The Distribution of Legal Traditions around the World: A Contribution to the Legal Origins Theory

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Abstract

The distribution of the common law was conditioned by a colonial strategy sensitive to the colonies' level of endowments, exhibiting a more effective implantation of the legal system in initially sparsely populated territories with a temperate climate. This translates into a negative relationship of precolonial population density and settler mortality with legal outcomes for common law countries. By contrast, the implantation of the French civil law was not systematically influenced by initial conditions, which is reflected in the lack of such a relationship for this legal family. The common law does not generally lead to superior legal outcomes to the French civil law when precolonial population density and/or settler mortality are high. The form of colonial rule in British colonies is found to mediate between precolonial endowments and postcolonial legal outcomes.

Keywords: Law, Legal origins, Legal Outcomes, Doing Business, Colonialism, Endowments, Indirect Rule

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1. Introduction

Fifteen years of abundant research in the legal origins literature has established that legal traditions are strongly related to creditor and investor rights, efficiency and quality of legal systems, and economic regulation. The pioneering papers of La Porta et al. (1997, 1998) analyze the effect of legal traditions on the legal protection of corporate shareholders and creditors, finding that common law countries have stronger investor and creditor rights than civil law countries. Subsequent work has confirmed these initial results for a larger sample of countries, improved indicators of legal rules and over a wider time interval (La Porta, Lopez-de-Silanes, and Shleifer –hereafter LLS– 2006; Djankov, McLiesh and Shleifer 2007; Djankov et al. 2008b). Related research has shown that common law countries are associated with lower legal formalism, more efficiency of contract and debt enforcement, higher judicial independence and, in general, higher quality of legal systems (Djankov et al. 2003b; La Porta et al. 2004; Djankov et al. 2008a; Balas et al. 2009). All this literature advocates that the British common law is associated with better rules and outcomes than the French civil law in many areas of the legal system.[1]

As a result of the unprecedented popularity gained by the Legal Origins Theory, a number of criticisms have been raised (among others, Rajan and Zingales 2003; Licht, Goldschmidt and Schwartz 2005; Roe 2006; Roe and Siegel 2009; and Spamann 2010a, b). Within the context of the present paper, it is particularly relevant the point made by Berkowitz, Pistor, and Richard (2003a, b) who argue that the manner in which legal systems are obtained is more important than the specific countries' legal traditions to explain the quality of legal systems. They differentiate among origin countries, receptive transplants and unreceptive transplants, with the first two categories being related to higher legal effectiveness. Whether legal transplants are receptive or not depends on the adaptation of the imported law to local conditions and on the population's familiarity with law principles.

In parallel to the Legal Origins Theory, a growing body of research pioneered by the work of Engerman and Sokoloff (1997, 2000) and Acemoglu, Johnson, and Robinson –hereafter AJR– (2001, 2002) has developed. This strand of the literature, known as the endowments view, emphasizes that initial conditions existing in territories colonized by European powers were

[1] It has also been shown that governments in common law countries intervene and regulate to a lesser extent the economy (LLS 2002; Djankov et al. 2002; Botero et al. 2004). In addition, the common law appears superior to the French civil law in terms of financial development (La Porta et al. 1998; Beck, Demirgüç-Kunt, and Levine 2003a). This is explained by the lower judicial formalism and the greater ability for the common law to evolve as a response to changing circumstances (Beck, Demirgüç-Kunt, and Levine 2003b). See Beck and Levine (2005) and LLS (2008) for authoritative reviews of the legal origins literature.

crucial in explaining institutional development in former colonies. Endowments such as the disease environment, indigenous population density or resources abundance determined the colonial strategy and created the incentives to establish different types of institutions. However, according to this view, legal traditions are not considered as decisive determinants of institutional development.

