

Institutional Support of the Firm: A Theory of Business Registries

Benito Arruñada¹

Journal of Legal Analysis, vol. 2, no. 2, fall 2010, 525-76

¹ Pompeu Fabra University and Barcelona GSE. Mail: Trias Fargas, 25. 08005-Barcelona (Spain). E-mail: benito.arrunada@upf.edu. I thank Jesús Alfaro, Luis Fernández del Pozo, Francisco Garcimartín, Ricard Gil, Fernando Gómez-Pomar, Yadira González de Lara, Henry Hansmann, Ron Harris, Philip Keefer, Amalia Kessler, Amnon Lehavi, Charlie Manzanares, Francisco Marcos, Fernando Méndez, Rick Messick, Nicolás Nogueroles, John Nye, Cándido Paz-Ares, Carlos Petit, Joaquín Rodríguez, Maribel Sáez, Henry Smith, John Wallis and Giorgio Zanarone, as well as a reviewer and workshop participants at Bologna, CUNEF, Instituto de Empresa, George Mason, Paris X and Pompeu Fabra Universities, and meetings at the Rome and Florence Reflexive Governance group, the French Conseil d'État, The Deutsches Institut für Entwicklungspolitik, The Millennium Challenge Corporation, The World Bank, and the ISNIE and SECOLA conferences for relevant discussions on previous versions. The usual disclaimers apply. This study received financial support from the European Commission through the Integrated Project CIT3-513420 and the Spanish Ministry of Science and Innovation, through grant ECO2008-01116.

Abstract

Registering originative business contracts allows entrepreneurs and creditors to choose, and courts to enforce market-friendly “contract” rules that protect innocent third parties when adjudicating disputes on subsequent contracts. This reduces information asymmetry for third parties, which enhances impersonal trade. It does so without seriously weakening property rights, because it is rightholders who choose or activate the legal rules and can, therefore, minimize the cost of any possible weakening. Registries are essential not only to make the chosen rules public but to ensure rightholders’ commitment and avoid rule-gaming, because independent registries make rightholders’ choices verifiable by courts. The theory is supported by comparative and historical analyses.

Keywords: property rights, theory of the firm, business registries, formalization, starting a business, impersonal transactions.

JEL Classification: O17, K22, K23, L59.

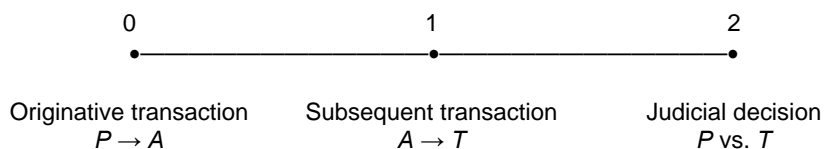
1. Introduction

Strong property rights encourage investment but hinder trade when acquirers are uncertain about the title or authority of their counterparty, who—to obtain specialization advantages—is usually an agent of the legal owner. This article explains why company registries are essential for overcoming this tradeoff of property enforcement and transaction costs. Registration of transactions between “principals” (mainly shareholders) and “agents” (the corporation’s officials) allows judges to safely apply market-friendly rules when later adjudicating disputes over subsequent transactions between agents and third parties. This solution not only obviates the information asymmetry that third parties suffer in such subsequent transactions but does so without endangering the enforcement of property rights and, therefore, without hindering specialization between principals and agents.

The starting point for our analysis are sequential exchanges in which, first, one or several principals (owners, employers, shareholders, creditors, etc.) voluntarily contract with one or several agents (possessors, employees, company directors, and managers) in an “originative” transaction; and, second, the agent then contracts “subsequent” transactions with third parties (Figure 1). Sequential exchanges are needed to obtain the benefits of specialization in the tasks of principals and agents. However, they give rise to substantial transaction costs, because third parties suffer information asymmetry with respect to the previous originative contract. In particular, third parties are often unaware if they are dealing with a principal or an agent, or if the agent has sufficient title or legal power to commit the principal. This constitutes a grave impediment, especially for impersonal transactions.

Moreover, principals also face a serious commitment problem when trying to contain this asymmetry because their incentives change after the third party has entered the subsequent contract. Before contracting, principals have an interest in third parties being convinced that agents have proper authority but their incentives change drastically if the business turns out badly. Understandably, the typical dispute triggered by sequential transactions is one in which the principal tries to elude obligations assumed by the agent in the principal’s name, whether the agent had legal authority or not.

Figure 1. Generic sequential exchange with two transactions and three parties



The law can adjudicate in such disputes in favor of the principal or the third party. Favoring the third party will be referred to here as enforcing “contract rules”, as opposed to the seemingly more natural “property rules” that favor the principal.² Their effects are clear. Take the simple case in which an agent exceeds his legal powers when selling a good to an innocent third party.³ Applying the “property rule” that no one can transfer what he does not have, the sold good returns to the principal (the “original owner”) and the third party (supposed here to be a “good faith purchaser for value”) wins a mere claim against the agent. This will maximize property enforcement but will worsen the information asymmetry suffered by all potential third parties with respect to legal title. Conversely, the law can apply an indemnity or “contract rule” so that the sold good stays with the third party and the principal only wins a claim against the agent. This will then minimize information asymmetry for potential third parties but will also weaken property enforcement.

In principle, the choice of rule involves a tricky tradeoff between property enforcement and transaction costs. On the one hand, enforcing contract rules obviates the information asymmetry usually suffered by third parties and encourages them to trade. It thus transforms the object of complex transactions into legal commodities that can be traded easily, thus extending the type of impersonal transaction that characterizes modern markets.⁴ On the other hand, enforcing contract rules weakens the principals’ property rights, endangering investment and specialization in the tasks of principals and agents.

To overcome this tradeoff between property enforcement and transaction costs, expanding the set of viable contractual opportunities without damaging property rights, the law tends to apply contract rules, but allowing principals to opt for property rules when they make their choice public. Principals can produce this publicity by various means, such as keeping

² The two terms “property rule” and “contract rule” echo the difference between the property and contract rights that the original owner retains. It also highlights the role of registries in facilitating the voluntary “weakening” of property rights, treating them as contract rights. These rules are also similar but distinct from the “property” and “liability” rules defined in a classic work by Calabresi and Melamed (1972) because the rules in the article are defined in the context of a three-party sequence of two transactions instead of a taking affecting only two parties. Moreover, our analysis focuses on the role played by the parties in each transaction, disregarding that current third parties will act as principals in a future sequence of transactions. Consequently, when good-faith third parties win a dispute over their acquisitive transaction (i.e., when they are given a property right), they do not win as a consequence of applying a property rule, which—by definition—would have given the good to the original owner. In such a case, the third party does not pay any monetary damages to the original owner, as in Calabresi and Melamed’s liability rule. Moreover, Calabresi and Melamed’s property rule is weaker, referring only to the ability to force a would-be-taker to bargain for a consensual transfer similar to specific performance, and thus arguably has little to do with a right *in rem*.

³ By “innocent” third parties I refer to good-faith parties who are uninformed about the matter in question.

⁴ The importance of impersonal exchange has been emphasized from different disciplines. See, for instance, North and Thomas (1973), Granovetter (1985), North (1990), and Seabright (2004) and, for a more foundational treatment, Hayek (1982).

possession of movable assets or filing their claims to immovables in a public registry. This way, when principals opt for a property rule, their rights become safer while, thanks to publicity, third parties will suffer little information asymmetry. Similarly, when principals choose a contract rule, third parties' rights are safe while principals' rights are weaker. But this weakening of property is limited since principals choose the agent whom they entrust with possession or appoint as their representative, this being the moment when they implicitly "choose" a contract rule.

The smooth operation of this switching of rules poses varying degrees of difficulty for different transactions. The difficulty is minor when the originative contract transaction inevitably produces verifiable facts, such as the physical possession of movable goods or the ordinary activity of an employee. For these cases, judges can base their decisions on this public information, which is produced informally. What judges or legislatures have to do is to clearly define the efficient contract rules to be applied. Conversely, greater difficulty arises when the originative transaction contract produces less verifiable facts, making informal solutions harder to apply. Such informal solutions may even be impossible if the contract remains hidden and its consequences are not observable. Consider, for example, the difficulties for clearly establishing by purely private contract the existence of a corporation, distinguishing the corporation's assets from the personal assets of its shareholders.

In such contexts of harder verifiability, it helps to publicly "formalize" the originative contracts—in particular, the articles of incorporation and any amendments to them—by entering and preserving at least some information on them in a public registry. This registration process necessarily has to be independent of all the parties, including parties to the originative contract, to prevent manipulation. This requirement of independence makes registry formalization wholly different from "documentary formalization" (i.e., having the contract written down, prepared by lawyers, or authenticated by the presence of witnesses), which is designed to safeguard the relation between parties to such originative contracts. Moreover, key features of the originative contract need to be made available to the public or at least to potential third parties, so that they can know which rules are applicable to any subsequent contracts. In essence, business registration becomes the means to make the voluntary choice of market-enabling contract rules verifiable by courts and therefore commit parties to their choices.

The analysis is developed in a framework close to several theories of property—meaning, *in rem*—rights, such as, mainly, Merrill and Smith (2000), Hansmann and Kraakman (2002), and Arruñada (2003), and, in particular, those works that see corporations from the perspective of property, based on asset partitioning in Hansmann and Kraakman (2000), and Hansmann, Kraakman, and Squire (2006); on shared ownership protected through property rules in Armour and Whincop (2007); on legal personality in Iacobucci and Triantis (2007); and on a concept of modularity encompassing these and other elements in Smith (2009). The focus of this article is different, however. While these works are mostly interested in identifying the nature and role of corporate law, the objective of the present work is to understand the organizational solutions that make corporate contracting possible. Moreover it departs from part of this previous literature by focusing on the cases and solutions that are prevalent in the population of transactions—those in which the assumptions of voluntary agency and information asymmetry hold—instead of those

most represented in the litigated sample.⁵ Lastly, the article also departs from previous work by focusing on the role of institutions in modifying the problem's information structure instead of on how parties' incentives and costs drive the local optimality of alternative rules. It focuses on how institutions overcome parties' difficulties in producing by themselves the information needed to enable impersonal market exchange. Institutions thus allow economic agents to reach global as opposed to local optimality.

In addition to explaining the essential function and organizational requirements of business registries, the article offers three other contributions. First, it identifies a mandatory core of corporate law that has often been overlooked: public registration of the key elements in originative corporate transactions. In so doing, the article contributes to the debate on the nature and role of corporate law and complements contractual theories of the firm by providing another rationale for public intervention in reducing transaction costs. Second, this rationale explains the slow emergence of the corporate form, furnishing an alternative explanation to theories developed by North, Wallis, and Weingast (2009) and Hansmann, Kraakman, and Squire (2006) for this late emergence. Lastly, and in addition to clarifying the key role of independence and publicity, this theory allows the setting of priorities and the structuring of business formalization reform in today's economies.

The rest of the article proceeds as follows. First, section 2 examines why contract rules are needed in business transactions, emphasizing the common structure of the informational problem and the prevalent solutions adopted in the three areas of movable property, agency and corporations. Next, section 3 explores how reliable evidence to efficiently apply contract rules can be produced by different means in these three areas, and establishes a common requirement: independent publicity. When originative contracts are made public informally—e.g., based on the “apparent authority” doctrine—this publicity is provided by market participants as a byproduct of their presence in the market. When originative contracts and legal acts are abstract and remain hidden, some formal publicity—registration—is required to prevent parties from opportunistically manipulating the relevant evidence affecting the choice of rules. Section 4 examines the organizational requirements and difficulties faced by corporate registries. Section 5 explores four historical cases that confirm the theoretical arguments. Section 6 concludes by briefly exploring the main consequences of the analysis for theory and policy.

⁵ Intentionally, most exceptions will be treated lightly to focus on the general rules. As argued, e.g., by Rubin (1995) and Williamson (1996, 2005), both legal scholarship and law and economics often tend to pay more attention to disputed judicial decisions than to the real contractual process. The same emphasis on judicial disputes sometimes leads analysts to base theories on pathologies instead of the prevalent solutions, framing general rules in terms of the exceptions or even taking the exceptional regimes as general rules. This selection bias might be behind the focus of the literature on the theft of movable property and the presence of informed or bad faith third parties, or the marginal treatment given to standard commercial transactions when introducing the transfer of movables (e.g., Cooter and Ulen (1997, pp. 129-31); and Posner (1998, pp. 91-92)). In our case, it is not so much that the functioning of contracts beyond the “shadow of the law” is disregarded, as argued by Rubin and Williamson, but the possibility that this shadow is made darker.

2. The prevalence of “contract rules” in business transactions

Contract rules are applied in the three main types of business exchange, that is, those aiming to (1) transfer the ownership of movable property, (2) exercise employment relationships, and (3) conduct corporate transactions. All three are sequential exchanges in which, first, originative transactions take place between principals and agents acting as sellers, employees or managers; and, second, subsequent transactions occur between these agents and third parties who are strangers to the originative transaction. For each of these three types of exchange, we shall see that contract rules are generally efficient because the enforcement advantage provided by property rules is less valuable than the cost of the information asymmetry they cause. Such asymmetry would lead to high costs in gathering or confirming the owner’s consent. (I shall refer, for simplicity, to the “cost of consent.”)

2.1. Movable property

Let us assume that a third party *T* purchases a movable good from an agent *A*, who is not the owner and is not entitled to sell it.⁶ The traditional legal rule is that grantors do not transfer more rights than they legally hold (*nemo dat quod non habet*). If the real owner, *P*, claims the good, then *T* will have to hand it over and can only ask for compensation from *A*.⁷ However, in order to facilitate market transactions and at the risk of weakening property rights, for the vast majority of transactions the law chooses to ensure that innocent purchasers keep the good even if the seller was neither the owner nor entitled to sell it.

