



How to Make Land Titling more Rational

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ABSTRACT

Substantial variety exists among systems of land and business formalization both over time and across countries. For instance, England relied on private titling and delayed land registration for centuries. In contrast, early on, its American colonies imported land recordation and its Australian colonies land registration. Similarly, in most of the world, governments used to allow voluntary land titling, in which owners decide whether they register their land. Recently, however, governments and international agencies have more often opted for universal titling, aiming to register all the land in a certain region. This paper critically examines these strategies, analyzing the costs and benefits of the two main decisions: whether to create a public titling system or to rely exclusively on private titling, and the choice between voluntary and universal titling. It concludes that universal titling is seldom optimal. In particular, it argues that lack of titling is more a consequence than a cause of poverty.

Keywords: property rights, land policy, land titling, registries, transaction costs, impersonal exchange.

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

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INTRODUCTION

Discussions on economic development have lately focused on the role of institutions in protecting property rights and reducing transaction costs. 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 or even improve the institutional environment. Common mistakes have often been committed, such as seeing registries’ controls as mere entry barriers to legality, 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. Of course, registries, like any other institution, can be used to capture rents and deter 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. 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. 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. Decisions 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.

The article is structured as follows. Its main parts critically examine titling policies, focusing on the costs and benefits of their two main decisions. First, Part I ponders

whether to create a public titling system or to rely exclusively on private titling. Part II analyzes the choice between selective (i.e., voluntary) and universal (often mandatory) titling. It concludes that universal titling is seldom optimal. Based on the costs and benefits analyzed to examine these questions, the paper then concludes by suggesting that lack of titling is more a consequence than a cause of poverty.

I. PART I: PRIVATE VERSUS PUBLIC TITLING

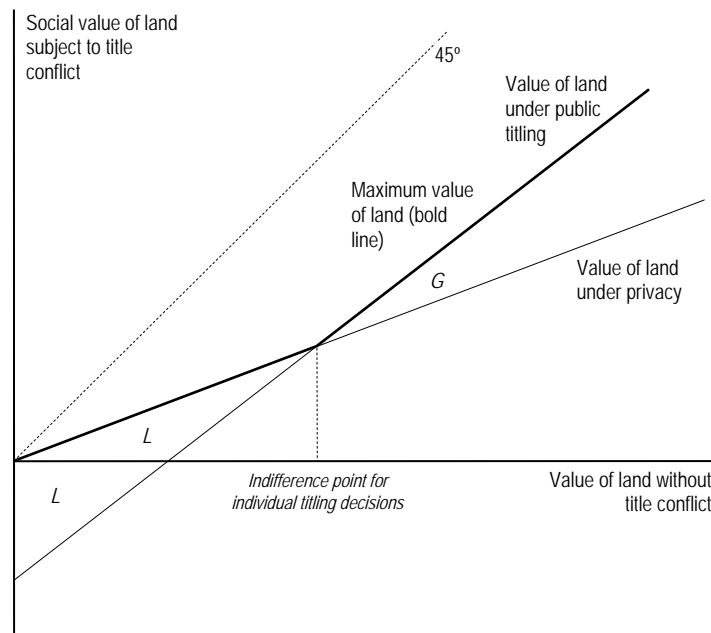
I will use a simple graphic model to structure the analysis. Figure 1 represents the social value of land under different institutions, assuming that prices of titling services are set optimally and owners are free to choose between keeping their land claims “private” and using a *more* “public” titling system built by the government based on a public register.¹ Following Arruñada and Garoupa, the social value of a parcel of land or any other real estate asset (represented on the vertical axis) depends on the probability that claimants with better legal rights may appear and is thus a fraction of its value in an ideal world with no conflicting claims (represented on the horizontal axis).² This fraction will depend on the available institutions and will likely be lower if, whatever such institutions, the land remains under private titling—privacy, for short. To simplify matters, I am assuming that the figure represents all land in an area to be served by only one registry that costs an amount F to put in place. Titling a parcel of land means that, by incurring a given additional cost, the probability of success falls for a conflicting claim on that parcel. I thus assume that, by titling, the value of the land increases by a certain

¹By “private” I am referring to arrangements such as customary solutions, often based on ceremonial conveyancing, possession, or even privately kept chains of title deeds. Therefore, in purity, they are not fully private, and most of them have substantial public elements. For instance, possession plays a substantial titling function when either its exercise or its delivery is public, as I argued in a related work (Benito Arruñada, *The Titling Role of Possession*, in *LAW AND ECONOMICS OF POSSESSION* 207–33 (Yun-chien Chang ed., 2015)). Moreover, many of those arrangements are often complemented with specific judicial solutions to purge title when needed, somewhat similar to the US quiet title suit. All of them are, however, less public than the alternative titling solutions consisting, paradigmatically, of creating a register. We have analyzed elsewhere the choice between particular systems of registries, including not only land recordation of deeds and registration of rights (Benito Arruñada & Nuno Garoupa, *The Choice of Titling System in Land*, 48 *J.L. & ECON.* 709 (2005)), but also the related choice about business formalization (Benito Arruñada, *Institutional Support of the Firm: A Theory of Business Registries*, 2 *J. LEGAL ANALYSIS* 525 (2010) [hereinafter *Institutional Support of the Firm*]). See also, Benito Arruñada, *The Institutions of Roman Markets*, in *ROMAN LAW AND ECONOMICS* (Giuseppe Dari-Mattiacci, ed.) (forthcoming Oct. 2016), for a deeper analysis of the choice between privacy and public titling in a historical context, focusing on classical Rome.

²See Arruñada & Garoupa, *supra* note 1, at 713.

percentage: with respect to the privacy line, the titling line has a negative intercept but is steeper.

Figure 1. Titling options (I): Choosing between private and public titling to maximize social value of land³



If the government creates the registry, it must also choose between voluntary and universal titling. Under voluntary titling (i.e., selective titling, often dismissively referred to as “sporadic” titling⁴), land rights are formalized at the request of individuals claiming

³ Figure 1 represents how the social value of land (*vertical axis*) is a function of the theoretical value of land without title conflict (*horizontal axis*) and the type of titling institutions available, which incur different costs. Social choice of titling institutions will be driven by these costs and the statistical distribution of the value of land parcels in the economy along the horizontal axis. Area *G* represents the potential gain from titling high-value land and area *L*, the potential loss from overtitling low-value land. Adapted from Arruñada & Garoupa, *supra* note 1, at fig. 2.

⁴ See, e.g., PETER F. DALE & JOHN D. McLAUGHLIN, LAND ADMINISTRATION, (1999); U.N. Econ. Comm’n for Eur., *Land Administration in the UNECE Region: Development Trends and Main Principles*, U.N. Doc. ECE/HBP/140 (2005) [hereinafter *Land Administration in the UNECE Region*], <http://www.unece.org/fileadmin/DAM/hlm/documents/Publications/landadmin.devt.trends.e.pdf>; JOHN W. BRUCE ET AL., LEGAL EMPOWERMENT OF THE POOR: FROM CONCEPTS TO ASSESSMENT (2007) [hereinafter FROM CONCEPTS TO ASSESSMENT]; and JOHN W. BRUCE ET AL., LAND AND BUSINESS FORMALIZATION FOR

to be owners. If owners must pay a fixed fee for publicly titling their land, they will choose not to title the less valuable parcels: those below the indifference point in the figure. Social gains arising from public titling are therefore represented by the area G . Under universal titling, often referred as “systematic” titling, all land in an area is publicly titled, and social gains fall to $G-L$.

Focusing now on voluntary titling and forgetting momentarily about area L , the decision to introduce public titling should be based on comparing titling gains G to the fixed costs of establishing the titling system, F . I now explore the main determinants of these gains and costs, while addressing universal titling later.

B. Determinants of the Gains from Titling

Title uncertainty reduces incentives to invest and increases the adverse selection suffered by potential acquirers of land rights, whether buyers or mortgage lenders. Public titling should improve the incentives to invest and reduce adverse selection.⁵ In terms of Figure 1, the greater the value of potential investment and trade opportunities, the more the indifference point will be positioned to the left, and, for a given statistical distribution of the value of land parcels in the economy, the larger the social gains from public titling, represented by area G .