Some authors have combined the endowments view and the legal origins literature. Beck, Demirgüç-Kunt, and Levine (2003a) and Levine (2005) provide empirical evidence showing that both legal traditions and initial endowments are important factors to explain financial development and property rights protection. Acemoglu and Johnson (2005), in trying to distinguish between property rights and contracting institutions, find that endowments influence to a greater extent the former while legal origin has more impact on the latter. By borrowing ideas from the law and finance literature, the endowments view and the "transplant effect" hypothesis, Oto-Peralías and Romero-Ávila (2014) showed that the effect of the common law on financial development is conditioned by the level of initial endowments. Extensive evidence indicates that the common law has led to higher private credit and stock market capitalization only in sparsely populated territories at the arrival of Europeans, where this legal tradition could be effectively introduced by European practitioners. On the contrary, the effect of the French civil law on financial development is invariant to endowments. In that paper we anticipated that the likely mechanism responsible for the heterogeneity observed across legal traditions lies in the distinct response of European powers' colonial strategies to endowments, but we did not assess its empirical validity.

This article goes one step further and assesses thoroughly the mechanisms linking precolonial conditions and their interaction with legal traditions to postcolonial legal outcomes. In addition, this paper differs from Oto-Peralías and Romero-Ávila (2014) in that, instead of analyzing the determinants of financial development, it brings additional insights into the core of the Legal Origins Theory that focuses on the relationship between legal traditions and legal rules and regulations by arguing that the process of distribution of legal traditions from origin countries to colonies is crucial to understand that relationship. Legal families were transferred from only few mother European countries to the rest of the world. An assumption made by the Legal Origins Theory is that the essential characteristics of each legal tradition remain both in origin and transplanted countries, and also implicitly that the implantation was homogeneous across

countries within the same legal tradition.[2] By doing so, the literature so far groups countries together according to their legal traditions and analyzes how these legal families are related to different aspects of a country's legal system.

This paper contributes to the Legal Origins Theory by showing that the relative legal rules and outcomes (in terms of creditor and investor rights, credit information, legal system efficiency and regulatory burden) of the British common law vs. the French civil law are associated with the colonial strategies followed by mother countries when implanting their legal systems in their colonial dominions. We argue that the distribution of legal traditions was highly heterogeneous, with initial endowments in colonized territories being the key factor explaining this diversity.[3] To illustrate this point, Figures 1 to 2 show how different the relationship of both investor protection and time to enforce contracts with precolonial population density is across common law and civil law colonies. In our view, this fact reflects the differentiated impact that the presence of native population had on the distribution of each legal tradition.

[*Insert Figures 1 to 2 about here*]

On the one hand, the transplantation of the common law was inversely related to the level of population density at the time of colonization. This was due to the nature of British colonial policy, which did not want to interfere with preexisting native law and rules of indigenous societies (Zweigert and Kötz 1998; Glendon, Carozza, and Picker 2008). Thus, in sparsely populated territories with a temperate climate the common law was extensively transferred and, consequently, we observe the usual features associated with this legal tradition, that is, high creditor and investor rights, effective legal systems and low regulation of the economy. In

[2] Although Djankov et al. (2003a) note that the way law and institutions are transplanted matters and LLS (2008) recognize that not all countries received legal traditions through conquest or colonization (for example, Latin America), beyond this clarification these authors do not account for the peculiarities of the implantation process.

[3] Following the endowments view literature, we refer to endowments as those initial conditions in colonized territories that were crucial in accounting for the colonial strategies followed by European powers. Even though the body of the paper uses precolonial population density (indicating the extent of indigenous labor abundance and precolonial prosperity) as the main endowment variable, one needs to conceive endowments in a broad sense, also considering other aspects such as the disease environment caused by the type of climate (tropical vs. temperate). Toward this end, we complement the analysis with the use of the potential mortality rate of European settlers, with the results being remarkably robust to the endowment indicator employed. Since the word *endowments* may evoke positive factors, for the sake of clarity, we henceforth employ the term "adverse endowments" instead of "high levels of endowments" to refer to either high precolonial population density or high potential settler mortality (as they are both generally associated with low European settlement and the predominance of extractive colonial strategies conducive to political and legal structures aimed to exploit indigenous resources, rather than build sound property rights (AJR 2001, 2002; Levine 2005). Likewise, we use the term "favorable endowments" instead of "low levels of endowments" to refer to either low precolonial population density or low potential settler mortality (as they are both conductive to more European settlement, which favored the transmission of legal systems and led to inclusive institutions).