This is so in most commercial contexts, in which the judge will confirm ownership for an innocent third party who bought the good from a “merchant” (that is, a business firm) who had been entrusted with possession.⁸ For example, the *Uniform Commercial Code* (UCC) in the US,

⁶ We focus on the sale and purchase of movable goods because of their greater importance in business trade. The transfer of rights to immovable property follows the same patterns regarding the application of market-enabling legal rules (especially, establishing priority in cases of conflict over ownership based on the date of publicity and not that of the contract), except that such application is based to a greater extent on formal publicity (entry in a public register), as analyzed in Arruñada (2003).

⁷ This Roman law rule is fully valid in common law but has been toned down, or even derogated, in many civil law jurisdictions. For a historical approach to good faith purchasers in different jurisdictions, see, in general, Levmore (1987). Sauveplanne (1965) offers a thorough comparative analysis and Merryman (2008) summarizes the legal treatment in common and civil law.

⁸ Protection of the good-faith purchaser in commercial law was already a universal rule in the *Lex Mercatoria* since its principles were consolidated from the eleventh to the thirteenth

adopted by almost all states, establishes that “any entrusting of possession of goods to a merchant who deals in goods of that kind gives him power to transfer all rights of the entruster to a buyer in ordinary course of business” (UCC 2-403[2]). Something similar happens in civil law jurisdictions.⁹ This means that the former legal owner will only hold a personal indemnity claim on the selling merchant and will not recover the good bought for value and in good faith by the third party.

A particular set of exceptions to this application of the contract rule in commercial contexts clarifies the rationale behind it. In many countries, in some transactions with merchants a property rule is applied that sometimes includes the obligation for the owner to compensate the purchaser for the price paid by the latter to the seller.¹⁰ Such exceptions are frequent for transactions in which the selling merchant’s supplier—usually the owner of the good—is an individual and not another merchant, as in used goods stores, art galleries and auction or pawn shops. As a result, even innocent purchasers lose ownership of the goods they have acquired in such establishments when a legal owner appears whose right had been violated. For example, when defining whether a purchaser acts “in ordinary course of business,” UCC 1-201(9) requires the seller, in addition to good faith and lack of knowledge, to be “in the business of selling goods of that kind,” and its mention of pawnbrokers was interpreted as creating an exception (Baird and Jackson, 1984, p. 307, n. 22), an interpretation that was later confirmed by the revision of the UCC. Moreover, purchases in art galleries are generally treated in the US in the same way as those in auction houses and pawnbrokers, so that a good-faith purchaser of a stolen work of art will probably have to relinquish it if the legal owner appears.¹¹ In many countries the owner is entitled to restitution but only after refunding the price paid for the good by the good-faith purchaser. This applies for lost or stolen movables that have been purchased in a public sale, as well as those bought from authorized pawnbrokers.¹²

centuries, at a time of great expansion and internationalization of trade (Berman, 1983, pp. 348-50). See Murray (1960, mainly pp. 29-34) for ancient law and Benson (1998) for a summary of medieval and modern Merchant Law. There is, however, substantial discussion about the nature, enforcement mechanisms and timing of the institutions characteristic of medieval Merchant Law; e.g., Epstein (2004) and Kadens (2004).

⁹ Compare, for example, for Germany, BGB 935 and 932 with HGB 366.

¹⁰ Other typical exceptions violate basic assumptions of the general problem under analysis. This happens in particular for the good faith and knowledge exceptions, which relate to the breakdown of the information asymmetry assumption, and the theft case, which violates the assumption of voluntary agency. Understandably, many jurisdictions, including most of the US, apply the property rule to commercial purchases of stolen goods but the contract rule to goods that have been separated through fraud, deceit or coercion, where a voluntary, though imperfect, element is present.

¹¹ See, e.g., Caruso (2000) and, for a defense of application of the property rule, Landes and Posner (1996). For a more recent discussion, arguing in favor of granting legal entity status to the register of lost works of art, see Merryman (2008).

¹² E.g., article 464 of the Spanish Civil Code, partially amended by article 61.1 of Law 7/1996 on the organization of retail trade.

In sum, legal systems tend to attribute the property right to the good faith purchaser when *the owner* is a merchant. This solution is well adapted to a commercial context. Basically, application of one rule or the other alters purchasers' incentives to find out about true legal ownership, as well as owners' incentives to protect their property, whether this protection is a matter of physical possession or legal title. Moreover, both the cost and the effectiveness of these three activities of information and ownership protection change depending on whether the owner is a merchant or not. First, if the owner is a merchant, it is usually more difficult for the purchaser to investigate the ownership of the good, because in most cases there will have been a whole chain of transactions such as those between manufacturers and wholesale and retail distributors. "The rapid circulation of movables makes it difficult, if not impossible, to trace their legal origin. If every purchaser were compelled to investigate his predecessor's title, the circulation of movable property would be seriously hampered" (Sauveplanne, 1965, p. 652). Second, both economies of scale and specialization in commercial activities reduce the cost of protecting physical possession. Third, merchants are better able to protect their legal ownership because most of the risks for ownership arise when giving possession of the goods to a third party, and merchants have comparative advantages in such transfers of possession—they gain knowledge with experience, carry out repeat transactions, and may put safeguards in place. So, the key in commercial transactions is that, with regard to enforcement, owners who are merchants are in a good position to choose reliable sellers,¹³ so retaining a property right over the goods would be less valuable to them than to owners who are not merchants. Moreover, with regard to the costs of consent, when the owner is a merchant, it is most likely that there will be a chain of transactions so it will therefore be more costly to investigate ownership than when the owner is not a merchant. Both factors thus advise against applying a property rule in the commercial ambit.¹⁴

Our position is therefore eclectic, considering the effects of the allocation rules on both property enforcement and transaction costs. These two effects have been extensively analyzed in the literature, often under extreme and opposite assumptions.¹⁵ Works in the "least transaction cost" school lean toward rules that minimize the transaction cost of acquirers but disregard their effects on property enforcement. Works in the "least cost avoider" school lean towards rules that

¹³ As argued, for instance, by Weinberg, for cases in which there is fraud and the owner's agent behaves incorrectly (1980, pp. 588-91).

¹⁴ The analysis here thus reduces the indeterminacy emphasized by Levmore (1987) when evaluating solutions to conflicts between good faith purchasers for value and original owners. Levmore concludes that "legal systems exhibit a wide variety of responses in the way that they resolve the conflict between the original owner and the good-faith purchaser. I argue that this variety reflects the fact that the question of which parties should prevail is a challenging one. Reasonable lawmakers could disagree about the effects and wisdom of the possible legal rules" (1987, p. 45). This consideration comes up against two difficulties. First, since it is based mainly on historical evidence, it minimizes the possible adaptation of the two solutions to civil and commercial contexts, which are obscured in the reality of history because of the lower degree of economic specialization. Second, the application of the contract rule to a greater extent in civil law is compensated by strengthening the good-faith requirement.

¹⁵ See, e.g., Medina (2003, p. 344) for references and additional descriptions.

safeguard property rights but neglect their effects on the transaction costs of acquirers. In particular, our analysis rejects the common assumption in the “least transaction cost” school that third parties’ willingness to pay remains unaffected by the choice of legal rule—since they will also become principals and will therefore be affected by both rules. When framed in a voluntary agency (instead of a fraud or theft) context, this assumption is mostly inadequate, as it is principals’ decisions that trigger rule switching and it is therefore principals’ performance in, for instance, selecting agents that defines the costs they will bear. The relative optimality of rules thus hinges on the comparative ability of merchants to select agents when acting as principals as compared to their ability to select counterparties when acting as acquirers. Moreover, part of the literature pays little attention to the role of publicity and registries in overcoming, rather than statically optimizing the tradeoff. That is, it emphasizes the costs and benefits of alternative rules, disregarding how and when publicity in general and registries in particular alter such costs and benefits, which is the main focus of our analysis. Conversely, our focus is not the choice of rule but the mechanisms that make it possible to apply a contract rule without endangering property enforcement.

2.2. Agency

The law also applies contract rules for legal representation through agents, generally employees. The traditional principle that no person can commit another—equivalent to the *nemo dat quod non habet* principle of property law—is thus turned round so that the agent does commit the principal (*respondeat superior* or “Master-Servant Rule”). This switching of rules protects innocent third parties acquiring rights on the firm’s assets, and these third parties will thus be more willing to contract since they do not need to ascertain whether the agent is or is not legally empowered to commit the firm. In addition, third parties who are affected non-contractually by the firm’s activities enjoy greater protection of the rights they now hold.

The argument used in the preceding section to explain the use of a contract rule in commercial sales and purchases can also be applied when the firm acts through an agent. The value of the additional enforcement that rightholders would obtain if a property rule was applied would be limited, whereas the cost of gathering all the relevant consents would be high. It therefore makes sense to apply a contract rule. Although such a contract rule reduces enforcement, principals and employers have effective tools for containing such a reduction, because they can select and supervise their agents and employees. Conversely, if a property rule was applied, purchasers would have to check the consent of the entrepreneur, which might be costly. Also, the entrepreneur would have to personally carry out all the firm’s transactions, which would drastically limit the size of the firm.

In particular, the entrepreneur is generally liable for damages caused by the firm’s employees to third parties. Moreover, this attribution of liability is not left to the will of the parties, unlike other damages that only affect them, because such contractual freedom would make transactions harder for all market participants. For example, if the courts were to enforce a contract whereby an employee bears all liability without the affected third party being able to take action against the employer, then the information asymmetry for all contracting parties would increase. Moreover, such asymmetry increases not only for that firm’s parties but also for all market

participants, who would have to start producing information on the liability regimes contracted by each and every employee and their employers.

2.3. Corporations

The sequential nature of corporate contracting is more complex than in previous cases because corporations are artificial constructs—legal entities—that need to be identified, have specific mechanisms defined to make their decisions, and own a set of assets to operate. Originative transactions thus include not only incorporation but also later changes in both the corporate decision-making process and capital structure. Subsequent transactions include any dealings the company has with third parties, although the dealings that are of particular interest to this section are those that affect the relative legal position of shareholders and third parties.

In addition to the contractual problems of property transfer and agency existing when the firm is a sole proprietorship, new problems therefore arise when the firm is a company. In this case, third parties may suffer new types of information asymmetry with respect to the very existence of the company, how the corporate will is produced, and how priorities are set for the firm's and the shareholders' assets: the "incorporation," "corporate will," and "asset partitioning" problems.¹⁶ Information asymmetries in these three areas might dissuade possible contractual partners.¹⁷ In order to solve them, the firm is considered a legal entity, which in essence means

¹⁶ The difficulties increase with the complexity of originative contracting, driven by the diversity—owners, managers—and the number of participants involved, as well as the degree of specialization in their functions—mainly, the separation of ownership and control. The reference for our analysis is the dominant type of business company today with many owners, most of whom are not empowered to commit the company. This means that priorities between the firm's and the owners' creditors need to be clearly defined. In the extreme case of what used to be a general partnership under common law, these problems hardly existed. When all the partners may commit the firm and there is little asset partitioning among them or with regard to the firm, they may function on the basis of the de facto publicity provided to third parties by the partners signing on behalf of the partnership. However, this solution is limited to firms with a small number of owners, all of them empowered to commit the firm and, originally, with no asset partitioning. In particular, it provides little organizational flexibility, especially when partners wish to distribute decision-making rights among them in a non-uniform or restricted way (see the comparison between France and the US in section 5.3 below). Safe asset partitioning is also hard to achieve. For instance, in the US during the first decades of the nineteenth century, there was often litigation involving personal debtors trying to prove the existence of a partnership, even when what really existed was just a pact to share profits (Lamoreaux, 1995).

¹⁷ For the purpose of clarification, we will examine these three elements sequentially even though they overlap, because: (1) both corporate will and asset partitioning presuppose incorporation; (2) effective asset partitioning is a consequence of the initial endowment of resources at incorporation and the subsequent exercise of the corporate will; and, perhaps most

that the rules governing these three areas are changed from the traditional property rules to contract rules. This reduces information asymmetry for third parties or eliminates the damage such asymmetry might cause them.

First, company existence is generally determined with a view to protecting innocent third parties, so that, if a company has not been legally incorporated or has been used as an alter ego, this cannot be used to the detriment of innocent third parties. The contract rule is applied by either (1) asserting the legal existence of a corporation placed in doubt by its shareholders in order to elude an obligation entered into on their behalf, or (2) by piercing the corporate veil to attribute the duties of a corporation to its shareholders. Contract rules are applied in both sets of cases as the interests of innocent third parties are favored over those of shareholders. For example, according to section 2.04 of the US Model Business Corporation Act (MBCA), “all persons purporting to act as or on behalf of a corporation, knowing there was no incorporation under this Act, are jointly and severally liable for all liabilities created while so acting.” Generally speaking, protecting innocent third parties makes sense in these cases because shareholders know more about the condition of the incorporation process and can also easily avoid most defects in it.

Second, third parties tend to remain unaffected by possible legal defects in the corporate decision-making process.¹⁸ For example, when a company decides to increase its capital, if the terms of the company charter are not respected (regarding, for example, the prospectus, the quorum or the shareholders’ assent), such a defect will not affect the rights of investors who buy the new shares (e.g., 6.21(c) MBCA). Also, the law usually protects third parties when the decision-making body goes beyond the limits of its powers or the objects clause.¹⁹

The rationale behind this application of contract rules is similar to that of the previous cases. In company transactions, the value of the additional enforcement that would be provided to

important, (3) incorporation and corporate will most often boil down to asset partitioning in terms of the efficacy of remedies for lack of contractual performance.

