analysis of existing governance and corruption indicators worldwide, see Kaufmann, Kraay and Zoido-Lobaton (1999b). While world-wide comparative indices are mostly unidimensional proxies for corruption, in-depth diagnostic survey tools have been developed to unbundle corruption and measure other governance dimensions (World Bank Institute and ECSPE, 1999). However, these country specific diagnostics do not lend themselves to cross-country comparative indices for large groups of countries.

An analysis of the BEEPS data suggests a starkly contrasting picture of the nature of interactions between firms and the state across the transition countries. In one group of countries, which we refer to as capture economies, public officials appear to have created a private market for the provision of normally public goods (e.g. the security of property and contract rights) and rent-seeking opportunities which a relatively small share of firms can obtain either through influence or state capture. While such advantages bring substantial private gains to the individual firms, they generate significant negative externalities for the rest of the economy. In the other group of countries, this market for concentrated advantages to individual firms through state capture and influence is quite limited, though present. In these countries, capture appears to have few direct benefits to those firms who engage in it while producing a much more limited impact on the operations of other firms in the economy.

Beyond the variation across the transition economies, we can identify and differentiate among *captor firms* (i.e. firms that make private payments to public officials to affect the rules of the game) and *influential firms* (i.e. firms that have influence on those rules without recourse to private payments to public officials). We find clear distinctions between the profiles of these two groups of firms. Influential firms tend to be the classic incumbents inherited from the previous communist system. They are generally large, state-owned firms with a higher than average market share in their own sectors, reasonably secure property rights and close formal and informal ties with the state. Captor firms tend to have the opposite profile: they are likely to be *de novo*<sup>6</sup> private firms with less secure property rights and weaker ties to the state facing stronger competitive pressures from incumbent firms.

Our analysis suggests that while influence tends to be inherited from the past -- by particular state and privatized enterprises -- other firms choose to engage in state capture as a strategy to compete against these influential incumbents. Captor firms seek to purchase advantages *a la carte* directly from the state, including, but not limited to, individualized protection for their own property and contract rights in environments where the state continues to under-provide public goods necessary for effective entry and competition.

Comparing enterprise performance over time, we find that influential and captor firms grow at a substantially faster rate than other firms, controlling for country-wide determinants and for other firm-level characteristics. Yet these private gains to capture are only realized in high capture economies, i.e. where state officials have created a sufficiently extensive private market for key under-provided public goods and other rent-generating advantages and thus share some portion of the rents associated with state capture. In contrast, in countries with more limited levels of state capture, those firms that engage in state capture perform worse than other firms. Starting from a lower level of property rights security, captor firms are also shown to gain much greater improvements in the security of their property and contract rights over time, especially in capture economies.

Despite these substantial private gains to captor and influential firms, we demonstrate that the social costs of capture and influence for all other firms in the transition economies can be considerable. Average firm growth rates are systematically lower for firms in high versus low capture economies, despite the concentrated gains to captor firms. Moreover, the success of captor firms in securing individualized protection for their property rights appears to weaken overall progress in strengthening the security of property and contract rights for all other

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<sup>6</sup> We define *de novo* firms as those created without any state-owned predecessor.

firms. The private gains to capture and influence seem to generate considerable negative externalities for other firms, especially in high capture economies.

Whereas *de novo* firms have been the driving force of growth and a major constituency for further structural reforms in the most advanced transition economies, in the capture economy, these firms have strong incentives to engage in state capture in an effort to compete against influential incumbent firms. This can lead to a potential vicious circle in which a small share of dynamic firms gain concentrated advantages that further undermine the state's provision of necessary public goods and weaken economic growth.<sup>7</sup>

While this paper is empirically-oriented and does not formalize a conceptual model of the complex interaction between firms and the state, we advance an approach that moves beyond the 'grabbing hand' model, recognizing the ways in which firms exert influence on the state and identifying the private and social costs and benefits associated with different methods of influence. We also explore the determinants of state capture, at the firm level focusing on the initial conditions faced by the firm (especially security of property rights), and at the country-wide level emphasizing the progress made in the process of political liberalization.

The rest of the paper is organized as follows: Section 2 discusses the BEEPS survey. Section 3 outlines the empirical approach to measuring corruption, state capture and influence. Section 4 examines the micro-level determinants of these interactions between the state and the firm. Section 5 considers the private gains to the firm resulting from these interactions. Section 6 discusses the social costs of state capture in terms of firm performance and section 7 examines the link between state capture and reduced security of property rights that underlies the negative impact of the capture economy on firm performance. Section 8 presents a brief discussion of the origins of the capture economy in terms of social and political liberalization. Section 9 concludes. An appendix presents some additional results together with information on the sample composition of the BEEPS, and a summary table of all the variables used in the empirical analyses.

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<sup>7</sup> For a multiple equilibria model of the unofficial economy in transition which underscores the nexus between governance variables and the provision (or lack thereof) of key public goods, see Johnson, Kaufmann and Shleifer (1997).



## 2. The Survey

The BEEPS questionnaire for the transition economies was developed jointly by the World Bank<sup>8</sup> and the Office of the Chief Economist at the EBRD.<sup>9</sup> The survey was conducted on the basis of face-to-face interviews with high level firm managers or owners in site visits during the period June through August 1999 in the following countries:<sup>10</sup>

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 (246), Russia (552) and Ukraine (247). The sample was structured to be fairly representative of the domestic economies with specific quotas placed on size, sector, location, and export orientation.<sup>11</sup>

By unbundling forms of influence and types of corruption and examining them from the firm-level perspective, the BEEPS provides a number of important advantages. First, it allows us to explore whether firms with heterogeneous characteristics interact differently with the state. Second, it provides an opportunity to investigate the types of “services” for which firms engage the state through bribe payments and influence. Third, it provides a micro-economic perspective on the costs and benefits to firms associated with different forms of influence and corruption. Lastly, it allows us to investigate the factors that make firms influential and determine their propensity to engage in different forms of corruption.

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<sup>8</sup> The team at the World Bank comprised Daniel Kaufmann, Homi Kharas, Syamm Khemani, Guy Pfefferman, Andy Stone and Geeta Batra. We are also grateful to Randi Ryterman for contributing to the BEEPS questionnaire.

<sup>9</sup> The team at the EBRD comprised Steven Fries, Joel Hellman and Mark Schankerman.

<sup>10</sup> In all countries (except Latvia and Albania) the survey was conducted by local staff of an international survey firm to ensure consistency of training and approach across countries.

<sup>11</sup> 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 ownership strata and the quotas were designed only to ensure representation.

### 3. Measuring Capture, Corruption and Influence<sup>12</sup>

The BEEPS survey includes questions to measure three distinct, but potentially overlapping, types of interactions between the firm and the state:<sup>13</sup>

- *administrative corruption*: the extent to which firms make illicit and non-transparent private payments to public officials in order to alter the prescribed implementation of administrative regulations placed by the state on the firm's activities.
- *state capture*: the extent to which firms make illicit and non-transparent private payments to public officials in order to influence the formation of laws, rules, regulations or decrees by state institutions.<sup>14</sup>
- *influence*: the extent to which firms have influence on the formation of laws, rules, regulations and decrees by state institutions without recourse to illicit and non-transparent private payments to public officials.

The key distinction between these three types of interactions is the source of the rents and the rough distribution of those rents inherent in each relationship. Through administrative corruption, rents deriving from the discretionary capacity of the state to regulate the activities of firms should accrue primarily to corrupt public officials. This is the closest equivalent to corruption associated with the "grabbing hand" state. Through state capture, rents deriving from the capacity of firms to encode private advantages in the rules of the game as a result of bribes to public officials are shared by firms and the corrupt officials. Through influence, rents deriving from the capacity of firms to encode advantages for themselves in the basic rules of the game as a result of their enhanced leverage should accrue primarily to the firm.

Of course, there is considerable scope for overlap across these three types of interactions between the firm and the state and the exact distribution of rents cannot be so neatly deciphered in reality. Moreover, some firms are likely to engage simultaneously in all types of interactions with the state. Some firms can even avoid such interactions with the state altogether, though the survey suggests that such firms are in the minority across the transition economies. Recognizing the limitations, the BEEPS survey was designed to disentangle these interactions to investigate potential differences in the roots and consequences of these relationships both at the firm level and at the country level.

#### Administrative Corruption

<sup>12</sup> The empirical measures presented in this section and their graphical depiction can be downloaded at <http://worldbank.org/wbi/governance/govdata/capdata.xls>. For a more detailed depiction of the characteristics of the sample and variable characteristics, see tables A1 and A2 in the Appendix of this paper.

<sup>13</sup> For more detail on this unbundling of corruption into separate and measurable components, see Hellman, Jones, Kaufmann and Schankerman (2000).

<sup>14</sup> The concept of regulatory capture, upon which this concept is based, is not limited to a relationship based on illicit transactions. Regulations could be devised to the benefit of the regulated at the expense of social welfare due a number of factors that have nothing to do with corruption, such as asymmetric information or collective action problems. We are interested in making a sharper distinction between capture as a form of corruption and influence. A vast literature on regulatory capture emerged from the work of Stigler in the early seventies, including Stigler(1971), Peltzman(1976), Laffont and Tirole (1993), among others (see bibliographical references for details). 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 in particular sectors (such as those regarded as 'natural monopolies' in infrastructure).

Methods of measuring and comparing levels of administrative corruption across countries are already well-established. The BEEPS survey follows the convention of previous surveys around the world which ask firm managers to estimate the proportion of annual revenues typically paid by "firms like yours" in unofficial payments to public officials "in order to get things done."<sup>15</sup> The survey stipulates a range of "services" for which such bribes could be paid, including connection to public services, to obtain licenses and permits, to deal with taxes and tax collection, to deal with customs/imports. Table 1 presents unweighted country averages of the cumulative bribes paid by firms in administrative corruption.

