

State Capture Analysis: How to Quantitatively Analyze the Regulatory Abuse by Business-State Relationships

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ABSTRACT

Abundant qualitative evidence reveals how public and private actors abuse regulations to seek rents, impede reforms, and distort the economy. However, empirical evidence of such behavior, including its economic costs, remains limited. For that reason, the objective of this paper is to help practitioners who seek to quantitatively analyze state capture make better use of experience, methodologies, and potential data sources. Based on a comprehensive body of existing empirical studies, it provides guidance to analyze state capture and its impact on the economy. Chapter 1 discusses the concept of state capture and its relevance for economic development. Chapter 2 presents the main avenues of how policies have been captured and the empirical evidence of their implications. Chapter 3 provides an analytical framework for state capture analysis and discusses various applied approaches. The chapter is organized into three components required for the assessment: (i) evidence of political connectedness, which discusses data collection methods and methodologies of analyzing political connections; (ii) evidence of de jure and de facto mechanisms, through which firms receive policy favors; and (iii) firm-level indicators to measure performance differences between politically connected and nonconnected firms. Finally, two annexes provide a list of potential data sources and an extensive compilation of studies that have empirically examined state capture. They offer a concise overview of the type of capture assessed in different countries, the key findings, and the data sources used for the analysis.

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EXECUTIVE SUMMARY

Although abundant qualitative evidence reveals the ways in which public and private actors abuse regulations to seek rents, impede reforms, and distort the economy, empirical evidence of such behavior, including its economic costs, remains limited. For that reason, the objective of this paper is to help practitioners who seek to analyze state capture quantitatively make better use of experience, methodologies, and potential data sources. Based on a comprehensive body of existing empirical studies, guidance is offered on how to analyze state capture and its impact on the economy.

What is State Capture?

State capture is the exercise of power by private actors — through control over resources, threat of violence, or other forms of influence — to shape policies or implementation in service of their narrow interest (World Bank 2017). Policy advice for countries stuck in development traps has often focused on the proximate causes of stagnation, such as the inefficiency of resource allocation or inadequate policies for industrial upgrading. However, evidence from post-communist countries, Southeast Asia, and the Middle East and North Africa (MENA) Region has pointed toward deeper underlying governance constraints, such as the power of certain actors who have incentives and the means to preserve the status quo.

The essence of state capture lies in a distinct network structure in which corrupt actors cluster around particular public organs and industries. It thrives in areas with weak institutions, heavy state involvement, and considerable room for discretion. Consequently, recognizing the mechanisms of capture, the actors' incentives, and the institutions, sectors, and products that are captured helps to understand the (in) effectiveness of policies and to identify entry points for designing policies that are politically implementable and promote long-term growth.

What are the Mechanisms of State Capture and their Economic Impacts?

Results from the existing pool of quantitative analyses show significant economic costs. Table 1 provides common mechanisms and some of their possible negative impacts that are in different country case studies. (See annex A for a detailed overview.)

Table 1. Common Mechanisms of State Capture and Potential Impacts

Capture Type	Common Mechanisms	Possible Impacts
Debt Financing	Public banks provide cheaper lending to politically connected firms (PCFs) or increase lending in election years. The organizational design of public banks enables politicians to threaten bank officers with transfers and removals or reward them with appointments and promotions.	<ul style="list-style-type: none">• PCFs have much higher borrowing and default rates, and distorted or noninvestment of these loans may cause additional economic costs.• Private banks prefer lending to PCFs, as political ties are seen as an implicit sovereign guarantee against failure.

Restrictions on Firm Entry	Restrictions on foreign direct investment, exclusive licensing, and other regulatory instruments are used to create barriers to firm entry in captured industries.	<ul style="list-style-type: none"> • Highly concentrated gains of PCFs. • Increased prices for downstream producers and consumers. • Incumbent firms have less pressure to innovate, potentially causing productivity losses. • PCFs reduce job growth of competitors.
Public Procurement	Single source contracting, restricted tendering methods, or nontransparent evaluation are used to allocate government contracts to PCFs.	<ul style="list-style-type: none"> • Inadequate sector and spatial allocation of government contracts. • Substantial losses in the provision of public goods.
Taxation	Misclassification and undervaluation of imported goods in customs; fewer audits on refund requests of value added tax; no penalties for tax arrears; lower taxation in politically connected sectors and regions.	<ul style="list-style-type: none"> • PCFs have a competitive advantage through lower taxation or tax exemptions.
Access to Public Assets	Appropriation of land for free or below market prices; land concessions through biased procurement; appropriation of former state-owned enterprises (SOEs) through biased auctions, nontransparent corporatization, or bankruptcy processes.	<ul style="list-style-type: none"> • Creation of oligarchic structures through allocation of public assets (e.g., land, SOEs, infrastructure) to only a few actors, hence concentrated wealth. • Environmental damage (e.g., deforestation).
Subsidies	Subsidized prices or direct subsidies for PCFs or PCFs dominated sectors and regions.	<ul style="list-style-type: none"> • Competitive advantage of PCFs.

How can State Capture be analyzed?

A rigorous one-size-fits-all method to accurately analyze the full dimension of state capture seems not only impossible but inadequate, given that state capture is highly context specific and takes various forms with different impacts on development. Instead, methodologies must be adapted and focus on the particular issue that seems most detrimental to development in the respective context, or from an operational point of view, most detrimental to the success of the development project. While existing efforts to quantitatively assess state capture differ in their approaches depending on context, interest, and data availability, they share a common analytical framework as described in chapter 1 (see figure 1).

The rationale behind state capture is the following: connected firms influence public institutions (e.g., government officials, members of parliament, local governments, and customs or regulatory agencies) that either alter the design of laws and regulations or apply practices that allow connected firms to systematically

receive benefits. Consequently, empirical evidence of state capture requires the cross-validation of three data components:

- Political connections: Who is connected with whom and to what degree?
- Capture mechanism: What are the mechanisms through which politically connected actors receive policy favors?
- Firm-level indicators: Are there performance differences between connected and nonconnected firms? What is the impact of capture?

Evidence of Political Connections

Several challenges are present when identifying politically connected firms. Collecting data on business-state relations remains difficult, as it is often a sensitive topic of conversation. Therefore, data collection requires context specific approaches (open environments versus closed environments), mostly consisting of mixed methods (e.g., network mapping, interviews, investigative journalism, and surveys). (See annex B for data sources.). Secondly, the complexity of business-state relationships raises the question of how to utilize the collected data for further analysis. Politically exposed persons and large business groups typically use diverse ownership structures and corporate vehicles to exert de facto control of firms. Most existing studies have categorized political connectedness in a binary manner (connected or not connected) and then explored that association with firm outcomes. However, this disregards the heterogeneity in benefits from different types of connections. Therefore, some researchers have developed more nuanced methodologies, such as considering political proximity and network properties (e.g., what position a firm has in a network, such as central or in the periphery, as well as the number of political ties and with whom they are linked). Empirical evidence has shown that type of political connection matters for the degree of impact on the firm's performance.

Firm-Level Indicators

The data on political connections can then be matched with firm-level indicators to assess performance differences between connected and nonconnected firms. In this way, it can be identified whether there are some anomalies in some industries that might be based on political connection premiums to the detriment of nonconnected competitors. Researchers have used administrative data sources such as central bank, tax authorities, and firm registries; firm or labor force surveys; and private data providers, depending on data availability and the area of interest. (See annex B for data sources.)

Most studies have shown significant connection premiums. Connected firms are major players in specific sectors (usually in the most profitable and regulated ones, often belonging to the nontradables group); have comparatively higher output, employment, leverage and corporate value than nonconnected firms; and often account for a disproportionately large share of sector profits. Performance differences seem not specific to the sectors in which connected firms operate, but most researchers argue the political advantages make captor firms more profitable relative to their competitors. At the same time, several studies estimated lower productivity levels of connected firms and negative impacts of captor firms on nonconnected firms operating in the same sector, such as reduced job creation. The results indicate that privileges change the incentive structures of firms. Connected firms innovate less due to less competitive

pressure, while nonconnected firms are unable to compete with their politically privileged peers, and instead, shrink or stop growing. In addition, a highly captured public apparatus can create incentives for nonconnected firms to engage in capture behavior as a strategy to improve their competitiveness. This dynamic has the potential to trigger a vicious circle with increasing state capture and slow growth.

Evidence of Capture Mechanisms

Assessing the relationship between regulation or practices, and the performance of politically connected firms requires data of the mechanism through which firms receive favors, which then can be merged with firm-level data and political connections data. Network analysis, surveys, and interviews reveal not only overlaps of business and state actors but provide insights on how capture is potentially exercised (hence, reveals what data to look for). The assessment of state capture should consider both de jure (law and regulation) and de facto (practice) mechanisms of state capture, since it is possible that, in reality, a formal law granting preferential treatment is not strictly enforced, or connected firms receive benefits systematically even without formalized laws. Table 2 provides an overview of how and what data can be used to create proxies for capture mechanisms. (See annex B for data sources.)

Table 2. Using Data to Create Proxies for Capture Mechanisms

Influence on the Policy-Making Level: De Jure Measures	Influence on the Operational Level: De Facto Measures
<p>REVIEW OF LEGISLATIVE ACTS</p> <p>Example:</p> <ul style="list-style-type: none"> • Review the regulatory framework to categorize the level of intensity of regulation in a sector (e.g., in high and low by type of regulation, such as foreign direct investment restriction or exclusive licensing). • Merge these data with data on political connections and firm performance indicators. • Identify what regulatory mechanism were potentially used to favor politically connected firms. 	<p>EXPERT OPINION</p> <p>Example:</p> <ul style="list-style-type: none"> • Conduct expert interviews to construct a de facto proxy for the intensity of regulation (Experts provide a rating of which sectors are most difficult to obtain permission to enter, for example.). • Merge these data with data on political connections and firm performance indicators. • Identify which regulatory instruments were potentially used to favor their connected firms.

REVIEW OF VOTING PATTERNS ON LAWS

Example:

- Establish a database consisting of legal acts, which potentially serve the interests of business groups.
 - For each legal act, take information on which member of parliament and how many of them voted for what law (some parliaments publish this online).
- Merge voting patterns of legal acts with political connections of the members of parliament and firm indicators.
- Identify which business groups influence the decision making on specific legislative acts.

PUBLIC SECTOR DATA PROVIDERS

Public registries and administrative data from authorities can provide data that enable a direct measurement of capture behavior.

Example:

- Procurement data
- Tax audit frequency, value added tax payments, import taxes
- Land registries
- Firm loan-level data

OPEN WORLDWIDE DATABASES

If access to administrative data is restricted, data from various organizations (World Bank, United Nations, World Economic Forum), including Enterprise Surveys, can serve as proxies for capture mechanisms.