¹⁸ For example, articles 7 to 9 of the 1968 First European Directive on Company Law are relevant in this respect. An old precedent to this type of rule is section XXX of the English 1844 Company Registration Act regarding the validity of acts signed by officers whose appointments were defective. Protection is also strong in the US, given that all that is needed is for the corporate secretary to attest that a decision was duly adopted by the board for the third party to be protected against possible irregularities (Cary and Eisenberg, 1988, pp. 221-22; Grossfeld, 1973, p. 45). See also Lutter (1997, pp. 131-35).

¹⁹ The protection afforded to third parties contracting with a corporation when the board of directors goes beyond its powers—*ultra vires*—now varies little from country to country. Traditionally, German legislation afforded the strongest protection since the board’s power is unlimited and cannot be restricted (Grossfeld, 1973, pp. 39-45). Article 9.1 of the First European Directive, now implemented across the EU, establishes that *ultra vires* decisions by corporate organs are binding unless they are illegal, with some countries also requiring that third parties be in good faith and without knowledge. In the US, it is no longer an issue because of the evolution of both case and statute law (e.g., 3.04 MBCA), plus statutory acceptance of object clauses that allow corporations to engage in any lawful business (3.01 MBCA).

rightholders (usually shareholders) if the property rule were applied would be limited, whereas the cost of gathering all the necessary consents would be high. As regards enforcement, switching the rule applied to decisions by company governance bodies reduces the rights of shareholders who may then only act against the company directors and officers but without damaging any third parties who have entered a contract with the company. However, this potential reduction is made up for by attributing voting rights to shareholders, which not only allows them to exert some control over company appointments and extraordinary decisions but allows the functioning of the takeover market. Moreover, investors choose with whom they want to associate when deciding to buy shares in one company rather than another, so they can choose reliable partners. Since investors are in a position to choose, this should also motivate issuers of shares to provide efficient safeguards. As regards the costs of gathering consents, use of the contract rule avoids the heavy costs for third parties of checking with all shareholders.

Third, in order to facilitate the contracting of capital, shareholders' assets are separated from those of the firm, making it possible to switch from property to contract rules, and allowing each set of assets to back its own set of debts. This is achieved with two special versions of contract rules: limited liability and what Hansmann, Kraakman, and Squire (2006) call "entity shielding."²⁰ These two corporate rules depart from the legal principle of unlimited liability, whereby persons are liable with all their assets for their debts. Limitation of liability protects shareholders' assets from their firms' debts, while entity shielding protects firms' assets from any debts personally taken on by shareholders. Not only do the firms' creditors have priority over the firms' assets but usually the shareholders' personal creditors are not entitled to liquidate the firm in order to claim their debts. At most, personal creditors may step into the shareholder's role as an owner of shares in the company.

These two rules are functionally similar to the contract rules described in previous sections. By virtue of entity shielding, company creditors know that their rights over the company's assets will not be damaged by the shareholder's individual obligations toward personal creditors who might otherwise—in the absence of the entity shielding rule—have priority over such assets or might have the company liquidated. The relationship between the personal creditor and the shareholder is thus transformed in a similar way to that between an owning merchant and a selling merchant after a good has been sold to an innocent third party: the owner retains a personal right against the seller but has lost any property right on the good, which will be kept by the third party. In the same way, the shareholder's personal creditor has a personal right over him, but not over the firm's assets which are only within reach of the firm's creditors. In a symmetrical way, limited liability safeguards personal assets, thus protecting personal creditors against the firm's creditors. Therefore, the two types of creditor simultaneously play different roles as principals and third parties regarding the two types of asset—personal and corporate. Corporate creditors act as principals and consent to lose priority regarding personal assets (because of limited liability) but gain priority regarding corporate assets (by virtue of entity

²⁰ In previous works, some of these authors labeled limited liability as "defensive asset partitioning", and entity shielding as "affirmative asset partitioning" (mainly, Hansmann and Kraakman, 2000). The concepts of asset partitioning and, in particular, entity shielding are close to those of "separate fund" or "separate patrimony," which play a major role in civil law analyses of legal persons (Hansmann, Kraakman and Squire, 2006, pp. 1138-39, n. 9).

shielding). It is the other way around with personal creditors who act as principals regarding the corporate assets over which they consent to lose priority.

As with movable property and agency, the rationale for applying these contract rules in asset partitioning depends on the balance of enforcement benefits and consent costs in comparison with the alternative application of property rules.

On the one hand, regarding the enforcement benefits, entity shielding causes little damage to personal creditors of investors. When the investment is in cash, the contract rule hardly affects the creditor because an opportunistic individual has better ways to keep funds out of the reach of his creditors than investing in a company. It is true that, for nonmonetary investments, the rights of these creditors are reduced because of entity shielding and to the extent that shares in closed corporations are not liquid. However, most nonmonetary contributions take the form of real estate, identifiable movable goods, and financial assets, so personal creditors will have had the opportunity to protect themselves by asking for them to be posted as collateral. Similarly, limited liability does not change the guarantee of company creditors unless the money is transferred to shareholders, a circumstance that may often lead courts to pierce the corporate veil and make shareholders personally liable. Moreover, when limited liability would make it harder for corporate creditors to collect their debts, they can easily reintroduce unlimited liability by contract.

On the other hand, regarding the consent costs, both rules reduce information asymmetry and facilitate the firm's contracts with third parties, expanding opportunities for trade and specialization. So, under limited liability, potential investors who are thinking about buying shares in the firm no longer need to worry about the wealth of other shareholders, and they also know their losses will be limited to the amount invested. Moreover, if the entity is shielded, a potential creditor who is thinking about lending it some money will no longer have to worry about the solvency of the individual shareholders, because the latter's personal debts do not affect the position of the firm's creditors regarding the firm's assets. In this case too, some of the information asymmetry is avoided, that referring to the greater knowledge that individuals have of their own assets.

2.4. Summing up: How contract publicity simplifies sequential contracting

Publicity of business contracts allows judges to apply rules that are especially suitable for agents when contracting with poorly-informed third parties, thus facilitating impersonal transactions in the market. This is so in the three sets of relations we have just examined—commercial sales, employment, and corporate. In addition, the rules applied in each of these three areas share the same structure. From an economic perspective, all these relations can be considered “agency” relations between different participants in the firm: owners and sellers, employers and employees, shareholders and company bodies, companies and their representatives, or creditors and shareholders. In all of them, contract publicity serves to simplify the corresponding originative agency relationship so that third parties are protected against any possible defects that might exist in it—in a sense, they contract with the principal. Consequently, they will not care about their information asymmetry with respect to the agent's title and will be

more willing to contract, enhancing trade and specialization between principals and agents. This simplification of agency relationships thus provides a sort of legal modularity that allows market participants to treat business firms as black boxes, using little information about what is going on inside them.²¹

So, in all these cases, publicity makes it possible to apply rules that are suitable for the market and especially for impersonal market transactions. This is achieved by adding to the originative private contracting between the parties an element of publicity. For example, the sale contract between a supplying merchant and a buying merchant is followed by a transfer of possession. Similarly, the subscription of a company formation agreement by founding partners is followed by public registration. The contract is purely private and, as such, only generates legal effects between its parties, while publicity determines the rights of third parties who are strangers to the private contract. Publicity may be an automatic byproduct of the private originative contract, such as the appearance obtained when transferring possession of movable goods or the notoriety produced when allowing the firm's employees to carry out their functions. Alternatively, it may be a formal process, as when the private contract or an extract of it is entered in a public register. In any case, it affects all subsequent contracts. In essence, by making their private contracts public, rightholders consent and (given the public element) implicitly but firmly commit to having contract rules applied to future transactions with innocent third parties. This consent is often more constructive than real. When a merchant transfers possession to another or an employer places employees in contact with third parties, they are implicitly consenting to their rights being relegated to those of, respectively, future purchasers or any third parties dealing with such employees in the ordinary course of business. For the same reason, the rights of shareholders defer to those of any parties contracting with the company once it has been registered.

3. Requirements for applying contract rules:

The rationale of formal publicity

Although contract rules have generally been adopted for all the commercial transactions analyzed so far, judges base their decisions on different types of publicity: for movable property, they rely mostly on informal notoriety; for agency contracts, on a combination of informal and formal criteria; and for corporate contracts, predominantly on registration.

Let us now examine the logic for this reliance on formal and informal solutions for different types of transaction.

²¹ See, mainly, the pioneer work by Simon (1962); and, closer to our topic, Smith (2006, 2007, 2008, and 2009).

3.1. Movable property

As we saw in section 2.1, the rationale for applying a contract rule in transactions on movable property depends on the commercial nature of the owner of the good, although the legal formulation for its application is often approximated in terms of the commercial or noncommercial nature of the seller or of the transaction, thus using subjective or objective criteria (Tallon, 1983). Moreover, the commercial nature of the owner is also used to establish the exceptions (auctions, art dealers, pawnbrokers) to which some variant of the property rule is usually applied, especially in common law. All the same, in both the general rule and its exceptions informal criteria are most often used to establish who is a merchant. In fact, today most legislations use criteria of professional dedication, habitualness and notoriety to identify individual merchants, and public registration is only required for companies. For example, the US Uniform Commercial Code (UCC) defines a merchant as “a person that deals in goods of the kind or otherwise holds itself out by occupation as having knowledge or skill peculiar to the practices or goods involved in the transaction or to which the knowledge or skill may be attributed by the person’s employment of an agent or broker or other intermediary that holds itself out by occupation as having the knowledge or skill” (UCC 2-104[1]).²²

Contract rules are therefore applied to individual merchants without it being necessary for them to register as merchants and to commercial acts carried out by non-merchants. This application of contract rules based on informal criteria indirectly reveals when and why formal public registration becomes necessary. Individual merchants are natural persons so that at least their identity has been formalized in a civil registry. Consequently, they are easier to identify than legal entities. Second, in principle, goods belonging to a natural person are also relatively easy to identify. This is indicated by the legal requirement that individual merchants formalize and make public certain transactions that, were they to remain hidden, would affect their liability and obscure how much guarantee their assets provide for third parties. Such is the case, for example, of general powers of representation, marital authorizations, dowries and legal incapacitation, as well as some marriage contracts. In addition, informal publicity is more viable for movable goods because there are usually few rights on them, thus granting greater information value to possession (Baird and Jackson, 1984), unlike what happens with immovable property (Arruñada, 2003, pp. 406-407). These factors also help to explain why registration is

²² In the past, however, individual merchants were often required to register. Even if one of the aims might have been to facilitate the enforcement of guild rules and restrictions, this registration actually altered merchants’ legal status. It was, for instance, used to distinguish between “burghers” and mere inhabitants, who had fewer rights and were required to provide additional safeguards (Kadens, 2004, pp. 46-47, n. 34). It therefore played a role in supporting the personal jurisdiction of merchant courts, including their community responsibility as analyzed by Greif (2002, 2004 and 2006). And it lasted for centuries, until the nineteenth century in most of Europe. For example, registration was still required by the Spanish Commercial Code of 1829 to distinguish merchants from non-merchants, even though this formal criterion had been dropped in practice somewhat earlier (Garrigues, 1943, pp. 69 and 182). Even now, it is still required in some Latin American countries, including Bolivia, Colombia and El Salvador (Arruñada, forthcoming).

more necessary for companies, which constitute a paradigm for both abstraction and multiplicity of rights.

3.2. Agency

The same rationale of specialization and delegation advantages that explains the efficiency of applying a contract rule for agency relations (section 2.2), also explains why informal criteria are used to define when to apply such a rule: in essence, in transactions habitually performed by employees. More precisely, in such transactions, the contract rule is applied based on the law of actual and apparent authority without any need for registration.²³ In particular, employees are generally considered to enjoy apparent authority if they have been notoriously acting on behalf of the principal, even if they lack actual authority (Menéndez, 1959, p. 282). Notoriety thus plays a publicity role that is similar to that played by possession in sales and purchases of movables. This is possible because acting as legal representative is easy to observe, not only for third parties but also for the entrepreneur, who is thus able to prevent recurrent deception or misuse. For movable goods, owners regulate the effects of the contract rule when they decide to which merchant they entrust possession of their goods. For agency and employment relations, entrepreneurs do the same when selecting and supervising their agents and employees.

Exceptions also confirm the argument. The rule is not switched for transactions that go beyond the usual competence of the agents as in the case of a sales assistant selling the cash tills. Also, for habitual transactions, the entrepreneur may (but not always, as exemplified by the German *Prokura* and European company officers) prevent rule switching by means of appropriate publicity. This publicity adopts forms ranging from notices affixed in the actual establishment in such a way as to destroy the effects of the appearance (as achieved, for example, by the Roman *condicio praepositionis* or by signs still stating “Fixed price” or “Pay here,” which alert the customers that the sales assistants are not empowered to either apply discounts or collect payment for the goods sold); to formal solutions, such as the proclamation and entry in a public register of the powers of the agent, as practiced, for example, in Italian cities in the Middle Ages (Menéndez, 1959, pp. 281-305; and Fernández, 2008).

3.3. Corporations

Both in the movable property and agency areas, informal publicity criteria therefore predominate for triggering the application of contract rules. However, formal publicity—i.e., registration—plays the predominant role in corporate transactions, most clearly in company incorporation and asset partitioning, with informal criteria playing an important role only with respect to the representation component of the corporate will, which can in fact be seen as an issue of agency.

²³ See on actual authority, sections 2.01, 2.02 and 3.01, and, on apparent authority, sections 2.03 and 3.03, *Restatement (Third) of Agency* (2006).

