Registries

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Abstract

Governments and international development agencies often fail in their efforts to build and reform property and company registries. They implement misguided policies rooted in a poor understanding of the role that registries play in the modern economy. This work aims to remedy this situation by first presenting a theory of registries as market-enabling institutions which, by making private contracts verifiable by judges, enable truly impersonal (i.e., asset-based, *in rem*) trade without endangering property enforcement. The theory is then applied to discuss and guide major policy decisions that reformers face in the areas of land titling and business formalization, emphasizing the principle of registry independence, identifying courts as the key users of registries, clarifying the main choices of titling and formalization projects, and pointing out the presence of diseconomies of scope between contractual and administrative registries.

Keywords: property rights, land policy, land titling, registries, transaction costs, foreclosure crisis, business formalization, impersonal exchange.

JEL: D23, K11, K12, L85, G38, H41, O17, P48.

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1. Introduction

1.1. The Prevalence of Institutional Failure even in the USA

In the fall of 2010, the main US mortgage lenders all but stopped foreclosure proceedings against their defaulting debtors because of lawsuits alleging that they had improperly registered mortgage transactions and therefore lacked a legal right to foreclosure (COP 2010). When the ensuing crisis threatened another collapse of the financial system, which was still recovering from the 2008 meltdown, attentive observers started realizing that contractual registries play a key role in a modern economy. Their lack of previous awareness is far from unique. For more than a century, developed nations have been enjoying these typical institutions of the liberal state, which provide the legal infrastructure for impersonal markets, such as mortgage lending and securitization. Analysts and policymakers have taken them for granted, focusing their attention instead on newer welfare-state interventions, such as pensions or healthcare. Their disregard for the institutional foundations of markets goes a long way toward explaining why most of the US registries are stunted, shaky institutions whose functions are partly provided by private palliatives. In land, the public county record offices have been unable to keep up with market demands for speed and uniform legal assurance. Palliative solutions such as title insurance duplicate costs only to provide incomplete personal guarantees or even multiply costs, as Mortgage Electronic Registry Systems (MERS) did by being unable to safely and comprehensively record mortgage loan assignments. In company registries, the lack of information on beneficial ownership means that they are of little help in fighting fraud, and the sparse legal review means that US

transactions require more extensive legal opinions (Arruñada and Manzanares 2014). In patents, a speed-oriented US Patent and Trademark Office combines with a strongly motivated patent bar to cause an upsurge of litigation of arguably dangerous consequences for innovation.

The 2008 financial crisis unveiled yet another case, as it was exacerbated by weaknesses in the markets for financial derivatives, related to a possible deficit in central clearinghouses and organized exchanges, which also commoditize transactions by eliminating personal characteristics, therefore performing similar functions to contractual registries. Traders in organized exchanges are indifferent about their counterparties' solvency because they do not deal with each other but with the exchange, in contrast to traders in informal over-the-counter (OTC) transactions (Telser 1981; Pirrong 2014). Similarly, acquirers of real estate need to worry mainly about the content of the register. In a sense, they do not deal with sellers but with the registry. Unsurprisingly, similar private interests are involved, as both the dealers selling OTC derivatives and conveyancers and title insurers examining land-title quality and customizing title guarantees are displaced by the more industrial production of, respectively, exchange trading of financial derivatives and truly real property rights. To overcome the collective action problem in the creation of both organized exchanges and contractual registries, more effective public interventions, freer from private interests, are necessary.

Behind these weaknesses in public registries lies a misunderstanding about the role of registries in the economy and the proper role of the state in providing services for the registration of private contracts. For markets to function, it is often thought that a minimal state is good. This confuses the liberal-state institutions *supporting* markets with the welfare-state institutions *replacing* markets. Registries are conceived as unnecessary barriers instead of as facilitators of transactions. Such disregard for registries' value and their organizational

complexity leads to policies that, by minimizing public registries, give way to the overgrowth of industries providing ineffective palliative services, such as those of lawyers, notaries, title insurers, or financial dealers.

The alternative view developed in the book *Institutional Foundations of Impersonal Exchange: Theory and Policy of Contractual Registries* (Arruñada 2012a) and presented here is that, far from being unnecessary burdens on market participants or, at most, trivial and easy-to-build depositories of data, functional property and business registries are valuable market facilitators. They are costly and fragile institutions that must be well designed and wisely managed to be effective in making private contracts judicially verifiable, thus reducing transaction costs and making truly impersonal (that is, asset-based) exchange possible.

In the rest of this article, I will describe the current situation, present the book's main argument and outline its contents and policy conclusions.