1. WHAT IS STATE CAPTURE?

The [World Development Report 2017: Governance and the Law](#) argues that decision makers may have the right objectives and yet may still be unable to implement the right policies because doing so would challenge the current balance of power (World Bank 2017). It highlights that policy making and implementation involve bargaining among different influential groups with different interests (e.g., civil society, business groups, labor unions), while the relative power of these groups to influence others in such bargaining process determines the policy outcomes. The negative implications of the unequal distribution of power — power asymmetries — are manifested in *clientelism*,¹ *exclusion*,² and capture. The latter is based on [Stigler's 1971](#) concept of regulatory capture, in which the regulator gives priority to the special interests of private groups over the public interest, as private groups are able to exert greater political pressure. The notion of capture has evolved since then. [Hellman, Jones, and Kaufmann \(2000\)](#) distinguish between *state capture*, *influence*, and *administrative corruption*. They define state capture as firms shaping the “formulation of the rules of the game through private payments to public officials and politicians,” while influence is the same without recourse to payments, and administrative corruption involves “petty forms of bribery in connection with the implementation of laws, rules, and regulations.” Yet, in reality, public-private interactions cannot always be so neatly deciphered. The *World Development Report 2017* provides a broader definition of state capture as the exercise of power by private actors — through control over resources, threat of violence, or other forms of influence — to shape policies or implementation in service of their narrow interest.

¹ Clientelism is a political strategy characterized by giving material goods in return for electoral support.

² Exclusion means that powerful actors lack access to state institutions, resources, or services, and consequently cannot participate in the policy process.

Understanding the mechanisms of capture can help understand the effectiveness (or ineffectiveness) of policies in promoting long-term growth. For example, policy advice for countries stuck in development traps has often focused on the proximate causes of stagnation, such as the inefficiency of resource allocation or inadequate policies for industrial upgrading. However, literature has pointed toward deeper underlying governance constraints, such as the power of certain actors who have incentives and the means to preserve the status quo. For example, middle-income countries seeking to transition to high income will have to overcome significant vested interests to move toward a fully functioning market economy that enables creative destruction, competition, and innovation (World Bank 2017). Power asymmetries can also be the outcome of certain reform processes as was the case in many post-communist transitions. It is not uncommon that former managers of state-owned firms became the owners, politicians appropriated the media, and oligarchs bought their way into politics to ensure their influence. [Hellman \(1998\)](#) described the resulting situation in these countries as a freezing of the economy in a partial reform equilibrium where rent-seeking groups continue to gain rents at costs for the rest of the society. A highly captured public apparatus can also create incentives for firms without political relationships to use capture (i.e., the purchase of preferential treatment) as a strategy to improve their competitiveness. This dynamic has the potential to trigger a vicious circle with increasing state capture and slow growth ([Hellman, Jones, and Kaufmann 2000](#)).

Evidence from countries in the Middle East corroborates the view that economic policies cannot work effectively in environments dominated by rent-seeking. Similar to some countries in the Europe and Central Asia (ECA) Region, a highly autocratic political elite defined the rules of the game by using the business sector as a source of patronage. The iconic case of Ahmad Ezz in Egypt illustrates the nature of state capture in the MENA Region. The steel tycoon and former member of parliament controlled about 65 percent of the local market share and was accused of having improperly appropriated the largest public steel company at an artificially low price; taking advantage of his market power to generate excess profits; and lobbying to increase tariffs for protection from foreign competition and to encourage the passage of diluted antimonopoly legislation ([Chekir and Diwan 2012](#)). Several studies provide quantitative evidence of such state-business relations stifling competition, innovation, and job creation ([Francis, Hussain, and Schiffbauer 2018](#); [Diwan and Haidar 2016](#); [Schiffbauer et al. 2015](#); [Chekir and Diwan 2012](#)). The Arab Spring uprisings were a powerful expression of the lack of opportunities and widespread sense of favoritism, illustrating the risks of ignoring the impacts of state capture on growth and inequality, which in turn can affect political stability.

By contrast, despite the fact that the governance challenges and political risks³ echoed those of the MENA Region in the 2000s, the experience in South Korea in the 1960s demonstrates that close linkages between political and business elites do not necessarily result in patronage, rent-seeking, and stagnation. [Schiffbauer et al. 2015](#) argue that even though Korean policies appear very much like those undertaken in MENA,⁴ reforms in the organizational design of the industry reduced power asymmetries, created checks on opportunistic behavior, and supported collective action by the private sector. For example, the establishment of new public boards, and thereby lifting the monopoly over information, increased the ability of the bureaucracy

³ The 1960s in South Korea were a period of significant political unrest. Student demonstrations and military coups drove regime change, the president faced few institutional controls on his authority, and top officials earned significant rents (Schiffbauer et al. 2015).

⁴ Selected industries received support with little attention to the identification of market failures and cost-benefit analysis.

and firms to resist discretionary policy reversals by the president. Moreover, the government credibly linked policy implementation to firm success in pursuing private sector growth and structural transformation. Even if subsidies might also have been disproportionately channeled to politically connected businesses, these firms still had to meet the performance targets⁵ aligned with economic growth. Consequently, when influence and incentives are balanced through the appropriate design of public agencies and mechanisms that strengthen accountability, connected firms can have a positive influence on policies aimed at economic growth. Box 1 provides an introduction of how to address state capture.

[Faccio, McConnell, and Masulis \(2006\)](#) show that the abuse of regulatory systems to favor a political elite is especially prevalent in countries with weak rule of law. It thrives in areas with weak institutions, heavy state involvement and considerable room for discretion. Yet, the capture of policies is not limited to low-income countries. It is also demonstrated in high-income democracies with high state capacity; for example, public bank lending in Italy ([Cingano and Pinotti 2013](#)) and preferential allocation of government contracts in the United States ([Goldman, Rocholl, and So 2008](#)). The essence of state capture lies in a distinct network structure in which corrupt actors cluster around particular public organs and industries. Particularly prone to rent-seeking behavior are industries that are not or less exposed to competition such as in the electricity, water, oil, and the extractive sectors as well as nontradables⁶ (e.g., real estate construction) and generally high rent sectors (e.g., transport and telecommunication).

Box 1. Addressing State Capture

Mitigating state capture requires a strategy that is compatible with the existing balance of power to be politically implementable while aiming at altering incentives and the influence structure of relevant actors. The identification of who the captors are, what kind of mechanism of rent-seeking they use, and to what extent creates important insights to find the right entry points. In this respect, the *World Development Report 2017* provides a framework of how a better design of public agencies can expand the set of implementable policies.

Firstly, improved selection processes and incentive structures in bureaucracies can make officials less susceptible to undue influence by captors. This may include tools such as pay-for-performance schemes to weaken the incentives of officials to engage in capture if that means failing performance targets; monitoring mechanisms to discipline implementation; the election of regulators instead of direct appointment so they are more likely to respond to voters than political elites; promoting intrinsic motivation of officials through appropriate selection and work environment; or disrupting and improving accepted norms of behavior.

Secondly, mechanisms of horizontal and vertical accountability in public agencies help level the

⁵ For example, subsidies were conditioned on a firm's export performance or the successful undertaking of new activities.

⁶ Politically connected firms also operate in sectors that belong to the tradable group but are more prevalent in nontradable sectors. For instance, in Lebanon, Diwan and Haidar (2016) show that connected firms are mainly concentrated in the banking, media, energy (including oil and gas distribution), health (i.e., hospitals, drug import, and distribution), real-estate construction, road paving, water extraction and sale, mining (including quarries), telecommunication, soft-drinks, and pharmaceutical production sectors.

playing field in the policy arena. For example, general-purpose oversight agencies can act as a check on the capture of agencies responsible for specific policy areas, as proven effective in South Korea during its industrial transition (see [Schiffbauer et al. 2015](#)). Dividing power among public agencies reduces the monopoly over information and increases ability to contest opportunistic behavior. See the *World Development Report 2017* (chapter 5) for a more detailed discussion on how state capture can be addressed.

The diversity of state capture suggests a combination of operational interventions tailored to the specific context. [Mahmood and Slimane \(2018, 128–131\)](#) recommend a long-term programmatic approach to address capture mechanisms and to exploit synergies between different policy areas. They provide examples of such interventions mapped to different World Bank tools, ranging from Development Policy Operations and advisory activities, to results-based operations and investment operations.

2. WHAT ARE THE MECHANISMS OF STATE CAPTURE AND THEIR ECONOMIC IMPACTS?

There is abundant qualitative evidence revealing how public and private actors abuse regulation to seek rents, impede reforms and distort the economy. While the avenues of state capture are well known, quantitative analyses of state capture remain limited. Chapter 2 presents common mechanisms of state capture and empirical evidence of their impacts. An overview of studies measuring different types of state capture in various countries is provided in annex A.

Preferential Access to Debt Financing

Political favors can arise through government banks such as in the form of cheaper lending in politically preferred regions or increased lending in election years. The organizational design of government banks enables politicians to threaten bank officers with transfers and removals or reward them with appointments and promotions. [Khawaja and Mian \(2005\)](#) demonstrate that in Pakistan, politically connected firms borrowed 45 percent more and had 50 percent higher default rates than nonconnected firms between 1996 and 2002, which was related entirely to loans from government banks. Defaulted amounts from captured government lending can be thought of as transfer payments from taxpayers to captor firms. Moreover, given that connected firms borrowing from government banks were found to have relatively poor productivity, distorted or simply noninvestment of this money causes significant additional economic costs. In Pakistan, the economy-wide costs of these rents were estimated to be 0.3 to 1.9 percent of gross domestic product (GDP) every year. In another example of preferential treatment in lending, [Johnson and Mitton \(2001\)](#) show that during the Asian financial crisis the government of Malaysia used capital controls to make credit more easily available to favored firms.

Political influence can also alter the lending decisions of private banks. In Egypt (2003–2011), private banks preferred lending to connected firms, as they made larger profits and political ties were seen as an implicit sovereign guarantee against failure ([Diwan and Schiffbauer 2018](#)). A study across 35 countries finds that firms with close relationships with the government are significantly more likely to be bailed out than nonconnected firms ([Faccio, McConnell, and Masulis 2006](#)).

Restrictions on Firm Entry

Restrictions on foreign direct investment (FDI), exclusive licensing, and other regulatory instruments are widely used to create barriers to firm entry in captured industries. Several studies measured a significant political connection premium in terms of firm value, market share and profits as the result of protection against competition. [Freund, Nucofira, and Rijkers \(2014\)](#) provide evidence that, in Tunisia, former President Ben Ali (1987–2011) and his family established regulatory barriers that favored firms under his control. They accounted for a disproportionately high share, an estimated 16 percent, of total net private sector profits. Consequently, such restriction on competition can generate significant efficiency costs, both in terms of productivity loss — as incumbent firms have little incentive to invest in innovation since they do not face competitive pressures to reduce costs — and more concentrated markets. [Mobarak and Purbasari \(2006\)](#) highlight such negative externalities for the Suharto-era in Indonesia, where decreased competition from preferential import licensing led to higher input prices for downstream producers and higher end product prices for consumers.

Limited competition and low productivity growth undermine the fundamentals of job creation. For example, in Lebanon, [Diwan and Haidar \(2016\)](#) find that even though connected firms are on average larger and create more jobs, the effect of crowding out competition is larger than the positive and direct job creation effect of connectedness. They estimate that for every additional political connection in a sector, 7.2 percent fewer jobs are created each year on average.