First, with regard to incorporation, when corporate charters were granted by specific legislative acts, incorporation was publicly known as a byproduct of the legislative process and the ordinary publication of the chartering acts. The charters themselves established that contract rules would be applied to future transactions by the corporations by granting them not only a clear legal position (Coornaert, 1967, p. 247) but also entity shielding and limited liability (Hansmann, Kraakman, and Squire, 2006, p. 1378). However, given that most analysts focus on the role of charters in imposing entry barriers in economic activity (their licensing function), their publicity function has often been neglected. Consequently, after incorporation was liberalized in the nineteenth century, analysts tend to see registration as a substitute for licensing and not as what it mainly was—a substitute for the publication of the chartering legislative acts which until then had been essential to allow judges to safely apply contract rules to subsequent corporate contracts. Registration has been performing this function since then, given that “registration and notice of that registration are in all legal systems the borderline; when crossed, the entity is formed” (Buxbaum, 1974, pp. 19-20). For example, according to section 2.03(a) of the US MBCA, the existence of a corporation begins when the articles of incorporation are filed. A similar effect is produced with respect to third parties by article 3.5 of the First European Directive, which establishes that companies cannot rely on unregistered documents as against uninformed third parties. Consequently, once it is registered, a corporation has all the necessary elements for acting as a legal entity, it is empowered to sign binding contracts, and counterparties are able to litigate against it. In essence, the new entity becomes easily identifiable and traceable because all registries make sure that the corporation has a distinctive name, a physical location, and, at least, a contact agent for legal notifications.²⁴

Second, incorporation creates a decision-making authority, enabling it to exercise its corporate will. In particular, it determines that such authority exists and constrains its structure, mainly by drastically limiting shareholders’ rights and centralizing decision rights with the board of directors (Clark, 1986, pp. 21-23). Countries differ as to how much detail about representation mechanisms is disclosed in the public record. Typically, the corporate will is first structured by naming at incorporation the initial directors and officers (e.g., article 2.1(d) First European Directive) or, at least, by naming the incorporators who must then hold an organizational meeting to elect directors and complete the organization (section 2.05 MBCA).

Third, incorporation is the key condition for asset partitioning. The articles of incorporation do not only describe the capital structure of the company (in particular, the types, numbers and

²⁴ MBCA 2.02(a) requires that “the articles of incorporation must set forth: (1) a corporate name for the corporation that satisfies the requirements of section 4.01; (2) the number of shares the corporation is authorized to issue; (3) the street address of the corporation’s initial registered office and the name of its initial registered agent at that office; and (4) the name and address of each incorporator.” Proposed changes in the MBCA would not require the articles of incorporation to include information on the initial registered office and registered agent, which would be no longer necessary because proposed changes in section 16.21 would require inclusion of that information in the first annual report accompanying the initial articles of incorporation (ABA, 2008b).

rights of authorized shares.²⁵) Once a company has been incorporated, it is also clear how the corporate will is to be exercised and what its consequences are. This makes it possible to separate changes in corporate assets and liabilities from changes occurring in shareholders' personal assets and liabilities. Consequently, incorporation is essential for both limited liability and entity shielding. In particular, filing of the articles is conclusive with respect to limited liability for those transacting on behalf of the corporation. If the articles have not been filed, the law generally imposes personal liability on those prematurely acting as or on behalf of a "corporation" at least while they know that the articles have not yet been filed (e.g., section 2.04 MBCA and article 7 of the First European Directive). Similarly, entity shielding also requires registration: a majority of incorporators', initial directors', or shareholders' votes is necessary to trigger voluntary dissolution of a registered corporation (e.g., MBCA, 14.01 and 14.02). Conversely, the law may allow individual incorporators to trigger the dissolution of unregistered corporations (e.g., article 40 of Spain's Companies Act).

Lastly, changes in all these elements must also be registered. For instance, the MBCA mandates specific filings in connection with structural changes such as amendments of articles of incorporation (10.06), mergers (11.06), issuances of shares (6.02(c)), and dissolution (14.03).

The above description focuses on the minimalist company registry, as defined by the MBCA. Most company registries require additional information and perform additional functions. From a transaction costs perspective, a main difference with respect to mandatorily registered information is the appointment of corporate directors and officers, which has to be registered in Europe to be used against third parties (articles 2.1(d) and 3.5 of the First European Directive) but not in the US. Consequently, there tends to be greater reliance in the US on informal criteria, based on applying agency principles relating to the actual and apparent or "ostensible" authority of the firm's officers for exercising their functions. Such application often rests on the officer's position (e.g., Cary and Eisenberg, 1988, pp. 236-41). However, names and business addresses of directors and officers are also disclosed in the US as part of the annual reports mandated by state rules adopting MBCA 16.21(a), under threat of administrative dissolution of the corporation (14.20). Furthermore, this disclosure plays a role in ascertaining officers' authority,²⁶ a role that

²⁵ See MBCA 2.02(a). Section 2.02(b) describes optional provisions. The mandatory requirements form a corporation with "the broadest powers and least restrictions on activities permitted by the Model Act" (ABA, 2008a, p. 2.12). Departing from this standard requires additional disclosure: the official comment lists twenty-eight optional provisions that may be elected only in the articles of incorporation (and therefore become registered) but not in the bylaws (ABA, 2008a, pp. 2.20 to 2-22).

²⁶ See, for instance, *Winters v. Dodson*, 896 So.2d 121, 125 (La. App. 3 Cir. 2004, writ denied) (Decur, J., dissenting) (arguing that filed annual report, among other documents, apparently authorized vice-president to act on behalf of corporation); *Sullivan v. Cox*, 78 F.3d 322, 326-327 (7th Cir. 1996) (timing of annual report, filed with secretary of state nine months prior to transaction, created material issue of fact as to whether corporate officer was authorized to act on behalf of corporation); *Radison Props., Inc. v. Flamingo Groves, Inc.*, 767 So. 2d 587, 590 (Fla. Dist. Ct. App. 4th Dist. 2000) (based partly on filed annual report, court held that former officer did not have authority to convey property on behalf of corporation); and *U.S. v. Norden Enterprises, Ltd. Liab. Co.*, No. 01 C 8968, 2002 WL 1632633, at *2 (N.D. Ill. July 22, 2002)

is likely to grow if the proposal to amend the MBCA, including a new duty to update the information in the annual report as soon as it becomes incorrect or incomplete, is eventually adopted.²⁷ Other differences among registries refer to disclosure requirements based more on an externalities rationale than a pure transaction costs rationale. This is partly the case of the European rule mandating companies to file their financial statements annually (Arruñada, 2010), and, perhaps more clearly, the proposed disclosure of beneficial ownership in the US.²⁸

Company registries also differ in the scope of their compliance review. The most passive registries only check that filings contain the required information with the prescribed formal attributes. This includes those US registries that follow the latest versions of the MBCA, which since 1984 has treated the role of company registries as purely ministerial (section 1.25(d)), assigning all checks of validity to the attorney general and the courts (ABA, 2008a, p. 1-56). Conversely, more active registries, including most European registers and those in the US that follow earlier versions of the MBCA (ABA, 2008a, p. 1-58) and many state corporate laws,²⁹ perform more substantive control, making sure that corporate documents conform with the law.³⁰ European registries also enforce the rules that try to ensure companies' solvency by preserving their legal capital, a method of doubtful efficacy for such an objective.³¹ Similarly, some

(court used filed annual report to show lack of authority of agent to receive service of process on behalf of corporation).

²⁷ See 16.21(e) in ABA (2008b).

²⁸ See the reports by MLTAG (2005, mainly pp. 47-50), FCEN (2006) and GAO (2006), as well as the US *Incorporation Transparency and Law Enforcement Assistance Act* (S. 569), available at <http://thomas.loc.gov/cgi-bin/query/z?c111:s569> (visited 25 September 2009).

²⁹ Depending on the definition used, surveys obtain different results as to the scope of the US registries' compliance review. According to the Government Accountability Office, only two states require registries to file documents as long as they contain the required information. Conversely, the registries of all US states control the availability of company names, 45 states check articles of incorporation and 36 states check annual reports for conformity with the law, of a total of 48 states responding (GAO, 2006, pp. 21-23). However, of a total of 39 states responding to a survey by the National Association of Secretaries of State, 31 define their filing role as ministerial, 2 as regulatory, 2 (including Delaware) as a mix and 5 give other descriptions (NASS, 2007, pp. 23-24). Securities regulation subjects open corporations to additional registration requirements, often subject to substantive review, as in the first decades of the US Securities and Exchange Commission (Easterbrook and Fischel, 1991, p. 307).

³⁰ Consequently, registration refusal rates differ substantially across registries, ranging from 3% for Canada to 8% for the UK (World Bank, 2007, p. 13). On the other hand, registries performing more extensive checks are also able to produce greater legal effects in terms of, e.g., creating a presumption of validity and correctness (compare MBCA 1.25(d)).

³¹ See, for example, Mannig and Hanks (1990), and Armour (2006). A report to the European Commission concluded that "legal capital is criticised for failing to protect creditors: it is a poor indication of the company's ability to pay its debts. The current regime is arguably inflexible and costly." (Winter, 2002, p. 13). On the situation in the US, see Booth (2005).

European registries even try to protect minority shareholders, acting in this case as custodians of shareholders' rights.³²

Our analysis is not affected by these differences, however, as the article focuses on the core functions of company registries, common to all jurisdictions and represented in the above description by the minimalist registry proposed by the MBCA. The argument here is that even such a minimalist registry plays an indispensable legal function by safely switching the legal rules applicable to corporate transactions. And this essential function of the registry is not merely that of providing "notice", allowing parties to check company documents. It is mainly a judicial-support function, allowing courts to verify such documents and to apply contract rules without inflicting any unconsented harm on property rights. Differences across registries should not obscure the universal presence of this common core of minimum functions that are performed by all of them, and the essentially legal nature of such minimum functions.³³

4. Company registration: Need and difficulties

The common core of registries' functions is essential for corporate contracting. Without it, it would be difficult to ensure the independent publicity that makes originaive contracts verifiable, and corporate contracting would be either unfeasible or much more costly. This section analyzes this independence requirement, examines why documentary formalization is insufficient and explores the main difficulty faced by business registries: that they place entrepreneurs in a typical collective action dilemma—they all want effective registries to exist but at the cost of other entrepreneurs, not themselves.

³² Their function then becomes partly similar to that of land registers (Arruñada, 2003).

³³ This universal presence suggests that the rationale for these core functions is rooted in reducing private transaction costs. The rationale for registering additional information or having registries perform additional compliance review, in addition to being more related to externalities, is probably subject to a tradeoff of costs and benefits that may differ for different countries. The efficiency of having such additional functions performed by registries will not be addressed in this article. The existence of a tradeoff is indicated by the different need for legal opinions in different legal systems: "The practice of asking counsel—one's own counsel or the counsel to the other party or both—for legal opinions originated in the United States. It is not a common practice for purely domestic transactions in other countries. This difference in practice can be explained by differences of custom and tradition and, in addition, by the fact that civil law countries have developed legal doctrines and methods that make it easier to verify matters such as due incorporation, the power to bind the corporation, etc., than it is in common law countries, such as the United States." (Gruson and Hutter, 1993, p. xxvii).

4.1. Independent publicity required

Switching from a property rule to a contract rule requires publicity, whether formal or informal. This publicity defines what rules will be applied when judging a contract and what its effects on third parties will be. In general, whenever possible, parties to some originative contracts might try to opportunistically alter their legal attributes (and, consequently, the rules to be applied) in accordance with the evolution of the business. For much of the nineteenth century, a problem of this sort arose frequently to the extent that individual merchants resorted to whichever legislation and jurisdiction—civil or commercial—were most favorable to them (see, for Spain, Menéndez, 1990, pp. 30 and 54). In principle, before contracting, principals and agents in originative contracts will choose the option that suits third parties in subsequent transactions, so that the latter will be willing to contract. However, subsequently, they will do everything possible to ensure that the rule applied is the one which is most favorable to their own interests.

This possibility of gaming the rules to be applied poses a serious moral hazard in corporate contracting. For example, a company and its shareholders are interested in third parties believing that the firm's representative has sufficient authority to commit the firm in a specific operation. But, if the operation turns sour, then the company and its shareholders may allege that that person was not its legal representative or lacked sufficient authority. The judicial history of unincorporated companies in England prior to the creation of the English Company Registry in 1844 provides many examples of this type,³⁴ because “third parties were in the dark, in many circumstances, as to the status of the person they were dealing with. They could not be certain whether a person pretending to be a director, officer, or clerk could act for the company, its capital, or its shareholders” (Harris, 2000, p. 144). In a similar way, companies may offer unlimited liability to make credit cheaper but, when the company becomes bankrupt, shareholders would prefer to allege limited liability. A version of this type of problem, which had considerable historical relevance (causing, for instance, much litigation in France and Spain for centuries), was the hidden limited partnership in which the limited liability of a wealthy partner was concealed until the firm became bankrupt.³⁵ Similarly, companies will want to create

³⁴ English unincorporated companies, analyzed in section 5.1, show the difficulties arising when companies were set up through private contracts without any type of public registration.

³⁵ The reason was that limited liability partnerships were disguised as general partnerships because “the *Ordonnance* [of 1673] had allowed judges to typify partnerships in line with the partners' stipulations” (according to a request for reform filed in 1748 to make the *Ordonnance* effective by applying a reform of 1734, which had not been enforced). This request, made in connection with a certain “Lorry affair,” asked that “any partnership should be reputed a general partnership and be considered as such for all those whose names figure in the name of the partnership and also for all those who were entitled to sign for the company even if they did not figure in the name” and that “any other interested parties should only be considered limited partners, unless their consent were expressed in another way.” (Girón, 1955, pp. 130-31; see also, for Spain, pp. 164-65). The difficulties faced by the French registry are analyzed in section 5.3.

the impression of having more capital than they actually do, because that would allow them to take on debt under better conditions.