contrast, in those places with a large indigenous population and unfavorable disease conditions, few if any of these features are observed, since the legal and institutional transfer was very superficial and could even have negative consequences. This is because the widespread use of indirect rule in these colonies led to the empowerment of local elites who, unlike precolonial times, were no longer subject to traditional checks by the native population and could mold customary law, which was not formalized, in their own benefit (Daniels, Trebilcock, and Carson 2011; Lange 2004). In short, low precolonial population density and the likelihood of the British colonial power moving in are highly correlated so that in colonies where the conditions were ripe for the colonizers to live there, they adopted the common law. However, in those places where lots of people already lived or where it was hard for settlers to survive, the introduction of the common law either did not occur or, if it did, was too hard to enforce among the indigenous population.

On the other hand, France imposed its civil law rigidly across its empire, leading frequently to conflicts with existing laws. Since this colonial policy was largely independent of the particular circumstances of the colonized territories, the distribution of the French civil law across colonial dominions was more uniform than in the British case. In addition, as a related question to the distribution of the French civil law, we support the view that former Spanish colonies deserve separate treatment since they share a common Castilian law legacy and a different adoption of the Civil Code by imitation. Both characteristics warn against mixing these countries with those colonies where the French civil law was implanted by France itself. Former Spanish colonies experienced a better assimilation of the civil law and, therefore, one expects better legal outcomes for this group compared to French colonies.

Our empirical analysis provides extensive evidence supporting the thesis proposed in this paper about the presence of heterogeneity in the distribution of legal traditions for a cross-section of 100 former colonies. An interaction model is used to explain a variety of legal rules/outcomes through legal traditions, indigenous population density and their interaction. We employ as dependent variables legal indicators such as creditor and investor rights, credit information sharing institutions, enforcement of debts and contracts and regulatory burden from *Doing Business* in addition to firm and household survey-based legal outcomes. This not only enables us to cover the main dimensions of the law-making process and regulation previously studied by the legal origins literature, but also to extend the analysis through the use of a wide array of indicators measuring how firms and households perceive and experience the legal and regulatory systems. Our findings can be summarized as follows: 1) according to our thesis, for common law countries we find a consistent and robust negative relationship between endowments and legal

outcomes; 2) in contrast, for the French civil law tradition we do not observe any clear-cut pattern between endowments and legal outcomes; 3) for many legal indicators the British common law does not lead to better legal outcomes than the French civil law at high levels of precolonial population density or potential settler mortality; 4) former colonies deriving their legal systems from Spain exhibit in general higher scores in legal variables than those obtaining the civil law from France itself; 5) the form of colonial rule in British colonies mediates between endowments and postcolonial legal outcomes.

The remainder of the paper is organized as follows. Section 2 explains how the British common law and the French civil law were distributed around the world, thereby emphasizing the role played by endowments in that process. Section 3 describes the empirical approach and data used. Section 4 presents the basic regression evidence. Section 5 reports the results of the sensitivity analysis and those obtained with firm and household survey-based data on legal and regulatory outcomes. Section 6 explores the mechanism linking initial endowments and their interaction with legal traditions to current legal outcomes. Section 7 puts forward some implications and concludes.

2. How Colonial Powers Distributed their Legal Traditions

This section consists of four parts. Firstly, we make some general remarks about the importance of the distribution of legal traditions in the Legal Origins Theory. Secondly, we introduce the role played by endowments in the colonial strategies of mother countries when implanting their legal systems in the colonies. Finally, we describe how the British common law and the French civil law were distributed around the world.