Allocation of Public Contracts

Given the sizable discretionary power in allocation decisions of government contracts and the large share of public spending involved, [Djankov, Islam, and Saliola \(2016\)](#) estimate shares of public procurement in GDP at 14.5 percent for low-income and 12.6 percent for high-income countries. Public procurement is most vulnerable to rent-seeking. A high percentage of single source contracting, restricted tendering methods, or nontransparent evaluation provide indications for such developments. For example, in Chad between 2012 and 2013, only three institutions concentrated almost 90 percent of procurement works in value ([World Bank 2015](#)). Contracts were mostly awarded to the president's close relatives and politically connected firms. Inadequate sector and spatial allocation of government contracts from the preferential treatment of some firms can cause substantial losses in the provision of public goods, preventing pro-growth or pro-poor expenditures such as in rural areas as well as in health, education, and social expenditures. In Chad, an inverse correlation between poverty level and public investment level was measured in the country. Another striking example is provided by [Cingano and Pinotti \(2013\)](#), which estimated that the strong shift of public contracts toward connected firms (1985–1997) resulted in an estimated reduction of the provision of public goods by 20 percent.

Preferential Access to Public Assets

Elite groups have developed myriad mechanisms to place valuable public assets under the private control of individuals who are themselves part of the capture network. For example, in Egypt, [Diwan, Keefer, and Schiffbauer \(2015\)](#) find that firms with ties to the government are more likely to have better access to land and industrial zones which offer benefits to occupants that competitors outside of these zones do not enjoy. In the ECA Region, obscure privatization processes of public assets, such as biased auctions,

nontransparent corporatization, or bankruptcy processes, enabled business groups to buy enterprises previously owned by the state. In Cambodia, road building through forested land in the name of government-led development provided a cover for uncontrolled logging. Through economic land concessions and biased bidding procedures, officials have reportedly allocated formerly inaccessible forests to connected firms ([Global Witness 2007](#)).

Next to environmental damages (as in the case of Cambodia's logging syndicate), this asset-stripping deprives large parts of the population of the revenue that could be derived from more efficient use of public goods. In the economies of the former Soviet Union, the allocation of public assets to a political elite created oligarchic structures with a very concentrated accumulation of wealth to the detriment of economic diversification and growth.

Privileges in Taxation

The creation of tax privileges is a widespread practice to provide a competitive advantage to politically connected firms. For instance, [Faccio \(2010\)](#) demonstrates in a study of 47 countries that connected firms enjoy on average lower taxation than their nonconnected counterparts. Practices take different forms. For example, in Tunisia, [Rijkers, Baghdadi, and Raballand \(2015\)](#) find that firms owned by former President Ben Ali and his family were more likely to evade import tariffs than other private firms, such as through the underreporting of prices. They estimated that between 2002 and 2009, underreporting alone enabled connected firms to evade \$1.2 billion worth of import taxes. A case study by the World Bank in Ukraine found that politically connected firms were less often audited when requesting value added tax (VAT) refunds than nonconnected firms, which reduces compliance costs and lowers the effective tax rates for these firms ([Balabushko et al. 2018](#)). Not only tax levels but also tax arrears, where penalties for noncompliance are not enforced for connected firms, can also provide a de facto unfair advantage over competition.

Allocation of Subsidies

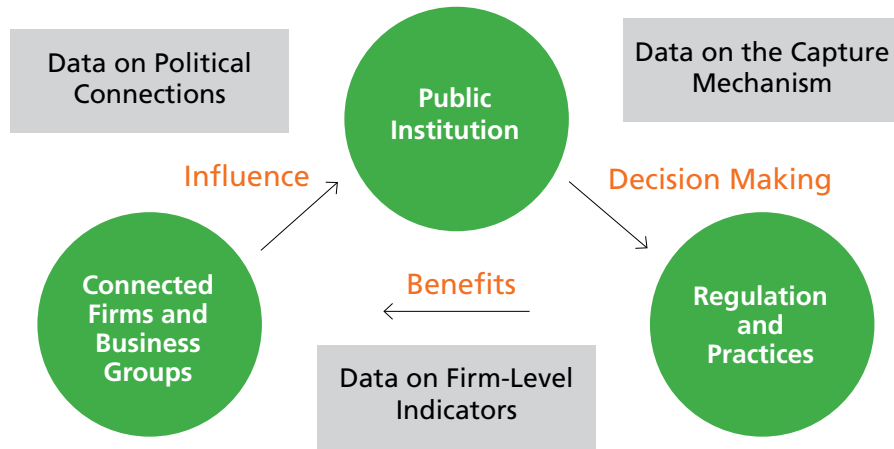
Subsidies may disproportionately benefit connected firms if they are channeled to mainly connected sectors or regions. For example, in Egypt, [Diwan, Keefer, and Schiffbauer \(2015\)](#) find that 45 percent of all politically connected firms operate in energy-intensive industries, subject to energy subsidies, compared to only eight percent of nonconnected firms. In the Russian Federation, [Slinko, Zhuravskaya, and Yakovlev \(2005\)](#) found a strong correlation between laws granting preferential treatments in a given region and direct budgetary subsidies in firms' balance sheets.

3. HOW CAN STATE CAPTURE BE ANALYZED?

To begin with, a rigorous one-size-fits-all method that accurately analyzes the full dimension of state capture seems not only impossible but impractical, given that state capture takes various forms, with different impacts on development. Instead, methodologies must be adapted and should focus on the particular issue that seems most detrimental to development in the respective context, or from an operational point of view, most detrimental to the success of the development project. While existing efforts to quantitatively assess capture behavior differ significantly in their approaches—depending on context, interest, and data availability—they share a common analytical framework. Chapter 3 conceptualizes this framework and outlines the different approaches to data collection and analysis within it, based on a large body of empirical studies.

Collusion between politicians and businesspeople takes place at two levels: the policy-making level, where formal policies are designed, and the level of the bureaucrat who is responsible for policy implementation (Lipsky 1980).⁷ Therefore, the assessment of state capture should consider both de jure measures of state capture (regulations) and de facto measures of state capture (actual practices). The rationale behind state capture is the following: connected firms influence public institutions (e.g., government officials, members of parliament, local governments, and customs or tax authorities) that either alter the design of laws and regulations or apply practices that allow connected firms to systematically receive benefits (figure 1).

Figure 1. Analytical Framework of State Capture and Related Databases



Thus, empirical evidence of state capture requires cross-validating three data components:

- Political connections: Who is connected with whom and to what degree? Data collection involves identifying the set of actors, firms, and interests capable of capturing various policies for their own benefit. It provides the basis to build a dataset on political connections and analyze the influence of firms on public institutions.
- Capture mechanism: What are the mechanisms through which politically connected actors receive policy favors? These data allow to analyze the de facto practices and de jure rules that potentially provide connected firms or specific industries with benefits.
- Firm-level indicators: What is the impact of capture? These data allow to measure the performance differences between connected and nonconnected firms, as evidence of a political connection premium.

Efforts to provide evidence of state capture could start with any of the above three entry points, to be cross-validated by the others. For example, one could start with a presumed politically connected firm (e.g., owned by close relatives of a powerful decision maker) and test whether firm indicators reveal preferential treatment, and then track the source of those benefits to the specific laws or practices that serve as the capture mechanism. The starting point could also be evidence of preferential treatment or other forms of policy distortion, which could lead to identification of the capture mechanism and the political interests

⁷ Lipsky (1980) argues that policy implementation in the end comes down to the people who actually implement it. He highlights the power of discretion of those bureaucrats who have tremendous power and act de facto as policy makers in the day-to-day implementation of public programs.

and connections it is serving. Or, evidence of skewed laws or poorly implemented practices could reveal more deeply ingrained vested interests and power asymmetries arising from political connections. Importantly, in fact, not all politically connected firms receive unfair preferential treatment. Poor legislation and implementation could be evidence of capacity constraints rather than state capture. And, the outlying performance of some firms may be due to a range of reasons. Demonstrating the existence of state capture thus requires triaging the evidence.

Evidence of Political Connections

There are several challenges in identifying politically connected actors and firms. Where decision making is highly centralized and personal, it can be relatively straightforward. In the case of Tunisia, [Freund, Nucofira, and Rijkers \(2014\)](#) define a connected firm as one that was owned by former President Ben Ali or a family member. Similarly, in Indonesia, [Fisman \(2001\)](#) defines a politically connected firm as one that was directly affiliated with former President Suharto, his children, and longtime allies.

Specifying political connectedness is becoming a particularly complex task in countries where political decision making is more dispersed and encompasses several government levels. In this case, analyzing a firm's political associations requires information on its relations with various government decision-making bodies as well as some way of aggregating these connections, which makes a clear-cut categorization difficult. Some researchers such as [Faccio \(2010\)](#) and [Diwan, Keefer, and Schiffbauer \(2015\)](#) use the concept of a politically exposed person (PEP) — people who are entrusted with prominent public functions which could include government and party officials, judicial or military officials, and executives of state-owned enterprises (SOEs). They consider a firm to be connected if it has at least one PEP among its owners, shareholders, or managers, thus creating a potential conflict of interest between maximizing firm profits and advancing political interests.

Collecting data on business-state relations remains difficult. It is often a sensitive topic of conversation, and connections tend to shift considerably over time. Therefore, many studies relied on approaches that identify those relations ex-post. For example, [Freund, Nucofira, and Rijkers \(2014\)](#) based data of political connections on a list of owners of confiscated assets after the regime change in Tunisia. The ex-post approach may yield fewer false positives. The identification of politically connected firms who, in fact, never exercised their proximity to the president to economic advantage. However, [Diwan, Keefer, and Schiffbauer \(2015\)](#) argue that the approach may also yield false negatives. Some old regime connected firms may establish close relationships with new leaders and not have their assets confiscated. More importantly though, analysis results based on past political settlements might not accurately reflect the current power dynamics.

This section sets out different approaches used to collect evidence of connections between politicians and business owners, including in complex and sensitive environments.

Net-Map Tool

The Net-Map tool is a specific approach to undertaking social network analysis. It is a visual mapping instrument based on focus group interviews (two to eight participants from similar professional backgrounds) that helps to understand better the stakeholder networks: Who is involved? What are their formal and informal links? What do they want, and how influential are they? The group defining the political link generates data on political connections and gives insights of the mechanisms used to capture policies (see box 2).

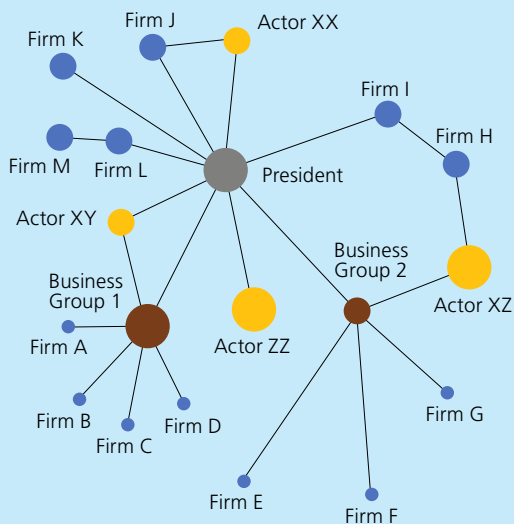
Box 2. Five General Steps of How Net-Map Works

1. Working in small groups, agree on a clearly stated question in the format: “Who influences the process.”
2. Assign colors for actor categories, invite each group to write names of key actors on sticky notes, and distribute these on the Net-Map sheet.
3. Ask each group to select the type of connections to map (e.g., formal, informal, money flow, political pressure); develop a color code for each type; and draw lines for the connections and arrows to show the direction of flow.
4. Identify who is positive, negative or neutral with regards to influencing the process. Indicate this next to each actor card with plus, minus and plus/minus signs.
5. Ask, “How strongly can an actor influence the process,” and invite participants to create Influence Towers, using small round disks. The higher the influence, the higher the tower. Place towers next to each actor’s name.