These gains, however, depend on the true existence of such opportunities, which therefore has to be confirmed before embarking on the costly introduction of public titling. Unfortunately, the effects of public titling on investment and trade are hard to estimate even after titling has been introduced.⁶ And estimating the demand for public titling is even harder before a titling system is introduced: the little information available is dispersed and specific, and participants do not necessarily reveal their true valuations. A main drawback is that those who know the level of demand best are likely to benefit the most from formalization projects, because they will either be subsidized users or privileged suppliers, and thus tend to exaggerate demand.

1. Difficulties for truthful demand revelation

In particular, proponents of reforms and suppliers of services for new formalization systems often commit two types of misrepresentation to exaggerate the demand for formalization. On the one hand, they tend to promote land titling and business formalization as silver bullets for growth, while disregarding that underdevelopment and poverty are mainly a cause, not a consequence, of informality.⁷ In addition, they tend to

LEGAL EMPOWERMENT OF THE POOR (2007) [hereinafter LAND AND BUSINESS FORMALIZATION]. The term “sporadic” suggests randomness, wrongly, because, in fact, it results from rational value-maximizing decisions by owners.

⁵See Arruñada & Garoupa, *supra* note 1, at 721–23.

⁶BENITO ARRUÑADA, INSTITUTIONAL FOUNDATIONS OF IMPERSONAL EXCHANGE: THE THEORY AND POLICY OF CONTRACTUAL REGISTRIES 125–38 (2012).

⁷See *id.* at 125–31.

present the demand for security of tenure as a demand for public titling capable of facilitating transfer and credit transactions. In this, they are often helped by owners, who, in expectation of subsidized titling, are also prone to disguise their demand for greater security of tenure—which could be easily satisfied without creating expensive registries—, as a demand for titles enabling land transfer and secured credit transactions—which do need such registries.

Security of tenure can indeed be provided more cheaply by simpler legislative and administrative measures, such as lessening the legal requirements for prescription and adverse possession, or explicitly recognizing the legality of some contracts or the property rights of some squatters.⁸ In part, this reflects a difference between which institutions are required for supporting investment and which for supporting trade. Security of tenure often suffices to support investment, whereas trade in land tends to require public titling. However, when titling is subsidized, both land tenants and suppliers of titling services have an interest in exaggerating the demand for titling by presenting the demand for security of tenure as demand for titling. Consequently, the expectation of obtaining rents from titling may distort the opinions voiced in surveys and reports, making it more necessary for benevolent prospective reformers to rely on contractual and market signals as a source of information. Through these signals, individual transactors are more likely to reveal their true valuations because, unlike surveys and mere opinions, they result from real transactions and are backed by the real expenditures that transactors incur to carry them out.

Several types of signals meet these requirements for truthful demand revelation: use of inefficient contracts, confused and unreliable jurisprudence, and, especially, market prices. In the same vein, benevolent prospective reformers should also consider whether some components of titling projects must be interpreted as implicit recognitions that socially valuable demand is lacking. This is often the case when information campaigns are thought to be necessary to publicize the value of titling. In principle, as discussed below, owners should know better than reform suppliers. It is also the case with two other measures that are designed to palliate the bad consequences of titling, such as expropriation abuses and improvident sales. When such damage control is deemed necessary, reformers should start by asking themselves why titling is a good idea in the first place.

2. Role of Market Signals for Appraising Titling Demand

Paying attention to actual contractual and organizational behavior and to market prices will help identify fake claims in titling demands, as people reveal their preferences more faithfully in their conduct. In particular, the presence of costly private contracting that would be effectively facilitated by public titling could be taken as an indication that investment in public titling is needed. For example, substantial demand for using land as

⁸David A. Atwood, *Land Registration in Africa: The Impact on Agricultural Production*, 18 *WORLD DEV.* 659, 666–68 (1990) analyzes different alternatives, pondering their suitability and costs. *See also* GEOFFREY PAYNE, *LAND, RIGHTS AND INNOVATION: IMPROVING TENURE SECURITY FOR THE URBAN POOR* 18 (2002).

collateral for credit would be signaled by the widespread use of vicarious contractual solutions, such as including repurchase agreements in contracts for the sale of land, and by the use of mortgages safeguarded by depositing the chain of written deeds with the creditor. If such arrangements or other functionally similar ones are frequent, demand for public titling or for better registries is more likely to be real. A similar market signal in business formalization would be the presence in business contracting of unincorporated companies, such as in eighteenth- and nineteenth-century England and currently in, for example, Bolivia.

A second source of hard evidence on the demand for change is provided by the inputs used and the consistency shown by judicial decisions. If judges rely on secret documents for deciding on conflicts involving third parties, this reliance often signals a lack of proper institutions. (Although judges are involved in these cases, their reliance on secret documents can still be considered a market signal because it is based on existing contracts.) In more developed countries, the subordinate role of the law of impersonal transactions can be inferred from the prevalence of law that is full of exceptions and contradictory jurisprudence. Some of the palliative organizational solutions, such as the creation of the private registry of mortgages in the United States (Mortgage Electronic Registration Systems (“MERS”)),⁹ can also be taken as evidence of institutional demand. Their existence is a strong signal, since they require substantial investment and overcoming a collective action problem among market participants.

Lastly, market prices are also especially revealing for detecting the need to reform existing, but dysfunctional, registries. This is the case, in particular, of the spread or difference in interest rates between secured and unsecured (i.e., personal) credit. When this difference is small, as in even some developed countries, it is a definite indicator that registries and likely land law need a radical upgrade, because they are unable to realize the collateral value of land. Some other prices are also informative, but they are noisier signals and thus need closer scrutiny, such as the market price of shelf companies. The same happens with other indicators of the need for stronger contractual registries, such as mandatory intervention (both legally or de facto) by conveyancers; the relative price paid to conveyancers and registries; the use, cost, and legal complexity of lawyers’ title reports; and the reliance on extensive legal opinions for ordinary company transactions.

3. Risk of titling abuse

When deciding to introduce public titling, the encouragement of private investment and contracting might be offset by enhanced possibilities of exploitation, rooted in land

⁹In the last decade of the twentieth century, participants in the US secondary mortgage market created the Mortgage Electronic Registration Systems (MERS) as a way of avoiding the costs and delays of local recordation of mortgage loan assignments, by decoupling the local and national sides of the market. At the local level, MERS was to be the lender’s representative, holding the rights in rem, enforced through the recording offices. The limitations of this solution became clear with the foreclosure crisis (*see, e.g., Adam Levitin, The Paper Chase: Securitization, Foreclosure, and the Uncertainty of Mortgage Title*, 63 DUKE L.J. 637 (2013)).

grabbing, fraud, and political failure. In terms of Figure 1, these effects would move the indifference point to the right, thereby reducing the social gains from public titling.

First, individuals might take advantage of public titling to grab land and devise frauds. In particular, initial titling opens new opportunities for the powerful to grab land,¹⁰ a risk that is especially dangerous with respect to communal land. Community involvement is often proposed to reduce this danger,¹¹ but it is costly to operate and its results highly uncertain. Occasionally, artificial demand for titling is generated by the threat of the land being titled to someone else, often to elites or officials. Titling may also tend to degrade the rights of some specific classes of claimants, such as women, youths, and seasonal users.¹² Moreover, even if these frauds have been more common in connection with land, all registries are prone to suffer them, as exemplified by the European Trading Scheme, the world's biggest market in carbon emissions, which closed for several weeks in January 2011 after fraudsters stole about sixty-two million USD in carbon credits from several of its national registers.¹³

Similarly, information in the public records can also be used for planning various frauds and extortions, from the proverbial pursuit of wealthy heiresses by dowry-seeking bachelors that Victorian fathers feared¹⁴ to the present-day identity theft¹⁵ or the sale of vacant houses after learning the identities of their owners in the public record.¹⁶ And this possibility of fraud is not exclusive of property registries, as shown by the company registry created in Bulgaria in 2008, which provided free access to the personal data of company owners, giving not only their names and various personal identifiers but also scanned copies of their identity cards.¹⁷ These risks of private abuse can be reduced by filtering the data to be disclosed (e.g., excluding personal identification numbers) or limiting access to the public record to those authorized by owners and those with a legitimate interest, which casts serious doubt on the current fashion of open registers

¹⁰Gershon Feder & Akihiko Nishio, *The Benefits of Land Registration and Titling: Economic and Social Perspectives*, 15 LAND USE POL'Y 25 (1998).

¹¹See, e.g., LAND AND BUSINESS FORMALIZATION, *supra* note 3.