2.1. On the Importance of the Distribution of Legal Traditions

It is not our intention here to repeat general issues concerning the Legal Origins Theory, which are well described in other papers (see Beck and Levine 2005; LLS 2008). Rather, our aim is to focus on the key aspect of the distribution of legal traditions which, despite its relevance, has not received much attention. We make four general comments about the importance of this process for the Legal Origins Theory. First, the vast majority of countries are "non-origin" countries, which means that the process of distribution of legal traditions is pivotal by itself and, consequently, almost all the evidence provided in the literature relies on differences among "non-origin" countries.[4] Second, it is argued that "legal traditions were typically introduced into

[4] In fact, Glaeser and Shleifer (2002, p. 1221) state that "the empirical results described [regarding the Legal Origins Theory] are driven almost entirely by former colonies rather than by England and France". Thus, a basic ingredient of the Legal Origins Theory is –in words of LLS (2008, pp. 306-7)– that legal traditions "were transplanted by the origin countries to most of the world".

various countries through conquest and colonization and, as such, were largely exogenous" (LLS 2008, p. 286). This highlights that only "non-origin" countries possibly allow us to make causal statements. Thus, much of what is written about the effect of legal origins is possible because this variable appears exogenous for most countries. Third, related to the preceding, colonialism is a phenomenon of great importance for the distribution of legal traditions, since it made it possible to spread European legal systems around the world. Thus, questions such as the initial conditions existing in colonized territories or the colonial strategies implemented by European powers are key factors to bear in mind when explaining such a distribution.

Fourth, it is generally assumed that countries belonging to each legal tradition received "specific laws and codes and the more general styles or ideologies of the legal system" in the transplantation process and, despite further legal evolution at the national level, "the basic transplanted elements have remained and persisted" (LLS 2008, p. 288). Most importantly, it has been implicitly assumed that the implantation process was homogeneous within legal traditions.[5] This explains why countries are simply grouped into four legal traditions (the British common law and the German, Scandinavian and French civil law) and why many legal features and outcomes are associated with these legal families abstractly, that is, without differentiating countries within them. In this section we describe how the distribution of the British common law and the French civil law was very different and the main implications resulting from that.

2.2. The Role Played by Endowments

To account for the process of transplantation from mother countries to "non-origin" countries is crucial to bring into the discussion the role played by endowments. According to Engerman and Sokoloff (1997, 2000) and AJR (2001, 2002), factors such as indigenous population density, resources abundance or tropical disease determined the colonial strategy of European powers and shaped the incentives to create different types of institutions. Adverse endowments in the form of high indigenous population density or high settler mortality rates are generally associated with low European settlement and the prevalence of extractive institutions. Following this literature, we argue that initial endowments also conditioned the strategy of implantation of metropolitans' legal systems in the colonies. Ross Levine (2005), in fact, raises the possibility that legal traditions and endowments interact. He suspects that the negative effect of the French civil law

[5] Daniels, Trebilcock, and Carson (2011) agree on this point by arguing that one of the assumptions underlying the claim about the superior performance of the British common law is that transplanted institutions were imposed uniformly across territories; an assumption they clearly question. In addition, it is assumed that the transplantation of law entailed not just legal rules but also other organizational features of legal systems (Pistor 2009), which gives more room for the possibility of heterogeneity in the distribution process.

could be particularly large in territories with adverse endowments. However, as we show below, it is not the effect of the French civil law that worsens with adverse endowments but that of the common law.

The core of our analysis is conducted with a particular measure of endowments, namely, precolonial population density. We motivate the choice of this variable as our preferred endowments indicator on the grounds that it was a key factor that conditioned colonial legal policies in several ways. First, the presence of high indigenous population density limited European settlements (Easterly and Levine 2012), which is an important factor for the type of legal-administrative institutions established in the colonies as well as for the transmission of legal expertise. Second, where Europeans found more prosperous and densely populated societies they had incentives to build coercive legal systems to exploit indigenous resources.[6] Third, high precolonial population density can be associated with the preexistence of a society (or political entity more or less organized) with its own rules, following the Roman maxim *"Ubi Societas, Ibi Ius"*. Importantly, the response of colonial powers to native rules is a decisive factor to explain the differences in the distribution of legal traditions across colonial empires. As pointed out below, Britain responded differently from France, trying to preserve indigenous rules to a greater extent (Zweigert and Kötz 1998; Glendon, Carozza, and Picker 2008).