1.2. Misguided Titling and Formalization Policy

Discussions on economic development have lately focused on the role of institutions in protecting property rights and reducing transaction costs, especially after the traditional hypothesis linking secure property rights and growth (e.g., Smith 1776) was reformulated by North (1981, 1990) and tested by, among many others, Knack and Keefer (1995); Chong and Calderón (2000); Acemoglu, Johnson, and Robinson (2001); and Rodrik, Subramanian, and Trebbi (2002). In particular, the idea has taken root that development would benefit from facilitating access to legality. It is thought that, if those in possession of even small buildings and plots of land have good titles, they will enjoy better incentives to invest and can use these

real assets as collateral for credit. Similarly, if business entrepreneurs are able to "formalize" (for our purposes, publicly register) their firms easily, they will benefit from operating them as legal entities. For instance, they will have access to the courts for enforcing contracts and settling disputes, and will also be able to obtain credit and invest more. Consequently, firms will grow faster and be more productive.

These simple ideas, inspired by the works of Ronald Coase, Douglass North, and Oliver Williamson, and reminiscent of widespread arguments in the most advanced economies of the nineteenth century, have motivated thousands of reform and aid programs in developing countries, where the state of legal institutions is often considered to be inadequate. Some authors have even held that providing better institutions would in itself lead to greater development. Similar ideas have also influenced reform policy in developed countries, where some of the institutions for registering property and businesses have become outdated or captured by private interests. In both cases, simplifying administrative procedures was expected to have considerable impact on economic activity.

However, outcomes from these efforts in institutional building and reform have often been disappointing, failing to fulfill their promise of economic growth and even that of improving the institutional environment. Common mistakes have often been committed, such as seeing registries' controls as mere entry barriers to legality,[1] forgetting that they must be reliable to be socially useful. This has often led to reforms that emphasize quantity and speed, thereby sacrificing quality and making registries speedy but useless (Arruñada 2007). Of course, registries, like any other institution, can be used to capture rents and deter

[1] E.g., De Soto et al. (1986), Djankov et al. (2002), and the "Doing Business" project (World Bank, 2004–13).

competition. This possibility must be considered and avoided, but it only imposes one more policy and organizational constraint—it does not define registries' function and should not therefore be treated as their only design factor.

In other cases, the error comes from mixing up cause and consequence when assuming that informality is causing poverty instead of the other way around (e..g., De Soto *et al*. 1986). This has led, for instance, to the building of universal land titling systems that spend huge amounts to little effect, as they usually miss key objectives, such as the use of land as collateral for credit.[2] In fact, given that formalization incurs fixed costs, informality may be appropriate for low-value assets and small, incipient firms. Registries are not silver bullets for development. Decision on the creation and coverage of registries must be guided by considerations of costs and benefits, which depend on the particular circumstances of each country.

These failures are rooted in a poor understanding of the role of registries and, consequently, of the demand for them and of their organizational requirements. The following pages aim to fill this gap by, first, developing a theory of contractual registries and, second, using this theory to analyze the main dilemmas posed by the creation and organization of registries.

[2] See, e.g., Besley (1998), Bruce at al. (2007) and Deininger and Feder (2009).

2. The Role of Public Registries

Opportunities for economic development are greater when trade is impersonal instead of limited to known people (North and Thomas 1973). To be fully impersonal, contractual performance must be independent of parties' characteristics, including not only their reputation and wealth but also their legal authority to contract.[3] Such fully impersonal trade therefore requires contractual enforcement to be based on assets, meaning that buyers do not merely acquire a personal claim on the seller but a real right on the specific asset. This poses a conflict between those holding and those acquiring property rights, between owners and buyers: more precisely, between owners seen retrospectively as buyers and owners seen prospectively as potential victims of future expropriation by, e.g., a fraudulent seller. In short, making contractual performance hinge on assets reduces transaction costs but may endanger the security of property. Overcoming this conflict is the role of contractual registries, a crucial role, because both secure property and low transaction costs are necessary conditions for economic development and, for some markets and transactions, would collide in the absence of registries.

The nature and importance of this conflict can be better identified by considering legal remedies. Property rights are the foundation of economic incentives and prosperity. It therefore makes sense to enforce them strictly, so that in case of conflict goods are always returned to their owners unless they had granted their consent—treating them as rights *in rem* (from the Latin word *res*, thing). But such *in rem* enforcement would increase transaction

[3] Other concepts of impersonal exchange use less stringent requirements, such as, mainly, trade in the shadow of an independent court (North 1990:34–35), but also trade with strangers, equal treatment of market participants, presence of assurance intermediaries, or posted prices available to any buyers (Arruñada 2012a:15–18).

costs by worsening the information asymmetry suffered by acquirers of all sorts of rights, who would always have to gather the consent of the original owners, whom they often cannot even identify. Enforcing rights *in rem* might therefore endanger trade. It would also endanger specialization, because specialization is often based on having agents acting as owners' representatives, and acquirers would have reasons to doubt the legal authority of sellers. Understandably, economic development therefore requires this conflict between property enforcement and transaction costs to be optimized, so that both owners and acquirers are efficiently protected. Protecting owners' property rights encourages investment, and reducing the transaction costs faced by acquirers encourages them to trade impersonally and thus improve the allocation and specialization of resources. Owners' consent must be preserved but enforced in a way that makes trade possible.