¹²Ruth Meinen-Dick & Esther Mwangi, *Cutting the Web of Interests: Pitfalls of Formalizing Property Rights*, 26 LAND USE POL'Y 36 (2009).

¹³This fraud was seemingly caused by lenient registration of market participants, so that after opening accounts, fraudsters then took advantage of lax security to transfer credits from companies' accounts into their own accounts from which they were immediately sold to third parties (*Carbon Trading: Green Fleeces, Red Faces—A Theft of Carbon Credits Embarrasses an Entire Market*, THE ECONOMIST, Feb. 5, 2011, at 70).

¹⁴J. STUART ANDERSON, *LAWYERS AND THE MAKING OF ENGLISH LAND LAW 1832-1940* 46-47 (1992).

¹⁵James P. Sibley, *Is the Door to Public Records Slowly Closing?*, 85 TITLE NEWS, May-June 2006 at 9.

¹⁶PETER SPARKES, *A NEW LAND LAW* 14 (1999).

¹⁷Petar Kostadinov, *Corporate ID Worries: Managers Still Fear Losing Their Property Through Fraud*, THE SOFIA ECHO, Nov. 28, 2008, http://sofiaecho.com/2008/11/28/665096_corporate-id-worries.

(twenty-eight of the forty-two jurisdictions surveyed by the UN-ECE were wholly open to the public).¹⁸

Lastly, in a political vein, there might be a risk that public titling could facilitate bad government. In principle, titling should facilitate law enforcement that includes, most prominently, the collection of taxes. But this may have positive or negative social effects depending on citizens' capacity to control their own government and impede excessive taxation. If citizens do not trust their government, they will tend to avoid public registries that might be used for collecting taxes. This holds two consequences. First, the weaker the political institutions, the less sensible it is to introduce public titling because it would be less likely to succeed. Second, it makes sense for the public titling system to be independent of the tax authority, even at the price of some duplication.

In all these cases, there are reasons to be doubly cautious in regard to the risks of abuse. To avoid such risks may require preventive measures, but their presence should also alert policymakers that there might not be enough demand for titling.

4. Risk of titling facilitating improvident sales and indebtedness

Studies of land titling have also often discussed the possibility that, by facilitating the sale and mortgage of land, titling efforts may lead the poor to improvidently lose their land. To avoid this risk, experts have advised that land marketability should be limited by different means, such as requiring the consent of spouses and administrative agencies¹⁹ or introducing sales moratoria during which the poor would receive education. According to the United Nations' Commission on Legal Empowerment of the Poor (CLEP), for instance, "ceilings on ownership and sales moratoria are considered a reasonably successful protective practice, provided that they are limited in time and that time is used for legal and financial education."²⁰ However, my previous analysis suggests that such advice is misguided.

So far, I have implicitly assumed that owners are capable of maximizing their individual utility and hold consistent preferences across time. The improvident sales argument denies this assumption and therefore presumes some degree of irrationality, with owners being unable to look after themselves. However, this view is incomplete, because such allegedly irrational behavior is induced by exogenous interventions that may be destroying the institutional basis of rationality. The lack of marketable titles—whatever its rationale—might perform a self-controlling function, committing owners to act in a manner consistent with their (or their families') long-term interests. This may be a valuable institutional arrangement to achieve rational self-control in an environment of extreme hardship. When family members are dying of hunger, being precluded from

¹⁸U.N. ECON. COMM'N FOR EUR., *STUDY ON KEY ASPECTS OF LAND REGISTRATION AND CADASTRAL LEGISLATION* (2000), http://www.unece.org/fileadmin/DAM/hlm/documents/Publications/wpla_inv2_p1.pdf.

¹⁹*See, e.g.,* LAND AND BUSINESS FORMALIZATION, *supra* note 3, at 37.

²⁰1 COMMISSION ON LEGAL EMPOWERMENT OF THE POOR, *MAKING THE LAW WORK FOR EVERYONE* 67 (2008) [hereinafter COMMISSION ON LEGAL EMPOWERMENT].

selling the land may guarantee the long-term survival of some whereas being free to sell it now might mean that all will perish. The deep reluctance that farmers feel in most societies about selling their land probably serves a similar long-term rationalizing purpose.

So, the question becomes why should such land be titled in the first place. One may think that a reasonable policy would have been to not introduce titling in that area or to introduce it on a voluntary, fee-for-service basis that would encourage only efficient titling, that is, titling by those deciding to be free of the commitment arrangement. (An argument along these lines could be made based on the “libertarian paternalism” promoted by Thaler and Sunstein.)²¹ However, the government often decides, first, to free the poor and then to introduce new constraints to prevent them from making mistakes and to teach them how to behave in the new environment. In a sense, it is replacing a simple legal constraint—the impediment to sell—with a hard-to-produce and harder-to-maintain education constraint. Titling efforts may well be premature in such life-threatening circumstances.

In sum, poor people may be led to desperate sales, which titling may well facilitate. However, the best way of protecting them is not to constrain their behavior with moratoria and education just after granting them full titles. In a similar manner to the risk of titling abuse analyzed in the previous section, the expectation of improvident sales should instead alert us to the risk that the whole titling effort might be premature or its universal nature inappropriate.

C. Determinants of the Fixed Cost of the Titling System: Making Fixed Costs Variable

The fixed costs of introducing a titling system include legislative and administration costs. New legislation and judicial decisions will be necessary to reform land law, at least to solidly establish the legal effects of public titling (mainly, priority of filing in recordation and the contract rule in registration). It will be necessary not only to adapt the statute law, often in a new way, but also to train judges in the new law and to develop jurisprudence accordingly. Administration costs are involved in putting in place a titling service, which will require not only one or several registry offices but also a regulatory or managerial structure. Neither of these tasks is easy, and they are related: judges are often reluctant to enforce new principles of property law. Understandably, they are even more reluctant when the registries function imperfectly.²²

²¹RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* (2008).

²²Carol M. Rose, *Crystals and Mud in Property Law*, 40 *STAN. L. REV.* 577 (1988). Rose summarizes this tendency graphically when she points out the repeated failed attempts at clarifying property law: “[L]egislatures pass new versions of crystalline record systems—only to be overruled later, when courts once again reinstate mud in a different form.” *Id.* at 580. For history and references, *see id.* at 585–90. The resistance of judges to apply contract rules appears in many forms and contexts. For instance, New Zealand (and, to a lesser extent, Australian) courts have constructed a fraud exception with apparently little justification in the statute when judging that a rightholder has

1. Interactions between legislative decisions and administration costs

Furthermore, legislative and administration costs interact with each other. For example, defining by law a numerus clausus and eliminating the fragmentation of property rights in order to reduce administration costs will often be useful. However, this may conflict with the recognition of customary rights, thus providing another reason for voluntary titling. When such conflict is important, titling should be introduced only for those parcels or in those areas where keeping such customary rights as in rem rights has become inefficient, so they should be legally debased to mere contract rights.²³

The solution adopted in England since the seventeenth century to transform the paralyzing property rights system inherited from feudal times can be understood in this way. At the start of the Industrial Revolution, owners had limited rights, as they could not mortgage, lease, or sell; many other people held property in rem rights on the same land; and land uses were often predetermined. These constraints made it impossible to use land in the most productive way, missing the valuable opportunities that were becoming increasingly available in a context of rapid economic change and growth. To be safe and avoid paying twice, acquirers had to gather the consent of all right holders, but this was often impossible because only sellers knew about many of the rights.

Between 1660 and 1830, the English Parliament enacted numerous acts restructuring property rights by relaxing such constraints.²⁴ With these estate acts, sales, leases, and

registered an interest with the intention of defeating an unregistered interest. Peter Blanchard, *Indefeasibility under the Torrens System in New Zealand*, in *TORRENS IN THE TWENTY-FIRST CENTURY* (David Grinlinton ed. 2003). A further example is provided by the position held by the Paris courts regarding seventeenth-century company registers. José Girón Tena, *Las Sociedades irregulares*, 4 ANUARIO DE DERECHO CIVIL 1291 (1951) (Spain), *reprinted in* JOSÉ GIRÓN TENA, *ESTUDIOS DE DERECHO MERCANTIL* 125 (1955) (Spain).