Before turning to describe the pattern of distribution of the common law, we justify our focus on a sample of former colonies as the most appropriate way to analyze the issues at hand. It is due to two main reasons. First, the basis of our argument is the presence of heterogeneity in the way legal systems were transmitted from origin to "non-origin" countries. Within the second category, former colonies are the vast majority and represent the only group for which legal traditions are arguably exogenous. In Europe, for example, although Napoleon imposed its Code on the territories conquered by the French army, there have always been mutual legal influences throughout history. Thus, the rediscovery of Roman law (Justinian's Digest) in the northern Italy monasteries, along with the canon law from the Catholic Church, laid the foundation for the *ius commune* that prevailed in continental Europe since the Middle Ages. In contrast, the implantation of European legal traditions in the colonies constituted a radical change relative to

[6] In the territories of the Aztec and Inca empires, Spain employed a system of coercive labor (the "*encomienda*") to exploit the abundant human resources. According to Acemoglu and Robinson (2012, Ch. 1), the key factor behind the different colonial strategies followed by Spain and England in the New World was the presence or not of native population that could be used as forced labor. The importance of precolonial population density in accounting for the colonial strategies and policies is reflected in its widespread use in the literature (see, among others, Fieldhouse 1966; Engerman and Sokoloff 2000; Mahoney 2003; Lange 2004; Lange, Mahoney, and vom Hau 2006; Bruhn and Gallego 2012).

their situation before being colonized. Consequently, by focusing on former colonies the exogeneity of legal origins is stronger.[7] Second, we base our analysis on the role played by endowments in the distribution of legal traditions through conditioning the colonial strategies of European powers, which only holds for the group of former colonies.

2.3. The Distribution of the British Common Law

Comparative law scholars have documented well that the common law was exported in a heterogeneous way across the British colonial empire. Zweigert and Kötz (1998) differentiate two groups of colonies: the settler colonies, which at the time of colonization were "unoccupied or occupied only by natives at a very early stage of civilization and not yet politically organized" (p. 220); and the rest, which were colonies previously controlled by native kings or other European powers. In the first group Britain transplanted the common law mechanically, while in the second the legal policy did not aim to replace the existing native rules but to preserve them. Accordingly, in North American and Australasian colonies there was a deep transfer of the common law directly by European practitioners, whereas in African colonies "to much the largest part of the African population the Common Law is of almost no practical significance" (p. 230). On the same issue, Glendon, Carozza, and Picker (2008) point out that the former group of colonies was characterized by the absence of "civilized" local law and the presence of only a small indigenous population, whereas the latter comprised more densely populated territories which in many instances had well-established customary rules.[8]

Behind this heterogeneity in the distribution of the common law is the fact that Britain opted for a "flexible" colonial administration system, which was variable to local conditions, featured a high degree of local autonomy and in many parts of the empire took the form of indirect rule (Fieldhouse 1966). "[It] was pragmatic in terms of the adaptation of British law" (Schmidhauser

[7] Michaels (2009) remarks that the "ingenious idea" of La Porta *et al*. (1997, 1998) to solve the endogeneity problem between legal rules and economic performance was "to look at settings in which law was not co-original with society but instead was imposed as an external factor", which they found "in the context of colonization, where law was […] imposed externally by the colonizing power, with a random distribution of different legal systems depending on which European country colonized parts of the non-European world." (p. 769).

