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# Transactional Legal Opinions as Evidence of the Tradeoffs between Business Registration and Contractual Costs\*\*\*

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## Abstract

The role of corporate registries in supporting corporate contracting has traditionally been ignored or trivialized, which has often lead to narrow policies focused on creating minimalist registries and reducing registration costs. Arruñada (2010) proposed a theory that explains how these registries facilitate corporate transactions. We test this theory by constructing and exploiting a dataset of model transactional legal opinion comments and using the lengths of these comments as proxies for legal opinion costs. In particular, we test for whether stronger registration requirements decrease the length of lawyer comments on model legal opinions included in an authoritative report on legal opinions created by the International Bar Association. We confirm the presence of this tradeoff by finding that in countries with less stringent registration requirements, legal opinion comments are longer, even after controlling for the legal origin, European Union affiliation, and judicial quality of each country.

Keywords: business registries, corporate law, business formalization, impersonal transactions.

JEL Classification: O17, K22, K23, L59.

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## 1. Introduction

Policy discussions concerning the organization of business registries have become more prevalent in recent decades. These discussions, reminiscent of widespread arguments in developed economies of the nineteenth century, have led to a series of policy initiatives, such as the World Bank's *Doing Business* reports, which have devoted extensive resources to simplifying registration procedures for firms, seeing these procedures primarily as entry barriers. However, as argued by Arruñada (2007), the fundamental approach of these initiatives—seeing registries and registration requirements primarily as entry barriers—tends to disregard the more important role of business registries as reliable sources of information for judges, government departments, and other firms. Further, it ignores potential trade-offs between business registration and transaction costs associated with future corporate contracts. The trivialization of this information-serving, contract facilitating role has not been limited to policy. For example, most theories of the firm, which have been dominated by a contractual emphasis, traditionally see the role of the State as limited to providing a set of default rules for contracts; a judiciary that ensures ex post contract enforcement; and a range of mechanisms to correct externalities.<sup>1</sup> Within this theoretical framework, there is little need for business registration.

Arruñada (2010) proposed a theory of business registries which argues that, by making some contracts public and verifiable, registries facilitate later corporate contracting while preserving consent of corporate owners to a diminishment of their property rights. The theory can be summarized as follows. Although property rights provide incentives for investment and specialization (between principals and agents), strict enforcement (for real property, *in rem* enforcement) creates transaction costs in the form of worsened information asymmetry between property owners and acquirers. In the corporate context, transactions can be seen as the product of “sequential” exchange, which involves at least two steps. First, corporate principals (owners) enter into “originative” contracts (mainly, charters, bylaws and appointments) with themselves and with corporate agents (mainly, directors and officers). Originative contracts contain vital information about the firm, including, *inter alia*, the decision-making structure and procedures necessary for the corporation to bind itself to contracts with outside parties, as well as information concerning the ownership structure of the firm. At its core, an originative contract involves a reallocation of property rights (and power to transfer these rights) among its parties, and in principle, its contents must be respected to legally commit the firm to “subsequent” contracts between the firm and outside (third) parties. Therefore, third parties entering these subsequent contracts with a corporation face substantial transaction costs caused by information asymmetry: namely, they need to verify the contents of the corporation's originative contracts to make sure that the corporation is legally bounded by the contract. Otherwise, if things turn out badly, they may end up with an indemnity claim against individual corporate agents, rather than with a more valuable legal claim against the corporation itself. Therefore, in this scenario, there is a potential conflict between the parties to originative contracts (e.g. principals and their

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<sup>1</sup> Mainly Coase (1937), Alchian and Demsetz (1972), Jensen and Meckling (1976), Williamson (1975, 1985), Klein, Crawford and Alchian (1978), Grossman and Hart (1986), and Holmstrom and Milgrom (1994).

agents), and third parties who wish to contract with the firm. Strict enforcement of originative contracts increases transaction costs for third parties, inhibiting impersonal trade, while lowering transaction costs for third parties diminishes the property rights of corporate owners, inhibiting investment and specialization.

Along these lines, public registries, supported by mandatory registration requirements, serve to publicize the contents of a corporation's originative contracts in a verifiable (not manipulatable) manner, lowering transaction costs for third parties entering into subsequent contracts with the firm while giving corporate owners control over the content of originative contracts they register, preserving their consent. A testable prediction of the theory is that *weaker (stronger) registration requirements should result in higher (lower) costs of subsequent contracting*.