²³After decades of ignoring customary rights, their recognition has become common in development programs. For example, CLEP advises the “recognition of a variety of land tenure, including customary rights, indigenous peoples’ rights, group rights, certificates, etc., including their standardisation and integration of these practices into the legal system.” COMMISSION ON LEGAL EMPOWERMENT, *supra* note 19, at 60. Recognizing such customary rights may or may not be efficient, but it seems contradictory with other recommendations made by the same commission, especially those for universal titling and for establishing “simplified procedures to register and transfer land and property.” *Id.* Customary rights are complex, and recognizing them as property rights makes titling less simple and more costly. In the vein of the preceding section, the need for such recognition could also be understood as a sign that the titling effort is premature.

²⁴Gary Richardson & Dan Bogart, *Institutional Adaptability and Economic Development: The Property Rights Revolution in Britain, 1700 to 1830* (Nat’l Bureau of Econ. Research, Working Paper No. 13757, 2008), <http://www.nber.org/papers/w13757.pdf>; Dan Bogart & Gary Richardson, *Making Property Productive*:

mortgages became legal, and all interests were recorded in a way that was accessible to the public. This eliminated information asymmetries, making it possible to transact impersonally. Statutory authority acts made construction of infrastructure possible by, among other measures, organizing procedures for expropriating land. And enclosure acts mainly served to transform common property into individual property.

The experience is interesting in terms of both efficiency and fairness. Consonant with my argument for voluntary titling, right holders or communities had to apply for such restructurings, which led to these transformations occurring where they were most valuable. Moreover, damage to right holders was minimized by procedures that granted them ample scope for opposition in several layers of review. Generally, right holders who lost property rights received monetary compensation. The case therefore shows that it is possible to radically transform property rights in a manner that is fair, at least from the procedural point of view. But it also teaches a sad lesson, as England was the only European country able to achieve this transformation peacefully. Other countries had to endure their own versions of the French or Russian revolutions.

These English solutions required parliamentary acts but relied on specific administrative commissions. In general, purely legislative costs are mostly fixed with respect to the establishment of public titling. However, most administration costs can be made fixed or variable—and therefore, when variable, avoidable—depending on the titling policy being adopted. For example, considering only a given geographical area, voluntary titling allows for smaller registry offices and therefore incurs less fixed costs than universal titling. (Under voluntary titling, some titling costs are conditional on the decision by owners as to whether to title their land, a solution that, in combination with pricing decisions, helps to select which land should be titled first.) Conversely, under universal titling, all costs are fixed and unavoidable and are not conditional on owners' decisions. Similarly, fixed costs are smaller when titling is introduced only in the most promising areas. Imagine for a moment that the horizontal axis in Figure 1 represents the land in a region that would be served by multiple registry offices, each incurring a fixed cost F . In this case, if land parcels of similar values are geographically concentrated in different areas within the region, it would make sense to introduce titling selectively, starting from the areas where the most valuable land is located, which should reduce the total fixed costs. In reality, this is the solution adopted when registry offices are opened only in urban areas or in the biggest cities. This was, for example, the solution chosen in England in 1897, which introduced compulsory registration following property transactions only in central London. It was as late as 1990 that the system was applied to all counties in England and Wales.²⁵ Therefore, both selective demand and selective supply of titling services may reduce fixed costs.²⁶

Reorganizing Rights to Real and Equitable Estates in Britain, 1660 to 1830, 13 EUR. REV. ECON. HIST. 3 (2009).

²⁵PETER SPARKES, A NEW LAND LAW 1–3 (1999).

²⁶Similarly, colonial powers such as France and the United Kingdom in Africa and Ireland (ALAN WATSON, SOCIETY AND LEGAL CHANGE 56 (2001)), as well as the United States in the Philippines (Lakshmi Iyer & Noel Maurer, *The Cost of Property Rights: Establishing Institutions on the Philippine Frontier Under American Rule, 1898–1918*

2. Variable nature of most mapping, surveying, and similar costs

The fixed or variable nature of costs also hinges on other policy options. First, establishing boundaries by surveying each land parcel is often considered to be a requirement for good titling²⁷ and has been included in many titling programs. Investment to demarcate land by mapping the area and identifying parcel boundaries has therefore been treated as a fixed cost. But most of it can be transformed into a variable cost by allowing parcel identifications of different quality, made on a voluntary basis, so that greater precision would be demanded either by owners for whom such precision in defining boundaries is really valuable or by the registry office in special circumstances in which it is deemed indispensable for titling. (The issue is important because at least 53.45 percent of the unit costs of land titling projects are being spent on physically identifying parcels.²⁸)

Centrally demarcating land in homogeneous, easy-to-measure units has been claimed to facilitate enforcement, reduce conflict and transaction costs, and produce positive externalities, increasing land value in a context of land allocation without preexisting property rights.²⁹ Some of these benefits may also accrue to surveying and mapping

(Nat'l Bureau of Econ. Research, Working Paper No. 14298, 2008), <http://www.nber.org/papers/w14298.pdf>), introduced land registration in their colonies while keeping more traditional systems of privacy and recordation in their homelands.

²⁷See, e.g., Jürg Kaufmann & Daniel Steudler, *Cadastral System, Int'l Fed'n. of Surveyors* (1998), <https://www.fig.net/resources/publications/figpub/cadastral2014/presentation/2002-05-kaufmann-granada-cad2014-paper.pdf>.

²⁸The unit costs incurred for physical identification in the seven projects on which sufficient detail is given in Burns amount to 38.74 percent of total costs, whereas costs are 37.17 percent for other activities and 24.09 percent for administration and management. Tony Burns, *Land Administration Reform: Indicators of Success and Future Challenges* 94-95 (The World Bank Working Paper No. 41893 2007). Allocating the proportional share of administration and management, the costs for physical identification increase to 53.45 percent. Physical identification includes the following tasks: building a geodetic network, developing cartography, investigating boundaries, surveying and marking, and preparing cadastral maps and plans. The remaining 46.55 percent is spent on compiling existing records, publicity, acquiring government equipment, collecting claimant information, mediating in conflicts, controlling quality, legal validation, publicly displaying field results, resolving conflicts, preparing land records, designing cadastral and registry databases, entering data, registering property rights, and issuing titles to beneficiaries.

²⁹See Gary D. Libecap & Dean Lueck, *Land Demarcation Systems*, in RESEARCH HANDBOOK ON THE ECONOMICS OF PROPERTY LAW (Kenneth Ayotte & Henry E. Smith, eds., 2011). Their seminal empirical work on land demarcation systems compares the value of adjacent land in thirty-nine counties of Ohio that, due to a historical accident, were demarcated by metes and bounds (MB) or the rectangular survey (RS) around 1784–85. Gary D. Libecap & Dean Lueck, *The Demarcation of Land and the Role of Coordinating Property Institutions*, 119 J. POL. ECON. 426 (2011). They find that, for

otherwise identical land, the RS system is associated with higher land values, more roads, more land transactions, and fewer legal disputes. However, it is unclear to what extent these significant and persistent differences can be attributed to physical land demarcation. In fact, the two sets of parcels differ not only in the demarcation technique but also in the way the land was allocated to settlers.

The processes for demarcating *and claiming* land in Ohio were different for RS and MB lands. For farmers to obtain RS land, the federal government first surveyed parcels into square 640-acre sections, as the law required, and then made them available to individuals at the local land office, often the county seat. Individuals located a square parcel or collection of squares and obtained title through purchase and registration of the transaction . . . Under MB there was no presurvey by the government and *no external constraint on individual plot demarcation*. Claimants first located a plot of land of any shape, marked its perimeter on trees or other natural or human monuments, filed the claim or “entry” at the local land office (again at the county seat), hired a surveyor to formally measure the boundaries, and then *recorded* the surveyed plot at the land office and received title.

Id. at 433 (emphases added).