Source: Schiffer (2007).

More information on Net-Map is available at <http://netmap.wordpress.com>; and Manchanda, S., and A. Robakowski-Van Stralen. 2016.

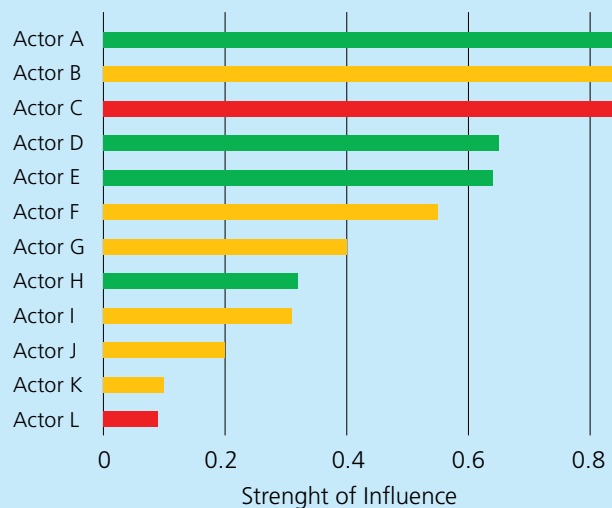
Box Figure 1. Example of a Net-Map Visualization



Source: Author’s representation.

Box Figure 2. Example of an Influence-Chart

Note: The color indicates the direction of influence (positive, negative, mixed) and bars indicate the strength of influence.



Source: Author’s representation.

The approach is a relatively quick and cost-efficient way to map out stakeholder relationships. It can be more powerful than individual interviews because the visual presentation of stakeholder dynamics encourages in-depth discussion of complex relationships, and multiple interviewees immediately validate what is said in the room (objecting, agreeing, or adding to something a person said). Experience on the ground (e.g., stakeholder analysis in Madagascar) shows the interactive element of this approach encouraged participants to speak openly, and even powerful actors — who have little to fear because of their privileged position — can be willing to reveal sensitive information. However, the transparency this activity provides can cause worry among participants who speculate on the World Bank’s true motives. At the same time participating honestly and openly in the group discussions may pose risks for the participants. Therefore, given the high sensitivity of speaking about business-state relationships, this approach is not suitable for every context. Contextualizing the

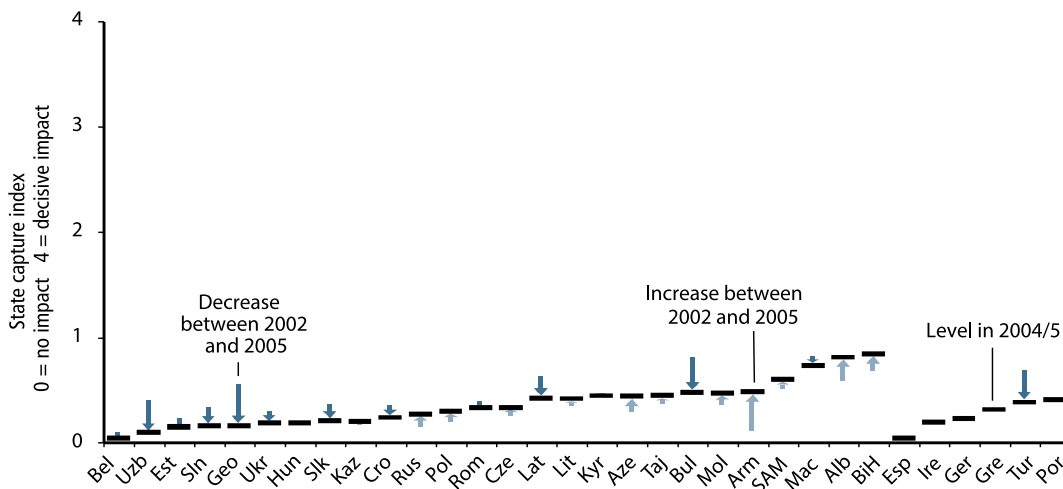
approach is paramount. For example, in Madagascar, wide media coverage of corruption created openings to talk about policy capture at the time. Local expertise⁸ (awareness of the sensitive environment) and the right framing (“we want you to be successful and need to understand the lay of the land”; “we close the eyes, you draw the line, and we do not ask who drew it.”) creates the space for such an approach and helps make stakeholders comfortable to speak.

Surveys

Some surveys attempted to measure state capture, such as the Executive Opinion Survey of the World Economic Forum⁹ and the World Bank Enterprise Surveys. The Enterprise Surveys implemented in the ECA Region, also known as Business Environment and Enterprise Performance Surveys (BEEPS), surveyed firms on the extent to which they perceive different types of undue influences on policy have had an impact on their business. This method includes an impact measurement, based on firms which report a direct impact of state capture on their business, and a measurement that identifies the number of firms reporting payments, gifts, or other benefits to parliamentarians or government officials to influence regulations.

The publication series Anticorruption in Transition 1–3 (Anderson et al. 2000; Gray, Hellman, and Ryterman 2004; Anderson and Gray 2006) together with Hellman, Jones, and Kaufmann (2000) initiated an approach to measuring state capture based on firm-level survey data. For example, based on the BEEPS rounds from 2002 and 2005, Anderson and Gray (2006) measured the changes in the impact of state capture in ECA transition countries and European comparators. They created an impact measure for both years, which is the average of the scores on the two dimensions addressed in the survey — payments to parliamentarians and to government officials. Figure 2 illustrates the perceived changes for each country. It also shows that firms in southeast Europe perceived the highest levels of state capture.

Figure 2. Changes in the Impact of State Capture, 2002–2005



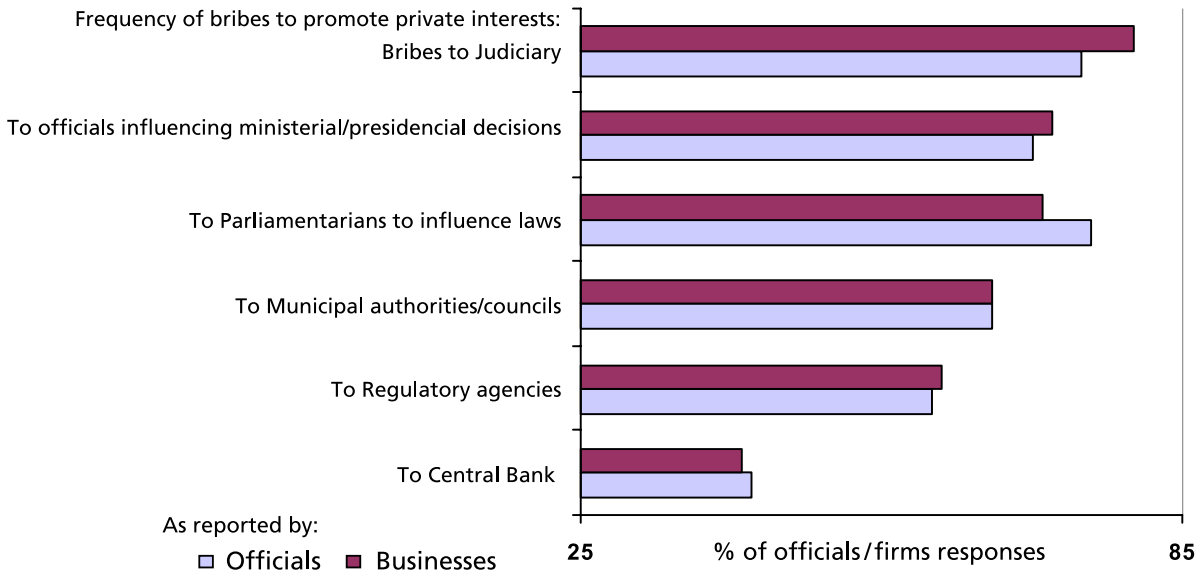
Source: BEEPS 2002, BEEPS 2005.
 Note: Changes in the following countries are significant: Alb, Arm, Aze, Bel, Bul, Geo, Lat, Pol, Rus, Slk, Slv, Tur, Ukr, Uzb. See Annex for details.

Source: Anderson and Gray (2006).

⁸ In some countries, there was less reluctance to speak to an international consultant about some sensitive issues.
⁹ The Executive Opinion Survey of the World Economic Forum is part of its *Global Competitiveness Report* series. The survey asks firms: “Do other firms’ illegal payments influence government policies, laws, or regulations; impose costs; or otherwise negatively affect your company?”

[World Bank \(2001\)](#) measured the extent of state capture in Peru based on an Enterprise Survey. More than half of the respondents perceived that economic groups and organized crime have a great ability to influence the government’s decisions. The authors found that bribes have a very significant influence on key government functions: the high judiciary, the legislative, and the executive (figure 3). Disaggregation at the regional level suggests, however, that state capture is not uniformly widespread in Peru and may be a function of the institutional strength of a region.

Figure 3. Extent of State Capture by the Elite to Shape Laws and Regulations in Peru, as Reported by Public Officials and Enterprises in 2001



Source: Reprinted from World Bank (2001) .

In very closed environments where capture cannot be openly discussed, surveys can be less intimidating and risky to create negative ripple effects beyond the activity. For example, although surveys are less direct than one-on-one or focus group interviews, the BEEPS question on state capture did not ask whether a firm made unofficial payments to public officials, but whether such payments by others affected the firm directly. By including a question on firm ownership by government officials, the most recent Enterprise Survey in Egypt in 2016 provides even a direct measure of political connectedness: “Has this establishment ever had a (current or former) government official among its managers, owners, or board of directors?” Notably, only 3 out of the 1,813 firms refused to answer or indicated not to know the answer. 5.8 percent of all firms surveyed were found politically connected ([Francis, Hussain, and Schiffbauer 2018](#)).

If state capture cannot be directly investigated in talks with governments or other stakeholders, surveys can provide indications which mechanisms and institutions (e.g., government, parliamentarians, regulatory agencies, and local authorities) are most captured. Nevertheless, critiques of surveys such as the BEEPS note that (i) responses on state capture might be less reliable than perceptions of administrative corruption, since firms often have no or little knowledge of state capture ([Fazekas, Tóth, and King 2013](#)); and (ii) impressions of survey respondents might be driven by general sentiment reflecting, for example, media coverage of high-profile corruption cases ([Golden and Picci 2005](#)).

Additional Data Collection Methods

Most of the time, complementary methodologies are required to identify the political proximity of firms. In addition to surveys, focus group discussions and semi-structured interviews, publicly available information, investigative journalism, and other qualitative methods can yield evidence to build a database on political connections.

For example, in addition to informant interviews (where there was no risk of leakage), teams have used media releases and articles on country politics to identify the main captor firms. [Faccio \(2006\)](#) builds her database on political connections, among others, from information on official government and company websites. [Diwan, Keefer, and Schiffbauer \(2015\)](#) interviewed bank managers, lawyers, and nongovernmental organizations to create a dataset for PEPs in the Mubarak regime in Egypt and matched these individuals with firms listed on the Cairo stock exchange, which allowed them to compare the performance of connected and nonconnected firms.

Moreover, several consulting firms collect and sell information on political connections and business group affiliation. For instance, the databases of BoardEx and the Thomson Reuters' World-Check Watchlists of global PEPs include firm board members and associations between firms and PEPs. The advantage of secondary data is its time and cost efficiency. Besides, the more "objective" the data are (e.g., external data providers in contrast to World Bank-driven investigative journalism), the easier it is to openly talk about it ("all we did is analyze the data that are already there").