This article seeks to test this prediction by exploiting differential registration requirements across countries as well as a cross-section dataset of model transactional legal ("closing") opinion comments from a sample of countries constructed from an International Bar Association publication. The dataset consists of detailed comments created by lawyers from a sample of countries discussing the application of a model legal opinion in their country. Legal opinions are requested by one contracting party from the legal counsel of the other contracting party (usually, the corporation) prior to the consummation of large corporate contracts. These legal opinions contain a discussion of various legal issues pertaining to the contract, and, in order to render them, legal counsels must undergo an extensive documentary investigation of the originative contracts of the corporation. The cost of issuing legal opinions therefore provides a measure of the transaction costs experienced by contracting parties related to the verification of the contents of originative contracts. This dataset does not provide direct information on legal opinion costs. However, we use the lengths of legal opinion comments as a proxy for the cost of issuing legal opinions in each country.

Using this data, we compare business registration requirements in each country with the length of legal opinion comments to determine whether weaker registration requirements are associated with longer legal opinion comments. The results indicate that even controlling for legal origin, EU affiliation, and judicial quality, countries with weaker registration requirements also have longer legal opinion comments.

This paper is organized as follows. Section 2 presents a theory of corporate registries, introduces the practice of legal opinions, and advances a testable prediction of the theory. Section 3 discusses two detailed registry examples. Section 4 introduces the legal opinions data. Section 5 presents and discusses findings and implications.

## 2. Theory and Testable Prediction

### 2.1. Introduction to the Theory of Corporate Registries

According to Arruñada (2010) corporate contracting is characterized as a process of sequential exchange, which involves at least two steps. First principals—e.g. owners and shareholders—voluntarily contract with themselves and with agents—such as employees, company directors and managers—in “originative” transactions (charters, bylaws, board and shareholder resolutions). Second, agents, enter into “subsequent” transactions with third parties, such as corporate clients, corporate creditors and future shareholders, on behalf of the corporation.

Sequential exchange allows for specialization in the tasks of principals and agents but gives rise to substantial transaction costs, because third parties suffer information asymmetry with respect to the previous originative contract. Additionally, principals face a serious moral hazard and commitment problem because their incentives change after the third party has entered the subsequent contract. Before contracting, principals have an interest in convincing third parties that originative contracts have been complied-with but their incentives change drastically if the underlying business turns out badly. Consequently, the typical dispute triggered by sequential transactions is one in which the principal tries to elude obligations committed by the agent in the principal’s name, whether the agent had legal authority or not.

The law can adjudicate such disputes in favor of the principal or the third party. In principle, a legal rule favoring the principal will maximize property enforcement and incentives for investment and specialization in the tasks of principals and agents but will worsen the information asymmetry suffered by all potential third parties with respect to legal title. Conversely, a legal rule favoring the third party will minimize information asymmetry for potential third parties, encouraging them to trade, but will also weaken property enforcement. Therefore, the choice of rule involves a tradeoff between property enforcement and transaction costs.

Registering originative contracts—the charters, bylaws, and any amendments to them (including relevant board or shareholder resolutions and changes in agent appointments)—overcomes this tradeoff between property enforcement and transaction costs, expanding the set of viable contractual opportunities while minimizing the weakening of property rights. To the extent that registries provides reliable information about whether a judge or other future enforcer will favor the principal or the third party in the event of a conflict (“independent publicity”), third parties will know the applicable rule merely by checking the registry, eliminating the information asymmetry. Also, consent of right-holders to a weakening of their property rights is preserved.

## 2.2. The Practice of Issuing Legal Opinions

As a condition precedent to the closing of many business transactions, legal counsel for one party delivers to the party on the other side a letter in which counsel provides the recipient its legal opinion on various matters. These letters are referred to as legal opinions. Legal opinions have played a role in business transactions in the United States for more than a century, and have become standard practice, especially as part of the due diligence process supporting large transactions, both in the United States as well as internationally. These opinions are almost exclusively written and involve a series of legal assertions, qualifications, and assumptions regarding how the opined upon contract will likely be enforced (Glazer and Keller, 2005, 389-92). Each portion of a legal opinion that addresses a particular legal issue is herein referred to as an “assurance.”<sup>2</sup>

In order to render a legal opinion, legal counsel will engage in an extensive documentary investigation of origivative documents detailing matters referred to in the opinion. For example, legal opinions will often contain a “corporate action” assurance, which speaks to whether the corporate agent executing the given agreement has the requisite authority to bind the firm to the contract. In most cases, the legal opinion counsel must verify the contents of several of the corporation’s origivative documents: including its charter, bylaws and any relevant board or shareholder resolutions, in order to be confident that the agent has the requisite legal authority. Therefore, the cost of issuing these opinions can serve as a proxy for the costs of contracting associated with the verification of the contents of origivative contracts.<sup>3</sup>

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<sup>2</sup> What we call “assurances” are commonly referred to as “opinions” among legal opinion practitioners, even though they are one of many sections within one legal opinion letter. For example, what Gruson *et al.* (2003) refers to the corporate action “opinion” is one of several sections of the model legal opinion letter presented, which also contains many other sections addressing other legal issues. For expositional simplicity, we refer to sections within a legal opinion letter addressing different legal issues as “assurances,” rather than “opinions,” to distinguish them from the legal opinion letter itself.