Therefore, it seems that, where land was demarcated by the RS, settlers were granted specific parcels, guaranteeing no overlaps or conflicting claims. But, where land was demarcated by MB, settlers were given a right to appropriate a certain area, which then was freely chosen by each settler, privately surveyed and recorded, without, in principle, undergoing any purging procedure to avoid overlaps and clear the title. Consequently, whether the differences observed by Libecap and Lueck capture the effects of the different demarcation systems or those of alternative allocation and titling procedures is unknown. To isolate both effects, it would have been necessary for the land under MB to have been divided using MB before being granted to settlers, like the land divided under the RS. Therefore, the results obtained by Libecap and Lueck probably overestimate the relative importance of physical demarcation by including those of the different allocation procedures used in that case for RS and MB lands. In particular, such results might reflect the fact that the boundaries of plots under MB have not been purged and are therefore likely to overlap with those of neighboring plots. In this case, both contracted and reported acreage under MB would systematically overestimate the legal acreage really sold, as parties would try to keep their boundary claims alive. Therefore, the acre prices that they observe under MB would underestimate real prices. This hypothesis is consistent with the fact that they observe such value differences in farmland but not in urban land, whose boundaries are usually more precise. It is also consistent with their finding that most 19th century litigation in metes and bounds areas is not related to boundaries (1.46 by 1,000 parcels, about 4 times more than in rectangular survey areas) or to the validity of the survey (2.48%, 31 times more) but to the validity of the entry/patent (8.61%, 33 times more). *Id.* at 453. Lack of clarity in the title seems to have been more important as a driver of litigation and, possibly, of transactions costs and value.

efforts in a steady-state context with preexisting rights. Furthermore, systematic mapping generally enjoys economies of scale and does not collide with vested interests. It is therefore understandable that titling projects tend to include or be preceded by mapping and surveying of land parcels. However, the value of this physical demarcation (as opposed to nonphysical, more purely legal demarcation) depends on the nature of the land. It is greater for rural, uniform land in areas lacking fixed boundaries,³⁰ as well as, given the fixed costs of surveying, for more valuable land. The latter explains why surveying and other due diligence studies are customary for commercial transactions in the United States but are rare for residential ones.³¹ Mapping is also costly and slow so that, above a certain frequency of transactions, even in developed economies it becomes almost impossible to keep the physical representation of the land universally updated at the speed needed today for economic activity, especially if the registry of rights is supposed to check boundaries before registration, to require neighbors' consent in case of collision, and to indemnify claimants for boundary errors.

Scotland provides an interesting example of these difficulties. The 1979 Scotland Land Registration Act created a new registry of rights, the Land Register, to replace the old register of deeds, the General Register of Sasines, which had been created in 1617. The act burdened the new registry with a duty to maintain a physical description of each parcel of land, based on the Ordnance Survey map. More than thirty years later, only 19 percent of the landmass of Scotland and 55 percent of its titles had been transferred into the new registry.³² Mapping had caused frequent refusals and delays in registration, often because of discrepancies between the plan in the deed and the Ordnance Survey map; it had also been the largest category of error in terms of indemnities³³ and had been a major cause of the slow transition into the new registry, which suffered from long turnaround times and the accumulation of a considerable backlog, in which mapping issues figured prominently.³⁴ The Scotland Law Commission advised in 2010 to give discretion to the registry to replace the Ordnance Survey base map with some other system.³⁵

³⁰Libecap, Lueck, and O'Grady use a similar contextual argument to explain the variation in the land demarcation systems adopted in various British colonies. Gary D. Libecap, Dean Lueck & Trevor O'Grady, *Large-Scale Institutional Changes: Land Demarcation within the British Empire*, 54 J.L. & ECON 295 (2011).

³¹MICHAEL T. MADISON, ROBERT M. ZINMAN & STEVEN W. BENDER, *MODERN REAL ESTATE FINANCE AND LAND TRANSFER: A TRANSACTIONAL APPROACH* 14 (2nd ed. 1999).

³²REGISTERS OF SCOTLAND, *LAND REGISTRATION (SCOTLAND) BILL CONSULTATION PAPER 5* (2010), https://www.ros.gov.uk/__data/assets/pdf_file/0007/16837/lr_bill_consultation.pdf.

³³REGISTERS OF SCOTLAND, *ANNUAL REPORT AND ACCOUNTS 2009-2010* 26 (2010), https://www.ros.gov.uk/__data/assets/pdf_file/0004/5836/rosannualreport_09-10.pdf.

³⁴*Id.* at 10, 16.

³⁵REGISTERS OF SCOTLAND, *LAND REGISTRATION (SCOTLAND) BILL CONSULTATION PAPER*, *supra* note 31, at 16.

3. Danger of focusing on average costs for making sensible technological choices

Besides mapping, other policy options affecting the mix of fixed and variable costs are computerization and online registration, which are also often argued to reduce costs. For instance, CLEP claims that the “costs of property certification can be considerably reduced and transparency improved by computerization and GPS systems, especially where comprehensive records do not yet exist.”³⁶ This is partly true. Not only computers but also, in general, capital-intensive technologies achieve lower average costs. Formalization enjoys substantial economies of scale, as suggested by data such as those depicted in Figure 2. However, these economies depend on the relative prices of capital to labor and, in any case, can only be reached at high levels of output. As it happens, most poor countries have plenty of labor, and their demand for formalization is limited to the most valuable urban land and corporate firms.³⁷ Therefore, extensive investments in computers and information technologies are often inappropriate.

Because average cost does not measure efficiency, it should be treated with extreme caution for comparisons and probably never set as an objective for reform efforts. Unfortunately, using average cost carelessly has been promoted by the popularity of international indicators that narrowly focus on them. In terms of the bottom panel of Figure 2, they pay attention only to the vertical axis instead of considering the whole cost function. Consequently, when comparing such indicators across countries, institutions in countries with lower figures are seen as more efficient. However, countries at different levels of development have different demands for formalization and their optimum average costs should also differ. Therefore, a higher average cost in a country whose system functions at a lower scale does not necessarily mean that its institutions are less efficient. They may be functioning efficiently, at precisely the frontier of productive possibilities, but at a lower scale and perhaps with different, more labor-intensive technology. And vice versa, a richer country may show lower average costs only as a result of the scale, even though its system is inefficient.

Comparing average costs cannot resolve these doubts and may also lead reformers to pursue inefficient reductions in average costs (affecting, in fact, only part of them, as most indicators only measure expenses directly paid by users, therefore producing only a partial estimate of variable average costs). This is yet another case of modern public management falling into an old trap of poorly applied managerial accounting, which for years had led industrial firms to choose capital-intensive technologies and to produce excessively large batches of products.³⁸ It may help to explain why many formalization projects underestimate the fixed costs involved in building institutions.³⁹

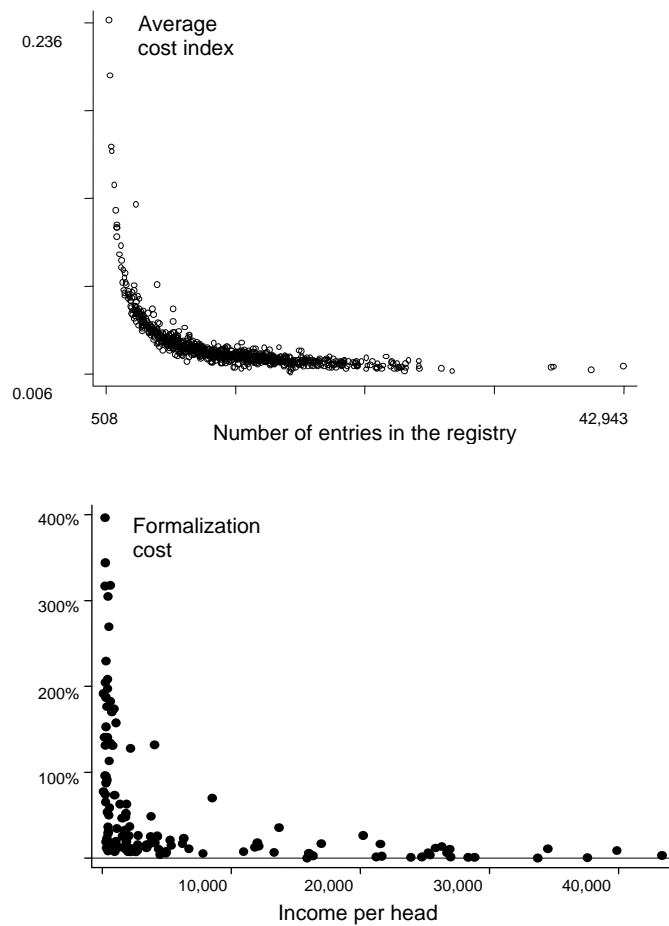
³⁶COMMISSION ON LEGAL EMPOWERMENT, *supra* note 19, at 66.

³⁷Individual proprietorships do not need contractual registration, as shown in *Institutional Support of the Firm*, *supra* note 1.

³⁸Michael C. Jensen & William H. Meckling, *Specific Knowledge and Divisional Performance Measurement*, 21 J. APPLIED CORP. FIN. 49 (2009).