Connecting the Dots: Proximity to Power

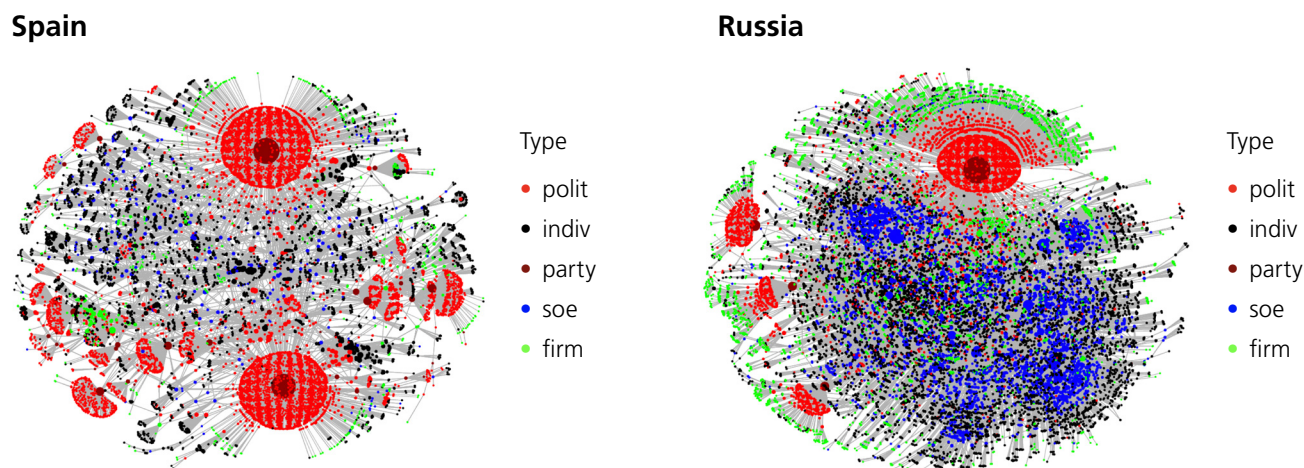
Examples given illustrate the complexity and different types of business-state relationships, which raises the question of how to utilize this information for further analysis. Many studies concentrated on categorizing political connections in a binary manner (connected or not connected) and then explored that association with firm outcomes. However, PEPs and large business groups typically use diverse ownership structures involving various corporate vehicles, at times with minority interests, to exert de facto control of firms. When treating political connectedness in a binary manner, indirect and direct business-state links are either aggregated and do not take into account their different effects, or some firms look as if they are not connected and are therefore excluded, even though they may be indirectly connected to PEPs through third parties ([Bussolo Commander, and Poupakis 2018](#)). Thus, the approach influences the magnitude of state capture measured.

The importance of the nature of a connection has been demonstrated by researchers who looked at the political proximity of firms. For example, in a study of 35 countries, [Faccio, McConnell, and Masulis \(2006\)](#) found that indirectly connected firms are disproportionately more likely to be bailed out by the state in comparison to directly connected firms.¹⁰ [Fisman \(2001\)](#) used a firm dependency index ranging from one (least dependent on the president) to five (most dependent), showing that the closer firms were to President Suharto, the more the value of their stock fell as rumors about the president's health circulated.

¹⁰ They considered a firm to be directly connected when a PEP is among its owners, shareholders or managers and indirectly connected when a relative or friend of a government official was a top officer or large shareholder.

A more nuanced approach was taken by scholars such as [Khwaja, Mian, and Qamar \(2011\)](#), and [Bussolo, Commander, and Poupakis \(2018\)](#) who examined the heterogeneity in benefits from connections. For instance, the latter analyzed the value of a connection depending on network properties, such as what position a firm has in a network (central or in the periphery) as well as the number of connections and type (whether a firm is connected to another firm, political party, or SOE). The authors provide evidence that the location in a network and the extent of political ties matter for the degree of impact on firm-level indicators. They also show that every country has a large big island ([Khwaja, Mian, and Qamar \(2011\)](#) or giant network) — a cluster of connections in which the greatest part of the network falls. For example, Spain’s big island holds two-thirds of the network. Figure 4 provides an example of the mapping of a big island network for Russia and Spain, visualizing the constellation of links between firms, SOEs, politicians, and political parties. It illustrates that in contrast to Spain, where the large number of political parties (brown dots) and relative absence of SOEs (blue dots) and private firms (green dots) stand out, Russia has a relatively small number of political parties, but is heavily influenced by SOEs. SOEs in Russia comprise around 9 percent of the total network and are strongly interconnected. In Spain, only a few but massive private firms are politically well connected. For example, the total assets of just three connected companies amount to over 20 percent of GDP.

Figure 4. Example of Network Mapping



Source: Bussolo, Commander, and Poupakis (2018).

Firm-Level Indicators

The data on political connections can then be matched with firm-level indicators to assess performance differences between connected and nonconnected firms. As a result, anomalies in some industries can be identified, which might be based on political connection premiums to the detriment of nonconnected competitors. Researchers have used administrative data sources (central bank, tax authorities, firm registries), firm or labor force surveys, and private data providers, depending on data availability and the area of interest.

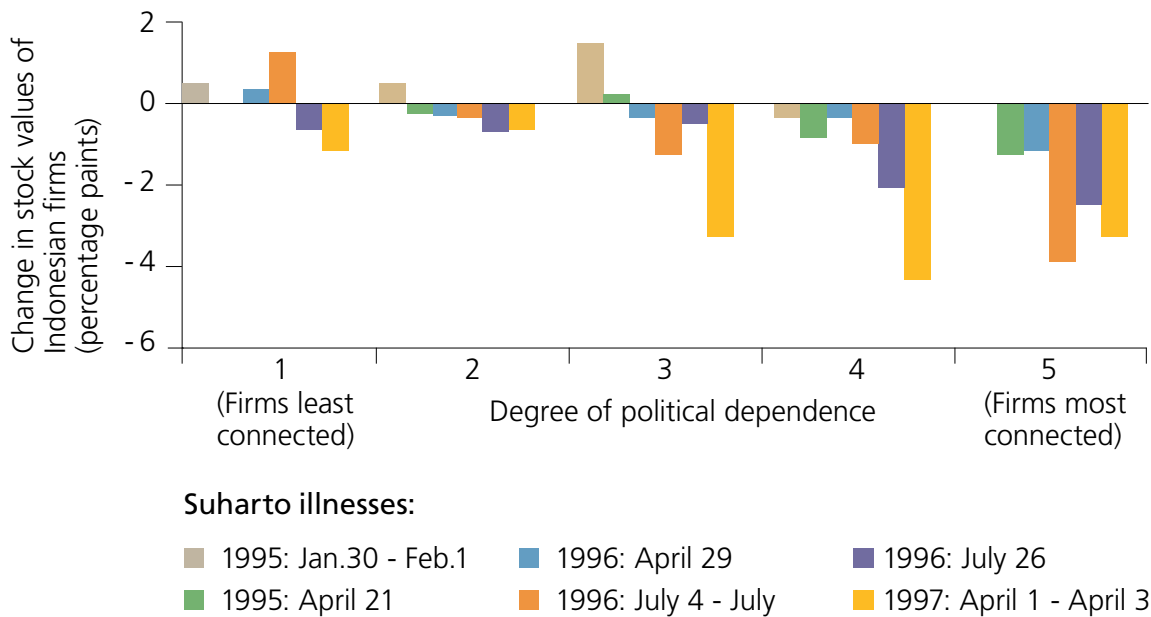
In the best case, authorities are willing to grant access to data on firm performance, or there are high-quality firm censuses available that contain firm characteristics and performance measures. In Tunisia, by combining firm census data and data on gross output and profits from the Tunisian Ministry of Finance with data of politically connected firms, [Freund, Nucofira, and Rijkers \(2014\)](#) were able to show that connected firms are major players in specific sectors (i.e., the most profitable and regulated ones), such as telecommunication, cars and motorcycles (sales and repair), finance and insurance, and transport. For example, Ben Ali firms accounted for only 1.05 percent of all in the telecommunication sector but accounted for 59 percent of the sector output and 77 percent of the sector net profits in 2010. By contrast, their presence and economic significance in other sectors were rather marginal (e.g., the manufacture of textiles). [Freund, Nucofira, and Rijkers \(2014\)](#) argue that the high profitability of Ben Ali firms is based on political privileges. This is consistent with findings in Egypt, where [Diwan, Keefer, and Schiffbauer \(2015\)](#) highlight that political advantages make captor firms more profitable relative to other firms operating in the same sector. Performance differences are hence not specific to the sectors in which connected firms operate. While [Faccio \(2010\)](#) confirms connected firms have higher leverage, corporate value, and higher market shares, the results of a firm-level data analysis from 47 countries show they, on average, underperform compared to nonconnected companies on an accounting basis (lower rate of return of assets).

World Bank Enterprise Surveys have also been used to measure the impacts of captor firms on their competitors. [Diwan and Haidar \(2016\)](#) took data on firm output, the number of employment, wages, and others from the Enterprise Survey in Lebanon to demonstrate that connected firms reduce job creation in nonconnected firms in the same sector. The results indicate that nonconnected firms are unable to compete with their politically privileged peers, and instead, shrink or stop growing in order to stay small enough to operate under their radar.

Some scholars have conducted event studies around elections, regime changes, and rumors on political leaders to explore whether variations in firm performances can be attributed to preferential treatment by politicians. A prominent example is [Fisman \(2001\)](#), who collected data on announcements of Suharto's illness, to make inferences about the effects of political connectedness on firm value in Indonesia (figure 5). Fisman took the stock price of firms traded on the Jakarta Stock Exchange and correlated it with health news of Suharto. Figure 5 illustrates the results. The closer industrial groups were to President Suharto, the more the value of their stock fell as rumors about the president's health circulated.¹¹ [Chekir and Diwan 2012](#) applied a similar methodology in Egypt on rumors about the health of Mubarak. By using stock price markets information from Bloomberg and DataStream, the authors estimated the market valuation of political connections to be 20 percent to 23 percent of the value of connected firms.

¹¹ The decline was unrelated to variations in market conditions or firm productivity; hence, the drop in stock prices is a proxy for the political connection premium.

Figure 5. Impact of the Degree of Political Dependency on the Stock Value of Firms



Source: World Bank (2017).

A large part of studies focused on firms listed on stock exchanges, which are only one component of the economy and likely to capture only the most salient business-state linkages. The advantage of this approach is the greater data accessibility, e.g., by drawing on external data providers such as Bloomberg, Datastream, Worldscope, or the Orbis database from Bureau van Dijk. For example, the Orbis database has been widely used¹² for state capture analyses as it includes (i) various firm characteristics (e.g., industry code, and age) and financial data, and (ii) information on board members, managing directors, shareholders, subsidiaries, and business group affiliation. As of March 2018, the Orbis database has a coverage of 300 million companies across all countries. A detailed discussion of the advantages and disadvantages of this database can be found in [Ribeiro, Menghinello, and De Backer \(2010\)](#). In some cases, administrative data from authorities (e.g., commercial registers or credit registries) also include the identities of firm directors and group affiliations.