**Table 1: Measuring Administrative Corruption<sup>16</sup>**

Country	Administrative Corruption <sup>+</sup>	Standard error
Albania	4.0	(0.4)
Bulgaria	2.1	(0.4)
Croatia	1.1	(0.2)
Czech Republic	2.5	(0.4)
Estonia	1.6	(0.2)
Hungary	1.7	(0.3)
Latvia	1.4	(0.3)
Lithuania	2.8	(0.5)
Poland	1.6	(0.2)
Romania	3.2	(0.4)
Slovak Republic	2.5	(0.4)
Slovenia	1.4	(0.3)
<b>Average CEE</b>	<b>2.2</b>	
Armenia	4.6	(0.7)
Azerbaijan	5.7	(0.7)
Belarus	1.3	(0.4)
Georgia	4.3	(0.6)
Kazakhstan	3.1	(0.5)
Kyrgyzstan	5.3	(0.6)
Moldova	4.0	(0.6)
Russia	2.8	(0.2)
Ukraine	4.4	(0.4)
Uzbekistan	4.4	(0.6)
<b>Average CIS</b>	<b>3.7</b>	
<b>Overall (unweighted average)</b>	<b>3.0</b>	

<sup>+</sup> Firms were asked, on average, what percent of revenues do firms like yours typically pay per annum in unofficial payments to public officials?  
0%; less than 1%; 1 - 1.99%; 2 - 9.99%; 10 - 12%; 13 - 25%; Over 25%.  
The categories were imputed at 0%; 1%; 2%; 6%; 11%; 19%; 25% and the mean calculated.

<sup>15</sup> The question was posed in terms of firm revenues rather than profits since estimates of revenues are more reliable. In addition the question was posed indirectly in terms of "firms like yours" to reassure respondents that their responses would not be attributable directly to their firm. We take total payments as a proxy for administrative corruption since evidence from the BEEPS suggests that the majority of bribe payments are for this purpose.

<sup>16</sup> This measure of administrative corruption differs from the "bribe tax" presented in EBRD (1999), although both were based on the BEEPS. The measure used in this paper includes the responses of all firms, whereas the measure presented in EBRD (1999) presents the average bribes as a share of revenues, among firms that reported paying bribes.

The results suggest considerable variation in the level of administrative corruption across transition economies ranging from less than 2 per cent of annual revenues in a number of Central European countries to over 5 per cent in some CIS countries. Yet there is considerable variation within each region as well. Within the CIS, the high regional average is driven by the very high levels of administrative corruption in the Caucasus countries and Kyrgyzstan. Other CIS countries fall within ranges more comparable to Eastern Europe.

### State capture

Measuring state capture as a form of corruption distinct from the above is more complex as there are few existing indicators in the empirical literature on corruption. One key measurement problem is that the extent to which a set of state institutions is captured is not necessarily a function of the number of firms that engage in state capture. In an extreme case, a single powerful monopoly could generate a much higher level of state capture than a larger number of less powerful firms competing to buy off state officials. To compare state capture across firms and across countries, we therefore need both to identify the number of firms that engage in it and to measure the extent of the impact on all firms from the capture of the state by a subset of those firms. Consequently, we use two measures of state capture: 1) an *impact measure* of the extent of the capture economy defined as the share of firms in each country which report a direct impact on their business from the purchase of laws, decrees and regulations by firms through private payments to public officials, and 2) a *behavioral measure* that identifies captor firms, i.e. those that report having made private payments to public officials for the purpose of influencing the contents of laws, decrees or regulations.<sup>17</sup>

To construct an index of the capture economy, firms were asked to assess the extent to which the following six types of activities have had a direct impact on their business:<sup>18</sup>

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

Table 2 presents the percentage of firms in each country which responded that the respective form of state capture has had a significant impact on their business. By averaging across all of the categories an aggregate index of the extent of the capture economy is presented.

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<sup>17</sup> Of course, the impact measure of state capture is based on the speculation of firms that other firms are engaging in improper behavior and thus less reliable than the behavioral measure. The empirical analysis of the effects of state capture on firm-level performance below will be based on the more reliable behavioral measure. However, we believe that the impact measure still provides a useful relative indicator of perceptions of the impact of state capture across countries.

<sup>18</sup> The decision to include the sale of court decisions to private interests and the mishandling of Central Bank funds as elements of state capture requires some explanation. Courts are generally seen as institutions that implement existing laws as opposed to making them, though the precedent-setting function of courts can blur these boundaries. In the transition countries, where legal systems are still in the nascent stages of development, courts can be seen as playing a more formative role in the development of the legal framework. As regards the Central Bank, the institution's role in setting monetary policy and creating the regulatory framework for the developing financial system also blurs the distinction between the formation and implementation of rules. While recognizing the difficulty of drawing concrete boundaries within any particular institution, we have chosen to incorporate these institutions within the category of state capture as a result of the unique nature of the transition period. Yet it is important to note that removing these components from the index of state capture does not change substantially the ranking of countries on state capture presented in table 2.

The index of the capture economy, defined as the unweighted average of the 6 component indices, suggests a sharp division of the transition countries into two groups.<sup>19</sup> The low capture group includes: Albania, Armenia, Belarus, Czech Republic, Estonia, Hungary, Kazakhstan, Lithuania, Poland, Slovenia and Uzbekistan. This is an unusual combination of countries as it incorporates the most advanced and the least advanced reformers on both political and economic transition in the sample. It should not be surprising that the most advanced reformers have the lowest levels of state capture as their progress in liberalizing the economy, strengthening bureaucratic accountability and promoting political contestability might be expected to place some, albeit still imperfect, constraints on the extent to which individual firms can capture the state.

**Table 2: Measuring the capture economy (% of firms affected by ‘purchase of...’\*)**

Country	Parliamentary legislation	Presidential decrees	Central Bank	Criminal Courts	Commercial Courts	Party Finance	Capture Economy Index <sup>†</sup>	Classification <sup>20</sup>
Albania	12	7	8	22	20	25	16	Low
Armenia	10	7	14	5	6	1	7	Low
Azerbaijan	41	48	39	44	40	35	41	High
Belarus	9	5	25	0	5	4	8	Low
Bulgaria	28	26	28	28	19	42	28	High
Croatia	18	24	30	29	29	30	27	High
Czech Republic	18	11	12	9	9	6	11	Low
Estonia	14	7	8	8	8	17	10	Low
Georgia	29	24	32	18	20	21	24	High
Hungary	12	7	8	5	5	4	7	Low
Kazakhstan	13	10	19	14	14	6	12	Low
Kyrgyzstan	18	16	59	26	30	27	29	High
Latvia	40	49	8	21	26	35	30	High
Lithuania	15	7	9	11	14	13	11	Low
Moldova	43	30	40	33	34	42	37	High
Poland	13	10	6	12	18	10	12	Low
Romania	22	20	26	14	17	27	21	High
Russia	35	32	47	24	27	24	32	High
Slovak Republic	20	12	37	29	25	20	24	High
Slovenia	8	5	4	6	6	11	7	Low
Ukraine	44	37	37	21	26	29	32	High
Uzbekistan	5	4	8	5	9	4	6	Low
<b>Overall (unweighted average)</b>	21	18	23	18	18	20	20	

\* Firms were asked whether corruption in each dimension had no impact; minor impact; significant impact; very significant impact on their business. The table reports the proportion of firms reporting significant or very significant impact of state capture in each dimension.

<sup>†</sup> Calculated as the unweighted average of the six component indices.

<sup>19</sup> This division is not intended to imply that there are no interesting differences between the countries in the two groups but is rather a simple reflection of a tendency in the data that will be used for framing some of the uncontrolled results in the paper. Albania is defined as the borderline low-capture country and Romania the borderline high-capture country.

<sup>20</sup> The use of the descriptive term ‘low’ does not imply that state capture does not exist in these countries. Indeed the BEEPS shows that the phenomenon is present across the transition economies, although in those that we describe as ‘low’ the impact is significantly more limited.

*A priori* the low capture index for some of the least advanced reformers, such as Belarus and Uzbekistan, might appear puzzling. A likely explanation is that in such countries the private sector remains small, important elements of the command system are still in operation, and the political regimes are highly authoritarian. In countries with such a severe imbalance between the power of the state and the private sector, the extent of state capture by the private sector can only be minimal (and indeed the concept may have little meaning in this context).

The gap separating countries with a low and high state capture index is considerable. In the high capture economies, more than a quarter of the firms surveyed reported a significant impact of state capture on their business. This group includes: Azerbaijan, Bulgaria, Croatia, Georgia, Kyrgyzstan, Latvia, Moldova, Romania, Russia, Slovakia and Ukraine. Most of these countries could be considered partial reformers both in terms of their political and economic transitions. They have generally made significant advances in liberalization and privatization with much less progress in concomitant institutional reforms to support a proper legal and regulatory framework. 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, though the determinants of the capture economy will be addressed in greater detail below.<sup>21</sup>

In contrast to this impact measure of the extent of state capture, the BEEPS survey also attempted to elicit whether firms directly engaged in making illicit private payments to public officials to influence the content of laws, decrees or regulations. This allows us to identify *captor firms* and contrast their characteristics and performance with other firms both within and across countries.<sup>22</sup> Table 3 lists the share of all firms in each country that can be classified as captor firms. As expected, captor firms are a minority in all countries, though again the variation is considerable across the transition countries.

## **Influence**

The measure of influence is based on the firm's own assessment of their capacity to affect the content of laws, rules, regulations or decrees emanating from various state institutions that would have a substantial impact on their business.<sup>23</sup> The question made no reference to any

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<sup>21</sup> On the links between partial reforms and the capacity of powerful firms to concentrate gains as a result of the associated market distortions, see Hellman (1998).

<sup>22</sup> The captor firms were identified on the basis of the following question: "How often do firms like yours nowadays need to make extra, unofficial payments to public officials to influence the content of new laws, decrees and regulations?". Firms responding sometimes or more frequently were classified as captors. As discussed above, there is no theoretical reason to believe that the behavioral measure of state capture, constructed as the share of firms engaging in this activity, should be necessarily related in any systematic manner to the impact measure, constructed as the share of firms that have been directly affected. However a simple correlation of the two measures reveals a correlation coefficient of 0.69, which lends some additional confidence to the measurement of state capture as used in this paper. Nevertheless, the less than perfect correlation between the two measures is consistent with the observation that the nature of state capture varies from country to country and thus there is a variance in the cross-country *concentration of capture*, defined as the ratio of the capture economy index to the proportion of captor firms (i.e. the economy-wide state capture impact per captor firm). The calculated measure of concentration of capture is presented in the appendix table A3 and will be analyzed further in forthcoming research.