Achieving both goals is straightforward when the content of private contracts (such as, for instance, previous ownership transfers or representation proxies) is easy to verify: all it requires are clear adjudication rules between owners and acquirers. (Notice that contract verifiability refers here not to the parties' *performance* on a given contract, as is usual in the economic analysis of contracts, but to the *content* of the contract itself.) This is what usually happens in commercial trade of movable goods, for which Western law has been able to effectively overcome the conflict between property enforcement and transaction costs since at least the late Middle Ages. Generally speaking, when one firm gives possession of movable goods to another, the legal system understands that it authorizes the receiving firm to sell the goods. Third parties acquiring from a firm are therefore secure and do not need to worry about the authority of the seller. But owners are also protected because it is they who choose the seller. And they cannot renege from their decision because the transaction produces a verifiable consequence: the transfer of possession.

Protecting third parties without damaging owners is harder when contracts remain private. This is what happens in transactions such as mortgages or those involving companies, which lack verifiable consequences. History suggests that achieving both goals in these cases requires effective, independent, public registration of private contracts or property rights. Only such reliable registers can ensure that owners have publicized their claims (so that acquirers can find out about them before contracting) or have consented voluntarily to a weakening of their rights with respect to innocent acquirers (so that owners cannot opportunistically renege from such consent). When purchasers of land and mortgage lenders rely for their contracts on the information filed with the registry, developed legal systems protect their acquisitions *in rem* (that is, grant them the asset or a priority on it) even against unregistered owners. A similar function is performed by company registries with respect to personal and corporate creditors, so that, for instance, if a company has remained unregistered this should not damage third parties. In both cases, these protections in fact eliminate the information disadvantage suffered by third parties and thus reduce transaction costs, making trade easier. Furthermore, well-functioning registries achieve these feats without damaging the property rights of landowners or shareholders.

This role of contractual registries can be generalized by considering that most economic transactions are interrelated sequentially. In the most simple sequence, with only two transactions, one or several “principals”—such as owners, employers, shareholders, creditors, and the like—voluntarily contract first with one or several economic “agents”—possessors, employees, company directors, and managers—in an “originative” transaction. Second, the agent then contracts “subsequent” transactions with third parties. Understandably, it is necessary to optimize the total costs of transacting, considering both originative and subsequent contracts.

These sequential exchanges offer the benefits of specialization in the tasks of principals and agents—between landowners and farmers, employers and employees, shareholders and managers, and so on. But they also give rise to substantial transaction costs, because, when third parties contract with the agent, they suffer information asymmetry regarding not only contractual performance as it is usually understood (referring to the material quality of the goods or services being transacted) but also the legal effects of 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 the impersonal transactions that are necessary to fully exploit the advantages of specialization.

Moreover, principals also face a serious commitment problem when trying to avoid this asymmetry because their incentives change after the third party has entered the subsequent contract. For instance, before contracting, principals have an interest in third parties being convinced that agents have proper authority, but, if the business turns out badly, principals will be inclined to deny such authority. This is why 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.

Judges can adjudicate in such disputes in favor of the principal or the third party. I refer to favoring the third party as enforcing "contract rules," as opposed to the seemingly more natural "property rules" that favor the principal. This terminology considers the solution in which priority is granted according to legal property as a property rule, and the alternative in

which it is granted according to the transfer contract as a contract rule. Whatever the terms,[4] the effects of these rules are clear. Take a simple case in which an agent exceeds his legal powers when selling a good to an innocent third party (i.e., a good-faith party who is uninformed about the matter in question). If judges apply the "property rule" that no one can transfer what he does not have, they rule to have the sold good returned to the "original owner," and the innocent third party wins a mere claim against the agent. Owners will feel secure with respect to this contingency, because this outcome maximizes property enforcement, but it worsens the information asymmetry suffered by all potential third parties with respect to legal title.

Conversely, judges 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 minimize information asymmetry for potential third parties but will also weaken property enforcement, making owners feel insecure. Enforcing contract rules thus obviates the information asymmetry usually suffered by third parties and encourages them to trade. In so doing, contract rules transform the object of complex transactions into legal commodities that can be traded easily, thus extending the type of impersonal transaction that characterizes modern markets. However, contract rules weaken the principals' property rights, endangering investment and specialization in the tasks of principals and agents.