<sup>3</sup> It has been suggested, with respect to the United States, that legal opinions often do not provide incremental informational value that justifies their cost, and that this excess cost is driven by (1) excess demand by requesting lawyers, who attempt to avoid reputational penalties for perceived professional incompetence by requesting non-cost justified, but entrenched, excessive legal opinions, and (2) an excess supply of legal opinions by companies who wish to avoid being perceived, through an adverse selection mechanism, as being on an extreme-low end of the contracting quality spectrum (Barnett, 2007). Observe that excess lawyer demand and excess company supply of opinions is partly consistent with our theory: the ability of lawyers to capture rents may lead to both registry underdevelopment (Arruñada, forthcoming), as well as unnecessary or defensive lawyering. To the extent that defensive lawyering is entrenched as an industry standard for contracts, companies may feel the need to provide opinions to signal a base level of contracting quality. Something similar to the unnecessary or defensive lawyering argument has been claimed with respect to title insurance, which plays a parallel function in the field of real property (Arruñada, 2002).

### 2.3. Testable Prediction

If our interpretation of the role and registries and legal opinions is correct, when originative contracts are privately kept and not registered, third parties seeking to verify their contents and enter into subsequent contracts with the corporation will face greater informational asymmetry, which should increase the extent of mechanisms used to mitigate this information asymmetry: namely, in this context, legal opinions. Since we use comments on model legal opinions as proxies for the length of legal opinions (as well as their cost), we therefore expect legal opinion comments to be longer in jurisdictions where originative contracts are not publicly registered or are registered incompletely.

We will first illustrate in section 3 the tradeoff by comparing two extreme types of corporate registries: those of the United States and Germany before running a quantitative test in section 4.

### **3. Two Extreme Cases: The US versus German Corporate Registries**

Given their foundational information-providing role, registries in different jurisdictions have historically developed different organizational types and registry requirements. The expected trade-offs associated with these differences are the primary concern of this paper. Typically, all registries require the registration of basic originative documents such as corporate charters. However, beyond these basic requirements, registries differ according to which additional originative documents must be registered (including corporate bylaws, board resolutions, and share resolutions), whether amendments to these originative documents must be filed, whether the identity of corporate agents must be registered, and the legal effect of registered information. States within the United States provide canonical examples of “minimalist” business registries, while Germany provides a “maximalist” example, and differences in the registration of originative documents are expected to give rise to trade-offs between registration and the extent of legal opinions.

As an illustrative example, consider the documentary investigation conducted by legal opinion writers in the United States versus in Germany, seeking to create a legal opinion assurance concerning whether a corporate officer is authorized to execute a contract on a corporation’s behalf (a “corporate action” assurance). In most US jurisdictions, only the corporate charter (and amendments to it) must be filed. However, typically corporate bylaws, board and shareholder resolutions, and the identity of current corporate directors and managers need not be filed with the Secretary of State. A corporate officer is “actually” authorized to execute a contract on a corporation’s behalf if the agreement is approved or authorized, “in a manner consistent with the applicable corporation statute and the company’s charter and by-laws, by the proper body or bodies (stockholders, directors, or board committee), by the required vote at a properly called and held meeting (or by appropriate written consent) (Tribar, 1998, p.654).” According to the Tribar committee (1998), a corporate action assurance also signals that “the persons identified in the agreement as signatories had actual authority to execute the agreement on behalf of the company, that all required signatures were obtained and that the company delivered the executed agreement (or caused it to be delivered) in a manner permitted

by applicable law (Tribar, 1998, p.654).” Although other doctrines, such as apparent authority and implied authority are available to generate corporate authorization, parties to large value transactions (the transactions where legal opinions are most common) tend to demand assurances that the transaction was *actually* authorized (Tribar, 1998, p.654).