<sup>23</sup> The influential firms were identified on the basis of the following question: "When a new law, rule regulation or decree is being discussed that could have a substantial impact on your business, how much influence does your firm typically have at the national level of government to try to influence the content of that law, rule regulation or decree?" The question was

private payments to public officials or other explicit forms of corruption. Firms that reported some influence or more on any of the branches of government listed – executive, legislature, ministries or regulatory agencies – were classified as influential. The share of influential firms as a percentage of the sample in each country is listed in Table 3. Influential firms make up a small minority of firms in every transition country, though there is still considerable variation across countries.

One might expect some overlap between state capture and influence as both represent efforts to shape the content of the legal and regulatory framework, although through different methods. However, a cross-tabulation of captor firms and influential firms across the entire sample reveals surprisingly little overlap. Of the 343 captor and influential firms in the sample, only 21 firms report that they engage in both state capture and have influence on the formation of state policies. This suggests that capture and influence are alternative strategies of interacting with the state for a small share of firms with the capacity to have an impact on shaping the legal and regulatory environment.

**Table 3: Captor and Influential firms**

<b>Country</b>	<b>Captors (% of sample)</b>	<b>Influential (% of sample)</b>
Albania	11	4
Armenia	7	3
Azerbaijan	24	1
Belarus	2	5
Bulgaria	11	8
Croatia	10	12
Czech Republic	7	8
Estonia	5	11
Georgia	8	8
Hungary	4	3
Kazakhstan	6	4
Kyrgyzstan	7	7
Latvia	14	14
Lithuania	14	5
Moldova	12	14
Poland	9	3
Romania	13	9
Russia	9	7
Slovak Republic	12	4
Slovenia	10	3
Ukraine	12	14
Uzbekistan	2	4
<b>Overall (unweighted average)</b>	<b>9</b>	<b>7</b>

asked separately for the executive, legislative, ministry and regulatory branches of government. A firm that reported influence in any of these branches was classified as influential.

#### 4. The determinants of capture, corruption and influence

What factors affect the propensity of firms to enter into these different types of relationships with the state? To what extent are these choices determined by characteristics of the firm or features of the broader political economy environment? By investigating the different profiles of firms that engage in state capture and influence, we might gain insights into how these relationships with the state differ.

##### *Econometric Results*

We present the results of separate regressions to explore the characteristics that affect the propensity of any given firm to engage in administrative corruption, state capture or influence, as defined above. Controlling for country fixed effects, we examine the impact of the firm's size, origins, market power, bureaucratic recourse, and security of property and contract rights.

*Size:*<sup>24</sup> Larger firms would be expected to wield greater influence and be more likely to engage in state capture as they have more bargaining power with the state and control more resources. Smaller firms, in contrast, might be more vulnerable to the grabbing hand of the state and thus more likely to be targets of administrative corruption.

*Origins:*<sup>25</sup> The ownership and origins of the firm – i.e. state-owned, privatized or *de novo* – determine, to some extent, the formal ties between the firm and the state as well as the extent of repeated interactions between firm managers and public officials. State-owned and privatized firms might be expected to retain considerable access to and ties with public officials, enhancing their influence on the state. As new players on the market, *de novo* firms, in contrast, are less likely to be influential, while possibly more likely to invest in state capture as a substitute for more formal ties of influence to the state. Such firms might also be expected to pay higher levels of administrative corruption.

*Market power:*<sup>26</sup> Firms with greater market power would be expected to be more influential and more likely to engage in state capture, though it is difficult to separate the direction of causality since influence and capture are also likely to enhance the firm's market power.<sup>27</sup> In the BEEPS survey, market power is measured by the inelasticity of demand for the firm's major product line. Respondents were asked to state the likely response of their customers to a significant price increase in their main product line. Firms with less market power are more likely to be subjected to demands for bribes in the context of administrative corruption.

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<sup>24</sup> Firms were divided into *small*, *medium* and *large* based on the number of employees. Small firms had less than 50 employees, medium sized firms had between 50 and 500 and large firms were those with more than 500.

<sup>25</sup> Firms were divided into *de novo*, *privatized* and *state owned*. *De novo* firms are those which were private from the time of start-up with no state-owned predecessor, privatized firms are those which were formerly state owned and state owned firms are those in which the state retains majority ownership.

<sup>26</sup> Firms were asked, "if you were to raise your prices of your main product line 10% above their current level (after allowing for any inflation and assuming that your competitors maintained their current prices), which of the following would best describe the result? Many of our customers would buy from our competitors instead (1); Our customers would continue to buy from us, but at much lower quantities (2); Customers would continue to buy from us, but at slightly lower quantities (3); Customers would continue to buy from us in the same quantities as now (4).

<sup>27</sup> In addition, we include this variable since its exclusion potentially biases the coefficient of the insecurity of property rights variable.



*Bureaucratic recourse:*<sup>28</sup> Some firms have better access to public officials than others and can use that access to ensure fair treatment against transgressions. The BEEPS survey asked firms to assess whether, if some public official acts against the rules, they can go to another public official to get fair treatment without recourse to private payments to that public official. Firms that have sufficient access to defend themselves against such transgressions could be described as having greater bureaucratic recourse. Bureaucratic recourse should be expected to be positively associated with greater influence. Firms that engage in state capture might be expected to have lower levels of bureaucratic recourse as their interactions with public officials tend to be based on private payments. Firms with less bureaucratic recourse should also be more prone to administrative corruption.

*Insecurity of property and contract rights:*<sup>29</sup> Firms with insecure property rights, especially as a result of discretionary interventions in their affairs by bureaucrats, might be tempted to seek individualized protection through state capture. In contrast, firms with more secure property rights might be expected to wield greater influence on the state, given their longer time horizon and greater leverage over the state. The survey asked firms to evaluate the security of their property and contract rights both today and three years ago to examine changes over time. In the regressions reported below we use the insecurity of such rights three years ago as proxy for the firm's "initial conditions".

Table 4 presents the econometric evidence on the determinants of influence, capture and administrative corruption. Country fixed effects are included in each regression though the results are not shown. Comparing the results across the regressions confirms that different types of firms in transition economies have incentives to enter into different types of relationships with the state.

As expected, larger firms with their greater command over resources are more likely both to have influence on the state and to engage in state capture, but pay less bribes as a share of their annual revenues for administrative corruption than small firms. Large firms would appear to have a wider range of options in their interactions with the state. Administrative corruption, in contrast, is highly regressive having the greatest impact on small firms.<sup>30</sup>

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<sup>28</sup> Firms were asked, "How often is the following statement true? If a government agent acts against the rules I can usually go to another official or to his superior and get the correct treatment without recourse to unofficial payments." Never (1); Seldom (2); Sometimes (3); Frequently (4); Mostly (5); Always (6).

<sup>29</sup> Firms were asked "To what degree do you agree with this statement, now and three years ago? I am confident that the legal system will uphold my contract and property rights in business disputes" Always (1); Mostly (2); Frequently (3); Sometimes (4); Seldom (5); Never (6).

<sup>30</sup> On the regressive nature of bribery see EBRD (2000).

The effects of the firm's origins on the nature of its relationship with the state show an interesting pattern. Again as expected, state-owned firms are more likely to be influential than either privatized or *de novo* firms, perhaps as a result of their stronger formal ties to the state, legacies of previous state ownership and more frequent interactions with public officials. In sharp contrast, captor firms are more likely to be *de novo* firms or privatized firms (though this latter variable is only borderline significant). Similarly, *de novo* firms pay higher levels of administrative corruption than either state firms or privatized firms. New entrants are thus more likely to engage in corruption, though larger new entrants are more likely to engage in state capture, while smaller new entrants face greater administrative corruption.

**Table 4: The determinants of state capture, administrative corruption and influence**

Independent variables		Dependent variables		
Category	Sub-category (Dummy variable base category in parentheses)	Administrative Corruption	Influence	State Capture
Origin	De Novo	0.009** (2.43)	-0.143** (-2.42)	0.392** (3.43)
	Privatized	0.005 (1.44)	-0.111** (-2.06)	0.173 (1.58)
	(State Owned)			
Size	Small	0.014** (3.26)	-0.356** (-4.87)	-0.382** (-2.89)
	Medium	0.003 (0.77)	-0.241** (-3.72)	-0.283** (-2.41)
	(Large)			
Insecurity of property and contract rights		0.006** (6.76)	-0.025* (-1.82)	0.082** (3.08)
Market power		0.000 (0.16)	0.042** (2.52)	0.015 (0.46)
Bureaucratic Recourse		-0.006** (-8.43)	0.025** (2.22)	0.117** (-5.2)
N		1902	1697	2030
R <sup>2</sup>		0.19	0.15	-
Pseudo R <sup>2</sup>		-	-	0.06
Econometric model		OLS	OLS	Ordered Probit
Country dummies were included but not reported				
** significant at 5% level; * significant at 10% level. t-statistics in parentheses.				

Market power, as measured by the inelasticity of demand for the firm's major product line does increase its influence, while having no significant impact on the propensity to engage in state capture or on the levels of administrative corruption paid by the firm. Thus, firms with limited competition can turn their market power into influence over the state without

necessarily resorting to various forms of state capture.<sup>31</sup> Similarly, firms with greater access to public officials, or what we refer to as bureaucratic recourse, are also more likely to have greater influence. By contrast, it is precisely those firms that lack access to public officials who can protect them against transgressions by other officials that tend to engage in state capture, arguably as a defensive strategy to purchase protection from other public officials. Lower bureaucratic recourse also increases bribes for administrative corruption.

Finally, the results on the insecurity of property rights follow the same pattern of variation across different types of relationships with the state. State capture appears to be a strategy of firms which started with less secure property and contract rights than influential firms.<sup>32</sup> Such insecurity also increases their exposure to administrative corruption.

The different profiles of influential and captor firms are striking. Influential firms appear to be the classic incumbent firms inherited from the socialist system. They are large, usually state-owned with good access to public officials and a dominant position in their own market. They began the transition from a more secure position with a much higher degree of security of property and contract rights. Captor firms, in contrast, tend to be larger new entrants to the market with weaker formal ownership ties to the state and less access to public officials. They begin the transition with less secure property and contract rights and do not have as strong a position in their markets as the influential incumbent firms.