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[4] Some confusion is inescapable, given that both property and contract rights are allocated in all cases. In any case, these rules are similar but distinct from the "property" and "liability" rules defined in the influential work by Calabresi and Melamed (1972) because, instead of a legal taking that affects only two parties, here the rules are defined in the context of a three-party sequence of two transactions (Arruñada 2012a:37–38). 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, which thus arguably has little to do with a right *in rem* (Merrill and Smith 2001).

The choice of rule therefore involves a tricky conflict between property enforcement and transaction costs. This conflict puzzles some economists because, adopting a simplistic view of Coase (1960), most economic analyses of property rights disregard both the key advantage that property rights (that is, *in rem* rights) provide to rightholders in terms of enhanced enforcement, and the difficulties they pose to acquirers in terms of information asymmetry about legal title (Arruñada 2012b). This simplification makes sense because most of the economic literature on property rights has been interested in problems such as violence, externalities, and the tragedy of the commons,[5] which can be fruitfully analyzed without considering which legal remedies are made available to the rightholder in case of a dispute or, in particular, which type of protection—real or personal—the law gives to different entitlements.[6]

These remedies are of two types: the rightholder gets either a real right, a right *in rem*, or a personal right, a right *in personam*—in legal terms these are called, respectively, property and contract rights. The enforceability and thus the value of these two types of right are often markedly different, because, while rights *in personam* are only valid against specific persons, *inter partes*, rights *in rem* are valid against all individuals, *erga omnes*. The latter, therefore,

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[5] See generally North and Thomas (1973), North (1981, 1990), and North, Wallis, and Weingast (2009), and, for specific applications, the works cited in Arruñada (2012a:236 n. 13).

[6] Notice that distinguishing between "economic" rights and "legal" rights (e.g., Barzel 1997:3–4, 2002:6, 186), however useful this may be in a single-exchange context, is inadequate for understanding the problems inherent in sequential exchange, in which this distinction loses its meaning because the allegedly economic nature (i.e., the "ability to enjoy", following Alchian 1965) of the rights acquired in the subsequent transaction fully depends on the legal status of the originative transaction (in particular, on the seller's title). In other terms, Barzel disregards the *in rem* dimension of property, as pointed out by Merrill and Smith (2001:376–78). This leads Barzel to see property registries as supporters of contract adjudication in single exchanges (2002:168–69, 185–86, 196), a type of transaction for which they are, however, generally unnecessary.

provide the strongest possible enforcement: without the consent of the rightholder, the rights *in rem* remain unaffected. However, as already mentioned, this makes transactions more risky for acquirers, endangering impersonal exchange. Without the supporting institutions, which are the object of this book, enforcing rights *in rem* is incompatible with the multiplication of rights on the same assets and the high frequency of transactions needed today for efficiently specializing and allocating resources. The function of registries is precisely to make rights *in rem* viable without increasing transaction costs.

To achieve this feat of overcoming the conflict between *in rem* property enforcement and transaction costs, expanding the set of viable contractual opportunities without damaging property rights, the law applies property or contract rules depending on conditions that provide proper safeguards. In essence, for judges to apply property rules, which favor original owners, the latter must have publicized their claims or rights, which should protect acquirers. That is, owners can opt for a property rule to make their rights safer while, thanks to publicity, third parties suffer little information asymmetry. Conversely, for judges to apply contract rules, which favor acquirers, original owners must have granted their consent, which should protect them. That is, when owners—in general, principals—choose a contract rule, third parties' rights are safe, whereas owners' rights are weaker. But this weakening of property is limited, since owners choose the agent whom they entrust with possession or appoint as their representative, this being the moment when they implicitly "choose" a contract rule

Smooth operation of this conditional application of rules poses varying degrees of difficulty for different transactions. The difficulty is minor when the originative 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 efficient contract rules to be applied.

The difficulty is greater when the originative transaction 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 verifiable. 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, defining contract rules is not enough because applying them requires information on originative contracts, whose content, in principle, is not always verifiable. To make it verifiable, it is necessary to enter and preserve at least the key data in a public registry. The next section analyzes how registries can be organized.

3. Policy Implications

By making the content of private originative contracts verifiable, public registries allow courts to apply market-friendly rules to subsequent contracts, thus eliminating parties' information asymmetry and enabling truly impersonal exchange, in which parties trade property, *in rem*, rights and not merely contract, *in personam*, rights. Understanding this essential role of registries should guide decisions on creating, developing, and regulating them.

3.1. Need for Independence and "Public Ordering"

The first practical implication derives directly from the theory of sequential exchange: given the presence of third parties who are strangers to the contract, registries must be independent of all the parties to both originative and subsequent transactions. In particular, registries must be free of corruption; not only the mild corruption that leads to selectively speeding up the processing of documents but also the much more serious practice of faking the date when the documents are filed, which makes registry certificates useless as proof. When such incidents are suspected to be frequent, judges will disregard registry decisions and certificates. Economic agents will soon follow judges, relying instead on personal safeguards, which will drastically limit their trade and specialization opportunities. They will also have little interest in registration because it will not save on transaction costs but will increase still further their tax and regulatory burdens.