The verification of corporate authorization therefore involves reliance on unregistered originative documents (in particular, bylaws and board resolutions). Often, as stated by the Tribar committee (1998), the assurance is delivered after review of “a certificate signed by the corporate secretary stating that (i) a meeting of the board of directors, at which a quorum was present, was held on a specified date on notice duly given and (ii) at the meeting a resolution authorizing the agreement was adopted by the required vote,” and an investigation that there has been no substantive action affecting the resolution since then (Tribar, 1998, p.609; also see Clark, 1986, p. 112). Additionally, legal opinion writers would inspect a copy, certified by the Secretary of State, of the corporation’s articles of association and an up-to-date copy of the corporation’s bylaws certified by the corporation’s secretary, as well as “miscellaneous other certificates attesting to the validity of certain signatures, to the identity of certain officers, and to the up-to-date character of the other documents (Clark, 1986, p.112).”<sup>4</sup>

The Tribar committee acknowledges potential problems with using unregistered sources prepared by parties interested in the transaction:

The opinion preparers could also (but almost never do) interview the corporate secretary or obtain certificates from one or more participants in the meeting. Even if that were done, those who purported to participate in the meeting might claim that the meeting was held, even though it was not. The falsity of their claim might, in turn, be revealed by some further step—for example, locating witnesses who are aware of what really happened. In almost every situation the possibility that the information certified is not true would remain despite efforts to look beyond the information provided to that point (1998, p.609).

Alternatively, legal opinion writers in Germany rely heavily on publicly registered information (relative to other jurisdictions in the sample). The basic instruments for the *Aktiengesellschaft* (‘AG’) and the *Gesellschaft mit beschränkter Haftung* (‘GmbH’) are the ‘*Satzung*’ for the AG and the ‘*Gesellschaftsvertrag*’ of the GmbH. Each document covers most of the subjects covered by the Charter and By-laws of US corporations. Both of these instruments have to be filed with the competent registration court as a pre-requisite to incorporation, and upon registration, important parts of the *Satzung* or the *Gesellschaftsvertrag* are entered into the company register (‘*Handelsregister*’) (Gruson *et al.*, 2003, p.60). Further, all amendments to the *Satzung* or the *Gesellschaftsvertrag* become effective towards third parties only upon registration of the fact that there has been an amendment, and, with minor exceptions (Gruson *et al.*, 2003, p. 71), copies of these amendments must also be filed.

Corporate authority is vested with certain corporate officers as a matter of law, and the scope of their authority is defined by law. There are three general classes of officers with statutorily defined authority to represent the corporation: officers of unlimited authority (*Vorstand* for the AG and *Geschäftsführer* for the GmbH), *Prokurist*, and *Handlungsbevollmächtigter*. Each corporation must have officers of unlimited authority, and their names are registered with the company register. Further, if there is more than one of these officers, they must represent the

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<sup>4</sup> Although Clark’s example referred to the sale of substantially all of a corporation’s assets, the analysis is applicable to a major corporate loan.

corporation jointly unless the *Satzung* or *Gesellschaftsvertrag* provides an alternative mechanism. The *Prokurist* and *Handlungsbevollmächtigter* have limited authority to represent the corporation, and only the name of the *Prokurist* must be registered.

Therefore, in most cases, legal opinion writers can determine the scope of a corporate officer's authority directly from the company register. Only in the event that a *Handlungsbevollmächtigter* or other agent whose name is not registered is signing on the corporation's behalf will counsel have to search non-public sources of information. Further, as a general rule (with rare exceptions<sup>5</sup>) third parties may rely on the statutorily defined authority of officers to represent the corporation, and internal limitations will not limit this authority with respect to third parties (Gruson *et al.*, 2003, p. 132-3).

Given the differences between registration requirements in the United States versus Germany, we would expect that legal opinion comments in countries like the United States, which rely on unregistered originative documents, will be longer than legal opinion comments in countries like Germany, which rely on publicly registered originative documents. This expectation is confirmed in the data (see Section 5).

#### 4. Data

The data on legal opinions is drawn from a published report created by the International Bar Association, detailing model opinion language used to support an international transaction, with responses by lawyers from around the world (Gruson *et al.* 2003). The report is the authoritative source for legal opinions of this type in international transactions. It presents model opinion language for a loan by a New York bank to a foreign corporation borrower from the US lawyer's perspective, followed by comments by lawyers from 25 other countries, including: Argentina, Australia, Austria, Belgium, Brazil, Canada, Colombia, Czech Republic, Denmark, England, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, Luxembourg, The Netherlands, South Africa, Spain, Switzerland, and Venezuela.<sup>6</sup> These comments provide a detailed examination of how the model assurances presented would apply in each respective country as well as how each assurance should be changed to produce the intended result in the given country (Gruson *et al.*, 2003).

The Gruson *et al.* (2003) report provides a complete list of country comments for five assurances:<sup>7</sup> corporate action, corporate power, due incorporation, remedies (legal, valid, and

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<sup>5</sup> These exceptions include, for instance, special statutorily defined transactions or cases in which the third party was or should have been aware of an abuse of an officer's authority to bind the corporation (Gruson *et al.*, 2003, p. 133).

<sup>6</sup> The Subcommittee chose to provide a model opinion and comments for a loan agreement opinion "because that opinion contains many of the opinion clauses which are also found in legal opinions rendered in connection with other types of agreements (Gruson *et al.*, 2003, p. 26)."