Furthermore, the captor firms also report greater barriers to competition than influential firms. Table 5 compares the share of captor, influential and other firms that perceive anti-competitive barriers as a significant obstacle to their business. Across the sample, captor firms face a greater threat of anti-competitive barriers. The difference is particularly stark when we compare the perceptions of captor firms in low and high capture economies.<sup>33</sup>

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<sup>31</sup> We also added a variable measuring the firm's market share in its dominant product line but these results were not significant in any of the regressions.

<sup>32</sup> To assert that the initial security of property rights are also a cause of influence is clearly implausible, but for symmetry we include this variable as a control in the determinants of influence. Our hypothesis is that a high level of 'initial influence' would be a cause of security of property rights in future periods, but unfortunately we do not have the variables to test this and the results are merely suggestive of the relationship between influence and the security of property rights.

<sup>33</sup> Captor firms also report somewhat lower levels of market share than other firms in the sample.

**Table 5: Anti-competitive Barriers**

% of firms that report anti-competitive barriers <sup>+</sup>	Low Capture Countries	High Capture Countries
Captor firms	0.46 (0.05)	0.73 (0.03)
Influential firms	0.32 (0.06)	0.56 (0.04)
Other	0.38 (0.01)	0.51 (0.01)
Standard errors in parentheses		
<sup>+</sup> Firms were asked how problematic are anti-competitive practices by the government or private enterprises? No obstacle; Minor obstacle; Moderate Obstacle; Major Obstacle. Firms reporting moderate or major obstacles are classified as facing anti-competitive barriers.		

Though it might be assumed that firms invest in state capture to extract rents from the state as a substitute for innovation in the market, the evidence suggests instead that state capture and economic innovation are complementary, at least in high capture states. Table 6 compares the propensity of captor firms versus other firms to engage in such innovative activities as opening new plants and developing new products. In high capture economies, captor firms are significantly more likely to innovate.<sup>34</sup> Yet there is a clear distinction between the behavior of captor firms in low and high capture economies.

**Table 6: Market Innovation**

	Opened new plants (% of firms)	Developed new products (% of firms)
<b>Low Capture Countries</b>		
Captor Firms	0.17 (0.04)	0.31 (0.05)
Influential Firms	0.27 (0.06)	0.27 (0.06)
Other Firms	0.19 (0.01)	0.31 (0.01)
<b>High Capture Countries</b>		
Captor Firms	0.31 (0.03)	0.36 (0.04)
Influential Firms	0.27 (0.04)	0.42 (0.04)
Other Firms	0.21 (0.01)	0.29 (0.01)
Standard errors in parentheses.		

<sup>34</sup> However, if we further divide the population of captor firms into *de novo* captors and captors derived from state firms, we see that the propensity to innovate is substantially higher in the former than the latter.

These results suggest that state capture is a strategy adopted by a small share of relatively dynamic *de novo* firms entering a market in which they face serious competitive barriers from influential incumbent firms. Given the conventional portrayal of so-called “oligarchs” who buy off state officials to extract rents, one might expect captor firms to report fewer competitive barriers. Part of an explanation of this anomaly lies in the particular structure of the BEEPS sample which is weighted towards small and medium sized enterprises. Therefore the captor firms being sampled are also biased towards smaller and medium sized enterprises. In addition, the large enterprises sampled were weighted towards state-owned firms, which as shown above, are more likely to be influential rather than captor firms. As a result, the sample contained only a small share of firms that might be characterized as part of the typical oligarch’s business group. This selection bias underestimates the share of large firms that might be expected to engage in state capture, which would also be more likely to erect barriers to entry than face barriers to entry.

There is a high share of small and medium sized enterprises among the captor firms in the BEEPS sample which suggests that state capture is not a strategy used exclusively by powerful oligarchs, but is more pervasive across different levels of the economy and the state in transition countries.<sup>35</sup> Indeed, the captor firms in the BEEPS sample might be more appropriately seen as “embryonic oligarchs,” i.e., new firms that are engaging in state capture as a strategy of entry in an effort to establish their own dominance in the face of influential incumbent firms.<sup>36</sup> The fact that in high capture economies such embryonic oligarchs also appear to be among the most dynamic new firms in the might explain why, once entrenched, state capture is so difficult to remedy.

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<sup>35</sup> The question remains as to what level of government or types of government decisions these smaller firms are actually capturing. In the transition economies, many regulations with direct impact on firms are not made at the highest levels of government, but are in the purview of local officials, who may be subject to capture from smaller firms. (The fallacy that state capture only applies to the largest firms at the highest levels of government is similar to the fallacy that monopoly power is related to the size of the firm or market it operates in. Even if the relevant market is small, monopoly power can nevertheless exist. Tirole (1988) gives the example of a single doctor with a rural practice. In the same way the relevant market for state capture and influence may be at the national or local level, all that is required is for some state official to have the power to influence the operating environment of the firm and its competitors.) If we assume that the smaller firms that engage in capture do so at lower levels of government, the results are not implausible. Unfortunately it is not possible to test this assumption. (and indeed, this assumption also suggests another interpretation if we assume that firms are more likely to admit to lower level forms of corruption).

<sup>36</sup> In addition, it has been common practice in the transition economies for managers of large firms to register *de novo* firms on the basis of their existing enterprises, as a means of diverting assets and reducing transparency. As a result, many small, *de novo* firms may actually be linked to much larger firms.

## 5. The private gains to capture, corruption and influence

If these alternative relationships between the firm and the state entail different distributions of rents, then we should see differential effects on firm performance associated with these relationships. The BEEPS survey provides the first opportunity to measure and compare the costs and benefits to those firms that actively engage in state capture, administrative corruption and influence, as well as the externalities to other firms in each country that are not engaged in such relationships. As a result, we can assess both the private and the social costs and benefits of different types of interactions between firms and the state.

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 as a result of corrupt activities that would not be reflected in the firm level performance.<sup>37</sup> Such private gains to managers cannot be measured. As a proxy of for firm performance, we use actual and expected future real growth in sales and investment, though the inherent limitations of these measures should be kept in mind.

To illustrate the performance differences, we first compare the unconditional means of the actual growth of sales and investment over the past three years between firms that engage in state capture, influence and administrative corruption and all other firms. We also include data on expected growth in these variables over the next three years to determine whether any costs or benefits on previous performance are perceived to be sustainable in the future. Table 7 compares the unconditional performance means for captor firms, influential firms and firms subject to administrative corruption.

On average, 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. State capture does appear to yield private benefits to the firm. It is interesting to note that the extent of their advantage over other firms recedes in expected performance suggesting some uncertainty about the gains to capture over time.

Yet the gains to state capture would appear to be highly dependent on the nature of the broader environment in which they operate. If we divide the transition countries into high and low capture economies according to their scores on the capture economy index defined above, the pattern of gains to capture looks rather different. Where there is a significant market for state capture, i.e. where the state is willing to sell customized packages of public goods and legislation to individual firms, the gains to those firms actively engaging in capture would appear to be substantial. Captor firms grew nearly four times as fast as other firms in high capture environments with similarly substantial differences in investment levels. Though, again, the gap between captors and other firms narrows considerably on perceptions of *expected* growth rates.

In sharp contrast, captor firms in low capture countries, where states provide a broader range of public goods for the market and the legislative process is more subject to institutional

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<sup>37</sup> These corporate governance problems have been investigated recently by Black et al (1999). To the extent that growth in sales represent gains that accrue to the firm, whether or not they are subsequently appropriated by managers, the results of this paper can be considered despite rather than because of corruption for the private benefit of managers.

restraints and political competition, exhibit *worse* sales growth than other firms despite similar investment and employment levels. Moreover, captor firms in such countries expect their lower growth rates to be maintained over time as they invest less and support a lower employment rate. The gains to state capture would appear to depend not only on characteristics of the firm, but of the state as well.

Table 7 also suggests a rough indication of the negative externalities to all other firms in these economies deriving from the practice of state capture. The average rate of sales growth for all firms in high capture countries is only 11.1 percent compared to 21.4 percent in low capture countries, despite the specific gains enjoyed by the captor firms. The growth rate of investment shows a similar pattern. A full assessment of the social costs of capture is presented in a later section.

**Table 7: Firm Performance and interactions with the state (uncontrolled means)**

	Firm Performance (unweighted means)							
	Actual real growth last three years (per cent)				Expected real growth next three years (per cent)			
	Sales		Investment		Sales		Investment	
<b>All Countries</b>								
Captor	24.5	(5.3)	22.6	(5.8)	24.4	(3.2)	19.9	(3.6)
Non Captor	14.5	(1.4)	14.6	(1.4)	25.3	(1.1)	16.8	(1.0)
Overall	15.6	(1.2)	15.6	(1.2)	24.6	(0.9)	16.9	(0.9)
<b>Capture Economies</b>								
Captor	31.1	(7.0)	23.0	(7.8)	29.6	(4.4)	25.7	(5.1)
Non Captor	8.3	(1.6)	9.4	(1.7)	26.7	(1.6)	17.5	(1.3)
Overall	11.1	(1.5)	11.5	(1.6)	25.1	(1.3)	16.8	(1.1)
<b>Non-Capture Economies</b>								
Captor	13.0	(6.6)	21.8	(7.3)	15.7	(3.2)	10.1	(3.5)
Non Captor	20.9	(2.3)	20.0	(2.3)	23.8	(1.6)	16.1	(1.5)
Overall	21.4	(2.0)	21.1	(1.9)	24.1	(1.3)	17.0	(1.3)
<b>All Countries</b>								
Influential	32.3	(6.9)	28.4	(7.2)	35.4	(4.9)	23.2	(3.8)
Non Influential	14.9	(1.4)	15.0	(1.4)	25.6	(1.1)	17.7	(1.0)
Overall	15.6	(1.2)	15.6	(1.2)	24.6	(0.9)	16.9	(0.9)
<b>All Countries</b>								
High Bribe Firms	11.2	(2.5)	10.2	(2.3)	25.8	(2.2)	17.9	(1.8)
Low Bribe Firms	17.3	(1.7)	17.4	(1.8)	23.4	(1.1)	17.0	(1.2)
Overall	15.6	(1.2)	15.6	(1.2)	24.6	(0.9)	16.9	(0.9)

Standard errors in parentheses

There would also appear to be positive gains to firm performance deriving from influence. Influential firms show stronger performance across all of the dimensions measured and, in contrast to captor firms, they expect these advantages to be maintained over time.<sup>38</sup> Influential firms seem to do better across the board, as might be expected.