Evidence of Capture Mechanisms

Assessing the relationship between regulation or practices and the performance of politically connected firms requires data sources of the mechanism through which firms receive favors, which then can be merged with firm-level data. Network analysis, surveys, and interviews reveal not only overlaps of business and state actors, but also provide insights on how capture is potentially exercised. Most countries have some level of data available to create proxies for these mechanisms. The following provides some examples.

¹² For example, Johnson and Mitton (2001); Diwan, Keefer, and Schiffbauer (2015); Bussolo, Commander, and Poupakis (2018); Chekir and Diwan (2012); and Balabushko et al. (2018) used it for their analyses.

Influence on the Policy-Making Level: De Jure Measures

REVIEW OF VOTING PATTERNS ON LAWS

[Balabushko et al. \(2018\)](#) established a database consisting of legal acts of Ukraine, which potentially served the interests of business groups. For each legal act, it contained information such as voting for the corresponding law (e.g., number of votes) and which member of parliament voted for what law. Merging voting and decision-making patterns of legal acts with political connections of members of parliament, they could identify which business groups potentially influenced the implementation of specific legislative acts. For example, in 2012, the parliament passed a law on the privatization specifics of coal mining companies. Data analysis revealed that the majority of members voting for this law were affiliated with one business group called SCM Holdings. The law allowed its energy subsidiary to obtain the most profitable mines.

REVIEW OF THE REGULATORY FRAMEWORK BASED ON (PUBLICLY) AVAILABLE LEGISLATION

[Freund, Nucofira, and Rijkers \(2014\)](#) coded entry regulations proclaimed by the Tunisian investment law governing economic activity in most sectors to categorize the intensity of regulation in a sector in highly regulated (subject to FDI restriction and authorization requirements for obtaining an operating permit) and free entry and modestly regulated industries. By merging these data with the identified firms previously owned by the Ben Ali family, and with administrative data from the tax authorities containing balance sheet information, they could demonstrate that Ben Ali and his family used regulatory instruments to favor their own firms.

Influence on the Operational Level: De Facto Measures

Basing the analysis of state capture exclusively on legislation differences has limitations. It is possible that, in reality, a formal law granting preferential treatment is not strictly enforced (e.g., a firm can still enter a sector easily), or connected firms receive benefits systematically even without formalized laws.

EXPERT OPINION

[Freund, Nucofira, and Rijkers \(2014\)](#) conducted expert interviews to construct a de facto proxy for the intensity of regulation. They hired a leading law firm to provide a rating of which sectors were most difficult to obtain permission to enter (this inevitably creates a degree of subjectivity). The results are robust, showing that firms owned by Ben Ali outperform their competitors in terms of market share, particularly in sectors in which obtaining approval to enter is de facto difficult.

PUBLIC SECTOR DATA PROVIDERS

When available, public registries and administrative data from authorities can provide data that enable a direct measurement of the capture behavior, e.g., customs practices, the allocation of public lands and contracts, or lending behavior.

Customs and taxes. Customs data can be used to detect collusive practices between import companies, customs inspectors, and politicians. A mirror statistics analysis¹³ of Madagascar customs data identified

¹³ Mirror statistics calculate the gaps of foreign trade statistics between two trading partner countries and can be used to detect potentially fraudulent import flows. See Cantens et al. (2012) for detailed discussion.

several sectors and products with strong potential for capture behavior. For example, the textile sector was found to be at risk of undervaluation due to collusive practices. The total estimated losses in revenue in 2014 from undervaluation and misclassification amounted to \$96 million, or 30 percent of non-oil revenues collected ([Chalendard, Raballand, and Rakotoarisoa 2016](#)). Cross-checking the ownership of the corrupt firms would allow to uncover whether this tax evasion is based on systematic preferential treatment by public officials associated with these companies.

A case study of the administration of VAT refunds in Ukraine used data from the Ministry of Finance and the State Fiscal Service on audits and VAT refunds. It showed that connected firms were 61 percent less likely to be audited when requesting VAT refunds, concluding these firms enjoyed lower costs for paying taxes than other firms ([Balabushko et al. 2018](#)).

Public procurement. In Chad, an analysis of procurement data revealed that in 2013 more than 70 percent of public works (in value) were contracted based on single source procurement. Also, 27 percent of total contracting was done by the presidency that used exclusively single source contracting ([World Bank 2015](#)). The firms which received the majority of the contracts were found to be politically connected. Another study used procurement data from the U.S. Federal Procurement Data System to assess how the change in control of the U.S. House of Representatives and U.S. Senate following the 1994 midterm election and the presidential election in 2000 affected the awarding of government procurement contracts to companies. It finds that companies connected to the winning party are significantly more likely to experience an increase in procurement contracts, while the opposite was true for companies connected to the losing party ([Goldman, Rocholl, and So 2008](#)).

Public lending. Khwaja, Mian, and Qamar (2011) received loan-level data from the State Bank of Pakistan and created a direct measure of whether lenders favor politically connected firms (between 1996 and 2002). They found that government banks provided significantly more loans to connected firms even though these firms had 50 percent higher default rates than nonconnected ones, causing economy-wide costs of an estimated 0.3 to 1.9 percent of GDP every year.

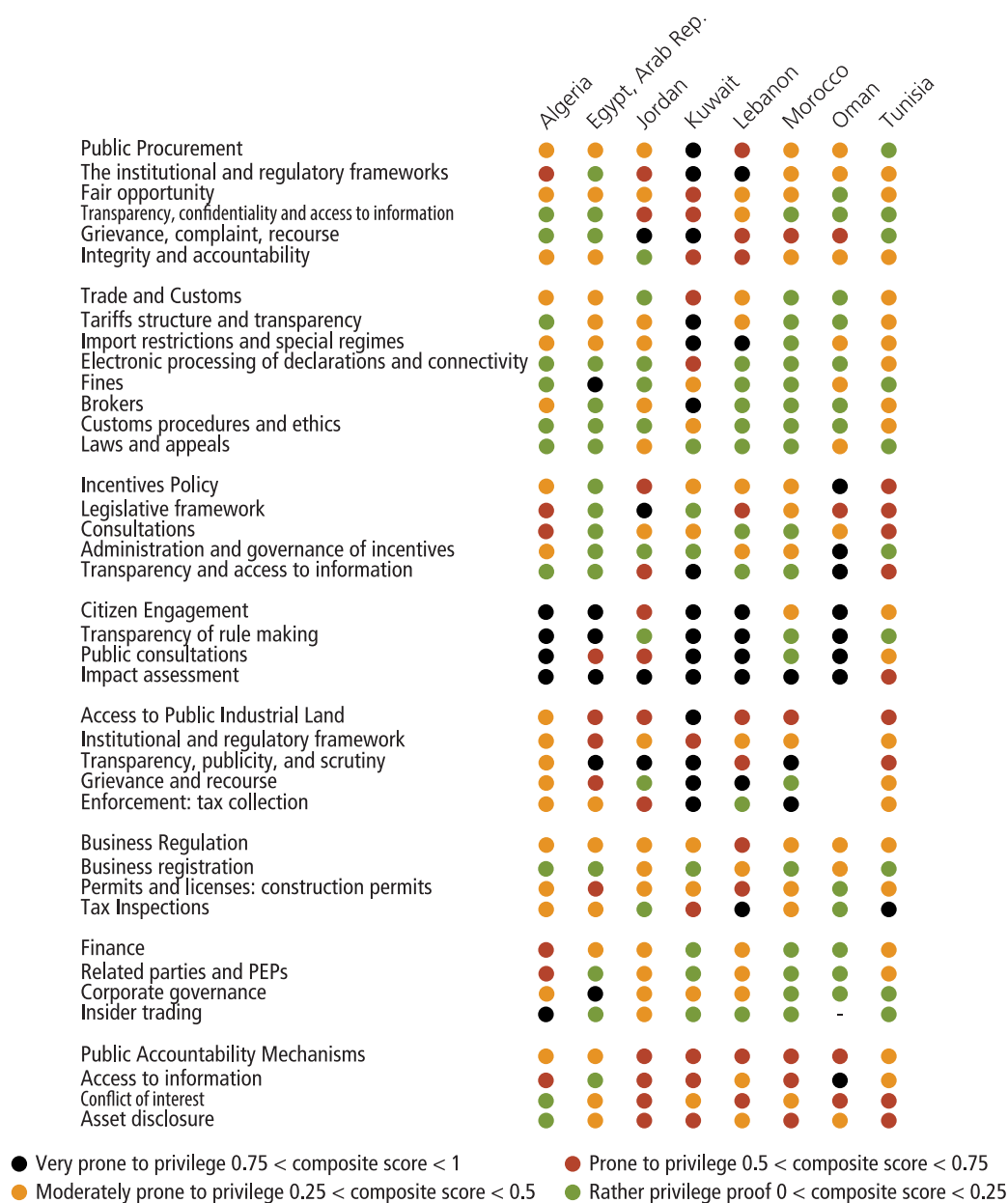
Open worldwide databases. If access to administrative data is restricted, data from various organizations can serve as proxies for capture mechanisms. [Diwan, Keefer, and Schiffbauer \(2015\)](#) use sector-specific indicators from World Bank data (World Integrated Trade Solution) on nontariff barriers, such as exclusive licenses requirements, rules of origin, and quality controls, for imported products to compare the performance and regulatory exposure of sectors according to the concentration of politically connected firms in the sector. They applied the same methodology to estimate preferential access to energy subsidies using United Nations data. Each firm was classified according to whether it belongs to a low, moderate, or high energy-intensive sector. They then compared the distribution of politically connected firms and all firms across industries with different energy intensities. Among others, they estimate that sectors with more politically connected firms benefit from more nontrade barriers and are more energy intensive (receive more energy subsidies). The World Bank's Doing Business Indicators also provide proxies of the regulatory environment affecting domestic firms in a country.

Country Dashboards

[Mahmood and Slimane \(2018\)](#) developed questionnaires for experts that aim to identify policy areas prone

to high-level capture. They cover the following areas: trade and customs, public procurement, access to public industrial land, access to finance, business regulation, and incentives policy (see figure 6).

Figure 6. Dashboards of Privilege Resistance for Eight MENA Countries, 2015



Source: World Bank.
 Note: PEP = politically exposed person.

Source: Mahmood and Slimane (2018).

The questionnaires cover de jure and de facto aspects. For each country, the policy areas are graded on their degree of vulnerability to privilege seeking. Finally, based on these data, which are generated by experts, dashboards are created as a diagnostic tool that ranks the countries according to the resistance

of their policies to privilege, discretion, and arbitrariness. (See [Mahmood and Slimane \(2018\)](#) for more information on the methodology and questionnaires.)

4. CONCLUSION

Empirical evidence on state capture remains limited because of data limitations and the challenge of quantitatively assessing the complexities of business-state interactions. To help promote more quantitative analysis of how public and private actors abuse regulation to extract rents, including the negative impacts on economic development, this paper discusses the various approaches taken by empirical studies. It highlights the heterogeneity of state capture, reflecting on the variety of contexts, specific industries, public functions, and institutions that are exploited to serve a political elite. Analysis requires different approaches. Some political environments allow a more open and direct dialogue with stakeholders that facilitates data collection and analysis. Others, particularly with very closed environments, require more creative and sensible approaches to assess potential capture behavior. A rigorous one-size-fits-all method that accurately measures the full dimension of state capture seems impossible (and impractical). Instead, methodologies must be adapted and focus on the particular issue that seems most detrimental to development in the respective context. One critical commonality of state capture analysis is that it requires cross-validation of three data components: (i) data on the set of actors who are capable of capturing various policies for their own benefit, which provides the basis to build a dataset on political connections and analyze the influence of firms on public institutions; (ii) data on firm-level indicators to measure performance differences between connected and nonconnected firms, as evidence of potential political connection premium; and (iii) data on de facto practices and de jure rules that potentially provide connected firms or specific industries with benefits.