<sup>7</sup> Of the assurances related to corporate existence ("due incorporation," "due organization," "good standing," and "valid existence") only the "due incorporation" assurance was considered. The "due organization" assurance was not considered because it is redundant to the "due incorporation" assurance in all jurisdictions except for Belgium, Canada (Ontario), Greece, The Netherlands, and the United States. The "good standing" assurance was not considered because, for almost all countries in the sample, it is legally meaningless. The "valid existence" assurance

binding), and enforceability of judgments. Within this group, three assurances were not used for the empirical test. The due incorporation assurance typically speaks to the legal existence of the firm. In all jurisdictions represented in the study (except for Canada (Ontario)) legal existence (with respect to third parties) begins upon company registration with the applicable company register or court. Therefore, this assurance does not provide the needed differentiation with regards to the registration of originative documents to conduct the desired empirical test. The remedies and enforceability of judgment assurances were eliminated because they refer to legal issues not related to the verification of the contents of originative documents. For example, the remedies opinion (in this dataset) speaks to four legal issues: (1) the validity of the governing law clause in the agreement, (2) the validity of the application of New York law to the agreement and note, (3) whether the agreement violates a public policy in the borrower's country, 4) whether the agreement and notes constitute a valid, legal, and binding contract within the borrower's jurisdiction. All of these issues are unrelated to the registration of originative documents. Similarly, the enforceability of judgment assurance speaks to whether a New York judgment will likely be enforced in the borrower's jurisdiction, which is also unrelated to the registration of originative documents.

Consequently, the two assurances used from the Gruson *et al.* (2003) sample are the corporate action and corporate power assurances, which each involve an extensive review of originative documents. The corporate action assurance addresses whether the particular corporate agent executing the agreement possesses the requisite legal authority to enter into a contract on behalf of the corporation. In order to render this assurance, a legal opinion writer will typically review a variety of originative documents, such as the charter, bylaws, and board and shareholder resolutions, as well as any registered agent appointments (such as director appointments). For example, a corporate charter may set guidelines under which bylaws are established, while bylaws may set voting procedures for director appointments as well as majority and quota requirements for binding the corporation to large contracts. Further, a director resolution may authorize a particular corporate agent to execute a particular contract. Each of these originative documents represents potential sources of a corporate agent's legal authority to enter into a contract on behalf of the corporation. The corporate power assurance addresses whether the corporation has the legal capacity to enter into the contract. For example, in some countries, corporations can limit their corporate purpose within originative documents such as corporate charters, and contracting third parties are bound to these limitations. For both the corporate action and corporate power assurances, the following pieces of information are collected: (1) which originative documents make up the necessary documentary investigation for rendering each assurance in a given country, (2) whether these originative documents are publicly registered, and (3) the length of the legal opinion comments for each assurance, by country. For this empirical test, the length of the legal opinion comments serves as a proxy for the cost of issuing legal opinions in each country.

For instance, Hungary provides the following legal opinion comment pertaining to the corporate action assurance:

The Articles of Association sometimes include limitations for certain transactions (especially transactions in excess of a certain value) subjecting them to the prior approval of the board of directors

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was not considered due to a lack of suitable data concerning the registration and legal effects of dissolution in the complete sample of countries studied.

or the shareholders' meeting. In such cases, a legal opinion that "all corporate actions have been taken" or that the company was "authorized" to enter into a particular agreement can be rendered only upon receipt of evidence of the approval by the company's appropriate corporate body. Such corporate resolution is not necessarily filed with the Court of Registration; therefore the cooperation of the company is required in order to furnish counsel with the necessary verification.

The Company Act authorizes the managing director of a limited liability company and the members of the board of directors of a company limited by shares [internal page reference] to represent and act on behalf of the company. In addition, the shareholders' meeting or the officers of the company may authorize certain employees of the company to legally bind the company with regard to certain matters. The Company Act includes restrictions regarding limitations on the representative power of such officers or employees. Further, the Company Act requires the registration of the name of each officer and employee who is entitled to act on behalf of the company with the Court of Registration together with the specimen signature of each such representative (taken and issued by a notary public verifying its authenticity). All above-mentioned information, including the specimen signature, is available to the public at the Court of Registration.