This independence principle constrains organizational solutions. Free choice by registry users must be limited to services that do not affect third parties, that is, complementary services (such as those provided by lawyers, notaries, conveyancers or surveyors) when properly reviewed by independent registrars. Furthermore, private provision of palliative services (not only traditional conveyancing but also title insurance or mortgage registries such as MERS) lacks the independence necessary to be granted public effects so it cannot enable impersonal exchange. In other words, registries produce true property, *in rem*, rights which are valid against everybody and therefore affect not only the transacting parties but also third parties. Given that these *in rem* rights oblige everybody, acquiring them cannot be achieved by purely private contracting between parties but must include a public intervention to purge or reallocate them (Arruñada 2012b:131–34). The effectiveness of private ordering is intrinsically limited to *in personam* rights.

This does not mean, however, that registries interfere with private property: it only means that they are required to make *in rem* enforcement of private property viable, and this holds equally for all types of registries and titling solutions. More or less active registries, with more or less intervention by judges, only alter the timing and completeness of the reallocation of rights implicit in any legal purge of property rights. The degree of such intervention is determined by the desired degree of *in rem* enforcement, and is only of an enabling type. Even in the extreme case when property registration is controlled by registrars, ultimate decisions are made by rightholders when giving their consent. It is true that privacy and recordation allow conveying parties more discretion on timing and heavier reliance on privately-produced information so they seem to rely more on private decisions, but this perception is deceptive. Not only privately held, unrecorded titles but even recorded titles are in fact mere claims rather than rights. They retain greater *in personam* content, given the survival of conflicting claims *in rem*; and additional intervention by the court, also subject to the possibility of allocation failure, would be required to transform such claims into property rights at an *in rem* level equivalent to that provided by property registration.

3.2. Identifying the Key Users of Registry Services

Property and business registries provide a valuable service only when they are sufficiently independent and reliable for judges to base judicial decisions on registry information. Only then can economic agents also rely on registries for contracting, thus reducing their information asymmetry and facilitating impersonal transactions.

This simple fact tell us that, when creating, reforming and managing registries, judges must be considered the key users. Of course, judges only interact with registries occasionally,

as a consequence of litigation. But they are the fundamental last-resort users because the weight that judges give to the registry in their decisions determines the value of the registry for all market participants. Moreover, considering judges as key users implicitly treats all affected rightholders as users even when they are not filing anything but are passive or potential third parties to transactions initiated by others. This is easier to see in systems of property registration or "registries of rights" in which, before accepting a filing for registration, the registrar must make sure it does not violate the rights *in rem* of third parties. Registration failure at this crucial step would damage the interests of any third parties holding potentially affected rights. However, similar effects might ensue for third parties in systems of property recordation, given that it is the filing date that determines priorities and therefore the effects for third parties. Understandably, judges dislike damaging innocent rightholders and thus would be wary of registries' failure. If frequent, judges might even disregard the registry. Therefore, focusing on the opinion of judges is an indirect way of taking into account the holders of potentially affected rights, who would otherwise be hard to identify and may know little about such filings.

Unfortunately, many reform projects totally overlook judges. When diagnosing the situation before a reform is planned or when evaluating its achievements after completion, reformers often seek the opinions of registry filers, such as owners and entrepreneurs, but rarely those of judges. This behavior would be equivalent in a manufacturing process to surveying the opinion of suppliers while disregarding clients. This fixation on direct filers amounts to taking registry filings as an end in themselves, forgetting that filings, together with all other registry processes, must serve to facilitate future, subsequent contracts, which will only be possible if registry outputs are truly taken by judges as judicial inputs.

By focusing on filing parties, reformers therefore risk setting wrong priorities, minimizing initial private costs, and neglecting not only value but also future and public costs. In contrast, paying heed to judges will draw reformers nearer to their efficiency goal by reminding them that, if forced to simplify the efficient balancing of costs and benefits, the priority should not be to reduce the private, initial cost of formalization—a cost paid only once—but, rather, to reduce recurring transaction costs in the future. Although most of these future transaction costs are "opportunity costs" related to unprofitable exchanges that fail to materialize, and thus are hard to see, they are recurring and are usually much larger than the costs of initial formalization. Therefore, as a first approximation, it often makes sense to grant them priority.

3.3. Avoiding Recurrent Errors in Titling and Formalization Projects

If registries are considered to optimize the tradeoff between property enforcement and transaction costs, then it is possible to avoid some of the recurring errors that have plagued titling and formalization projects. These failures seem diverse but they all share a proclivity to improperly consider the role of registries in sequential exchange. Such projects tend to either exaggerate the demand for subsequent transactions—thus justifying their own existence—, or to forget about subsequent transactions altogether—thus supporting dubious administrative simplification initiatives.