Because parties to originative contracts are interested in choosing rules opportunistically, mechanisms that are independent of such parties are required in order to establish before subsequent transactions and without any risk of manipulation, the rules to be applied when deciding on conflicts in such subsequent transactions. In order to guarantee independence, different types of publicity are required in different contractual situations. When the originative contracts themselves or their consequences are notorious, this very notoriety provides the required independence. Notorious facts are observed by all sorts of operators and result in ample proof that, if necessary, can accredit the legal reality. They are therefore relatively easy for judges to verify.³⁶ For example, when employees act in representation of their employers, their work is often observed by everyone dealing with them. Such people could testify to the employee's actions and thus refute an employer who attempted to repudiate the obligations that the employee has reached with third parties. Something similar occurs with corporate officers, at least for ordinary affairs.

On the other hand, when originative contracts remain hidden and especially when they generate intangible consequences, the latter cannot be observed by independent third parties who will not be able to provide reliable information in a possible judicial process. For example, if the courts were to enforce company formation agreements against third parties so that the partitioning of company and personal assets could remain secret, it would then be easy for shareholders to cheat such third parties, opportunistically adjusting the distribution of assets between those of the company and those of the shareholders. Third parties would then struggle to find out which assets really back which obligations, and they would obviously be reluctant to contract unless they receive additional guarantees. To avoid this, publicity needs to be achieved using formal mechanisms that guarantee independence, be they administrative departments, judges or, more often, company registries, which lie somewhere between the other two. The basic guarantee of their independence with regard to the parties lies in the fact that parties are not free to choose between alternative registries.³⁷

In summary, the key for making rule switching possible is independent publicity of the originative transactions and legal acts, so that parties remain committed to their choices. Such independence results automatically as a byproduct of some transactions but, when this is not the case, registration is needed. Without it, not only would third parties to subsequent contracts be facing adverse selection before contracting, but they would also suffer moral hazard afterward. The reason is that the relevant originative contracts would remain secret; principals and agents could, therefore, alter them in order to choose the rules that suit them best at any one time, to the detriment of third parties. Independent registration avoids this risk by making it possible to

³⁶ Hansmann and Kraakman (2002) emphasize the role of verifiability in the definition of property rights.

³⁷ When parties are able to choose jurisdiction, once their choice is made, they are not able to choose a registry. In general, when parties are seen as choosing registries, this is in fact a choice of jurisdiction and, when there is a switch of registries, specific precautions are taken to protect third parties (Arruñada, 2003, pp. 425-32).

verify the consents given by principals—the property rightholders in such originative contracts and legal acts. This enables judges to apply contract rules and thus protect third parties without damaging the enforcement of property rights, which remain safe by requiring rightholders’ consent before rules can be switched.

4.2. Two exceptions that confirm the argument

Apparent exceptions to independent publicity of originative contracts, such as negotiable instruments and powers of attorney, reinforce the argument, because independence is absent only when third parties retain contractual evidence preventing manipulation by either the principal or the agent.

Negotiable instruments, such as promissory notes and bills of exchange,³⁸ and those governed by similar rules (securities, letters of credit, bills of lading and IOUs) also facilitate impersonal market transactions using the same formula as for transactions on movables, with agents and by companies: assigning rights in such a way that the third party’s information asymmetry becomes irrelevant. In general, the third party who acquires a credit formalized in this type of instrument is safe against defenses that the debtor (who acts as “principal” in our framework) could plead against the “agent.” For example, in bills of exchange and promissory notes, the obligation to pay is separated from the underlying transaction, such as the sale in respect of which the bill was issued, unless the instrument returns to the agent. Therefore, a third party who has acquired the instrument in good faith has an unconditional right to be paid by the maker, even if the maker has a valid defense against the original payee (Méndez, 2007).

This is achieved without making the originative contract—i.e., the instrument—public. Principals’ commitment to the originative contract is ensured by a simpler procedure: transferring possession of the instrument, once it has been signed by the principal, first to the agent and then to the third party, when the agent cedes it. Consequently, the principal cannot cheat the third party by manipulating it. The solution is viable because the instrument involves only one obligatory right (that of being paid). So there are none of the usual difficulties arising from multiple rights as, for instance, with mortgages, in which the principal retains not only ownership but also possession of the mortgaged land or, worse still, when previous hidden mortgages might be enforced, a market-killing risk in a regime of contractual privacy (Arruñada, 2003, pp. 406-407). Nor are there several third parties who might be interested in possessing the instrument to protect their rights, with potentially damaging consequences for all others. Consistent with the legal nature of the right involved, such instruments are used for personal transactions safeguarded by knowledge of the debtor’s solvency.

Significantly, modern forms of secured finance that allow multiple rights on the same movable assets (including accounts receivable) and that therefore need to prioritize such rights,

³⁸ Negotiable instruments are also products of the medieval Merchant Law revolution and were adopted as from the eleventh and twelfth centuries (Berman, 1983, pp. 350-52), even if full negotiability probably only developed in the fifteenth century (Kadens, 2004, p. 41, citing John H. Munro). Ellinger (2000) analyzes historical and contemporary practices.

rely on registries, such as the one established by UCC article 9 on secured transactions.³⁹ Alternative solutions to public filing establish priority by the dates of the competing agreements to assign, protecting the first assignee, or by the date on which an assignee notifies the debtor or receives acceptance from him, protecting the first assignee to notify (Kötz, 1992, pp. 93-99). Both solutions are poor because they do not inform potential assignees about possible previous assignments. Moreover, the cost of notification increases with the number of debtors, making it impossible for a large number of transactions. The missed opportunities will increase the cost of credit and hinder securitization.

Powers of attorney also fully commit the grantor (the principal) in legal acts signed by the proxy (the agent), with and without publicity in different cases. First, a variety of publicity mechanisms are used to ensure that the principal remains committed and cannot deny the existence of the proxy. As we saw in section 3.2, notoriety in the exercise of representation provides sufficient publicity for the usual functions of entrepreneurs' agents. In addition, registration is often required of powers of attorney for general representation (that is, those in which proxies remain in force after being used) and organic representation of companies (section 3.3).

Second, mere documentary proxies are used, in which representation figures in a document but there is neither notoriety nor the need for registration. Legal systems often require such documentary proxies to meet certain requirements: for example, their form must be at least that of the act to be carried out by the proxy (*equal dignity rule*), the grantor may be required to consult with experts, and granting of the proxy may need to be authenticated by the presence and signature of lawyers and witnesses. These safeguards aim to ensure that the grantor understands the risks involved in granting power to the proxy and to provide convincing proof of the granting. They seem less effective, however, for protecting future third parties, because it is the grantor who chooses the persons who authenticate the proxy so they are dependent on him, especially when they compete with each other. Nor are they effective for avoiding false proxies, which would explain why cases of fraud involving documentary proxies are so common.

Nevertheless, in spite of the privacy maintained in documentary proxies and the dependent relationship of the authenticators, representation of individuals is largely based on this type of proxy. The principal's commitment is ensured by similar means to those used for bills of exchange. On the one hand, the third party checks the proxy and retains, if not the proxy, at least documentary and often (at least in civil law countries) authenticated evidence of it. On the other hand, a revoked proxy continues to commit the grantor toward good faith third parties, as it is understood to generate an appearance of representation that third parties can trust.

This efficacy of revoked proxies avoids the main risk for the third party, that of opportunistic behavior by the principal who may renege on the agent's act if such renege suits him. In the terms used above, when granting a proxy, the principal accepts being committed by the agent not only during the validity of the proxy but also afterward, until such time as the power is taken back. Here again, the viability of this documentary solution depends on the existence of a single right (that of acting in representation of the principal). Revocation poses a problem that is to some degree equivalent to dispossession for a bill holder. But the solution is simpler than what is

³⁹ See, for an international comparison, Kötz (1992, pp. 96-97).

required for the latter, because of the personal nature of representation, in contrast to the real nature of the relation between the holder and the bill.

However, the efficacy of revoked proxies only transfers the risk to the grantor. In particular, the grantor is in a difficult position if, after revoking the proxy, the agent does not give it back. In such cases it will be hard for the grantor to destroy the appearance of representation power that the proxy may still give to innocent third parties, which may harm the grantor. Avoiding such consequences may be easier for special proxies that authorize representation in a single transaction. This helps to explain why general proxies tend to be publicly registered. In addition to saving costs in repeated uses of proxies, registration provides a reliable way of revoking them. Without registration, grantors would tend to rely less on proxies, hindering specialization.

Both exceptions—negotiable instruments and powers of attorney—thus involve single rights where third parties can retain the contractual evidence, which prevents possible manipulation of originative contracts by principals. Therefore, they reinforce the argument that independent publicity is essential in the general case in which multiple rights are present.

4.3. Collective action and commitment in business registration

The main difficulty for achieving this independence when registration is necessary stems from the nature of the registry as a public good.⁴⁰ Entrepreneurs are truly interested in the registered information being credible, as this is the only way of making it trustworthy for courts and, consequently, for their contractual counterparts. However, they face a collective action problem because they prefer others to contribute to the registry, contributing as little as possible themselves. They are reluctant to disclose information or to finance the functioning of the registry. Moreover, given the legal function of the register, entrepreneurs are also reluctant to irrevocably commit themselves in the originative contracts that they formalize, preferring to remain free to choose the most favorable options a posteriori. Yet they do want other entrepreneurs to remain committed. Consequently, they all want an independent registry but want this independence to be exercised only with respect to others.

As stated above, entrepreneurs would prefer to modify their legal attributes a posteriori (for example, the name of their legal representative, or their company's assets). Judges would then apply to the entrepreneur's and the firm's contracts whichever rule or option is most favorable to the entrepreneur in any given business situation. If such selective laxity of the registry does not significantly damage its average effectiveness, the entrepreneur might benefit in two ways: first, when acting as a third party, he would be protected; and, second, when acting as a principal, he might be able to get around the system by damaging third parties who contracted with the entrepreneur's agent relying on the register. However, no entrepreneur would want to be in this

⁴⁰ See, for instance, Hayek (1982, p. 44). Also Barzel, who considers mandatory registration of assets and transactions as a way to facilitate enforce disputed agreements, with the scope of private registries being limited by the need for neutrality (2002, pp. 169, 185-86).

situation when acting as a third party, so they all want the registry to commit other entrepreneurs but not themselves.

This demand for “selective commitment” regarding legal rules poses a more serious collective action problem than that caused by mere funding or information disclosure,⁴¹ as it involves a risk of radical subversion of the registry. If a significant proportion of entrepreneurs is successful in achieving special treatment, the registry will no longer be effective and will turn into a useless burden for firms. It is therefore necessary to include additional precautions to protect the independence of registration decisions. The solution is not only to define the information to be filed but also to establish independent control to make sure that at least the required information is filed and that such filing is independently dated.

5. Lessons from four historical cases

So far, the article has discussed the role and requirements of company registries. Four historical cases will now be analyzed to demonstrate fundamental aspects of the discussion and draw some lessons for formalization reform. In particular, they confirm that it would be too costly to organize corporations by purely contractual means. These cases also indicate how the effectiveness of company registries depends on making them independent from parties and on resolving the collective action problem suffered by entrepreneurs. They will be presented in their logical order, which in this case only partly follows the chronology.

5.1. Feasibility and costs of private incorporation: The English unincorporated companies

Before the Act creating the Company Registry in 1844, English companies could only be incorporated by an Act of Parliament or a royal charter or Letter Patent, which were difficult to obtain. This meant that so-called unincorporated companies took on increasing importance despite being exposed to all sorts of complications, including the uncertainty of judicial decisions, as analyzed by Harris (2000).⁴² Their experience confirms the difficulties that arise when companies are created without registration, based only on private contracts and informal publicity.

Unincorporated companies used increasingly complex legal engineering, based on the structure of general partnerships to which they gradually added various elements of trusts and of corporations. Promoters created them by signing an initial agreement and then searching, often

⁴¹ See, for an introduction, Zingales (2004); and, for the disclosure of company accounts, Arruñada (2010).

⁴² Harris’ work contradicts a longstanding historiographical tradition. See, for a recent work, Getzler and Macnair (2005).

publicly, for additional passive partners. A deed of settlement was then drafted and signed by them all, specifying the joint-stock capital of the company, how it was to be raised and divided into shares and under what conditions the shares were transferable, as well as everything relating to the administration and representation of the firm. The most fully-developed versions also created a trust with all the firm's assets, designated trustees and established rules for their appointment and decision-making.⁴³ Perhaps the most famous example organized in this way was Lloyd's insurance market, which only obtained sound legal status with the *Lloyd's Act* of 1871. Interestingly, the launching of new companies involved substantial, decentralized publicity campaigns addressing potential subscribers of shares. The campaigns used all sorts of means, including public meetings, prospectuses, circulars, letters and newspaper ads, and relied on bank networks and previous subscribers to reach new subscribers (Harris, 2000, pp. 124-27).

This English experience with unincorporated companies reveals that creating companies based on private contracting and informal publicity comes up against three main types of difficulty: (1) high transaction costs for the partners to contract both among themselves and with third parties; (2) heavy judicial costs and uncertainty; and (3) substantial opportunity costs since contracting has to be limited to certain industries and based to a large extent on personal guarantees.

First, the parties faced high transaction costs for contracting the desired conditions such as entity shielding or limited liability, as well as for ensuring that the corporate will was well defined (in many cases, all the partners had to sign). They found it difficult to limit their liability. Even for insurance companies, in which the practice of including limited liability clauses in their policies came to be widespread, "the limitation of liability was only partial, and in other sectors, in which there was no practice of drafting standard written agreements, almost no limitation was in fact achieved" (Harris, 2000, pp. 143-44). Given that they were not considered legal entities, there was also little continuity and they had to be re-created when one of the partners died or went bankrupt, as every one of the partners could commit the firm. The use of trusts relieved this problem but did not solve it altogether because trusts were more appropriate for real estate (Harris, 2000, pp. 141-59).