[8] Daniels, Trebilcock, and Carson (2011) emphasize the high degree of variability in jurisdictional arrangements and institutions in the British Empire, which were responsive to the initial conditions encountered by colonizers, including the preexisting indigenous legal order. Outside of the settler colonies, territories under British control did not experience a complete transplantation of the common law and a subsequent displacement of native rules. In practice, the implantation process of the British law in each colony led to a unique corpus of law that differed from that in other colonies. Roe and Siegel (2009) also stress that Britain did not seek to uniformly transplant its own legal institutions to its colonies, since their widespread transfer would have been incompatible with ruling an empire. Thus, when Britain faced the occupation and control of Africa, it was clear the dangers that an "indiscriminate transfer of British legal practices" posed to colonial domination (Young 1988).

1992, p. 323). Regarding this style of colonial government, Zweigert and Kötz (1998) point out that "English policy was different [than the French]: true to the principle of 'Indirect Rule', English colonial administrators relied as much as possible on existing native rules, kept the local courts decentralized, and left mature native law almost intact" (p. 113).[9] Lange (2004) argues that indirect rule strengthened the positions of traditional chiefs as customary law administrators, who molded and interpreted customary law in their own benefit, thereby leading to abuses of power. This further promoted the control of economic resources by local elites, imperfect protection of property rights, social instability and conflict over the exercise of power (Berry 1992; Mamdani 1996).[10]

The colonial experience of Nigeria gives a good account of the negative effects –intended or not– derived from the system of indirect rule. The British established a parallel jurisdictional model consisting of colonial courts that dealt only with matters involving Europeans and native courts that, under indigenous customs and rules, handled all disputes between non-Europeans. This dual court system for dispute resolution implied a minimal contact of most indigenous population with the common law and a high degree of inconsistencies and uncertainties in the legal system.[11] Another important feature of indirect rule was that native chiefs were granted legislative, executive and judicial powers in order to control social relations in their chiefdoms, thereby being accountable only to British officials (Lange 2004). Since these chiefs were no longer subject to traditional checks by the native population as in precolonial times, they undermined the historical legitimacy of the native court system as well as the effectiveness of their customary law. It was even worse in Southern Nigeria and Kenya where, in the absence of

[9] Even though indirect rule was previously applied in some parts of India, Lord Lugard is known to be the colonial administrator that theorized it. In Lugard (1919, p. 298), he argues for "a single Government in which the native chiefs have well-defined duties and an acknowledged status equalling with the British officials" (see also Lugard, 1922). Thus, indirect rule was based on cooperation, rather than subordination as in the French case (Crowder 1964; Betts 1985). According to Lange (2004, p. 906), the most commonly view for indirect rule is that of Fisher (1991) who describes it as "the incorporation of indigenous institutions –not simply individuals– into an overall structure of colonial domination. From this view, direct rule differs from indirect rule in that it involves the construction of a complete system of colonial domination that lacks any relatively autonomous indigenous component, yet which might be staffed overwhelmingly by indigenous actors."

[10] Lange (2004) points out that the degree of indirect rule –that he measures as colonial dependence on customary courts– was related to local conditions such as the disease environment and precolonial population density. In Section 6 we implement an exercise in which endowments act as instruments for the extent of direct/indirect rule to explain current legal rules and outcomes.

[11] This situation has persisted over the postcolonial era. As a matter of fact, in other indirectly ruled colonies such as Sierra Leone, Tanzania and Zambia, the English law that today forms the basis of the legal system remains alienating to most people. "Such law is not embedded in the customs and traditions of those societies; it is complex, technical and expensive to implement. For ordinary people it is inaccessible, often physically remote and in many cases conducted in a language they do not understand." (Robins 2009, p. 2).

traditional indigenous rulers, the British opted for appointing local headmen as new leaders vested with authority over the native population (Daniels, Trebilcock, and Carson 2011).[12] Also related is the issue of "custom invention" by local chiefs that often gave rise to misleading "descriptions of the main features of the political system, customary law and land tenure" (Chilver 1963, p. 110). This enabled them to coerce the local population by controlling chiefdom police forces, customary courts and people's access to land (Lange 2009; Daniels, Trebilcock, and Carson 2011). According to Migdal (1988), Ben-Jua (1995), Mamdani (1996), Herbst (2000) and Lange (2009), indirect rule set the stage for subsequent postcolonial collapse by institutionalizing despotism and contributing to the creation of neo-patrimonial states (where the traditional authority of chiefs to rule peripheral areas is captured by the central elites), thereby leading to an ineffective central administration unable to enforce law and order.