Several approaches are presented on how to collect and use these data. The examples are listed in annex A, serving as a concise overview of the type of capture assessed in different countries, key findings, and the data sources used for the analysis. The main objective is to help practitioners who seek to measure state capture make better use of experience, methodologies, and potential data sources. Links to sources in the main text and annex A will assist in easily finding out more about specific methodologies.

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Annex A. Empirical Evidence of State Capture by Type of Capture

Table A.1. Empirical Evidence of State Capture by Type of Capture

Study	Country	What It Measures	Data Sources	Key Findings
Preferential access to debt financing				
<p>Khwaja, A.I., and A. Mian. 2005. "Do Lenders Favor Politically Connected Firms? Rent Provision in an Emerging Financial Market." <i>Quarterly Journal of Economics</i> 120: 1371–1411. (link)</p>	Pakistan	Investigates rents to politically connected firms in banking (1996–2002).	+ loan-level data from the State Bank of Pakistan + electoral outcomes for the two elections that overlap the loan data period	<ul style="list-style-type: none"> • Preferential access leads to economy-wide annual costs of 0.3-1.9% of gross domestic product. • Political firms borrow 45% more and although they have 50% higher default rates, they pay no higher interest rates than their nonconnected peers. • Preferential treatment occurs exclusively in government banks; private banks provide no political favors. • Political rents increase with the strength of the firm's politician and whether he or his party is in power.
<p>Khwaja, A. I., Mian, A., and A. Qamar. 2011. "Bank Credit And Business Networks." HKS Faculty Research Working Paper Series RWP11-017, John F. Kennedy School of Government, Harvard University, Cambridge, MA. (link)</p>	Pakistan	Estimates the value that network membership brings in terms of access to bank credit and improving financial viability.	Firm-level data from the central bank (includes directors' identities) + connection from BoardEx and OneSource	<ul style="list-style-type: none"> • There is a single super-network that comprises 5% of all firms but accesses two-thirds of all bank credit. • Super-network membership increases bank credit by 16.6% and decreases propensity to enter financial distress by 9.7% and better insures firms against industry and location shocks. • Network benefits depend on where a firm connects to in the network and on the firm's pre-existing strength.
<p>Diwan, I., and M. Schiffbauer. 2018. "Private Banking and Crony Capitalism in Egypt." <i>Business and Politics</i> 20 (3): 390–409. (link)</p>	Egypt	Assesses why private banks lend preferentially to politically connected firms (under the Mubarak regime).	Firm-level data from Orbis database + own list creation of thirty prominent, politically connected businesspeople	<ul style="list-style-type: none"> • Connected firms were more attractive to banks because they made larger profits, and because they were seen to be implicitly guaranteed by the state against failure. • Nonconnected firms had lower demand for loans.

Study	Country	What It Measures	Data Sources	Key Findings
Preferential access to government contracts				
Goldman, E., J. Rocholl, and J. So. 2010. "Political Connections and the Allocation of Procurement Contracts." Indiana University Working Paper. Available online. (link)	United States	Analyzes whether political connections of public corporations affect the allocation of government procurement contracts.	Procurement data from Federal Procurement system (Next Generation FPDS-NG). + hand-collected board members of S&P 500 companies that had past political position	<ul style="list-style-type: none"> Companies that are connected to the winning (losing) party are significantly more likely to experience an increase (decrease) in procurement contracts.
Mironov, M., and E. Zhuravskaya. 2016. "Corruption in Procurement and the Political Cycle in Tunneling: Evidence from Financial Transactions Data." <i>American Economic Journal: Economic Policy</i> 8 (2): 287-321. (link)	Russian Federation	Provides evidence of corruption in the allocation of public procurement and assesses its efficiency.	Central bank dataset of banking transactions among legal entities + firm-level data from firm registry from Russia's Statistical Agency (Rosstat)	<ul style="list-style-type: none"> Firms that receive government procurement contracts increase illegal tunneling around elections. Cash is tunneled to politicians in exchange for procurement contracts. In more corrupt localities, procurement contracts go to unproductive firms.
Fazekas, M., and I.J. Tóth. 2014. "From Corruption to State Capture: A New Analytical Framework with Empirical Applications from Hungary." Working Paper 2014:01, Corruption Research Center, Budapest, Hungary. (link)	Hungary	Develops a conceptual and analytical framework for gauging state capture based on micro-level contractual networks in public procurement.	Public procurement announcements (awards and modifications) (includes information on actors, i.e., the contract issuer and winner)	<ul style="list-style-type: none"> About 60 percent of public sector organizations are partially or fully captured. Captured organizations form a dense central network.
Cingano, F., and P. Pinotti. 2013. "Politicians at Work: The Private Returns and Social Costs of Political Connections." 2013. <i>Journal of the European Economic Association</i> 11 (2): 433-465. (link)	Italy	Quantify the private returns and social costs of political connections (1985-1997).	Employee-employer data of Italian firms matched with administrative data on individuals appointed in local governments	<ul style="list-style-type: none"> Public demand shifts toward connected firms. The revenue premium of connected firms amounts to 5.7% on average. It is larger (up to 22%) in areas characterized by high public expenditure and high levels of corruption. Public demand shift is estimated to reduce the provision of public goods by approximately 20%.

Study	Country	What It Measures	Data Sources	Key Findings
Preferential access to government aid of financially troubled firms				
Faccio, M., J.J. McConnell, and R.W. Masulis. 2006. "Political Connections and Corporate Bailouts." <i>Journal of Finance</i> 61 (6): 2597–2635. (link)	35 Countries	Studies the likelihood of government bailouts of 450 politically connected firms from 35 countries during 1997–2002.	Desk research of politically connected politicians and firm executives and bailed out companies, e.g., Worldscope, Lexis-Nexis, firm websites	<ul style="list-style-type: none"> Politically connected firms are significantly more likely to be bailed out than similar nonconnected firms. Connected firms are disproportionately more likely to be bailed out when the International Monetary Fund or the World Bank provides financial assistance to the firm's home government. Politically connected firms to be bailed out exhibit worse financial performance than their nonconnected peers at the time of and following the bailout.
Effects of state capture on job creation				
Diwan, I., and J.I. Haidar. 2016. "Do Political Connections Reduce Job Creation? Evidence from Lebanon." Working Papers 1053, Economic Research Forum, Giza, Egypt. (link)	Lebanon	Assesses how politically connected firms reduce job creation in Lebanon.	World Bank enterprise data, Ministry of Finance, the Lebanese Commercial Register (Ministry of Justice)	<ul style="list-style-type: none"> Politically connected firms are less productive than nonconnected firms in their sectors, and each additional connected firm reduces jobs created by 7.2% and jobs created by nonconnected firms by 11.3%.
Studies encompassing several avenues of state capture				
Diwan, I., P. Keefer, and M. Schiffbauer. 2015. "Pyramid Capitalism: Political Connections, Regulation, and Firm Productivity in Egypt." Policy Research Working Paper 7354, World Bank, Washington, DC. (link)	Egypt	Explores if connected firms under the Mubarak regime received favorable regulatory treatment, if they hurt aggregate growth, and if regulatory capture accounts for the high value of connected firms.	Interviews of bank managers, private equity funds, lawyers, and nongovernmental organizations + firm-data: Orbis database on Cairo stock exchange firms + employment census data + World Bank (World Integrated Trade Solution) data + Enterprise Survey	<ul style="list-style-type: none"> Connected firms are more likely to benefit from trade protection, energy subsidies, access to land, and regulatory enforcement. Regulatory capture account for the higher profits of politically connected firms. The entry of connected firms into new, modern, and previously unconnected sectors slows aggregate employment growth and skews the distribution of employment toward less productive, smaller firms.

Study	Country	What It Measures	Data Sources	Key Findings
Balabushko, O., O. Betliy, V. Movchan, R. Piontkivsky, and M. Ryzhenkov. 2018. "Crony Capitalism in Ukraine: Relationship Between Political Connectedness and Firms' Performance." Policy Research Working Paper 8471, World Bank, Washington, DC. (link)	Ukraine	Assesses the economic impact of crony capitalism by comparing the economic outcomes of politically connected versus non-connected firms.	Ruslana database from Bureau van Dijk + journalist investigations from open sources	<ul style="list-style-type: none"> • 2% of firms are connected but they control over 20% of the total turnover and over 25% of the assets of all Ukrainian companies. • A connected firm is 61 percent less likely to be audited than a nonconnected firm related to a VAT refund, thus enjoying lower cost of paying taxes. • Strong negative correlation between political connection and productivity. • Connected firms are larger and employ more people, but they are less productive and grow slower in turnover and job creation.
Freund, C., A. Nucifora, and B. Rijkers. 2014. "All in the Family: State Capture in Tunisia." Policy Research Working Paper 6810, World Bank, Washington, DC. (link)	Tunisia	Assesses the link between entry regulation and business interest of former President Ben Ali's family.	Business Register + list of confiscated firms + data on gross output and profits as declared to the tax authorities + data on investment law	<ul style="list-style-type: none"> • Connected firms are four times more likely than nonconnected firms to operate in highly regulated sectors. • Connections are most valuable for the largest and most profitable firms. • Profit and market share premium are higher in intensely regulated sectors.
Rijkers, B., L. Baghdadi, and G. Raballand. 2015. "Political Connections and Tariff Evasion: Evidence from Tunisia." Policy Research Working Paper 7336, World Bank, Washington, DC. (link)	Tunisia	Assesses whether politically connected entrepreneurs are more likely to evade tariffs.	List of confiscated Ben Ali firms + Firm-product-source country customs data + data from United Nations Conference on Trade and Development on HS6 exports	<ul style="list-style-type: none"> • Firms owned by President Ben Ali and his family were more likely to evade import tariffs. • Evasion gaps were particularly strong for goods subject to high tariffs and driven by underreporting of unit prices. • Unit prices reported by connected firms were lower and declined faster with tariffs than those of other firms. • Privatization to the Ben Ali family was associated with a reduction in reported unit prices, whereas privatization per se was not.