Unincorporated companies also involved heavy judicial costs. First, since they lacked legal entity, it was necessary to litigate against all the partners. According to the Ker report, "the principal difficulty in the present law arises in legal proceedings taken by or against partners, or in suits *inter se*, where the partners are numerous" (Ker, 1837, p. 3). Second, evidentiary difficulties were pervasive. For example, judges had to resort to contracts and notoriety as the main sources of evidence, especially to establish priorities among personal and corporate creditors in bankruptcies. Obviously, court decisions entailed great uncertainty, as made clear in a long series of contradictory court decisions (Harris, 2000, especially pp. 230-49). Unsurprisingly, disputes and litigation were intense (Copp, 2002, pp. 363; Ker, 1837). For all these reasons, the English courts were unable to find a way to make the creation of joint-stock companies effectively viable using purely contractual methods, without the need for either specific state charter or public registration.

⁴³ Harris, 2000, mainly pp. 139-40; with additional details at pp. 85-109 and, on financing, at pp. 124-27.

Finally, these high contractual and judicial costs led to a substantial opportunity cost, because many transactions and firms turned out to be unfeasible. In England, the unincorporated companies either relied on additional personal guarantees or carried out low-risk activities. Their contracts were based to a large extent on personal guarantees, both among partners and with personal and company creditors; as well as on the debtors' prison system, which played an essential role in England until the 1869 Debtors Act (Harris, 2000, pp. 131-32). Moreover, their presence was limited to not-for-profit activities and low-risk sectors, that is, those needing little borrowed capital and those in which fixed assets predominated so that default risk was low (Harris, 2000, pp. 165-67 and n. 71).

5.2. The registration solution: The 1844 English Company Act

In order to resolve these difficulties, in 1844 Parliament passed the "Act for the Registration, Incorporation, and Regulation of Joint Stock Companies", enabling companies to be created freely, provided they met certain requirements for registration and information disclosure, both at the time of incorporation and in subsequent reports that had to be registered every six months. Also, the law authorized the registry to issue a certificate conferring full legal entity status on the company, but only after ensuring that the registered documents complied with the law and contained all required information. The latter referred, among other things, to the company's objects, its capital structure, and the names and addresses of both shareholders and the company's officers and auditors. The Act required that all companies with transferable shares or more than 25 members be registered.

The registry was a success from the start. During the fourteen months subsequent to entry into force of the 1844 Act, 1,639 companies were registered, that is, more than double the number that existed in the whole of England two years before (Harris, 2000, p. 288). It had two main consequences: it eliminated preexisting barriers to entry; and it resolved the legal problems for incorporating companies, thus expanding contractual possibilities.

First, as analyzed by North, Wallis, and Weingast, given the paucity of incorporation charters granted by Parliament and the drawbacks suffered by unincorporated companies, lack of access to the corporate form of enterprise constituted a serious barrier to entry before 1844. "Charters created rents even when charters did not confer monopolies, because the ability to access the corporate form in itself was a substantial advantage to any economic organization" (North, Wallis and Weingast, 2009, p. 217). They are right when considering that English unincorporated companies suffered anti-competitive constraints since they could not obtain a corporate charter. However, the charter formula was difficult to apply widely and probably amounted to a poor solution for reducing transaction costs. The contractual solution was no easier, as can be seen from the difficulties faced by unincorporated companies. This explains why the number of companies increased not when one of the main prohibitory laws was derogated in 1825 (the Bubble Act), but when effective institutions for company contracting were implemented (that is, as from 1844, the year the Company Registry was set up). According to this argument, the main accomplishment of registration is not to liberalize incorporation but to make it feasible.

This historical episode therefore holds an important lesson for today's debate on business formalization and bureaucratic simplification. As in the England of the nineteenth century, effective institutions need to not only liberalize company incorporation but also to facilitate the enforcement of legal (contract) rules that enable impersonal market transactions. This requires implementing an effective company registry. In the same way, current reforms cannot be limited to just making formalization cheaper or faster without considering the quality of formalization institutions, thus condemning companies to use mere contractual methods similar to those used by unincorporated companies in England in the first decades of the nineteenth century. In view of the English historical experience, company formalization appears not only or even mainly as an entry barrier, as seen by De Soto (1989), Djankov *et al.* (2002), and the *Doing Business* project (World Bank, 2003-2009), but as a necessary condition for the effective functioning of legality.

Second, the registry expanded contractual possibilities in that it made it possible to limit liability contractually, something that unincorporated companies had been unable to do. On limited liability, the 1844 reform was timid, and until the enactment of a further law in 1855, registration did not entail limited liability. However, in contrast with the inability of unincorporated companies to limit the liability of their shareholders contractually (as explained above), registered companies were indeed able to limit their liability after 1844 (Hansmann and Kraakman, 2000, pp. 429-30).

In spite of these achievements, the positive role of the registry in resolving the problems for incorporating and operating companies in England is often disregarded. For example, Hansmann, Kraakman, and Squire blame legal conservatism and the shortcomings of bankruptcy institutions for such problems and, more generally, for the English legal system's incapacity to meet the economy's demand for companies with full-fledged legal entity status.⁴⁴ They argue that it was impossible or, at least, very costly, to shield the entity and, to a lesser extent, to limit liability without "organizational law"—mainly, corporate law. However, the lack of a law changing the rules to be applied should not in itself hold back the adoption by courts of such new rules, at least not in common law, especially if we follow the extensive literature on the adaptability of common law. What seems to have been most difficult was to set up the organizational mechanisms for formalization (that is, registries) that judges require in order to apply these rules efficiently: preserving rightholders consent and therefore property enforcement, while also ensuring commitment so that, when judges adjudicate subsequent contracts, principals cannot opportunistically choose whatever rule they prefer.

In addition, Hansmann, Kraakman, and Squire seem to attribute the growth of companies in the US to more specific, more recent factors, such as corporation tax, modern accounting

⁴⁴ For example, in early modern times, "institutional conservatism prevented English law from developing in lockstep with commerce" (Hansmann, Kraakman and Squire, 2006, p. 1375); "a bankruptcy system is a precursor to the rule of weak entity shielding" (p. 1379); "parliamentary obduracy and demand for the company form had combined to create a charter shortage" (p. 1383); "superior accounting and valuation techniques and greater commercial sophistication among courts, that protected owners and creditors alike" (p. 1388); "better valuation techniques, combined with the power of courts to order liquidation for cause, would reduce the costs of strong entity shielding among owners" (p. 1393).

techniques and obligations for disseminating information (2006, pp. 1394-99). These considerations have been criticized by Lamoreaux and Rosenthal for not taking into account developments in continental Europe, where it had been possible to shield entities earlier through limited liability partnerships, a figure whose roots went back to the medieval *commenda* (2006). However, in their critique they also disregard the role of registration. In particular, the serious problems that judicial enforcement of hidden limited liability partnerships used to cause before registration was effectively required.⁴⁵ The supposed superiority of continental law over Anglo-Saxon law is then debatable, at least in countries that did not have an effective company registry, in that the judicial enforcement of company contracts was often achieved at the cost of damaging the interests of third parties.

This English experience therefore suggests that effective company law requires two inseparable elements—not only a set of market-enabling rules but also an organization, the public registry, without which it is difficult to apply such rules. For example, section XXX of the 1844 English Company Registration Act established that acts by a director whose appointment was defective are still binding on him and the company. Moreover, section XLIV affirms the validity against the company of contracts signed by its officers, even if they fail to meet certain requirements (in writing, signed by two officers, sealed, etc.) that otherwise nullify them. These are simple rules but they are easier to apply safely if the incorporation and appointments have been registered and are therefore easy to verify. The essential element of the English Act of 1844, therefore, was the organization of an effective registry. To apply these new rules without previous company registration, the courts would have had to resort to notoriety in the incorporation and the exercise of the office, which would provide a much weaker basis. It seems reasonable for judges to be reluctant to make such a radical departure from the usual rules on the basis of informal publicity when this is unreliable.⁴⁶ So, redefining by law or precedent the rules to be applied by judges is insufficient for ensuring they will be enforced. Efficiently applying market-enabling contract rules requires effective registration of originative private contracts and legal acts. This becomes indispensable when notoriety does not provide verifiable evidence on originative contracts and thus commitment to the rules chosen in them by principals. Essentially, the registry ensures the quality of judicial evidence, allowing the application of market-enabling contract rules to subsequent transactions.

5.3. The importance of organization: The French 1673 registry

Unfortunately, effective registration is not easy to achieve because a functional, independent registry is hard to organize and because business registration and disclosure suffer from

⁴⁵ See section 4.1 and n. 35.

⁴⁶ Similar difficulties arise in this area to those suffered by legal systems when applying market-enabling priority and contract rules in real property, at least before registers were available to provide effective publicity. Compare, however, Rose (1988) for an argument in terms of endless cycling in this context.

collective action problems. As discussed above, firms usually want others to provide publicity but are reluctant to give it themselves, unless they are obliged to do so, and this obligation has to be enforced. Moreover, they may fall in a vicious circle: when the registry is ineffective, they are less interested in registering and, since many people do not register, the registry then becomes even less effective.

These problems are illustrated by the difficulties suffered and the practical irrelevance of the company registry set up in France in 1673. The main reason for setting it up was the need to establish a firmer basis for companies to contract with third parties, avoiding the main problems faced by trade at the time, which required clarifying who the company's partners were and what assets backed their contractual commitments (Kessler, 2007, pp. 163-64). These requirements were implemented in the *Ordonnance Commerciale* of 1673 issued under Colbert but drawn up by merchants, especially Jacques Savary, a former businessman, civil servant and author of a classic treatise on the subject.

According to the *Ordonnance*, companies in France should be created in two steps: First, the partners were to sign a written agreement (*acte* or *traité* de société) and, second, register a summary of the agreement with the merchant court and post it publicly (Kessler, 2007, pp. 162-63). Testimony on oral agreements could not be used to contradict the written agreement. These requirements were almost always violated, however, and the set penalty of nullity was not applied. As early as 1681, eight years after publication of the *Ordonnance*, the Paris Court issued a ruling recognizing the legal existence of a nonregistered company. Also, the Court stated repeatedly that it was against the obligation to register.⁴⁷ Most companies failed to comply with the writing and publicity obligations.⁴⁸ Conversely, written letters and witness testimony sufficed to establish company existence (Kessler, 2007, pp. 162-66). Other evidence usually considered by judges in other jurisdictions to determine the existence of a tacit company contract were the partners keeping accounts in common, business taking place after expiry of the period set in the company contract, and withdrawals of money being made from the company's treasury (Petit, 1979, p. 90).

The immediate cause for this limited use of the French registry was that, by imposing nullity on noncompliance with the obligation to register, the penalty became impossible to apply in practice. It was unfair, because it was mainly imposed on innocent third parties, and imposing the penalty would have gone against the very purpose for which the registry was created (Girón, 1955, pp. 159-63). Moreover, the law allowed unrestricted access by the general public to the content of the register, which went against the then prevailing desire for privacy. Deep down, however, the failure of the French registry stemmed from the typical collective action drama analyzed in section 4.3. This French registry had been created at the initiative of businessmen themselves. However, they all wanted others to register but were not prepared to register themselves unless obliged to do so.

Resistance to publicity is also easier to understand when it takes place in a context of transition as with the French registry, in which most companies were personalistic, so informal

⁴⁷ See, for example, the "Response of the Paris Court to the *députés de commerce*," 20 May 1748, reproduced in Girón (1955, pp. 195-201).

⁴⁸ See, e.g., Girón (1955, pp. 127-32), Freedeman (1979, p. 4) and Kessler (2007, p. 165).

publicity was still somewhat effective, and most transactions still had a highly personal element.⁴⁹ In fact, many participants did not understand the advantages of facilitating impersonal transactions.⁵⁰ This is illustrated by the above-mentioned response of the Paris Court. When criticizing the proposal made by the *députés de commerce* to strengthen the public company registry, the Paris judges asked:

Why can this matter [company publicity] not be left to general good faith, as it always has, and to the mutual trust that is the soul of trade? *A person who trades is assumed to know the trading partner.* If this is not the case, then there should be no trade, or the person wishing to trade should request the opposite partner to make himself known. If this precaution is not taken and the merchant relies on general, public good faith, then the only person to blame is himself for trusting someone he did not know sufficiently well.⁵¹

This response underscores the role played by public registries in making impersonal transactions viable. In 1748, it was not as clear as it is today that economic development is based precisely on the possibility of carrying out the sort of impersonal transactions that the French judges rejected outright.

Some decades later, the 1807 *Code de Commerce* restored the by then all-but-forgotten registration requirement with a nullity sanction. Contemporary doctrine tried to make nullity for lack of publicity unexceptionable against third parties, but this only became consolidated gradually and was not set in law until 1935 (Girón, 1955, pp. 129-34). All in all, the registry was relatively successful in the nineteenth century. For example, thanks to the public registration of partnerships, partners in nineteenth-century France could delegate management to one or some of them; limit their power to commit the firm; require that certain types of contract, such as debts, be signed by more than one partner, or even prohibit one person from signing altogether (Lamoreaux and Rosenthal, 2005). Their freedom to do these things was based on the willingness of judges to enforce these restrictions against third parties, provided the partnerships had been registered.

5.4. Private interest in mandatory publicity: the Bilbao company registry of 1737

Entrepreneurs are interested in having registries that will reduce transaction costs, especially those of companies for which informal solutions based on notoriety are ineffective. With reference to the commercial registry, it has been stated that “all the possible effects of

⁴⁹ See, in general, Supple (1977), and, especially for France, Kessler (2007).