The high variability in the way the common law was exported to colonial societies had important consequences. In sparsely populated territories with a favorable disease environment the common law was extensively implanted and fitted well with the colonial society. This led to a more intense legal-institutional transfer, which made it possible to develop a legal system that is comparable in many respects to the British one. In these cases, the positive features associated with the common law are expected to prevail, and therefore, the legal system can provide good protection of investor and creditor rights as well as be efficient at enforcing private contracts and debts. By contrast, in places with a relatively large indigenous population and adverse disease conditions to European settlement, indirect rule generally prevailed, which led to the superficial application of the British law that barely influenced and even distorted previous legal practices based on customary law. Hence, the legal systems arising in such territories are not comparable to that of the origin country, which implies that they are unlikely to feature either a high degree of creditor and investor rights or efficient legal enforcement.

2.4. The Distribution of the French Civil Law

The distribution of the French civil law differs in several respects from that of the common law. An important aspect is that while it is clear that the common law was distributed by Britain

[12] A contemporary at that time and firm supporter of indirect rule like Perham (1934a) explicitly admitted the difficulties colonial officers were facing in recognizing the true native authorities, which resulted in the appointment of many "wrong headmen" that really owed authority to their willingness to collaborate with colonial officials and had no claim to legitimacy on the basis of their lineage. Discussing the nature of indirect rule, Perham (1934b) also admitted that "[t]here is some truth in the complaint that it fails to preserve African societies and distorts their development in the attempt to adapt them. [...] Numerous examples can be quoted of attempts to turn African chieftainship with its peculiar attributes and its numerous limitations into an autocracy or, more often, a bureaucratic agency of the foreign power" (p. 327). On the consequences of the creation of "warrant" chiefs as a new political authority, see Crowder and Ikime (1970), Afigbo (1972, 1985), Wylie (1977) and Migdal (1988).

across its empire via colonialism, the French civil law was exported in a number of ways. On the one hand, there is a group of former colonies that received the civil law by France itself, entailing those territories that belonged to the French colonial empire. On the other, most other colonies coded as French civil law received the Civil Code through third countries or by own initiative. Considering that each European colonial power applied a particular legal policy in its empire, it is important to differentiate among them to better understand how the French civil law was distributed around the world. Toward this end, we consider three categories of colonies according to the way the civil law was transmitted to the recipient country. The first category includes those colonies that directly received the French civil law by France itself. This group contains 25 former French colonies in our sample. The second category consists of the former Spanish colonies (18 countries), whereas a third group comprises the remaining colonies (18 countries).[13]

2.4.1. Implantation by France Itself

France conducted a uniform and rigid application of the law across its empire and did not condition the implantation of the legal system on particular circumstances or endowments. Also, the application of the French law was more ambitious than in the British case and reached a higher percentage of people. Zweigert and Kötz (1998) state that "French colonial policy always sought in the long run to assimilate the native populations" (p. 113) and Whittlesey (1937) notes that "France is in Africa to make Frenchmen out of the Africans" (p. 367). The pursuit of legal assimilation led the French colonial legislation to encourage the native population to adopt the French law. While Britain applied the common law more flexibly and did not try to replace local laws and indigenous customs, France imposed its Code rigidly despite conflicting with local customs (Beck, Demirgüç-Kunt, and Levine 2003a). In fact, this homogeneity in the application of the law was accompanied by a similar administrative organization imposed on territories, which were considered uniformly even when they presented special features (Crowder 1964).