These mistakes serve a common purpose: to expand the demand for the aid and development industry, which tends to sell land titling and business formalization as a silver bullet for economic development instead of as one more contributing factor. Some authors even consider informality as the main cause of poverty, taking correlation between these two

phenomena as causation, when both are most likely caused by common and complexly interrelated variables. Also, titling and business formalization projects play the political game by prioritizing users' and owners' short-term interests, instead of the indirect, longer-term and less visible benefits that they could produce if they were to emphasize judges' opinions, which, as explained above, would amount to considering third-parties' interests and would thus enable subsequent transactions and impersonal trade.

Many land titling projects seem to be considering sequential exchange when they claim that a major objective is to "mobilize dead capital," that is, to allow land to enter the market and to be used as collateral for credit. They often take for granted the existence of a substantial demand for subsequent transactions and emphasize the importance of unclear titles for blocking them. However, the demand for transactions hinges not only on economic opportunities for trade but also on enforceability, and neither of these can be taken for granted. Trade opportunities depend on all sorts of environmental factors often related to the risks of property rights with respect to state action. Even without considering expropriation risks, the importance of risks and transaction costs related to titling often pales compared to those caused by taxes. And enforceability is often lacking, especially for derivative transactions. For instance, real property registries are necessary for using land as collateral for credit but, whatever the quality of registries, the demand for collateralized credit does not materialize if mortgages are not enforceable, as is the case in many closely-knit local communities.

Furthermore, titling projects often choose to exaggerate the demand for titling and, in particular, minimize the fact that difficulties to enforce foreclosures and repossessions makes land useless as security for credit, whatever the quality of legal titles. Consequently, they end up building unnecessary, premature and excessively large registries. Unneeded registries are

also created when titling and formalization projects are launched in countries lacking proper identification of persons. Such countries would benefit more from following a different sequence of reform, starting by making *in personam* rights viable through more modest and less costly policies, such as civil registries (Szreter 2007) as well as systematizing postal addresses and place names. Finally, registries are also questionable when used to provide legal security to squatters: instead of granting them registered titles, granting deeds seems to provide a similar degree of security and there is little demand for titling subsequent transactions. Typically in many of these projects, as exemplified by the Peruvian case (Arruñada 2012a:148–50), second transactions remain unregistered and there is little or no secured lending, often because of the difficulties to enforce repossessions by outsiders.

The overspending problem is compounded by the common practices of, first, making titling universal instead of selective, and, second, subsidizing most of the cost. Universal titling means not only that registries are created prematurely but also that land of little value is registered. Also, subsidies provide political support for the projects and eliminate any filtering of negative-value titling that would be achieved by relying on user fees. Lessons should be learnt from past experience. Historically, registries have been developed on a selective, demand-driven, fee-for-service basis, ensuring that the most valuable land is registered first, often at the time and in support of a sale or secured credit transaction. Lastly, titling projects also overspend hugely by including mapping and surveying components (Burns 2007), which are often useless and always unsustainable.

What many projects achieve, in the best of cases, is to improve security of ownership but without any proper consideration of the tradeoffs involved in terms of reducing the costs of subsequent transactions and doing so selectively, only for the most valuable land. They implicitly give priority to property enforcement (i.e., security of property for owners, mere

security of tenure) over transaction costs, forgetting that costly registries are not needed to secure tenure of low value land, for which possession is often sufficient, especially when supported by documentary evidence, which can usually be provided much more cheaply. This critique explains the recurrent failure of land titling projects based on universal instead of selective land titling, with the appalling result that no second transactions are registered because no secured credit is transacted and sales of titled land take place but remain mostly unregistered.

Similarly, disregard for the effect of registries on subsequent transactions also explains the emphasis placed by reform projects on simplifying business formalities without paying due attention to the reliability of registries' information and, in particular, to what judges think about the quality of such information. Such business formalization projects prioritize the interests of filers over those of judges and third parties, as mentioned in the preceding section. Instead, they aim to provide cheap and speedy formalization of businesses, often through single windows and one-stop shops, forgetting that business registries must provide a minimum of legal quality if they are to be useful in subsequent transactions. Land titling projects, meanwhile, often assume a demand for subsequent transactions that in fact does not exist. The errors are different but both policies lead to fruitless spending on building up excessively large and often low-quality registries that allow the aid and development industry to capture rents by showing some results in the short run but provide little if any benefit in the long run. All these features are consistent with a simple political economy explanation: these projects are designed to maximize their budget while paying little heed to their value. They spend hugely upfront in dubious areas (unnecessary registries, universal titling of low value land, mapping and surveying); disguise their cost to taxpayers by subsidizing users; and

create systems which, as a whole or in some of their most costly elements (e.g., mapping and surveying), are unsustainable.