³⁹Daniel Wachter & John English, *The World Bank Experience with Rural Land Titling* (World Bank Pol’y and Res. Division, Env’tl. Dep’t., Working Paper No. 35,

Figure 2. Possible economies of scale in formalization processes⁴⁰



Coming back to the main theme and considering that poor countries often have more labor than capital and limited demand for formalization, choosing labor-intensive technologies with higher average costs but little investment in fixed costs might be optimal. However, many have invested large amounts of capital while simultaneously

1992); LYNN C. HOLSTEIN, REVIEW OF BANK EXPERIENCE WITH LAND TITLING AND REGISTRATION (1993).

⁴⁰ Figure 2: *Top*, Average total cost index of property registries in Spain as a function of their volume of activity, measured by the number of annual entries in 1998 (based on data from Dirección General de los Registros y del Notariado [DGRN], ANUARIO DE LA DIRECCIÓN GENERAL DE LOS REGISTROS Y DEL NOTARIADO [YEARBOOK OF THE GENERAL DIRECTORATE OF REGISTRIES AND NOTARIES], 1998 (Spain)). *Bottom*, Income per head (in USD) and cost of business formalization (in percentage of income per head) in 2003 across countries worldwide (based on data from World Bank 2004).

trying to inflate demand and output by choosing a strategy of universal titling. I will now explore why this is generally a bad idea.

II. PART II: VOLUNTARY VERSUS UNIVERSAL TITLING

Under universal titling, where all land in an area is publicly titled, social benefits fall to the difference between the gains from titling high-value land (area G in Figure 1) and the losses from overtitling low-value land (area L). Universal titling thus would be inferior to voluntary titling in the absence of positive externalities. I examine the causes of this inferiority before analyzing a possible justification of universal titling via externalities and discussing the real case of land titling in Peru. I close by questioning the direction of causality between informality and poverty.

A. Causes of “Overtitling” Low-Value Land

The negative effect, L , arises under universal titling because low-value land—that below the indifference point—is now titled, even if the cost of titling is higher than the resulting increase in land value. (Observe in Figure 1 that for these parcels of land the value of land under the privacy line is above the value of land under the titling line.) In practice, this situation normally results not from mandatory but from subsidized titling. Individual titling decisions are driven by the individual value of titling in terms of enhanced security of titles minus the price of titling services. Arruñada and Garoupa conclude that, in the absence of externalities, optimal titling fees should be above cost when social costs are lower than private costs.⁴¹ The reason is that optimizing individuals

⁴¹ Arruñada & Garoupa, *supra* note 1. Nonconsensual transfers of property generate not only private but also social costs because they trigger rent seeking and, generally, transaction costs, especially to make future consensual transactions possible and to protect against fraud. For instance, real resources are spent on fabricating frauds and litigating disputes on current ownership. In addition, future land sales become more difficult when titles are unclear. The situation poses the typical problem of excessive care when private benefits are higher than social benefits (*see, e.g.*, Louis Kaplow & Steven Shavell, *Private versus Socially Optimal Provision of Ex Ante Legal Advice*, 8 J.L. ECON & ORG. 306 (1992); Steven Shavell, *The Fundamental Divergence between the Private and the Social Motive to Use the Legal System*, 26 J. LEGAL STUD. 575 (1997)), characterized in a wider context as “excess measurement” by Barzel. Yoram Barzel, *Measurement Cost and the Organization of Markets*, 25 J.L. & ECON. 27 (1982). FEDER ET AL., *LAND POLICIES AND FARM PRODUCTIVITY IN THAILAND* (1988) suggest several reasons why the private value of formalization is greater than the social value. Stewart W. Sterk, *Property Rules, Liability Rules, and Uncertainty about Property Rights*, 106 MICH. L. REV. 1285 (2008), explains along these lines several exceptions in the application of property rules to both real and intellectual property, exemplified by the tendency of courts to deny injunctive relief in cases of good faith boundary encroachments and to limit such relief in patent and copyright cases.

tend to purchase too much title assurance, given that in their titling decisions they consider not social but individual losses, which are assumed to be larger.

However, many development programs subsidize public titling by setting titling fees at nil or nominal levels and spending resources on informing owners about the benefits of public titling.⁴² Most developing countries seem to follow the prescriptions of CLEP that “new and small landowners [should be] exempted from registration fees and taxes.”⁴³ It coherently recommends institutionalizing “an efficient property rights governance system that systematically and massively brings the extralegal economy into the formal economy and that ensures that it remains easily accessible to all citizens.”⁴⁴ Although it also aims for efficiency, CLEP’s overarching goal seems to be a peculiar version of equality of results: “To ensure that a nation’s property is recognized and legally enforceable by law, all owners must have access to the same rights and standards. This would allow bringing the extralegal economy into the formal economy systematically and massively.”⁴⁵

Under registration, first titling of land previously held under privacy is in fact even more heavily subsidized because, given that unregistered titles are unclear, first registration is both more costly and more valuable.⁴⁶ Understandably, individuals are happy to go to the trouble of first registration, but they often do not file subsequent transactions and successions, even if the cost is less. They instead keep their titles private:

Frequently, the record of land rights established in mass titling is not kept up-to-date, and the system falls into disuse. Keeping the system vital and current depends upon those who hold registered rights in land and those who acquire them registering their transactions and successions. Failure to do so is frequent and occurs for a number of reasons. The costs imposed,

⁴²According to the responses to the *Doing Business in 2005* survey, user fees accounted for an average of 32.12% of the cost of public titling in 113 countries, with governments financing 63.90% and other sources (mostly aid agencies) the remaining 3.98%. Moreover, user fees financed the whole costs of titling systems in only 23 countries. *Doing Business in 2005: Removing Obstacles to Growth*, THE WORLD BANK (2004), <http://documents.worldbank.org/curated/en/883691468152697311/Doing-business-in-2005-removing-obstacles-to-growth>.

⁴³COMMISSION ON LEGAL EMPOWERMENT, *supra* note 19, at 67.

⁴⁴*Id.* at 60.

⁴⁵*Id.* at 66. The United Nations Economic Commission for Europe has proposed an intermediate approach whereby the initial establishment of the registry would be mainly financed from general taxation while user fees would provide for the cost of maintaining the registry in the future (*e.g.*, U.N. ECON. COMM’N FOR EUR., LAND ADMINISTRATION GUIDELINES WITH SPECIAL REFERENCE TO COUNTRIES IN TRANSITION at 8, U.N. Doc. ECE/HBP/96, U.N. Sales No. E.96.11.E.7 (1996)). But even this intermediate solution is not necessary under voluntary titling when most of the fixed costs of setting up the registry are made variable, as discussed above.

⁴⁶The inclination to register shown by holders of less secure titles when both registration and recordation are available in the same jurisdiction suggests that the value of titling is generally greater the less clear the title.

for instance, by fees or by taxing transactions, may be too high. The system may have become corrupt, driving away beneficiaries with heavy illegal charges. The landholders may not understand the system and its potential benefits to them or, if they do understand, they may not consider them worthwhile. They may simply be more comfortable with customary practices.⁴⁷

Titling therefore seems to be of so little value for these people that, even if they pay close to zero for it, it is not worth the time, trouble, and perhaps the possibility of being taxed, which are all associated with registration. When this happens for the majority of subsequent transactions, despite subsidized prices, it is reasonable to ask if most of this land which returns to privacy after a subsequent transaction lies, in Figure 1, to the left of the indifference point and therefore should not have been titled in the first place.

B. How Real Are the Positive Externalities of Universal Titling?

The above analysis assumes that the cost and value of titling each parcel of land is independent of whether other parcels are titled. In contrast, proponents of universal titling claim that there are substantial interdependencies, for instance, in clarifying boundaries and avoiding corruption, which should reduce the fixed cost of titling, *F*. For example, according to the United Nations Economic Commission for Europe:

The systematic [i.e., universal] approach . . . is in the longer term less expensive because of economies of scale, safer because it gives maximum publicity to the determination of who owns what within an area, and more certain because detailed investigations take place on the ground with direct evidence from the owners of adjoining properties.⁴⁸

Universal titling of an area might also produce positive externalities if the value gains produced by titling a parcel are not fully captured by its owner. Mainly, to the extent that titling encourages investments in building and renovation, some benefits of these investments will accrue to neighboring parcels.⁴⁹ Many other benefits are also possible.