The length of Hungary's comment for the corporate action assurance (the dependent variable, *Length\_Act*) was coded as twenty-two lines (lines within the Gruson *et al.* 2003 text). Further, the independent variables were coded as follows. The Articles of Association (containing most elements of charters and bylaws in the United States) as well as the identity of all agents authorized to transact on behalf of a company must be registered. However, since some corporate resolutions providing for special authorizations of specific transactions are not registered, Hungary receives an "All Registered" score of 0. The "Registration Score" is coded as 3, representing the registration of the charter and bylaws (each contributing one point into the score), as well as the identity of primary corporate agents (contributing one more point). The controls created included an indicator for the legal origin of the jurisdiction's corporate law (*Civil\_Law*), an indicator for the EU affiliation of the jurisdiction (*EU*), and an index based on judicial quality variables obtained from the *Doing Business* Report, 2011. Table 1 lists and describes all variables used. The data for the corporate power assurance was coded similarly.

## 5. Results, Implications, and Discussion

The results of the OLS regressions with respect to the "corporate action" and "corporate power" assurances are listed in Tables 2 through 4. In countries where all originative documents related to the corporate action assurance are registered, legal opinion comments related to this assurance are 0.75 to 0.77 standard deviations shorter in length, at either the 95% or 90% level of significance, depending on the specification. Also, countries who receive a higher registration score, e.g. those who publicly register more originative documents, have shorter legal opinion comments, at the 95% level of significance, for all specifications. For each originative contract registered, which corresponds to one point of "registration score," legal opinion comments are between 0.46 and 0.49 standard deviations shorter. These results are robust to the addition of controls for legal origin of a country's commercial code, EU affiliation, and the index of judicial quality.

Using the corporate power assurance data, the results are similar. In countries where all originative documents pertaining to the corporate power assurance are publicly registered, legal

opinion comments related to this assurance are between 1.24 and 1.29 standard deviations shorter than in countries where this is not the case, at the 99% or 95% level of significance, depending on the specification. The results change very little with the addition of the controls for legal origin, EU affiliation, and judicial quality. Also, all results are robust to the removal of the United States from the sample.

These results therefore confirm that differences in registry requirements and organization involve trade-offs reflected in the behavior of contractual intermediaries such as lawyers that may impact contractual costs for corporations. In countries with less stringent registration requirements, we find that legal opinion comments are longer, even after controlling for the legal origin, EU affiliation, and judicial quality of each country.

This finding suggests a cost-reducing rationale for ex ante public intervention that complements that suggested by most theories of the firm, which have a contractual emphasis with a limited role for the State. However, this reduction in ex post contractual costs does not inform as to whether public intervention results in overall efficiency gains. In other words, although the results point to a trade-off between ex ante public registration and ex post contractual costs, it does not address whether solutions that rely less on public registries, such as those found in the US, result in efficiency losses (or gains) versus solutions that rely more on public registries, such as those in Germany. A study of the overall efficiency gains of either system would need to more comprehensively take into account the costs and benefits of public registration versus the costs and benefits of substitutes for public registration to determine efficiency gains.

Despite these limitations, the existence of trade-offs between registration and contractual costs should provide reason for cautious application of policy prescriptions that seek to simplify registration requirements and rank countries based on the extent of ex ante public registration procedures.<sup>8</sup> Although simpler registration can eliminate unnecessary or overly-burdensome procedures, weaker registration of originative contracts may unintentionally increase costs of future corporate contracting. Further, the presence of legal opinions as possible substitutes for registration requirements suggests that countries with weaker public registration requirements may have evolved private mechanisms to deal with the effects of these weaker requirements. Eliminating registry requirements in countries that have not evolved these mechanisms may have especially harmful effects on the costs of corporate contracting. At the very least, more empirical evidence concerning the tradeoffs between registration and contractual costs is needed to determine the effects of registry simplification policies.

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<sup>8</sup> See De Soto (1989), Djankov *et al.* (2002), and World Bank (2003–2009).