Conversely, the theory developed here advises radically different criteria for selecting, designing and evaluating titling and business formalization projects.

First, when launching a new project, titling should not be sold as a sole driver of growth but as one more contributing factor. Careful attention should be paid to current contracting practices (especially the reliance on vicarious solutions, such as implementing secured credit through sales with repurchase agreements) in order to estimate the true demand for titling and to identify if it is opportune to spend resources on titling institutions. Similarly, the market price of shell companies provides a market estimate of the cost of business formalization, which must be used to locate the real barriers to entrepreneurship, which most often lie in taxation and administrative instead of corporate formalization.

Second, the priority when setting up new registries or reforming existing ones should be for them to provide reliable judicial inputs. Ensuring this evidentiary quality is generally more important than minimizing formalization costs, a common objective of reforms. Even if institutional efficiency depends on making the right tradeoffs of costs and benefits, including legal quality, the fact that only reliable, independent registries are able to reduce transaction costs should always be borne in mind.

Lastly, when evaluating such projects, attention should focus not on how many land parcels or business firms have been titled or formalized but on how many *subsequent* transactions (second sales, mortgages, new businesses) have taken place and what proportion of them has been formalized. In this context, arguments such as lack of information or education on the part of land owners, registry users, and, in general, market participants

should be seen as mere excuses and attempts to justify further useless expenditure by the titling bureaucracy. In fact, such arguments might be signaling the need to close down the whole project.

3.4. Danger of Integrating Contractual and Administrative Registries

My analysis has focused on "contractual" formalization: using public instruments such as registries to ensure contract verifiability and thus reduce private transaction costs and enable impersonal trade. Indeed, land and company registries are both considered "public" because they are open to everybody and are based on publicity. However, their function is essentially private in the sense that they reduce parties' transaction costs. Precisely because registration provides private benefits, governments have been prone to use the interest of individuals in registering their contracts to enforce "administrative" formalization, by requiring it before registration. For example, in many countries, buyers of land and founders of companies must traditionally pay land transfer and company incorporation taxes, respectively, before their property and corporate transactions can be registered. Moreover, the historic trend has been for these prerequisite of administrative formalization to extend to all sorts of obligations, such as social security registration, and issuance of land-use permits and business licenses.

However, the social value of this greater enforcement might be small or even negative if it deters the registration of some property transactions or business activities that it would have been efficient to formalize contractually, even without formalizing them administratively (such as, e.g., registering a sale of land or incorporating a company without paying the corresponding transfer or incorporation taxes). For this reason, it will often be advisable to place greater priority on contractual than administrative formalization, especially in the initial

development of registration institutions. By facilitating market transactions, this priority should encourage growth, which will produce social benefits even without administrative formalization. This solution is also consistent with historical evidence, to the extent that the main and oldest type of administrative formalization, related to taxes, has traditionally been run by separate government bodies, which at least allows different degrees of enforcement. In modern times, at least, most property registries are assigned to the courts or—within the executive power—to ministries of justice and general administrative departments, but seldom to treasury or economic departments. Company registries also tend to be independent of the executive, especially those that are administered by semiprivate bodies, such as chambers of commerce.

More recently, modern information technologies have added another factor to the design of these institutions by opening up the possibility of integrating different elements of contractual and administrative formalization, from entering data to controlling registration or even merging the records. The benefits of this greater integration, which may affect the user interface, the back office, or both, stem from the two processes relying on the same information and performing some similar activities. Separate registries duplicate both entry and control procedures, as well as some of the information on record. For instance, owners and entrepreneurs may have to file documents in two or more offices, and some of the information in these documents may be the same. Moreover, duplication occurs in both single and repeated filings. For example, part of the data in company incorporation documents is the same as that given when registering a firm with the tax authority or the social security agency.

However, integration also involves substantial risks because processes are not as similar as a process-engineering perspective may assume. The theory of contractual registries suggests that, given their different purposes, contractual and administrative formalization

have different demands and often rely on different resources and organizations. In particular, they use different types of specialized knowledge and implement different incentive structures. For a start, the data on file often serve different functions. For example, real property registries can work effectively with less precise geographical identification than cadastres, which are often used for planning purposes, such as building roads. Consequently, the type of knowledge necessary for exercising their functions is substantially different. And their different purposes also entail different demands. For instance, delays are often more costly for entering documents in contractual registries than in administrative ones. The outputs of both contractual and administrative registries are inputs in subsequent processes but these processes differ, consisting respectively of bilateral contracting and unilateral enforcement. Hence, delays in formalization have the potential for precluding further contractual transactions, whereas they merely postpone administrative enforcement. Similarly, entry in contractual registries can be kept on a voluntary basis, whereas entry in administrative registries must be obligatory, as they are designed to avoid negative externalities.