The gains to capture and influence at the firm level differ from the consequences of administrative corruption associated with the “grabbing hand” approach. The firms are divided into high and low bribe firms based on their average reported level of bribes to public

<sup>38</sup> The relative gains to influence do not appear to be affected by the incidence of capture at the country level.

officials “to get things done.”<sup>39</sup> While payments to influence the formation of the legal and regulatory framework appear to generate substantial gains to the firm, other forms of bribery would appear to weaken firm performance. Across the entire sample, firms that pay high levels of administrative corruption have grown at a significantly slower pace than other firms. Investment levels in these high bribe firms are substantially lower as well. This form of corruption would appear at first blush to impose considerable costs to the firm without any measurable benefits as the grabbing hand model would suggest.

An examination of the unconditional performance means suggests that unbundling corruption reveals important differences in the consequences of different forms of corruption on the firm. Although the characteristics of firms that engage in state capture or have influence on the state are quite different, both forms of interaction with the state would appear to generate significant rents to the firm. By contrast, firms engaged in administrative corruption do not appear to get advantages from their bribe payments. Yet an analysis of the consequences of these different forms of interaction with the state must control for other characteristics of the firm that might affect performance levels.

#### *Econometric Results*

We now estimate the effects on firm performance of all three different relationships with the state – capture, influence and administrative corruption – conditioned upon country fixed effects and a wide range of firm-level characteristics, including sector, size, origins, and investment of foreign capital in the firm. We also control for two other factors that should have an impact on firm performance, namely *innovation* and *market power*. Not only should innovation affect firm performance directly, but given the correlation of capture and innovation, is included to avoid omitted variable bias in the interpretation of the capture coefficients. Likewise, we include market power, since this variable potentially affects firm performance directly and indirectly through its correlation with influence. Innovation is a dummy variable measuring whether the firm has developed a new product or opened a new plant within the past three years. Market power is measured, as described above, by the inelasticity of demand for the firm’s major product as determined by the firm’s perceptions of the actions of their customers in the event of an 10 percent price increase. The dependent variables for the firm performance regressions are the average real rate of sales and investment growth over the previous three years and expected rate of sales and investment growth over the next three years. Table 8 presents the regression results.

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<sup>39</sup> Firms were classified as high bribe firms if they reported spending over 2% of their annual revenues on administrative corruption. Firms spending less than or equal to 2% of their annual revenues were classified as low bribe firms. Similar results were found using different thresholds to divide the firms into categories, which we do not report. In the controlled regressions, the full continuous measure of administrative corruption was used to avoid the need to choose a threshold.



**Table 8: Firm performance and interactions with the state<sup>40</sup>**

Independent variables		Dependent variables			
<i>Sub-category (Dummy variable base category in parentheses)</i>		Real growth rate of:			
<i>Category</i>		Sales (previous 3 years) (1)	Sales (next 3 years) (2)	Investment (previous 3 years) (3)	Investment (next 3 years) (4)
<b>Sector</b>	Mining	-2.3 (-0.12)	-3.9 (-0.28)	-12.3 (-0.63)	-4.5 (-0.34)
	Services (Manufacturing)	5.9 (1.48)	-1.2 (-0.41)	6.8* (1.63)	4.3 (1.55)
<b>Origin</b>	De Novo	24.4** (4.02)	13.4** (3.06)	24.9** (3.9)	4.0 (0.94)
	Privatized (State owned)	1.5 (0.27)	3.0 (0.75)	11.2** (1.94)	-0.6 (-0.15)
<b>Size</b>	Small	-15.3** (-1.99)	0.0 (0.00)	-1.9 (-0.24)	6.9 (1.26)
	Medium (Large)	-7.9 (-1.21)	-1.5 (-0.31)	1.1 (0.16)	3.0 (0.64)
<b>FDI</b>		7.5 (1.34)	9.8** (2.44)	15.4** (2.63)	1.7 (0.44)
<b>Innovation</b>		23.3** (5.87)	14.1** (4.92)	18.5** (4.43)	11.1** (3.98)
<b>Market power</b>		2.9* (1.63)	3.3** (2.58)	0.4 (0.20)	1.9 (1.53)
<b>Captor Firm</b>		-23.2* (-1.61)	-13.6 (-1.29)	-3.2 (-0.21)	-6.8 (-0.68)
	Interaction with the capture economy	119.9** (2.18)	40.1 (1.00)	42.4 (0.74)	26.8 (0.70)
<b>Influential Firm</b>		12.7* (1.83)	7.1 (1.40)	22.2** (3.06)	1.8 (0.37)
<b>Administrative corruption</b>		-0.8* (-1.85)	-0.3 (-1.13)	-0.4 (-0.85)	-0.2 (-0.52)
<b>N</b>		1617	1591	1612	1591
<b>R<sup>2</sup></b>		0.11	0.09	0.09	0.05
<b>Econometric model</b>		OLS	OLS	OLS	OLS

Country dummies included, but not reported  
\*\* significant at 5% level; \* significant at 10% level. t-statistics in parentheses.

<sup>40</sup> The estimated equation was:

Performance =  $\alpha + \beta_1 \text{Mining} + \beta_2 \text{Services} + \beta_3 \text{Small} + \beta_4 \text{Medium} + \beta_5 \text{De Novo} + \beta_6 \text{Privatized} + \beta_7 \text{FDI} + \beta_8 \text{Innovation} + \beta_9 \text{Market Power} + \beta_{10} \text{Capture} + \beta_{11} \text{Capture} \times \text{Capture Economy Index} + \beta_{12} \text{Influential} + \beta_{13} \text{Administrative Corruption} + (\text{country dummies}) + \mu$

Though dummy variables designating key sectors do not indicate a significant impact on firm performance, the size and origins of firms do matter for sales growth. Surprisingly, small firms have lower sales growth than either medium- or large-scale firms, though the difference does not hold in expectations for future sales growth.<sup>41</sup> *De novo* firms, on the other hand, have significantly higher rates of sales growth than other firms over the past three years and higher expected sales as well.<sup>42</sup> It is interesting to note that privatized firms have not exhibited higher sales growth than firms remaining under state ownership.<sup>43</sup> Firms with foreign direct investment have also not shown significantly higher growth rates than domestically owned firms, though they do anticipate higher expected sales over the next three years.

The two variables that indicate the firm's behavior in the market, namely whether they are innovators or monopolists, do have a significant impact on performance. Innovative firms show highly positive and significant gains in actual and expected performance. Firms with stronger market power also demonstrate positive, though somewhat less significant, gains in sales growth.

To investigate the effects of alternative relationships between the firm and the state, we include dummy variables for both captor firms and for influential firms. The captor dummy is also interacted with the index of the capture economy to measure the extent to which the gains to the captor firm depend upon the overall extent of state capture in the economy. The coefficients of the interaction variable represent the *additional* impact of capture on firm performance as the level of state capture in the economy increases.

The impact of state capture on sales growth for those firms that actively engage in it are markedly different in high capture versus low capture economies. Captor firms grow *less* than other firms in low capture economies, though the coefficient is only marginally significant. However, as the extent to which the state has been captured increases, the private gains to captor firms in terms of sales growth increase substantially. Capturing the state does generate gains for the firm, but only in those countries where state capture has reached some threshold level in terms of its impact on all firms throughout the economy.

It is interesting to note that the gains in terms of sales growth to captor firms relative to other firms are not linked with higher actual or expected levels of investment or employment. While captor firms have managed to extract advantages from the state to increase sales in the short term, this has not generated increased investment in such firms. Moreover, the firms remain uncertain as to whether the advantages in terms of sales growth will be maintained over time.

Influential firms also show positive, though less significant, performance gains in terms of sales growth. In contrast to captor firms, influential firms are also more likely to increase investment growth.

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<sup>41</sup> However, it is conceivable that small firms have greater incentives to under-report their income so as not to attract any undue attention from the state or organized crime. While larger firms might have similar incentives, small firms may be less likely to be detected and thus more likely to under-report.

<sup>42</sup> 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.

<sup>43</sup> For a further discussion of the inconsequential impact of privatization on firm performance using BEEPS data, see I:BRD (1999), chapters 8 and 9.

Controlling for country fixed effects, characteristics of the firm and its behavior in the market, capture and influence both continue to yield gains to those firms that can enter into such relationships with the state. Though influence enhances performance across the sample, the gains to capture are available only in the high capture economies.

In comparison with the private gains to influence and capture, the impact of administrative corruption contrasts sharply. The variable measuring overall bribe payments to affect the implementation of laws, regulations and decrees has a very small negative impact on firm level growth rates. There do not appear to be any firm-specific benefits in terms of performance associated with administrative corruption.

### *Endogeneity and Instrumenting*

A possible objection could be raised regarding simultaneity in these results. It might be argued that public officials target high-growth firms for “tribute” payments by threatening them with the introduction of unfavorable legislation, regulations and decrees. This would suggest that high growth rates are the real cause of state capture at the firm level. If so, state capture would not be a strategy by which firms extract rents from the state through shaping laws and regulations in their favor, but just another form of high-level extortion by the state, albeit one that tends to be directed at high-growth firms. Similarly, high growth could also be seen as a cause of a firm’s influence over the state. If high growth were the cause of both state capture and influence, we would expect to see greater overlap between capture and influence at the firm level as such growth would simultaneously enhance influence and increase the state’s propensity to extract tribute through the law-making process. Yet, as described above, few influential firms engage in state capture and vice versa. Furthermore, given that the regressions control for market behavior (i.e. innovation and market power), the relationship between capture, influence and firm performance is not consistent with the hypothesis that strong performance (as a result of market behavior) is the cause of state capture.