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## 7. Tables

Table 1. Description of Variables

Variable ( <i>Abbreviation</i> )	Description	Source	Number of Obs.	Mean	Standard Deviation
All Registered, Corporate Action ( <i>AllReg_Act</i> )	Records whether all originative contracts creating corporate authority and the identity of primary corporate agents are publicly registered: 1=all originative contracts creating corporate authority and identity of primary corporate agents are registered, 0=at least one originative contract creating corporate authority or identity of primary corporate agent is not registered.	Gruson <i>et al.</i> (2003)	26	0.46	0.51
Registration Score, Corporate Action ( <i>RegScore_Act</i> )	Score calculated by assigning a value of 1 for each originative contract that is publicly registered, and 1 for the registration of the identity of primary corporate agents. Also assigns a value of 1 for categories of originative contracts that cannot create unregistered corporate authority (e.g. "NA"). Maximum score = 4.	Gruson <i>et al.</i> (2003)	26	3.04	1.08
Length of Comments on Legal Opinions, Corporate Action ( <i>Length_Act</i> )	Length of legal opinion comment (number of lines) provided by lawyer in each country for the corporate action assurance.	Gruson <i>et al.</i> (2003)	26	22.27	9.87
All Registered, Corporate Power ( <i>AllReg_Pwr</i> )	Records whether all originative contracts creating corporate power are publicly registered: 1=all originative contracts creating corporate power are registered, 0=at least one originative contract creating corporate power is not registered.	Gruson <i>et al.</i> (2003)	26	0.81	0.40
Length of Comments on Legal Opinions, Corporate Power ( <i>Length_Pwr</i> )	Length of legal opinion comment (number of lines) provided by lawyer in each country for the corporate power assurance.	Gruson <i>et al.</i> (2003)	26	11.85	10.49
Civil Law Indicator ( <i>Civil_Law</i> )	Identifies the legal origin of the Company Law or Commercial Code of each country: 1=French Commercial Code or German Commercial Code, 0=English Common Law.	Dataset from La Porta <i>et al.</i> (1998) (variable code: "civ_com"), available: <a href="http://www.economics.harvard.edu/faculty/shleifer/dataset">http://www.economics.harvard.edu/faculty/shleifer/dataset</a>	26	0.77	0.43
EU Affiliation ( <i>EU</i> )	Identifies EU Affiliation of each country: 1=EU member, 0=not EU member		26	0.58	0.50
Index of Judicial Quality ( <i>Judicial_Qual</i> )	Index of judicial quality built using the "Enforcing contracts" indicator of the Doing Business Report, 2011. Built using principal component analysis (average score) of normalized number of procedures, time, and percentage cost of enforcing contracts in each country	Doing Business 2011. Available: <a href="http://www.doingbusiness.org">www.doingbusiness.org</a>	26	0.00	1.29

Table 2. Relationship Between Extent of Registration of Originative Documents and Legal Opinion Comment Length for the Corporate Action Assurance. Dependent Variable: Legal Opinion Comment Length, Corporate Action Assurance (*Length\_Act*)

<i>Independent Variables</i>	<i>Equation 1</i>	<i>Equation 2</i>	<i>Equation 3</i>	<i>Equation 4</i>
Intercept	25.786*** (2.477)	26.238*** (3.919)	26.238*** (4.205)	26.233*** (4.078)
<i>AllReg_Act</i>	-7.619** (3.646)	-7.427* (3.935)	-7.426* (4.039)	-7.423* (3.918)
<i>Civil_Law</i>		-0.703 (4.656)	-0.703 (4.893)	0.446 (4.804)
<i>EU</i>			-0.002 (4.005)	-1.527 (4.008)
<i>Judicial_Qual</i>				-2.325 (1.504)
N	26	26	26	26
R-Squared	0.154	0.154	0.155	0.241

Table 3. Relationship Between Originative Document Registration Score and Legal Opinion Comment Length for the Corporate Action Assurance. Dependent Variable: Legal Opinion Comment Length, Corporate Action Assurance (*Length\_Act*)

<i>Independent Variables</i>	<i>Equation 5</i>	<i>Equation 6</i>	<i>Equation 7</i>	<i>Equation 8</i>
Intercept	36.356*** (5.197)	36.093*** (5.498)	35.945*** (5.637)	35.274*** (5.576)
<i>RegScore_Act</i>	-4.636** (1.616)	-4.754** (1.772)	-4.842** (1.836)	-4.541** (1.823)
<i>Civil_Law</i>		0.808 (4.439)	0.553 (4.622)	1.235 (4.583)
<i>EU</i>			1.060 (3.791)	-0.272 (3.873)
<i>Judicial_Qual</i>				-1.869 (1.442)
N	26	26	26	26
R-Squared	0.255	0.257	0.259	0.314

Table 4. Relationship Between Extent of Registration of Originative Documents and Legal Opinion Comment Length for the Corporate Power Assurance. Dependent Variable: Legal Opinion Comment Length, Corporate Power Assurance (*Length\_Pwr*)

<i>Independent Variables</i>	<i>Equation 9</i>	<i>Equation 10</i>	<i>Equation 11</i>	<i>Equation 12</i>
Intercept	22.800*** (4.089)	23.318*** (4.562)	22.892*** (4.814)	22.840*** (4.907)
<i>AllReg_Pwr</i>	-13.562*** (4.550)	-12.970** (5.134)	-13.104** (5.244)	-13.001** (5.349)
<i>Civil_Law</i>		-1.295 (4.802)	-1.711 (5.016)	-1.419 (5.156)
<i>EU</i>			1.481 (3.928)	1.036 (4.133)
<i>Judicial_Qual</i>				-0.671 (1.554)
N	26	26	26	26
R-Squared	0.270	0.273	0.277	0.284