Study	Country	What It Measures	Data Sources	Key Findings
Anderson, J. H., and C.W. Gray. 2006. <i>Anticorruption in Transition 3: Who Is Succeeding ... and Why?</i> Washington, DC: World Bank. (link)	Europe and Central Asia countries	Analysis of the perception of the impact of state capture based on BEEPS 2002-2005	BEEPS data	<ul style="list-style-type: none"> • Highest levels of state capture are perceived by firms in southeast Europe • Major improvements were reported in Bulgaria, Latvia, the Slovak Republic, Ukraine, Georgia, and Slovenia, and the 2005 results were significantly worse than in 2002 in Albania, Armenia, Russia, and Azerbaijan
Mobarak, A., and D. Purbasari. 2006. "Corrupt Protection for Sale to Firms: Evidence from Indonesia." Available online. (link)	Indonesia	Explores access to import licenses with political connection during the Suharto era.	Desk research of connected firms + consulting firm + firm survey data + firms from the Jakarta Stock Exchange (JSX)	<ul style="list-style-type: none"> • Being connected triples the likelihood of receiving a license relative to the firm's competitors; having a member of the Suharto family on the firm's board quadruples this likelihood. • Indications of welfare losses: exclusive licensing increases prices for downstream producers and consumers, increases industry concentration and decreases the correlation between firm productivity and market share.
Bussolo, M., S. Commander, and S. Poupakis. 2018. "Political Connections and Firms Network Dimensions." Policy Research Working Paper 8428, World Bank, Washington, DC. (link)	Bulgaria, Hungary, Romania, Russian, Serbia, and Slovakia with Spain as comparator	Examines the association between being connected and firm-level attributes by assessing how location in a network, including the extent of ties and centrality, is correlated with firm scale and performance.	Orbis dataset for ownership, shareholder, balance sheet and financial information + publicly available information of politically exposed persons	<ul style="list-style-type: none"> • Positive correlation between being connected and levels of sales, output, wages and return on assets. • Location in a network, the extent of ties, and betweenness or centrality is often positively associated with firm-level indicators for the scale of activity. • Each country is characterized by a giant network component (Big Island). • Networks have small-world properties, with high clustering and short path length due to a relatively small number of bridging connections.

Study	Country	What It Measures	Data Sources	Key Findings
Hellman, J. S., J. Jones, and D. Kaufmann. 2000. " 'Seize the State, Seize the Day'": State Capture, Corruption, and Influence in Transition." Policy Research Working Paper 2444, World Bank, Washington, DC. (link).	Former Soviet Union	Investigates the dynamics of the capture economy.	BEEPS data	<ul style="list-style-type: none"> • In high capture economies, capture improves firms' performance and security of property rights. • Captor firms in low state capture countries perform worse than other firms. • Capture tends to be a strategy for new firms to compete with existing political connected firms (vicious circle).
Saadi, M. S. 2016. "Moroccan Cronyism: Facts, Mechanisms and Impact." Working Paper 1063, Economic Research Forum, Giza, Egypt. (link)	Morocco	Assesses the impact of cronyism on influence on competition and economic growth.	Administrative data of manufacture firm (commercial court website) + dataset on 20 largest firms in the sector	<ul style="list-style-type: none"> • There is a large patronage network. • Results suggest that political connections hinder competition, adoption of information and communication technology, and innovation among manufacturing firms.
Johnson, S., and T. Mitton. 2001. "Cronyism and Capital Controls: Evidence from Malaysia." NBER Working Paper 8521, National Bureau of Economic Research, Cambridge, MA. (link)	Malaysia	Assess the impact of political connections on stock price performance during the early phase of the Asian financial crisis (July 1997-August 1998).	Firm-level data from Worldscope + information on political connection comes from Gomez and Jomo (1997)	<ul style="list-style-type: none"> • The stock price performance of politically connected firms was hit harder during the Asian financial crisis, suggesting that previously favored firms lost valuable subsidies, which were restored with the imposition of capital controls. • Of the estimated \$60 billion loss in market value for politically connected firms, roughly 9% can be attributed to the fall in the value of their connections.
Fisman, R. 2001. "Estimating the Value of Political Connections." <i>American Economic Review</i> 91 (4): 1095–1102. (link)	Indonesia	Compares the returns of firms with different political exposure to President Suharto.	Data on the stock market and accounting for firms traded on the JSX + on group affiliations of all JSX firms + a series of events related to the condition of Suharto's health	<ul style="list-style-type: none"> • Politically dependent firms, on average, lost more value during periods of rumors about Suharto's health than the value of less dependent firms.

Study	Country	What It Measures	Data Sources	Key Findings
Chekir, H., and I. Diwan. 2013. "Crony Capitalism in Egypt." CID Working Paper 250, Center for International Development, Harvard University, Cambridge, MA. (link)	Egypt	Measures the state capture under President Mubarak by comparing the firm performance and the stock market valuation of connected and nonconnected firms.	Orbis database + stock price markets data from Bloomberg and Datastream +interviews with three leading stock-brokers in Cairo to indicate political connection.	<ul style="list-style-type: none"> • Political capture allowed connected firms to increase their market size and power and their borrowings. • The market valuation of political connections is estimated to be 20% to 23% of the value of connected firms. • They argue that capture led to a large misallocation of capital toward less efficient firms, which together with reduced competition, led to lower economic growth.
Faccio, M. 2010. "Differences between Politically Connected Firms and Nonconnected Firms: A cross country Analysis." Financial Management 39 (3): 905-28 (link)	47 Countries	Analyzes how connected firms differ from nonconnected firms and controls for level of corruption and economic development.	From Faccio (2006)	<ul style="list-style-type: none"> • Connected firms have higher leverage, corporate value, and higher market shares, but they underperform compared to nonconnected companies on an accounting basis. • Differences vary depending on the level of corruption and the degree of economic development in individual countries. • Significant increase in corporate value, but only when those involved in business enter politics.
Acemoglu, D., S. Johnson, A. Kermani, J. Kwak, and T. Mitton. 2013. "The Value of Political Connections in Turbulent Times: Evidence from the United States." NBER Working Paper 19701, National Bureau of Economic Research, Cambridge, MA. (link)	United States	Assesses the change of firms' returns connected to Timothy Geithner, when he was nominated by President Obama to become U.S. Secretary of the Treasury in 2008, compared to nonconnected firms.	Datastream + Worldscope + Trade and Quote database + public announcements	<ul style="list-style-type: none"> • The announcement of Timothy Geithner as nominee for U.S. Treasury secretary produced a cumulative abnormal return for financial firms with which he had a connection (6% after the first full day of trading and about 12% after 10 trading days). • There were subsequently abnormal negative returns for connected firms when news broke that Geithner's confirmation might be derailed by tax issues.

Study	Country	What It Measures	Data Sources	Key Findings
Bertrand, M., F. Kramarz, A. Schoar, and D. Thesmar. 2018. "Politically Connected CEOs and Corporate Outcomes: Evidence from France." Working Paper, University of Chicago Graduate School of Business, Chicago, IL. (link)	France	Measures potential cost of political connections for firms.	DAFSA (market research firm) yearbook listing French firms + panel dataset for firm indicators + surveys	<ul style="list-style-type: none"> • Connected firms are less profitable and experience a drop in profitability when a connected chief executive officer (CEO) comes to power. • Little evidence that connected firms benefit from preferential access to government resources, such as subsidies or tax exemptions. • Politically connected CEOs help politicians in their re-election efforts by increasing job and plant creation rates.
Imai, M. 2006. "Mixing Family Business with Politics." <i>Asian Economic Journal</i> 20 (3): 241–56. (link)	Thailand	Examines whether the political participation of family business yields a private economic payoff.	Publication by the Brooker Group + database from stock exchange	<ul style="list-style-type: none"> • Politically connected firms, on average, are more profitable than nonconnected firms. • The political benefit is found to be larger when firms are connected to cabinet members.

Annex B. Potential Data Sources

Table B.1. Potential Data Sources by Category

Category	Variable	Data Source
Political Connections	Identity of <ul style="list-style-type: none"> • Board members • Executives • Shareholder • Group affiliation 	<ul style="list-style-type: none"> • Orbis database (Bureau van Dijk) • Bloomberg • BoardEx • Thomson Reuters' World-Check Watchlists of global politically exposed persons (PEPs) • Included in some central bank and bank supervision agency registers • Included in some commercial registries of Ministry of Finance or Justice (commercial court) • Websites of firms • Diverse publications (e.g., stock exchange, banks, Forbes, media)
	Identity of PEPs (head of state, ministers, and member of parliament) PEP concept (most commonly used): <ul style="list-style-type: none"> • A firm is directly connected when at least one of a firm's top officers (executive officer, board member, president, vice-president) or large shareholder (e.g., at least 10 percent of the company's voting shares) holds a prominent public function (i.e., president, prime minister, judicial or military officials, executives of state-owned enterprises [SOEs], member of parliament). • A firm is indirectly connected, when a relative (or friend) of a PEP is a top officer or a large shareholder. 	<ul style="list-style-type: none"> • A country's official government or parliament website • U.S. Central Intelligence Agency • Thomson Reuters' World-Check Watchlists of PEPs • Lexis-Nexis
	Link between PEPs and firms	<ul style="list-style-type: none"> • Cross-checking names of PEPs with the names of board members, executives, and others (see Balabushko et al. (2018) and Bussolo, Commander, and Poupakis (2018), or Diwan and Haidar (2016) for detailed methodologies) • Lexis-Nexis (identifies undisclosed relationships between individuals and businesses) • Net-Map Tool • Focus group interviews • Desk research (e.g., news articles) • Investigative journalism and informants • Enterprise Surveys (see Egypt 2016)

Firm-Level Indicators	<p>Some key firm and performance data:</p> <ul style="list-style-type: none"> • Revenue • Net profits • Long- and short-term debt • Total assets • Return on assets (net profits by total assets) • Total equity • Financial leverage (total debt divided by equity) • Value added (turnover minus material cost) • Effective tax rate (income tax payments divided by profit before tax) • Market power of a firm (share of a firm in turnover of respective industry in a given year) • Age • Number of employees • Industry code 	<ul style="list-style-type: none"> • World Bank Business Enterprise Survey • Ministry of Finance • Firm registry from official statistical agencies • Central bank • Orbis database • Bloomberg • Datastream • Compustat • Worldscope • Wharton Research Data Services
Capture Mechanism	<p>Procurement</p> <ul style="list-style-type: none"> • Number and value of procurement contracts, including contract awards, contract modification notices, or contract completion announcements. 	<ul style="list-style-type: none"> • Sometimes available on websites of SOEs and government or regulatory agencies. • Enterprise Surveys, e.g.: “Over the last year, has this establishment secured or attempted to secure a government contract?”
<p>Taxes</p> <ul style="list-style-type: none"> • Tax audit frequency • Value added tax (VAT) payments • VAT refund requests • Corporate tax • Import taxes 	<ul style="list-style-type: none"> • Ministry of Finance • Customs administration • World Bank Enterprise Surveys • United Nations Conference on Trade and Development 	
<p>Loan-level data (e.g., interest rate, loan amount and allocation)</p>	<ul style="list-style-type: none"> • Central bank • Bank supervision agencies • Credit registers from private credit bureaus • World Bank Enterprise Survey (includes questions on loans) 	
<p>Regulatory environment (e.g., days to obtain license, firm entry, restrictions on foreign direct investment, industrial zones)</p>	<ul style="list-style-type: none"> • Doing Business Indicators • Expert ratings from domestic and international firms • Review of legislative acts (available on government websites online) • Review of voting patterns of member of parliaments (some parliaments publish this online) • World Bank Enterprise Surveys 	
<p>Nontariff barriers (e.g., exclusive licenses requirements, rules of origin, or quality controls)</p>	<ul style="list-style-type: none"> • World Integrated Trade Solution software 	
<p>Land</p>	<ul style="list-style-type: none"> • Land registries • World Bank Enterprise Surveys (e.g., questions on land issues such as: “From whom have you gotten the land [people, government, for free, other]?”) 	
<p>Subsidies</p>	<ul style="list-style-type: none"> • Budgetary subsidies reported in firms’ balance sheets • Enterprise Surveys, e.g.: “Over the last three years has this establishment received access to subsidized input or energy prices?” 	