A more rigorous method to check the robustness of these results to the simultaneity challenge is to replace the variables in questions with instrumental variables (IVs) that are highly correlated with capture and influence<sup>44</sup>, but unlikely to be caused by the dependent variable, firm performance. Given the regressions predicting the propensity of firms to be either captor or influential firms reported in Table 5, we use the initial degree of the firm’s insecurity of property and contract rights (three years ago) as one of our instruments. Furthermore, given the different profiles of captor and influential firms (i.e. predominantly *de novo* and state owned respectively), we use the firm’s date of establishment as a second instrument. To account for the interaction of captor firms and the capture economy we also interact both the instruments with the index of the capture economy. All four instruments were then used to estimate the performance regressions in Table 9. The sign and magnitude of the coefficients of captor firms and influential firms are nearly identical. The size of the standard errors is somewhat, though not substantially, larger than in the original regressions as might be expected. These results suggest that state capture and influence cause the higher growth rates at the firm level.

By controlling for a wide range of other factors that contribute to firm-level growth rates, the regression results suggest that both state capture and influence generate significant rents to the

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<sup>44</sup> There are three endogenous variables that we wish to instrument for: captor firm, influential firm, and captor firm interacted with the extent of the capture economy.

firm. Though the data do not give us the opportunity to calculate the aggregate level of rents generated by these relationships and the distribution of those rents between the firm and public officials,<sup>45</sup> they do suggest that whatever state officials might “grab” in the context of these relationships there are still substantial rents left for the firm. In contrast, whatever rents might be generated as a result of administrative corruption, they do not appear to accrue directly to the firm.<sup>46</sup>

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<sup>45</sup> This would require data on the rents received by public officials as a result of state capture, which are not included in the BEFPS survey. However, we do know that there is a difference in the distribution of these rents in relationships based on state capture versus influence, since the former entail private payments to public officials while the latter do not.

<sup>46</sup> Of course given weaknesses in the structure of corporate governance, it is possible that these rents accrue not to the firm but as private gains to the managers. Yet this would apply equally to any gains deriving from state capture and influence.

**Table 9: Firm performance and interactions with the state (IV regressions)<sup>47</sup>**

Independent variables		Dependent variables Real growth rate of:			
Category	Sub-category (Dummy variable base category in parentheses)	Sales (previous 3 years) (1)	Sales (next 3 years) (2)	Investment (previous 3 years) (3)	Investment (next 3 years) (4)
Sector	Mining	-8.4 (-0.38)	-4.8 (-0.32)	-20.2 (-0.87)	-7.1 (-0.48)
	Services (Manufacturing)	3.5 (0.78)	-1.3 (-0.43)	7.4 (1.54)	3.6 (1.16)
Origin	De Novo	24.5** (3.64)	10.7** (2.34)	25.2** (3.48)	2 (0.42)
	Privatized (State owned)	2.1 (0.35)	2.1 (0.5)	11.1* (1.71)	-1.7 (-0.41)
Size	Small	-10.6 (-1.26)	0.4 (0.06)	-0.3 (-0.04)	8.5 (1.44)
	Medium (Large)	-4.3 (-0.61)	-1.6 (-0.33)	0.9 (0.12)	3.0 (0.61)
FDI		6.2 (1.01)	8.5** (2.05)	14.0** (2.14)	1.5 (0.36)
Innovation		22.2** (5.05)	13.2** (4.4)	18.3** (3.86)	10.1** (3.28)
Market power		2.2 (1.13)	3.2** (2.41)	0.5 (0.23)	2.3* (1.68)
Administrative corruption		-0.7 (-1.45)	-0.1 (-0.28)	-0.5 (-0.94)	-0.1 (-0.17)
<b>Instrumented</b>					
Captor Firm		-24.6 (-1.55)	-9.8 (-0.89)	-1.3 (-0.08)	-3.1 (-0.28)
	Interaction with the capture economy	110.9* (1.76)	9.7 (0.22)	40.3 (0.6)	-2.3 (-0.05)
Influential Firm		16.2** (2.03)	7.8 (1.43)	23.5** (2.74)	3.5 (0.63)
N		1377	1354	1378	1354
R <sup>2</sup>		0.11	0.08	0.08	0.05
Econometric model		IV	IV	IV	IV

Instruments: insecurity of property and contract rights, foundation date of the firm, interaction of both these variables with the extent of the capture economy.

Country dummies included, but not reported

\*\* significant at 5% level; \* significant at 10% level. t-statistics in parentheses.

<sup>47</sup> The two stage approach estimated:

*Stage one:*

Captor =  $\alpha_1 + \beta_{11}$ Insecurity of Property Rights +  $\beta_{12}$  (Insecurity of Property Rights x Capture Economy Index) +  $\beta_{13}$  (Date of Foundation) +  $\beta_{14}$  (Date of Foundation x Capture Economy Index) + (all other exogenous variables from stage 2) +  $u_1$

Captor x Capture Economy Index =  $\alpha_2 + \beta_{21}$ Insecurity of Property Rights +  $\beta_{22}$  (Insecurity of Property Rights x Capture Economy Index) +  $\beta_{23}$  (Date of Foundation) +  $\beta_{24}$  (Date of Foundation x Capture Economy Index) + (all other exogenous variables from stage 2) +  $u_2$

Influence =  $\alpha_3 + \beta_{31}$ Insecurity of Property Rights +  $\beta_{32}$  (Insecurity of Property Rights x Capture Economy Index) +  $\beta_{33}$  (Date of Foundation) +  $\beta_{34}$  (Date of Foundation x Capture Economy Index) + (all other exogenous variables from stage 2) +  $u_3$

*Stage two (instrumented variables underlined):*

Performance =  $\alpha + \gamma_1$ Mining +  $\gamma_2$ Services +  $\gamma_3$ Small +  $\gamma_4$ Medium +  $\gamma_5$ De Novo +  $\gamma_6$ Privatized +  $\gamma_7$ FDI +  $\gamma_8$ Innovation +  $\gamma_9$ Market Power +  $\gamma_{10}$ Administrative Corruption +  $\gamma_{11}$ Capture +  $\gamma_{12}$ (Capture x Capture Economy Index) +  $\gamma_{13}$ Influence + (country dummies) +  $\epsilon$

## 6. Socials Costs of the Capture Economy

The regression results above focus on the performance of firms actively engaged in state capture, but what is the impact of state capture on the vast majority of firms that cannot capture the state? A rough indication comes from the unconditional performance means reported in Table 7. In low capture countries, the average real rate of sale growth over the past 3 years is 21.4 percent. In high capture countries, where a large number of firms report a substantial direct impact on their business from the capture of the state, the average growth rate falls to 11.1 per cent, despite the considerable relative gains for captor firms in these countries. Average real investment rates at the firm level differ substantially as well, falling from 21.1 per cent in low capture countries to 11.5 per cent in high capture countries.<sup>48</sup>

Controlling for firm characteristics, the impact of the capture economy on firm-level growth rates remains negative. Table 10 below repeats the performance regressions for sales and investment from Table 8 but replaces the country dummy variables with an index of the extent of the capture economy at the country level reported in Table 2 above. The coefficient of this variable gives an estimate of the impact of a high capture environment on the rate of sales and investment growth in all firms in that environment or what might be seen as one component of a measure of the social costs of state capture.<sup>49</sup> The results show that higher levels of state capture in the economy are significantly related to lower rates of both sales growth and investment at the firm level. The considerable gains to captor firms in the capture economy generate substantial negative externalities for all other firms.

There are a number of negative externalities that could potentially be generated by the capacity of a small share of powerful firms to capture the state and thus encode advantages into the basic legal and regulatory framework. Captor firms could use their relationships with public officials to erect barriers to entry or to impose harsh regulatory burdens on their competitors. States that are prepared to sell public goods to individual firms on an “a la carte” basis are likely to be undersupplying those goods to the market at large. The BEEPS survey provide data on the security of property and contract rights at the firm level, which would allow us to test for the extent of such negative externalities on the provision of a key set of public goods.

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<sup>48</sup> A parallel division of countries into high and low levels of influence on the basis of the index reported in table 3 did not produce any significant difference between these two groups. However a fuller discussion of the social costs of influence is not possible using this measure. In the first instance it is a behavioral measure and is not necessarily a good proxy for the cross-country impact of influence. In addition, it does not distinguish between corrupt and non-corrupt forms of influence, or between influence exercised via collective action and that via private arrangements between individual firms and officials. These distinctions are likely to be crucial to understanding the broader implications of the exercise of influence.

<sup>49</sup> One could imagine a number of other potential social and political costs associated with state capture beyond the impact on firm performance. For a fuller discussion of the negative consequences of state capture for the process of transition see World Bank (2000).

**Table 10: The social costs of the capture economy for firm performance**

Independent variables		Dependent variables	
		Real growth rate of:	
Category	Sub-category (Dummy variable base category in parentheses)	Sales (previous 3 years) (1)	Investment (previous 3 years) (2)
Sector	Mining	-3.9 (-0.2)	-12.5 (-0.64)
	Services (Manufacturing)	5.8 (1.46)	7.9* (1.92)
Origin	De Novo	28.4** (4.71)	25.1** (3.99)
	Privatized (State owned)	5.5 (1.02)	11.1** (1.95)
Size	Small	-18.5** (-2.4)	-5.7 (-0.72)
	Medium (Large)	-8.7 (-1.32)	-0.9 (-0.13)
FDI		9.9* (1.77)	16.8** (2.91)
Innovation		24.7** (6.28)	20.5** (5)
Market power		4.4** (2.49)	0.7 (0.37)
Captor Firm		-21.8 (-1.5)	-1.1 (-0.07)
	Interaction with the capture economy	106.7** (1.95)	37.9 (0.67)
Influential Firm		13* (1.86)	23.4** (3.21)
Administrative corruption		-0.9** (-2.29)	-0.7* (-1.69)
Capture Economy [cross-country measure]		-41.3** (-2.39)	-45.1** (-2.52)
N		1617	1612
R <sup>2</sup>		0.07	0.06
Econometric model		OLS	OLS

\*\* significant at 5% level; \* significant at 10% level. t-statistics in parentheses.

## 7. State Capture, Influence and the Security of Property and Contract Rights

In an earlier section, we showed that the different perceptions of the security of property and contract rights affected the propensity of firms to engage in state capture or have influence over state decisions. Firms with greater insecurity were shown to be more likely to engage in state capture, while influential firms enjoyed much more secure property rights. Yet if capture is, to some extent, motivated by the insecurity of property and contract rights, does it generate a demonstrable improvement for captor firms in these rights over time? If so, how does this affect the property rights of other firms that do not (or cannot) engage in state capture?