Table 5. Entities and Governing Documents Studied

Country	Entity	Governing Documents		
		Charter	Bylaws	Notes
Argentina	Sociedad Anónima (SA)	Acto Constitutivo	Estatutos	Normally embodied in one single document
Australia	Public Company (limited liability company)	Constitution	Constitution	Embodied in one single document
Austria	Aktiengesellschaft (AG); Gesellschaft mit beschränkter Haftung (GmbH)	Satzung (AG); Gesellschaftsvertrag (GmbH)	Satzung (AG); Gesellschaftsvertrag (GmbH)	Embodied in one single document
Belgium	Société Anonyme; Naamloze Vennootschap (NV)	Acte constitutif/oprichtingsakte; Statuts/statute	Acte constitutif/oprichtingsakte; Statuts/statute	Embodied in one single document
Brazil	Sociedade Anónima (S/A); Sociedade por Quotas de Responsabilidade Limitada (LTDA)	Ata da Assembléia Geral de Constituição and Estatuto (S/A); Contrato Social (LTDA)	Ata da Assembléia Geral de Constituição and Estatuto (S/A); Contrato Social (LTDA)	Embodied in one single document
Canada (Ontario)	Corporation	Articles of Incorporation	Bylaws	
Colombia	Sociedad Anónima (SA)	Escritura de Constitución	Escritura de Constitución	Embodied in one single document
Czech Republic	Akciová Společnost (a.s.); Společnosti s Ručením Omezeným (s.r.o.)	Zakladatel'ská Listina (one-shareholder a.s., one-shareholder s.r.o.); Zakladatel'ská Smlouva (more than one-shareholder a.s.); Společenská Smlouva (s.r.o. with more than one-shareholder); Stanovy (a.s., optionally for s.r.o.)	Zakladatel'ská Listina (one-shareholder a.s., one-shareholder s.r.o.); Zakladatel'ská Smlouva (more than one-shareholder a.s.); Společenská Smlouva (s.r.o. with more than one-shareholder); Stanovy (a.s., optionally for s.r.o.)	Embodied in one single document
Denmark	Aktieselskaber; Anpartselskaber	Stiftelsesoverenskomster and Vedtaegter	Stiftelsesoverenskomster and Vedtaegter	
England	Public Company; Private Company	Memorandum of Association	Articles of Association	
Finland	Osakeyhtiö; Aktiebolag	Perustamiskirja	Yhtiöjärjestys	
France	Société Anonyme; Société à Responsabilité Limitée (SARL)	Statuts	Statuts	Embodied in one single document
Germany	Aktiengesellschaft (AG); Gesellschaft mit beschränkter Haftung (GmbH)	Satzung (AG); Gesellschaftsvertrag (GmbH)	Satzung (AG); Gesellschaftsvertrag (GmbH)	Embodied in one single document
Greece	Anonymi Etairia (A.E.); Etairia Periorismenis Efthinis (EPE)	Katatatiko ("Statute")	Katatatiko ("Statute")	Embodied in one single document
Hungary	Részvénytársaság ("rt", company limited by shares, similar to German AG); Korlátolt Felelősségű Társaság ("kft", limited liability company, similar to German GmbH);	Alapszabály (rt), Társasági Szerződés (kft), Alapító Okirat (one-member kft)	Alapszabály (rt), Társasági Szerződés (kft), Alapító Okirat (one-member kft)	Embodied in one single document
Ireland	Public Company; Private Company	Memorandum of Association	Articles of Association	
Italy	Primarily, Società per Azioni (SpA), but also can be applied to: Società Inaccomandita per Azioni and Società a Responsabilità Limitata (Srl)	Atto Constitutivo	Statuto	Embodied in one single document
Japan	Kabushiki Kaisha	Teikan	Teikan	Embodied in one single document
Korea	Chusik Hoesa	Jung-gwan	Jung-gwan	Embodied in one single document
Luxembourg	Société Anonyme; Société à Responsabilité Limitée	Statuts	Statuts	Embodied in one single document
The Netherlands	Naamloze Vennootschap (NV, public limited company); Besloten Vennootschap (BV, private limited company)	Akte Van Oprichting (Deed of Incorporation)	Statuten (Articles of Association)	Embodied in one single document
South Africa	Proprietary Limited ("Pty Ltd", private limited liability company); Limited ("Ltd", public limited liability company)	Memorandum of Association	Articles of Association	
Spain	Sociedad Anónima (SA)	Escritura de Constitución; Estatutos Sociales	Escritura de Constitución; Estatutos Sociales	Normally embodied in one single document
Switzerland	Aktiengesellschaft (AG)	Statuten	Statuten	Embodied in one single document
United States	Corporation	Charter	Bylaws	Separate documents
Venezuela	Compañía Anónima; Sociedad Anónima	Acta Constitutiva	Estatutos	Normally embodied in one single document