⁴⁷ LAND AND BUSINESS FORMALIZATION, *supra* note 3, at 42.

⁴⁸ *Land Administration in the UNECE Region*, *supra* note 3, at 35

⁴⁹For the same reason, diluting property rights may cause negative externalities. For example, a number of foreclosures above a certain threshold reduces the value of all houses in a neighborhood (Jenny Schuetz, Vicki Been & Ingrid Gould Ellen, *Neighborhood Effects of Concentrated Mortgage Foreclosures*, 17 J. HOUSING ECON. 306 (2008)), potentially triggering a snowball effect when reduced home values lead to additional foreclosures. John P. Harding, Eric Rosenblatt & Vincent W. Yao, *The Contagion Effect of Foreclosed Properties*, 66 J. URBAN ECON. 164 (2009) estimate that each foreclosure reduces the value of neighboring family homes between 0.6 and 1.3 percent, an effect that decreases with distance and is caused by the visual impact of deferred maintenance and neglect; and Campbell, Giglio, and Pathak estimate that in Massachusetts a foreclosure at a distance of 0.05 miles lowers the price of a house by about 1 percent. John Y. Campbell, Stefano Giglio & Parag Pathak, *Forced Sales and*

For instance, titling could modify in a promarket direction the beliefs of those receiving them, as observed by Di Tella, Galiani, and Schargrotsky.⁵⁰ Such a change might help stabilize political outcomes, even though this outcome has been questioned, considering that titling poor owners may be bad for the poorest tenants who lack ownership claims in slums: the poorest are often exploited not by the rich but by the poor.⁵¹ Lastly, titles could also ease contracting for utilities, as emphasized by de Soto.⁵²

All these positive externalities would add to the benefits represented by the area *G* in Figure 1. However, as often happens with externalities, their importance remains open to question. First, cost externalities are clear in mapping and surveying work, but both activities may be unnecessary. They are also unsustainable, as “no project in the developing world has been able to implement and sustain high-accuracy surveys over extensive areas of their jurisdiction.”⁵³ Second, positive externalities disappear when owners who have been given public titles decide to keep their titles private in subsequent transactions and successions. To this extent, universal titling is only universal for the initial first titling effort, and all titling systems are de facto selective and voluntary. Lastly, there might be negative as well as positive externalities such as jeopardizing untitled customary rights to land.

Moreover, the empirical evidence on the effects of titling broadly supports applying voluntary instead of universal titling. Titling is more effective in areas where there are substantial investment opportunities, most commonly in cities, and when financial services have already developed.⁵⁴ Also, the benefits of titling, especially those related to the use of land as collateral for credit, accrue mostly to large landholders.⁵⁵

This evidence adds to the regularities observed in both the introduction of titling and the design of titling institutions, throwing some doubts on their real aims. With respect to

House Prices, 101 AM. ECON. REV. 2108 (2011). Accumulated average reductions may reach up to \$159,000. Dan Immergluck & Geoff Smith, *The External Cost of Foreclosure: The Impact of Single-Family Mortgage Foreclosures on Property Values*, 17 HOUSING POL’Y DEBATE 57 (2006).

⁵⁰Rafael Di Tella, Sebastian Galiani & Ernesto Schargrotsky, *The Formation of Beliefs: Evidence from the Allocation of Land Titles to Squatters*, 122 QUARTERLY J. ECON. 209 (2007).

⁵¹See, e.g., PETER N. WARD, MEXICO CITY: THE PRODUCTION AND REPRODUCTION OF AN URBAN ENVIRONMENT 193 (1990), and, more generally, MIKE DAVIS, PLANET OF SLUMS 79–82 (2006).

⁵²HERNANDO DE SOTO, THE MYSTERY OF CAPITAL 58–61 (2000).

⁵³See Burns, *supra* note 27.

⁵⁴SEARCHING FOR SECURITY OF LAND TENURE IN AFRICA (John W. Bruce & Shem E. Migot-Adholla eds., 1994); Feder & Nishio, *supra* note 9.

⁵⁵Gershon Feder, Tongroj Onchan & Tejaswi Raparla, *Collateral Guarantees and Rural Credit in Developing Countries: Evidence from Asia*, 2 AGRIC. ECON. 231 (1988); Michael Carter & Pedro Olinto, *Getting Institutions “Right” for Whom? Credit Constraints and the Impact of Property Rights on the Quantity and Composition of Investment*, 85 AM. J. AGRIC. ECON. 173 (2003).

the introduction of titling, it is common to find a symmetric failure to make sure, before the reforms, that a real demand exists, as has been admitted by CLEP;⁵⁶ and to check, after them, that such a demand has actually materialized. For example, most projects do not bother to monitor if subsequent transactions are being titled.⁵⁷ With respect to the structure of titling institutions, it is equally disturbing that most efforts rely on subsidized pricing, and policymakers are advised to continue relying on it.⁵⁸ No proper consideration is given to whether the need for subsidies is signaling a lack of demand for titling.⁵⁹ Instead, policymakers are advised to educate beneficiaries on the benefits of titling and protect them from bad decisions even though it is unclear who knows best.⁶⁰ Proposed policy changes share this disregard for demand. For instance, since credit does not evolve automatically from what are often supply-driven systems of property rights, CLEP advises the provision of “targeted credit,” without considering whether demand (i.e., investment opportunities) for such credit really exists.⁶¹ Yet, after all these subsidies and advertising efforts, titling projects still fail to get subsequent transactions titled.⁶² In principle, all these features are consistent with the troubling hypothesis that, in spite of their empowering-the-poor rhetoric, these projects in fact serve the interests of the using-the-poor industry; mainly, the suppliers of titling and complementary services.

C. Land Titling in Peru: An Example

Peru has spent hugely on formalizing property—over 214 million dollars between 1991 and 2002 alone, in an effort financed with loans from the World Bank since 1998.⁶³ Positive effects on investment and on the supply of labor have been found by Field,⁶⁴ as titling supposedly allows squatters not to rely exclusively on physical possession to enforce their rights. However, a large proportion of the formalized properties leave the

⁵⁶2 COMMISSION ON LEGAL EMPOWERMENT, *supra* note 19, at 84.

⁵⁷FROM CONCEPTS TO ASSESSMENT, *supra* note 3, at 42.

⁵⁸COMMISSION ON LEGAL EMPOWERMENT, *supra* note 19, at 60, 67.

⁵⁹The recommendation to subsidize first registration and mapping but to recover recurrent operating costs (as in *Land Administration in the UNECE Region*, *supra* note 46, at 25) is hardly viable unless titling triggers a substantial increase in land values.

⁶⁰COMMISSION ON LEGAL EMPOWERMENT, *supra* note 19, at 67.

⁶¹2 *Id.* at 82.

⁶²2 *Id.* at 84.

⁶³INSTITUTO LIBERTAD Y DEMOCRACIA, LA GUERRA DE LOS NOTARIOS 65 (2007) (Peru). In 2006, the World Bank granted an additional loan of twenty-five million dollars, subsequent to a previous one of thirty-eight million that ended in 2004. *COFOPRI al día*, COFOPRI (COMISIÓN PARA LA FORMALIZACIÓN DE LA PROPIEDAD INFORMAL) at 1 (Nov. 28, 2006) (Peru).

⁶⁴Erica Field, *Property Rights, Community Public Goods and Household Time Allocation in the Urban Squatter Communities*, 45 WM. & MARY L. REV. 837 (2004); Erica Field, *Property Rights and Investment in Urban Slums*, J. EUR. ECON. ASS'N PAPERS AND PROCEEDINGS 279 (2005); Erica Field, *Entitled to Work: Urban Property Rights and Labor Supply in Peru*, 122 QUARTERLY J. ECON. 1561 (2007).

formal system when the land is sold again, and hardly any commercial mortgages have been registered, despite many years of subsidized prices for registration.