The BEEPS survey asked firms to assess how the security of their property and contract rights has changed over the past three years.<sup>50</sup> This gives us an opportunity to investigate how different types of relationships between the firm and the state affect the evolution of the security of property rights for individual captor and influential firms, as well as to compare the aggregate affects on such rights at the country level over time. Table 11 presents the results of an ordered probit regression on the change of the security of property and contract rights.

The regression controls for the initial level of insecurity of property rights three years ago to account for the fact that the change over time might depend upon the initial starting point. As might be expected, firms starting with higher insecurity show the greatest probability of strengthening the security of these rights over time. However, *de novo* and privatized firms are *less* likely to have seen an improvement in the security of their property and contract rights over time relative to remaining state-owned firms. This raises doubts about the view that privatization and new entry have created an effective constituency to push for the institutional reforms that might increase their security of property rights over time, though the change is measured over a relatively short time frame.

The firms that are most likely to have strengthened the security of their property rights over time are captor firms, especially in high capture economies. Though the positive coefficient of the captor dummy variable in regression (1) is only marginally significant, it increases substantially in both magnitude and significance when interacted with the capture economy index in regression (2). Captor firms appear to have succeeded in doing something that most new entrants and privatized firms have been unable to achieve – to gain greater protection of their property rights over time.<sup>51</sup> In contrast, influential firms, which started from a position of greater security, experience no such differential improvement in their property rights over time.

Yet the magnitude of the achievement by captor firms in high capture economies is even more impressive when compared with the fate of all other firms in these high capture economies. An index of the capture economy at the country level in Table 11 shows that firms in high capture economies are much more likely to have seen a reduction in the security of their

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<sup>50</sup> Firms were asked whether they agreed with the following statement both at present and three years ago: “I am confident that the legal system will uphold my contract and property rights in business disputes.” In this regression, the dependent variable takes the values +1 indicating an improvement in the security of property rights over the period, 0 indicating no change and -1 indicating a deterioration. No attempt was made to measure the magnitude of the change in property rights, since the measures of the security of property rights in the two periods are simply ordinal variables.

<sup>51</sup> A second set of regressions, unreported here, also controlled for innovation, to examine the hypothesis that since capture and innovation are correlated at the firm level, the relationship between capture and improved protection of property rights is the result of greater demand for protection by innovative firms. The coefficient of innovation was insignificant and there was no substantial change in the coefficients on the other variables.



property and contract rights over time. Thus, captor firms have been able to purchase through private payments to public officials individualized protection of their property and contract rights from the state on an “a la carte” basis in an environment where such security has been deteriorating over time for most other firms, in particular for other new entrants and privatized firms.

If individual firms can purchase under-provided public goods directly from the state on the basis of private payments to public officials, then these officials will not have strong incentives to improve the overall provision of such goods given the risk of reducing their bribe income. Consequently state capture, while strengthening the position of a small share of firms, would appear to undermine the broader provision of a key public good by the state which might contribute to an explanation of the lower growth rates of non-captor firms in capture economies.

The sharp contrast between the private benefits and social costs of state capture in the provision of secure property and contract rights also helps to explain the clear threshold effects described above separating high and low capture economies. State capture reduces the security of property and contract rights for non-captor firms, which, as we have shown above, increases the propensity of other firms to engaged in state capture. Thus captor firms beget more firms seeking to capture the state at different levels of the political system.

**Table 11: The change in the security of property and contract rights**

Independent variables		Dependent variables	
<i>Category</i>	<i>Sub-category (Dummy variable base category in parentheses)</i>	The change in the security of property and contract rights	
		(1)	(2)
<b>Origin</b>	De Novo	-0.26** (-2.22)	-0.26** (-2.23)
	Privatized (State)	-0.22** (-2.17)	-0.22** (-2.13)
	<b>Size</b>		
	Small	-0.13 (-1.32)	-0.12 (-1.26)
	Medium (Large)	-0.21** (-2.47)	-0.21** (-2.41)
<b>Captor Firm</b>		0.17* (1.69)	-0.33 (-1.45)
	Interaction with the capture economy		2.23** (2.45)
<b>Influential Firm</b>		0.01 (0.1)	0.01 (0.12)
<b>Insecurity of property and Contract rights</b>		0.26** (10.9)	0.26** (10.9)
<b>Capture economy [cross-country measure]</b>		-0.88** (-3.17)	-1.1** (-3.77)
<b>N</b>		1916	1916
<b>Pseudo R<sup>2</sup></b>		0.06	0.06
<b>Econometric model</b>		Ordered probit	Ordered probit

\*\* significant at 5% level; \* significant at 10% level. t-statistics in parentheses.

## 8. Origins of the Capture Economy

Though our focus has been on the microeconomic incentives which underlie the decisions of firms to attempt to capture the state, we have also shown how these incentives are shaped by the overall extent of the capture economy in each country. In this section we begin a very tentative examination of the factors that might explain the extent of state capture at the aggregate level.

We focus on the role of civil liberties,<sup>52</sup> which we view as an exogenous variable that affects both the supply of and demand for state capture. On the supply side, civil liberties are a proxy for the constraints that effective oversight by civil society can place on public officials. Such oversight raises the costs to politicians of actions that provide highly concentrated gains to a small set of powerful actors while imposing substantial costs on everyone else. On the demand side we would expect the initial increase in the level of civil liberties relative to the communist system to increase the demand for state capture by newly autonomous firms. Thus, the effects of political liberalization on the aggregate level of capture in a given country are *a priori* ambiguous and depend on the extent to which the impact of liberalization on supply or demand dominates.

**Table 12: Measures of economic and social liberalization**

Country	Civil liberties
Albania	4.3
Armenia	4.0
Azerbaijan	4.3
Belarus	6.0
Bulgaria	3.0
Croatia	4.0
Czech Republic	2.0
Estonia	2.0
Georgia	4.0
Hungary	2.0
Kazakhstan	5.0
Kyrgyzstan	4.3
Latvia	2.0
Lithuania	2.0
Moldova	4.0
Poland	2.0
Romania	2.3
Russia	4.0
Slovak Republic	3.3
Slovenia	2.0
Ukraine	4.0
Uzbekistan	6.0

Interpretation of Indices: Index ranges from 1 to 7 where 1 is most free and 7 is least free.

<sup>52</sup> We do not suggest that such a simple mono-causal explanation can fully account for a phenomenon as complex as state capture. However, we do believe that the relationship investigated here represents an important component in any understanding of the problem.

In Table 12 we present a measure of the extent of civil liberties 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."<sup>53</sup> Each country is assessed on a scale of 1 (most free) to 7 (least free). The index has been compiled annually since 1972 and we use the average score for the three most recent years.

In the simple illustrative regressions presented in Table 13, the dependent variable is the index of the capture economy at the country level from Table 2. Since the initial stage of liberalization might lead to increases in state capture in comparison with the previous system, followed by a decrease in the capture index as civil society oversight increases over time, the relationship between civil liberties and the propensity to engage in state capture is unlikely to be linear. The key point reflected in the regressions is the inverted U-shape of the relationship.

The first pair of regressions on the extent of state capture includes all 22 countries. The second pair of regressions excludes Belarus and Uzbekistan, since private sector development has been very limited in these countries and the very notion of state capture by the corporate sector in these countries is potentially inapplicable.

**Table 13: Regressions of state capture vs. civil liberties**

Dependent variable	Countries in sample	Independent variables		R <sup>2</sup>
		Civil liberties	(Civil liberties) <sup>2</sup>	
Extent of state capture	22	0.010 (0.529)	-	0.014
	22	0.336** (4.08)	-0.044** (-4.02)	0.467
Extent of state capture	20 <sup>†</sup>	0.049** (2.33)	-	0.232
	20 <sup>†</sup>	0.470** (2.48)	-0.066** (-2.32)	0.406

† the smaller sample excluded Belarus and Uzbekistan  
\* significant at 10% \*\* significant at 5% t-statistics in parentheses.

The regressions are merely suggestive of some interesting trends that could merit further research:

- The relationship between civil liberties and state capture in the full sample of 22 countries is 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. In these countries, the initial introduction of civil liberties (and other checks on abuse of power related to the supply of state capture) is 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 has been reached further reforms in this area are associated with much *lower*

<sup>53</sup> 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.

levels of state capture, as increasing civil society oversight raises the costs to politicians 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, even though these are the key examples of transition countries with low levels of civil liberties. Put differently, there are other transition countries that are yet to reach the point where civil society is sufficiently developed to control state capture.

Further research should investigate other structural features of the political system that might increase the costs to politicians of colluding with firms to provide concentrated gains through state capture.

## 9. Summary and Conclusions

Though much of the existing literature on the political economy of transition has focused on the dynamics of state control over the economy, this paper has placed primary emphasis on the ways in which firms exert influence on and collude with public officials to extract advantages. The BEEPS data have provided a unique opportunity to differentiate channels of firm influence on the state and to unbundle corruption to examine variation both across and within the transition countries. The analysis has provided new insights into the origins and dynamics of the capture economy – an economy in which a relatively small share of firms has managed to capture public officials at various levels of the state to extract concentrated rents and to purchase individualized provision by the state of under-provided public goods. The analysis has also demonstrated that the private gains to capture are clearly associated with substantial social costs in capture economies both in terms of overall economic performance and the capacity or commitment of the state to provide critical public goods for the development of the market economy.<sup>54</sup>

State capture and influence are in evidence in all transition economies (as they are in all economies across the globe). However, the advantages to the firm of such activities can be sharply contrasted in different contexts. There is a group of transition economies in which the impact of state capture by a narrow group of firms is quite widely felt by many firms throughout the economy. In contrast, there are other transition economies in which firms may seek to influence the state through capture, but there are constraints which prevent the state from distorting the legal and regulatory framework to the advantage of a few powerful firms. The dynamics of state capture in each group are quite different.

In the capture economy, capture tends to be a strategy of innovative *de novo* firms trying to compete in a market dominated by influential incumbent firms with close historical and formal ties to the state and substantial advantages in terms of market share. As the state in such an environment tends to under-provide such critical public goods as the security of property and contract rights, the most dynamic *de novo* firms seek to purchase such services on an individualized basis directly from public officials along with other advantages to enhance their performance. They would appear to engage in capture not as a substitute for innovation in the marketplace, but as a complementary strategy to compensate for weaknesses in the overall legal framework.