⁵⁰ This contrasts starkly with the communitarian spirit present in England about the same time, allegedly rooted in Calvinist theology and thought to be important for the success of joint-stock companies (Berman, 2003, pp. 341-43).

⁵¹ Translated from Girón (1955, p. 200, emphasis added).

registration [in the commercial registry] have developed initially in response to the interests of private individuals and only subsequently to those of public interests” (Tallon, 1983, p. 110). This private interest is exemplified by the appearance of the first modern company registries stemming from the evolution of the *Lex Mercatoria*. The French case analyzed above is not the only one. For example, beginning in 1737 merchants in Bilbao, a city in the North of Spain, voluntarily, although with state support, adopted mandatory commercial regulations— known as the *Ordenanzas de Bilbao*—which, in order to achieve “preservation of good faith, and public security of Commerce in company,” obliged them to file with their Consulate a testimony of the company contract that could be accessed by any legitimate interested parties. This requirement soon led to the filing of the contract itself.⁵² Moreover, from 1791 on, the filings were reviewed by the Consulate Syndic, who could demand disclosure of additional information of special interest to third parties. This included, at a minimum: the identity of the partners and officers; the company signature and that of its representatives; the duration of the company; and, in practice, the regime for capital and profit sharing, limited liability and other matters relating to accountability, restrictions on trading by partners outside the company, the books and the criteria for liquidating the company (Petit, 1979, pp. 83-107). The main reason for their insistence on publicity were the problems previously caused by the existence of hidden limited liability partnerships, which resulted from the lack of a clear distinction between the different types of company and the presence of limited partners in companies claiming to be general partnerships (Girón, 1955, pp. 164-65).

Along these lines, the *Ordenanzas de Bilbao* illustrate two aspects that might well be forgotten today, now that registration is a legal imperative. First, the private interest of entrepreneurs themselves in introducing an independent registration system with mandatory publicity of the fundamental elements of company contracts. These eighteenth-century entrepreneurs decided to commit themselves to resolve the collective action problem that existed and continues to exist today regarding publicity. As we have seen, this was achieved by voluntarily setting up a system that obliged them to make known the aspects of their company contracts that were relevant to third parties. Furthermore, they ensured the verifiability and integrity of registered documents by empowering the Consulate Syndic to determine that the publicity was sufficient, to require additional information when necessary and to impose penalties in the form of fines and company closures, in addition to being responsible for preserving the files.

Second, the high degree of compliance with the registration requirements laid down by the *Ordenanzas de Bilbao* (Petit, 1979, pp. 98-103) contrasts with the poor compliance, as described above, with the French *Ordonnance Commerciale* of 1673. The difference seems to be due to two factors. On the one hand, the French *Ordonnance* raised the private costs of publicity because, unlike the Bilbao regulation, the register was open to all, not just to those with legitimate interests (p. 98). On the other hand, although failure to register could result in a more

⁵² The *Ordenanzas de Bilbao* were adopted with some exceptions as Spain’s commercial law until enactment of the 1829 Commercial Code (González, 1867, pp. 15-16). They regulated much more than just companies, covering most aspects of commerce, and were drawn up and enforced by the merchants’ corporation, although their enactment by the Consulate of Bilbao led to litigation that ended in a Royal Provision in 1740 (Petit, 1979, pp. 101 and 104).

serious penalty, that of absolute nullity of the company contract (which could be claimed not only by third parties but also by partners among themselves and against third parties), such penalties proved to be unenforceable, because of their seriousness and because they damaged the interests of the same innocent third parties whose interests the rule was designed to protect (Girón, 1955, p. 129). The penalties in Bilbao, though weaker, proved to be more effective and consisted, initially, of fines and then of closure of the establishments of unregistered companies.

5.5. Conclusions on the historical evidence

In summary, several lessons can be drawn from these historical experiences: (1) The difficulties faced by English unincorporated companies show that it is necessary to formalize a company's originative contracts in order to facilitate judicial action on subsequent contracts and, more specifically, to allow the enforcement of market-friendly rules. (2) Private interest in setting up a registry is clear from the French and Bilbao initiatives, which arose in the sphere of the Law Merchant. (3) The history of the French registry throws light on the collective action problems that plague registries and can only be solved by independent enforcement. (4) The effectiveness of such review is clear in both the English registry, where it was based on a legal mandate, and in Bilbao, where it was arranged by the entrepreneurs themselves.

6. Implications

By explaining how business registers help reduce transaction costs without endangering property rights, the analysis in this article provides a rationale for the institutional foundation of the firm. This rationale complements the contractual emphasis dominant in most theories of the firm,⁵³ in which the role of the state is limited to providing a set of default rules for contracts; a judiciary that ensures contract enforcement; and a range of mechanisms to correct externalities, often seen as not being part of corporate law. This contractual emphasis is quite visible with respect to corporate law. For example, Posner states that “the primary utility of Corporation law lies in providing a set of standard, implied contract terms” (1976, p. 506). Similarly, in reply to the question as to why corporate law exists, Easterbrook and Fischel state that “the short but not entirely satisfactory answer is that corporate law is a set of terms available off-the-rack so that participants in corporate ventures can save the cost of contracting” (1991, p. 34). Consequently, the scope of corporate law is often limited to companies' internal affairs. As summarized by Ramseyer,

⁵³ 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).

corporate law governs the internal affairs of the corporation. More specifically, it governs the ties among a firm's shareholders and its senior managers—its officers and directors. Functionally, it governs the relations among the residual claimants to the firm's assets and the agents they directly or indirectly appoint to manage those assets. Necessarily in doing so it governs only a small part of a firm's business activities. Banking and commercial law, for example, govern its relations with its creditors. Labour law governs its relations with its lower-level employees. Contract law governs its relations with its trade creditors, and tort law with its involuntary creditors (1998, p. 503).

There is little need in these views for business registration. Given that they tend to disregard the two types of contract in sequential contracting, they do not feel any need to subject originative contracts to publicity in order to reduce transaction costs in subsequent contracts. Consequently, both normative and positive discussions of the mandatory content of corporate law also tend to disregard the mandatory element in registration: e.g., even when incorporators are free to structure the articles of incorporation, they still have to register them.⁵⁴ Deep down, these perspectives tend to focus the analysis on the parties to the originative contract, disregarding the difficulties they face to contract with third parties. Something similar happens with broader analyses in the theory of the firm that identify the distinctive nature of the firm as lying in how the law treats employment as compared to commercial contracts (Masten, 1988), or in what Williamson (1991) calls “forbearance,” the refusal of courts to hear disputes between firms' divisions. Conversely, the analysis presented here emphasizes the relation with third parties. In this view, the ability of agents and third parties to commit the principal provides an additional criterion for defining the nature and boundaries of the firm.

The article thus provides an alternative explanation as to which institutions are needed for the corporate form of enterprise. From a contractual view of the firm, the corporate form should function effectively on the basis of private contract, which should minimize both the comparative advantage of chartered companies (emphasized by North, Wallis and Weingast, 2009) and the inability of courts and legislatures to produce the right rules (pointed out by Hansmann, Kraakman, and Squire, 2006). The article complements these explanations by clarifying the role of business registries in making it possible for judges to apply market-enabling “contract” rules to subsequent contracts without damaging property rights. Registries accomplish this by providing a verifiable record of the decisions made by property rightholders to weaken future property enforcement. This preserves rightholders' consent and commits them to their choices.⁵⁵

Finally, the article holds important implications for the reform of business formalization. Governments and international aid organizations have been devoting extensive resources to “simplifying” the procedures for formalizing business firms. However, many of these actions

⁵⁴ See, for instance, Symposium (1989), as well as Black (1990).

⁵⁵ Registration is therefore understood as a fundamental pillar of corporate law rather than a mere device to inform third parties, as seen, for instance, in Armour and Whincop (2007), who describe it as a complementary strategy for disseminating information to be used in the selective, case-by-case, enforcement of alternative rules, and emphasize the role of the law in supporting property rights against third parties (for the latter, see especially pp. 451-52).

lack a theory of business formalization, seeing it only as a set of bureaucratic constraints often captured by private interests (De Soto, 1989; Djankov *et al.*, 2002; World Bank, 2003-2009). Consequently, they focus on reducing the costs initially incurred by entrepreneurs to formalize their firms while disregarding the benefits that effective formalization institutions bring about by reducing firms' transaction costs with all their future contractual partners, neglecting essential organizational requirements and missing out the role played by judges as the key users of registries (Arruñada, 2007, 2009). This article aims to provide a thorough theoretical foundation for analyzing these issues, by demonstrating the future benefits of effective registration in reducing subsequent transaction costs, identifying the organizational requirements of registration and showing why judges play such a key role as users of the registry.

7. References

- ABA, American Bar Association, Committee on Corporate Laws. 2008a. *Model Business Corporation Act Annotated*, 4th ed. Chicago: ABA.
- ABA, American Bar Association, Committee on Corporate Laws. 2008b. "Changes to the Model Business Corporation Act Providing Increased Transparency," Draft of June 1, 2008 (http://www.law.upenn.edu/bll/archives/ulc/roba/2008june1_mbca.pdf, visited October 16, 2009).
- Alchian, Armen A., and Harold Demsetz. 1972. "Production, Information Costs, and Economic Organization," 62 *American Economic Review* 777-95.
- Armour, John, and Michael J. Whincop. 2007. "The Proprietary Foundations of Corporate Law," 27 *Oxford Journal of Legal Studies* 429-65.
- Armour, John. 2006. "Legal Capital: An Outdated Concept?," 7 *European Business Organization Law Review* 5-27.
- Arruñada, Benito. 2003. "Property Enforcement as Organized Consent," 19 *Journal of Law, Economics, and Organization* 401-444.
- Arruñada, Benito. 2007. "Pitfalls to Avoid when Measuring the Institutional Environment: Is 'Doing Business' Damaging Business?" 35 *Journal of Comparative Economics* 729-47.
- Arruñada, Benito. 2009. "How Doing Business Jeopardizes Institutional Reform," 10 *European Business Organization Law Review* 555-74.
- Arruñada, Benito. 2010. "Mandatory Accounting Disclosure by Small Private Companies," *European Journal of Law and Economics*, forthcoming.
- Arruñada, Benito. Forthcoming. *Formalización de empresas: Costes frente a eficiencia institucional*. Cizur Menor: Thomson.
- Baird, Douglas G., and Thomas H. Jackson. 1984. "Information, Uncertainty, and the Transfer of Property," 13 *Journal of Legal Studies* 299-320.
- Barzel, Yoram. 2002. *A Theory of the State: Economic Rights, Legal Rights, and the Scope of the State*. Cambridge: Cambridge University Press.
- Benson, Bruce L. 1998. "Law Merchant," in Peter Newman, ed., *The New Palgrave Dictionary of Economics and the Law*, Vol. 2. London: Macmillan, 500-508.
- Berman, Harold J. 1983. *Law and Revolution: The Formation of the Western Legal Tradition*. Cambridge: Harvard University Press.
- Berman, Harold J. 2003. *Law and Revolution (II): The Impact of the Protestant Reformations on the Western Legal Tradition*. Cambridge: Harvard University Press.

- Black, Bernard. 1990. "Is Corporate Law Trivial? A Political and Economic Analysis," 84 *Northwestern University Law Review*, pp. 542-97.
- Booth, Richard A. 2005. "Capital Requirements in United States Corporation Law," University of Maryland Legal Studies Research Paper 2005-64 (<http://ssrn.com/abstract=864685>, visited 27 February 2008).
- Brickley, James A., Frederick H. Dark, and Michael S. Weisbach. 1991. "The Economic Effects of Franchise Termination Laws," 34 *Journal of Law and Economics* 101-132.
- Buxbaum, Richard M. 1974. *The Formation of Marketable Share Companies*, chapter 3 in Alfred Conard, chief ed., *Business and Private Organizations*, Vol. 13 in *International Encyclopedia of Comparative Law*. Tubingen: Mohr Siebeck.
- Calabresi, Guido, and A. Douglas Melamed. 1972. "Property Rules, Liability Rules, and Inalienability: One View of the Cathedral," 85 *Harvard Law Review* 1089-128.
- Caruso II, Peter J. 2000. "To Buy or Not to Buy: Protecting Yourself from Stolen Art," *Arts Editor*, August (http://www.artseeditor.com/html/august00/aug00_law.shtml, visited 2 February 2009).
- Cary, William L., and Melvin A. Eisenberg. 1988. *Cases and Materials on Corporations*, 6th ed. Westbury, NY: The Foundation Press.
- Clark, Robert C. 1986. *Corporate Law*. Boston: Little, Brown and Company.
- Coase, Ronald H. 1937. "The Nature of the Firm," 4 *Economica* 386-405.
- Coornaert, Emile. L. J. 1967. "European Economic Institutions and the New World: The Chartered Companies," in E.E. Rich and C.H. Wilson, eds., *The Cambridge Economic History of Europe*, Vol. 4. Cambridge: Cambridge University Press, 220-74.
- Cooter, Robert D., and Thomas Ulen. 1997, *Law and Economics*, 2nd ed. Reading, MA: Addison-Wesley.
- Copp, Stephen. 2002. "Company Law and Alternative Dispute Resolution: An Economic Analysis," 23 *The Company Lawyer* 361-75.
- De Soto, Hernando. 1989. *The Other Path: The Invisible Revolution in the Third World*. New York: Harper & Row.
- Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2002. "The Regulation of Entry," 117 *Quarterly Journal of Economics* 1-37.
- Easterbrook, Frank H., and Daniel R. Fischel. 1991. *The Economic Structure of Corporate Law*. Cambridge MA: Harvard University Press.
- Ellinger, Peter. 2000. "Negotiable Instruments," chapter 4 in Jacob S. Ziegel, chief ed., *Commercial Transactions and Institutions*, Vol. 9, in *International Encyclopedia of Comparative Law*. Tubingen: Mohr Siebeck.
- English Registration Act. 1844. "An Act for the Registration, Incorporation, and Regulation of Joint Stock Companies. (5th September 1844)," *A Collection of the Public General Statutes Passed in the Seventh and Eighth Year of the Reign of her Majesty Queen Victoria, 1844*. London: Owen Richards.