Consequently, organizational constraints and incentive structures are also different. Registration procedures need to be stricter in contractual registries to ensure independence, because they bestow rights, not only obligations, on the filing users or their future contractual parties. Cadastres, for instance, are declarative: if someone claims to be in possession of land, most cadastres will have no trouble believing that person because their entries only create obligations for declarers. In contrast, property registries have to implement more rigorous registration procedures to check the quality of title or the date of filing because they bestow rights on filers or, more commonly, concede economic benefits to filers by bestowing rights on subsequent third-party innocent acquirers. In addition, the incentives necessary to operate

their processes are also different: contractual registries need to be impartial with regard to the transacting parties, on the one hand, and third parties, on the other; whereas administrative registries serve and are run by one of the parties, the government.

Along these lines, creating public "single windows" and "one-stop shops" has also been a popular reform initiative to reduce formalization costs to users. In addition to elusive cost reductions (most often these initiatives merely reduce visible user costs by increasing hidden tax burdens), these reforms endanger the specialization of the different agencies that is needed to make their interaction easier. The theory developed here advises an alternative strategy: improving the interaction between public agencies and private facilitators, but preserving the independence of the agencies and exploiting the strengths and specialization advantages of public and private operators. This would enable private single windows to be competitively designed by market forces, such as the business facilitating and information services that have been developing for decades. A sensible policy would therefore focus on developing flexible public-private interfaces with the bureaucracies in charge of the public core of formalization services while allowing the free market to organize a multifaceted intermediate sector, comprising all sorts of intermediaries offering final users a variety of more or less integrated services (a variety of *private* single windows). Public agencies could then focus their efforts on building such virtual interfaces that private providers of support services could then integrate in a modular fashion.

4. Concluding Remarks: The Challenge of Public Registries

Organizing registries is harder than it might seem at first sight. But the rewards are greater than ever due to their enhanced potential, related to technological changes that both increase demand and reduce costs.

This challenge is not new. Throughout history, solutions enabling impersonal exchange have developed unequally across countries and economic activities. Although market-enabling contract rules covering commerce and finance have been applied in business trade since the medieval law merchant, it has taken almost ten more centuries to apply similar rules enabling impersonal markets in property and company law.

The difference has mainly been linked to different trade opportunities and, therefore, differential *demand* for institutional change across economic activities and legal areas. But something else must also have been going on, since market-enabling and, in particular, contract rules were applied earlier in areas in which judges could safely base their decisions on the publicity produced as an unintentional byproduct of contractual and economic processes. This gap suggests an additional *supply* explanation: enabling rules are applied later where applying them requires the support of registries.

Indeed, both property and company registries were first proposed by cities and merchants during the Middle Ages, but they were generally created later and often unsuccessfully. Governments have struggled for almost ten centuries to organize reliable registries that could make enabling rules safely applicable to real property. Similarly, company registries were adopted by most governments only in the nineteenth century, after the Industrial Revolution. Moreover, though most countries have now been running property and company registries for

more than a century, only a few have succeeded in making them fully functional, as shown by the fact that in most countries adding a mortgage guarantee to a loan does not significantly reduce its interest rate. Furthermore, registry development has imperfectly matched demand across countries, as illustrated by the late creation, in 1844, of the company register in Britain.

The introduction of registries has been protracted because it involves multiple difficulties, not the least substantial being that their value depends on solving a collective action problem among beneficiaries, because part of the benefits of registering accrue to others. And even functional registries are fragile creatures, as the value of their services disappears altogether when corruption or incompetence lead to fraud, error, or, most often, delays and gaps in registration. They also have to fight against private producers of palliative services (i.e., documentary formalization) who usually prefer weak or dysfunctional registries, as they increase the demand for their services. Moreover, they suffer the added drawback that mainstream law developed initially for facilitating personal exchange. Consequently, most legal resources, including not only the human capital of judges, scholars, and law practitioners but also other intangible assets, such as conceptual frameworks and academic curricula, were originally—and to a large extent, still are—adapted to personal exchange. Institutional delay is thus partly caused by path dependency.

Today, these two sets of factors—demand for institutions supporting impersonal market transactions and the difficulties involved in supplying them—are being affected by technological changes that both increase such demand and reduce the costs of contractual registries. On the one hand, communications technologies have made new possibilities for impersonal trade potentially profitable, thus increasing the demand for the institutions, such as registries, that support impersonal trade. On the other hand, computerized databases lower registries' operating costs, telecommunications dramatically facilitate access, and digital

signatures not only reduce costs but also enhance security by ensuring parties' agreement without any need for having every contract authenticated by a third party. Economic development therefore hinges, more than ever, on governments' ability to overcome the difficulties and private interests that are holding back the effective registries needed to enable impersonal exchange and exhaust trade opportunities.

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