The analysis has shown that capture does generate substantial gains to the firm both in terms of performance and improved security of property rights, but only in the capture economy. In settings where the state faces greater constraints in its capacity to distort the legal framework to advantage a narrow group of firms – in turn associated with greater political liberalization -- the few firms engaging in capture exhibit weaker firm performance and fewer gains in terms of the protection of property rights. In contrast with the capture economy, in such settings firm-level capture and market innovation do appear to be substitutes.

Thus, in the capture economy, many dynamic new firms have strong incentives to engage in state capture which further weakens the state's capacity or commitment to enhance security of

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<sup>54</sup> This pattern of concentrated gains to firms with the capacity to encode their advantages in the legal and regulatory structure at a high social cost is consistent with the argument that the main political obstacles to reform in transition economies have been the early winners from partial economic reforms as argued in Hellman (1998).

property and contract rights. This, in turn, strengthens the incentives for other *de novo* firms to engage in state capture creating a vicious circle that can undermine growth and stymie further progress in economic reform. A recognition of the dynamics of the capture economy suggests a political economy framework for understanding the very divergent paths that are now clearly evident among the transition countries.

The need to shift the focus of reform to strategies for addressing the way in which firms interact with the state is the main implication of this paper. Though this implies deepening the process of economic and political liberalization that was the main challenge of the initial stage of transition, it also leads to a new focus on measures to channel the strategies of firms away from state capture to more legitimate forms of influence through a combination of societal 'voice', transparency reforms, political accountability and economic competition -- as suggested by our preliminary analysis of the positive impact of enhancing civil liberties once a threshold of reform has been reached.

Where state capture has distorted the process of reform to create (or preserve) monopolistic structures supported by powerful political interests, the challenge is particularly daunting. Strategies need to be formulated combining a gradual demonopolization with an activist stance on competition and entry policy, coupled with mobilizing societal voice -- and *inter alia* making transparent the social costs of state capture to the population, to pro-reform constituencies and NGOs. Strategies aimed at mobilizing collective action and empowering competitive constituencies should be given greater prominence.

We end with a word of caution. This paper is an initial effort into the empirical investigation of state capture and other forms of high-level corruption in transition. Future research would need to aim to develop fully a conceptual framework modeling the 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 play). The literature on regulatory capture, suitably integrated with the recent analytical work in the field of corruption, offers particular promise in this context.

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## Appendix

In this appendix we present some additional data and information. Table A1 presents tabulations of the BEEPS sample by country and according to the size, origin and whether or not the firm has any foreign direct investment.

**Table A1: The sample composition of the BEEPS**

Country	Total firms*	Origin			FDI <sup>55</sup>	Size		
		De Novo	Privatized	State		Small	Medium	Large
Albania	163	92	31	34	21	103	54	6
Armenia	125	63	34	25	2	80	40	5
Azerbaijan	137	93	17	25	13	87	48	2
Belarus	132	50	56	25	15	32	86	14
Bulgaria	130	77	26	25	17	68	50	12
Croatia	127	34	66	27	17	31	68	28
Czech Republic	149	113	10	25	33	96	40	13
Estonia	132	73	26	25	26	59	59	14
Georgia	129	75	29	25	18	65	59	5
Hungary	147	94	24	25	27	91	42	14
Kazakhstan	147	69	47	27	27	72	65	10
Kyrgyzstan	132	50	57	25	15	41	86	5
Latvia	166	88	25	33	41	70	76	18
Lithuania	112	84	26	0	6	93	16	3
Moldova	139	47	57	25	16	50	77	12
Poland	246	160	53	25	40	115	108	23
Romania	125	85	15	25	20	77	37	11
Russia	552	283	230	25	37	212	301	39
Slovak Republic	138	84	26	25	15	78	49	11
Slovenia	125	41	54	25	17	37	76	12
Ukraine	247	147	73	25	30	124	100	23
Uzbekistan	126	44	52	25	18	40	69	17

\*Due to occasional missing responses the sum of all firms in each subcategory is sometimes less than the total number of firms in each country.

Table A2 contains a summary of all the variables used in the micro-level regressions, including the survey definition from the BEEPS, the tables in which the variable is used and summary measures of maximum, minimum, mean, standard deviation and number of observations. We first list the dependent variables, then the independent variables and finally instrumental variables.

<sup>55</sup> For an empirical analysis of the link between FDI, corruption and influence see Hellman, Jones and Kaufmann (2000).



**Table A2: Definitions and summary statistics for the variables used in the econometric analyses**

Variable	N	Sub-Category	Table Number	Variable definition (question in the BEEPS survey)	Min	max	mean	Standard Deviation	Number of Observations
<b>Dependent variables</b>									
Sales (previous 3 years)	1		8,9,10	By what percentage have your company's sales changed in real terms over the previous 3 years?	-90	900	15.6	71.3	3492
Sales (next 3 years)	2		8,9,10	By what percentage do you expect your company's sales to change in real terms over the next 3 years?	-95	800	24.6	54.6	3426
Investment (previous 3 years)	3		8,9,10	By what percentage has your company's investment changed in real terms over the previous 3 years?	-100	999	15.6	72.2	3484
Investment (next 3 years)	4		8,9,10	By what percentage do you expect your company's investment to change in real terms over the next 3 years?	-100	900	16.9	50.6	3423
Change in the security of property and contract rights	5		11	How has the security of property and contract rights changed over the previous three years? -1 worsened, 0 no change, 1 improved.	-1	1	.075	0.71	3062
Administrative corruption	6		4	What percent of revenues do firms like yours typically pay per annum in unofficial payments to public officials? 0%; 1%; 2%; 6%; 11%; 19%; 25%.	0	0.25	0.03	0.05	2689
Influence	7		4	When a new law, rule regulation of decree is being discussed that could have a substantial impact on your business, how much influence does your firm typically have with the executive, legislative, ministry and regulatory branches of government to try to influence the content of that law, rule regulation or decree? Each was ranked on a scale 1 never influential, 2 seldom influential, 3 influential, 4 frequently influential, 5 very influential, and the mean across the four dimensions used.	1	5	1.4	0.8	2421
State capture	8		4	How often do firms like yours nowadays need to make extra, unofficial payments to public officials to influence the content of new laws, decrees and regulations? 1 never, 2 seldom, 3 sometimes, 4 frequently, 5 mostly, 6 always.	1	6	1.3	0.9	2874
<b>Independent variables</b>									
Sector	9	Mining	8,9,10	No subcategories.	0	1	0.01	0.09	3623
	10	Services	8,9,10	Firms describing themselves as trading/wholesale, retail, transport, financial services, personal services, business services	0	1	0.49	0.50	3623
	11	Manufacturing	8,9,10	Firms describing themselves as farming/fishing/forestry, manufacture/repair, building/construction, power generation.	0	1	0.50	0.50	3623
Size	12	Small	4,8,9,10,11	Firms with less than 50 full time employees.	0	1	0.47	0.50	3624
	13	Medium	4,8,9,10,11	Firms with between 50 and 500 full time employees.	0	1	0.44	0.50	3624
	14	Large	4,8,9,10,11	Firms with more than 500 full time employees.	0	1	0.09	0.27	3624
Origin	15	De Novo	4,8,9,10,11	Firms with no state owned predecessor.	0	1	0.55	0.50	3526

	16	Privatized	4,8,9,10,11	Formerly state owned firms.	0	1	0.29	0.46	3526
	17	State owned	4,8,9,10,11	Firms in which the state remains the majority owner.	0	1	0.15	0.36	3526
FDI	18		8,9,10	Firms in which some foreign company has a financial stake.	0	1	0.13	0.34	3619
Market power	19		4,8,9,10	If you were to raise your prices of your main product line 10% above their current level (after allowing for any inflation and assuming that your competitors maintained their current prices), which of the following would best describe the result? Many of our customers would buy from our competitors instead (1); Our customers would continue to buy from us, but at much lower quantities (2); Customers would continue to buy from us, but at slightly lower quantities (3); Customers would continue to buy from us in the same quantities as now (4).	1	4	2.2	1.1	3516
Bureaucratic recourse	20		4	How often is the following statement true? If a government agent acts against the rules I can usually go to another official or to his superior and get the correct treatment without recourse to unofficial payments. Never (1); Seldom (2); Sometimes (3); Frequently (4); Mostly (5); Always (6).	1	6	3.1	1.6	3070
Insecurity of property and contract rights	21		4,11	To what degree would you agree with this statement three years ago? I am confident that the legal system will uphold my contract and property rights in business disputes Fully agree (1) Agree in most cases(2); Tend to agree(3); Tend to disagree(4); Disagree in most cases(5); Strongly disagree(6).	1	6	3.6	1.3	3063
Innovation	22		8, 9, 10	Has your firm successfully developed a new product line?	0	1	0.30	0.46	3626
Captor Firm	23		8,9,10,11	See 8. Firms responding sometimes or more frequently.	0	1	0.09	0.29	2874
Influential Firm	25		8,9,10,11	See 7. Firms scoring 2.5 or more.	0	1	0.07	0.26	2801
Administrative Corruption	26		8,9,10	See 6.	0	0.25	0.03	0.05	2689
Capture Economy	24		8,9,10,11	Country level measure of the extent of state capture as presented in table 2.	0.06	0.41	0.21	0.11	3626
<b>Instrumental variables</b>									
Insecurity of property and contract rights	27		9	See 21.	1	6	3.6	1.3	3063
Foundation date	28		9	In what year was you firm founded?	1806	1999	1987	18.6	3548

Finally, table A3 gives a measure of the *concentration of state capture* as referred to briefly in footnote 22. We present this measure only in the capture economies. The variable is constructed as the ratio of the extent of state capture (table 2) and the proportion of capturing firms (table 3) and measures the degree to which the impact of state capture is attributable to a small number of firms. Larger numbers indicate that state capture is confined to a smaller proportion of firms. Further research will investigate this variable.

**Table A3: The concentration of state capture**

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<b>Country</b>	<b>Concentration of capture</b>
Azerbaijan	1.71
Bulgaria	2.55
Croatia	2.70
Georgia	3.00
Kyrgyzstan	4.14
Latvia	2.14
Moldova	3.08
Romania	1.62
Russia	3.56
Slovak Republic	2.00
Ukraine	2.67

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