- Epstein, Richard A. 2004. "Reflections on the Historical Origins and Economic Structure of the Law Merchant," 5 *Chicago Journal of International Law* 1-20.
- FCEN, Financial Crimes Enforcement Network. 2006. *The Role of Domestic Shell Companies in Financial Crime and Money Laundering: Limited Liability Companies*. Washington, DC: Department of the Treasury (http://fincen.gov/LLCAssessment_FINAL.pdf, visited 14 May 2009).
- Fernández del Pozo, Luis. 2008. "La publicidad registral de las sociedades civiles profesionales en el Registro Mercantil," 267 *Revista de Derecho Mercantil* 7-59.
- Freedeman, Charles E. 1979. *Joint-Stock Enterprise in France, 1807-1867: From Privileged Company to Modern Corporation*. Chapel Hill: The University of North Carolina Press.
- GAO, U.S. Government Accountability Office. 2006. *Company Formations: Minimal Ownership Information Is Collected and Available*, Report to the Permanent Subcommittee on Investigations, Committee on Homeland Security and Governmental Affairs, U.S. Senate, GAO.06-376 (<http://www.gao.gov/new.items/d06376.pdf>, visited September 24, 2009).
- Garrigues, Joaquín. 1943. *Instituciones de Derecho Mercantil*. Madrid: S. Aguirre.
- Getzler, Joshua, and Mike Macnair. 2005. "The Firm as an Entity before the Companies Acts: Asset Partitioning by Private Law," in Paul Brandt, Kevin Costello and W.N. Osborough, eds., *Adventures of the Law: Proceedings of the 16th British Legal History Conference—Dublin, 2003*. Dublin: Four Courts Press, 267-88.
- Girón Tena, José. 1955. "Las sociedades irregulares," *Anuario de Derecho Civil*, tome 4, 1951, reproduced in *Estudios de Derecho Mercantil*. Madrid: Editorial Revista de Derecho Privado, 125-201.
- González Huebra, Pablo. 1867. *Curso de Derecho Mercantil*, 3rd ed. Madrid: Librería Sánchez.
- Granovetter, Mark. 1985. "Economic Action and Social Structure: The Problem of Embeddedness," 91 *American Journal of Sociology* 481-510.
- Greif, Avner. 2002. "Institutional Foundations of Impersonal Exchange: From Communal to Individual Responsibility," 158 *Journal of Institutional and Theoretical Economics* 168-204.
- Greif, Avner. 2004. "Impersonal Exchange without Impartial Law: The Community Responsibility System," 5 *Chicago Journal of International Law* 109-38.
- Greif, Avner. 2006. "The Birth of Impersonal Exchange: The Community Responsibility System and Impartial Justice," 20 *Journal of Economic Perspectives* 221-36.
- Grossfeld, Bernhard. 1973. *Management Control of Marketable Share Companies*, chapter 3 in Alfred Conard, chief ed., *Business and Private Organizations*, Vol. 4 in *International Encyclopedia of Comparative Law*. Tübingen: Mohr Siebeck.
- Grossman, Sanford J., and Oliver Hart. 1986. "The Costs and Benefits of Ownership: A Theory of Lateral and Vertical Integration," 94 *Journal of Political Economy* 691-719.

- Gruson, Michael, and Stephan Hutter, eds. 1993. *Acquisition of Shares in a Foreign Country: Substantive Law and Legal Opinions*. London: Graham & Trotman and International Bar Association.
- Hansmann, Henry, and Reinier Kraakman. 2000. "The Essential Role of Organizational Law," 110 *Yale Law Journal* 387-440.
- Hansmann, Henry, and Reinier Kraakman. 2002. "Property, Contract, and Verification: The *Numerus Clausus* Problem and the Divisibility of Rights," 31 *Journal of Legal Studies* S373-S420.
- Hansmann, Henry, Reinier H. Kraakman and Richard C. Squire. 2006. "Law and the Rise of the Firm," 119 *Harvard Law Review* 1333-403.
- Harris, Ron. 2000. *Industrializing English Law: Entrepreneurship and Business Organization, 1720-1844*. Cambridge: Cambridge University Press.
- Hayek, Friedrich A. von. 1982. *Law, Legislation, and Liberty: A New Statement of the Liberal Principles of Justice and Political Economy*. Chicago: University of Chicago Press, 1973-1979. Reprint edition, London: Routledge & Kegan Paul (page references are to reprint edition).
- Iacobucci, Edward M., and George G. Triantis. 2007. "Economic and Legal Boundaries of Firms," 93 *Virginia Law Review* 515-70.
- Jensen, Michael C., and William H. Meckling. 1976. "Theory of Firm: Managerial Behavior, Agency Costs and Ownership Structure," 3 *Journal of Financial Economics* 305-60.
- Kadens, Emily. 2004. "Order within Law, Variety within Custom: The Character of the Medieval Merchant Law," 5 *Chicago Journal of International Law* 39-66.
- Ker, Henry Bellenden. 1837. *Report on the Law of Partnership*. London: House of Commons.
- Kessler, Amalia D. 2007. *A Revolution in Commerce: The Parisian Merchant Court and the Rise of Commercial Society in Eighteenth-Century France*. New Haven and London: Yale University Press.
- Klein, Benjamin, Robert G. Crawford, and Armen A. Alchian. 1978. "Vertical Integration, Appropriable Rents, and the Competitive Contracting Process," 21 *Journal of Law and Economics* 297-326.
- Kötz, Hein. 1992. *Rights of Third Parties: Third Party Beneficiaries and Assignment*, chapter 13 in Arthur von Mehren, chief ed., *Contracts in General*, Vol. 7 in *International Encyclopedia of Comparative Law*. Tubingen: Mohr Siebeck.
- Lamoreaux, Naomi R. 1995. "Constructing Firms: Partnerships and Alternative Contractual Arrangements in Early-Nineteenth-Century American Business," 24 *Business and Economic History* 43-71.
- Lamoreaux, Naomi R., and Jean-Laurent Rosenthal. 2005. "Legal Regime and Contractual Flexibility: A Comparison of Business's Organizational Choices in France and the United States during the Era of Industrialization," 7 *American Law and Economics Review* 28-61.

- Lamoreaux, Naomi R., and Jean-Laurent Rosenthal. 2006. "Entity Shielding and the Development of Business Forms: A Comparative Perspective," 119 *Harvard Law Review Forum* 238-45.
- Landes, William M., and Richard A. Posner. 1996. "The Economics of Legal Disputes Over the Ownership of Works of Art and Other Collectibles," in Victor A. Ginsburgh and Pierre-Michel Menger, eds., *Economics of the Arts: Selected Essays*. Amsterdam: North Holland, 177-220.
- Levmore, Saul. 1987. "Variety and Uniformity in the Treatment of the Good-Faith Purchaser," 16 *Journal of Legal Studies* 43-65.
- Lutter, Marcus. 1997. "Limited Liability Companies and Private Companies," chapter 2 in Detlev Vagts, chief ed., *Business and Private Organizations*, Vol. 13, in *International Encyclopedia of Comparative Law*. Tubingen: Mohr Siebeck.
- Mannig, Bayless, and James Hanks, Jr. 1990. *Legal Capital*, 3rd ed. Westbury, NY: The Foundation Press.
- Masten, Scott E. 1988. "A Legal Basis for the Firm," 4 *Journal of Law, Economics, and Organization* 181-98.
- Medina, Barak. 2003. "Augmenting the Value of Ownership by Protecting it only Partially: The 'Market-Overt' Rule Revisited," 19 *Journal of Law, Economics, and Organization* 343-72.
- Méndez González, Fernando P. 2007. "La inscripción como título valor o el valor de la inscripción como título," 83 *Revista Crítica de Derecho Inmobiliario* 2059-164.
- Menéndez Menéndez, Aurelio. 1959. "Auxiliares del empresario," 27 *Revista de Derecho Mercantil* 269-305.
- Menéndez Menéndez, Aurelio. 1990. "El Registro Mercantil español: Formación y desarrollo," in Ilustre Colegio de Registradores de la Propiedad y Mercantiles de España, Centro de Estudios Hipotecarios, *Leyes Hipotecarias y Registrales de España: Fuentes y Evolución (tome 5, Vol. 1): Registro Mercantil*. Madrid: Castalia, 9-140.
- Merrill, Thomas W., and Henry E. Smith. 2000. "Optimal Standardization in the Law of Property: The *Numerus Clausus* Principle," 110 *Yale Law Journal* 1-70.
- Merryman, John Henry. 2008. "The Good Faith Acquisition of Stolen Art," in John Jackson, Maximo Langer and Peter Tillers, eds., *Crime, Procedure and Evidence in a Comparative Context: Essays in Honour of Professor Mirjan Damaska*. Oxford: Hart Publishing, 275-94.
- MLTAG, Money Laundering Threat Assessment Working Group. 2005. *U. S. Laundering Threat Assessment*. Washington, DC: Department of the Treasury (<http://www.ustreas.gov/offices/enforcement/pdf/mlta.pdf>, visited 14 May 2009).
- Murray, Daniel E. 1960. "Sale in Market Overt," 9 *The International and Comparative Law Quarterly* 24-52.
- NASS, National Association of Secretaries of State. 2007. "NASS Survey on Company Formation Processes in the States" (http://nass.org/index.php?option=com_docman&task=doc_download&gid=101, visited 25 September 2009).

- North, Douglas C., and Robert P. Thomas. 1973. *The Rise of the Western World: A New Economic History*. Cambridge: Cambridge University Press.
- North, Douglass C. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- North, Douglass C., John Joseph Wallis, and Barry R. Weingast. 2009. *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*. Cambridge: Cambridge University Press.
- Petit, Carlos. 1979. *La compañía mercantil bajo el régimen de las ordenanzas del Consulado de Bilbao 1737-1829*. Seville: Universidad de Sevilla.
- Posner, Richard A. 1976. "The Rights of Creditors of Affiliated Corporations," 43 *University of Chicago Law Review* 499-526.
- Posner, Richard A. 1998. *Economic Analysis of Law*, 5th ed. New York: Aspen.
- Ramseyer, J. Mark. 1998. "Corporate Law," in Peter Newman, ed., *The New Palgrave Dictionary of Economics and the Law*, Vol. 1. London: Macmillan, 503-10.
- Rose, Carol M. 1988. "Crystals and Mud in Property Law," 40 *Stanford Law Review* 577-610.
- Rubin Edward L. 1995. "The Non-Judicial Life of Contract: Beyond the Shadow of the Law," 90 *Northwestern University Law Review* 107-31.
- Sauveplanne, Jean-Georges. 1965. "The Protection of the Bona Fide Purchaser of Corporeal Movables in Comparative Law," 29 *Rebels Zeitschrift* 651-93.
- Seabright, Paul. 2004. *The Company of Strangers: A Natural History of Economic Life*. Princeton and Oxford: Princeton University Press.
- Simon, Herbert A. 1962. "The Architecture of Complexity," 106 *Proceedings of the American Philosophical Society* 467-82.
- Smith, Henry E. 2006. "Modularity in Contracts: Boilerplate and Information Flow," 104 *University of Michigan Law Review* 1175-222.
- Smith, Henry E. 2007. "Intellectual Property as Property: Delineating Entitlements in Information," 116 *Yale Law Journal* 1742-823.
- Smith, Henry E. 2008. "Governing Water: The Semicommons of Fluid Property Rights," 50 *Arizona Law Review*, 445-78.
- Smith, Henry E. 2009. "Modularity in Property, Intellectual Property, and Organizations," Harvard Law School, September 17.
- Supple, Barry. 1977. "The Nature of Enterprise," in E.E. Rich and C.H. Wilson, eds., *The Cambridge Economic History of Europe*, Vol. 5, 393-461.
- Symposium. 1989. *Contractual Freedom in Corporate Law*, 89 *Columbia Law Review*, 1395-773.
- Tallon, Denis. 1983. "Civil Law and Commercial Law," chapter 2 in Konrad Zweigert, chief ed., *Specific Contracts*, Vol. 8, in *International Encyclopedia of Comparative Law*. Tübingen: Mohr Siebeck.

- Weinberg, Harold R. 1980. "Sales Law, Economics, and the Negotiability of Goods," 9 *Journal of Legal Studies* 569-92.
- Williamson, Oliver E. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press.
- Williamson, Oliver E. 1985. *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*. New York: The Free Press.
- Williamson, Oliver E. 1991. "Comparative Economic Organization: The Analysis of Discrete Structural Alternatives," 36 *Administrative Sciences Quarterly* 269-96.
- Williamson, Oliver E. 1996. "Revisiting Legal Realism: The Law, Economics, and Organization Perspective," 5 *Industrial and Corporate Change* 383-420.
- Williamson, Oliver E. 2005. "Why Law, Economics, and Organization?" 1 *Annual Review of Law and Social Science* 369-96.
- Winter, Jaap (Chairman). 2002. Report of the High Level Group of Company Law Experts on a Modern Regulatory Framework for Company Law in Europe. Brussels: European Commission.
- World Bank. 2003-2009. *Doing Business*. Washington DC: World Bank.
- Zingales, Luigi, 2004. "The Costs and Benefits of Financial Market Regulation," *ECGI - Law Working Paper* 21 (<http://ssrn.com/abstract=536682>, visited 4 February 2009).