Furthermore, several studies have concluded that titling has produced little, if any, security or value. Webb, Beuermann, and Revilla judge that formal titles add little security, and the difference has become smaller over time from the perspective of owners.⁶⁵ Kerekes and Williamson find that titling rural land has no effect on access to credit, even from public banks.⁶⁶ Several reports conclude that “it is not clear that beneficiaries place greater value on a registered title than on other ownership documents, such as municipal certificates or sale and purchase contracts, which have not necessarily been purged and registered.”⁶⁷ A report made for the promoters of the reform argues that “to some extent this can be explained by the widespread culture of informality among the population and also by the lack of knowledge of the benefits of having a registered title.”⁶⁸ This argument is behind its observation that “a large percentage of the formalized population would not be placing any additional value on the fact that their ownership title has been properly purged and registered.”⁶⁹ Also in line with this ignorance argument, the titling agency (*Comisión para la Formalización de la Propiedad Informal* (“COFOPRI”)) has been carrying out an extensive information campaign with the aim of “preventing the great effort at formalization from being wasted because a register that is not updated is of little use and everything seems to indicate that, once the COFOPRI title has been registered, a large proportion of the beneficiaries have not registered second transactions.”⁷⁰

It is, however, doubtful whether it is owners who underestimate the value of titles or, rather, title suppliers who overestimate it. It is hard to estimate true values in a dynamic context with possible collective-action effects, but data on credit suggest the latter:

No important differences are noted for each type of title certificate, except for a slightly higher degree of approval of Cofopri applications (96%). . . . [nor] a higher use of the ownership title in access to credit, because this seems to be linked more to the applicant’s payment capacity than to the holding of guarantees for the financial institution. The results show that the probability of approval of applications for loans is similar for those having a Cofopri title as for those having no ownership document as the two groups gained access to formal sources in the same proportion.⁷¹

⁶⁵RICHARD WEBB, DIETHER W. BEUERMAN & CARLA REVILLA, *LA CONSTRUCCIÓN DEL DERECHO DE PROPIEDAD: EL CASO DE LOS ASENTIMIENTOS HUMANOS EN EL PERÚ* (2006) (Peru).

⁶⁶Carrie B. Kerekes & Claudia R. Williamson, *Propertyless in Peru, Even with a Government Land Title*, 69 AM. J. ECON. & SOC. 1011 (2010).

⁶⁷FELIPE MORRIS GUERINONI, *LA FORMALIZACIÓN DE LA PROPIEDAD EN EL PERÚ: DESVELANDO EL MISTERIO 20* (2004) (Peru).

⁶⁸*Id.*

⁶⁹*Id.*

⁷⁰*Id.* at 21.

⁷¹*Id.* at 23–24.

What did increase slowly was the number of mortgages registered (between 4.18 and 5.59 percent, a tiny percentage considering that only 76,272 mortgages had been registered by the end of 2003 out of a total of 1,824,087 formalized parcels, for which 1,364,434 titles had been granted).⁷² But it is unknown whether these mortgages effectively reduced the interest rate on the loans. More importantly, most of their lenders were public firms. According to Miranda:

[A]fter six years work and more than one million registered land titles, . . . [most credit] is from the Banco de Materiales, a government credit system that provides credit to those with secure incomes and which is not based on those who have formal titles. There is not one private bank giving mortgage credit warranted by the titles registered.⁷³

These failures in subsequent transactions and mortgages have been blamed on the rising prices of notarial intervention.⁷⁴ However, even if notaries do make formalization more expensive, the problems with subsequent transactions and mortgages arose prior to the reintroduction of notarial privileges in 2002 and 2004. To make things worse, in later years, COFOPRI managers resigned amid allegations of prevalent corruption, including the hiring of thousands of political cronies and the sale of public land to friends at nominal prices.⁷⁵

CONCLUDING REMARKS: DOES INFORMALITY CAUSE POVERTY, OR IS IT A CONSEQUENCE?

Policies promoting titling and formalization efforts have become part of the conventional wisdom for fighting poverty. These efforts are grounded on the dual assumptions that the poor are poor because they are informal and that their informality is caused by high formalization costs. The argument goes that, as the poor cannot afford the fees required to register their land and their businesses, they lose economic opportunities. In particular, they are unable to use their land as collateral for credit, and their businesses cannot rely on courts to enforce their contracts. The solution is simple: provide the poor with affordable—often meaning free or at least subsidized—formalization services, in the hope that this will increase the value of their land, allow them to use it as collateral, and expand their businesses.

However, these universal and affordable formalization policies may be misguided if causation between poverty and informality runs in the opposite direction—that is, the poor remain informal because they are poor. This might well be the case because their assets are of low value and their economic activities are of a personal nature; therefore, for most poor people the benefits of formalization are below its cost. According to this

⁷²*Id.* 98–99.

⁷³Óscar Miranda, *Cofopri fue infectado por la corrupción*, PERÚ 21, Aug. 31, 2010, at 263 (Peru).

⁷⁴INSTITUTO LIBERTAD Y DEMOCRACIA, *LA GUERRA DE LOS NOTARIOS* (2007) (Peru).

⁷⁵Miranda, *supra* note 72.

argument, informality is prevalent among the poor because formalization processes are costly, which makes access to all dimensions of legality—including the definition of property rights, written contracts, and litigation—less efficient for those who own fewer assets or subscribe smaller contracts. These costs of formality are real social costs, not arbitrary fees, and may well be higher than the benefits that the poor and society as a whole would obtain with formalization if the poor lack the impersonal trade opportunities for which formalization is really valuable. Individuals thus tend to formalize their activity more or less fully depending on their wealth: very poor people are not even registered as individuals; poor people are registered as individuals, but their assets are not valuable enough for their rights or titles to figure in a public record; and wealthier people have more valuable assets that are recorded in a more formal way. If registries in developing countries mainly serve the elite, far from being a problem, this is often an efficient outcome. Even though it does not justify their high costs and low quality, it is consistent with the priority of demand and value over costs. (Moreover, it might also be fairer than spending scarce tax or aid money on useless titling or formalization efforts.)

Consequently, focusing formalization efforts on the poor may well be inefficient, and governments and international aid organizations often invest too much in formalization projects and structure them badly, aiming for simple but, in the end, useless solutions. In fact, some formalization efforts may be no more than another way of exploiting the poorest—for example, those without land to entitle—for the benefit, not of those who have some land, but mainly of the suppliers of formalization solutions. It is also inevitable that many of these projects become unsustainable: more often than not it is efficient not to sustain them and their inefficiency may even have been clear from the beginning.⁷⁶

Even if in many countries improving formalization institutions and lowering formalization costs is often a worthy objective, when properly based on costs and benefits, formalization policies should not focus on the poor. They should instead aim to improve registries for those already using them, focusing on improving the value of their services. And user fees should be levied so that charging beneficiaries at least part of the cost of formalization from the very beginning will provide a test on the social balance of costs and benefits and ensure sustainability.⁷⁷ Such policies would benefit the poor by achieving more efficient formalization, via lower costs or greater benefits, which would increase economic growth and lead some of the poor to formalize.

This argument is applicable to both land and businesses. Firms tend to be informal when they are small and not the other way around. To the extent that some formalization costs are fixed with the size of the firm, it will be socially optimal that smaller firms remain informal and choose simpler contractual structures. This may be especially important when considering that formalization decisions influence the costs of public enforcement. For example, to the extent that incorporation facilitates tax evasion, easing the administrative burden of very small companies therefore increases the fixed costs of

⁷⁶LAND AND BUSINESS FORMALIZATION, *supra* note 3, at 42.

⁷⁷As argued in BENITO ARRUÑADA, INSTITUTIONAL FOUNDATIONS OF IMPERSONAL EXCHANGE: THE THEORY AND POLICY OF CONTRACTUAL REGISTRIES 193–97 (2012).

tax enforcement on the activities now channeled through these companies. From this perspective, policies that focus on reducing the regulatory burden (not mainly the initial but the recurrent costs) of smaller companies are misguided to the extent that, relative to their size, at least the smallest ones may impose greater costs on society.

Furthermore, protecting the poor by legal means often conflicts with developing the institutions needed for a market economy. In particular, a legal foundation for a market economy is equal treatment for all citizens, yet policies that “empower the poor” often include laws targeted to favor them.⁷⁸ For instance, governments are encouraged not only to provide land registration but also to recognize land occupants as owners, as well as provide advice and support to new small businesses, which distorts competition between firms of different sizes and promotes production at an inefficiently low scale. Governments are even advised to encourage workers’ unionization efforts, as if unions did not have a dubious record in helping the really poor. And this is not to argue against redistribution to the poor in society. The criticism goes against implementing this redistribution by establishing unequal legal rights that at best benefit the poorest owners and not the poorest citizens.

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⁷⁸FROM CONCEPTS TO ASSESSMENT, *supra* note 3, at 5-6.

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