This legal colonial policy was coherent with the nature and character of the French empire, which was more centralized than the British and ruled with a very different ideology, namely, the consideration of the colonial empire as an intrinsic part of the Republic and the ideal of assimilation (Fieldhouse 1966; Kumar 2006). Referring to former French colonies, Whittlesey (1937) notes that they "represent an extension of France not merely economically, but in every phase of life" (p. 370). The French empire was based on centralized bureaucratic control of

[13] Focusing on a different research question (the role of the colonizer vs. the legal family), Klerman et al. (2011) divide the French civil law tradition into two groups (French colonies and the rest) and find that former French colonies grew slower than the other French civil law colonies during the period 1960–2007.

colonial dominions and relied more on direct rule. Besides, it had clear formal rules and chains of command, and indigenous chiefs were not considered an autonomous part in the system of colonial control (Crowder 1964; Gann and Duignan 1967). In ideological terms, the French, "inspired by egalitarian ideals of the Great Revolution and a belief in the superiority of 'civilisation française', constantly strove to lead the native population step by step to the higher level of metropolitan culture" (Zweigert and Kötz 1998, p. 113). All these features led to a more homogeneous colonial policy which was largely invariant to the level of endowments. [14]

The uniformity in the exportation of the civil law to former colonies had as a consequence a more homogeneous influence of the French civil law on colonial legal systems. Thus, the typically negative outcomes associated with the French legal tradition –as held by the Legal Origins Theory–, such as lower creditor and investor rights, higher legal formalism and lower legal efficiency, are likely to apply to all former French colonies irrespective of their initial endowments. We must add that the rigid implantation of the French civil law produced widespread unreceptive transplants –as reflected in the coding of the legal transplant variable by Berkowitz, Pistor, and Richard (2003a, b)–, which can also help explain the generally negative effect found for this legal tradition. In this respect, it is important to stress that the French civil law has had worse consequences in the colonies than in the origin country. This is because, despite the fact that soon after the revolutionary period France relaxed the strict application of the separation of powers and courts were granted the power to interpret laws, when exporting their legal system the French did "not include the information [saying] that it really does not work that way" (Merryman 1996, p. 116). This inhibited the development of the judicial system in many developing countries.[15]

[14] The different colonial strategies of France and Britain are reflected in the unequal presence of colonial officials in the colonies. For instance, this presence was much larger in French West Africa than in British Nigeria. In the 1930s, the ratio of colonial officials per thousand population was 24/100 for the former while 7/100 for the latter (Kirk-Greene 1980). In this sense, Whittlesey (1937) stated that "[t]he proportion of functionaries is therefore much higher in the French possessions [than in the British]. Obviously more political officers are needed for direct than for indirect government." (pp. 367-8). In addition, the status and power of the chiefs also differ. According to the Governor-General of French West Africa, Joost van Vollenhoven (1920), under French rule the chiefs "have no power of their own, for there are not two authorities in the *cercle* [the district]...; there is only one! Only the *commandant du cercle* commands; only he is responsible. The native chief is but an instrument, an auxiliary" (p. 207). In contrast to the British system of indirect rule stood "the French which tended to erode African authority, finally making the administrator the responsible judicial official" (Betts 1985, p. 324).

[15] Note that this constitutes another example of the problems arising when mixing origin countries with colonies. An argument with similar implications is the one provided by Glaeser and Shleifer (2002), who state that for countries that choose their legal rules –like France– the civil law system may be efficient. However, when this legal tradition is introduced into the colonies significant problems probably arise, due to higher government control over judges and legal rules. Djankov et al. (2003a) also argue that the civil law is more problematic in the colonies than in France.

2.4.2. Spanish Law Legacy

In line with French colonization, Spain eliminated indigenous legal systems in the Spanish American dominions (Fieldhouse 1966; Hanke 1949). However, there are two main distinctive features that qualify Spanish American colonies for separate categorization: the enduring legacy of the Spanish law tradition and the reception of the French Civil Code by imitation.[16] Before gaining independence, Spanish American colonies were ruled by Castilian kings over three centuries, period over which they were subject to a continuous process of reception of the Spanish law.[17] Initially after conquest, Spain transplanted Castilian laws to the colonies, but over time a special legislation was successively developed, which was compiled in the *Recopilación de las Indias*, a collection of 6,000 statutes published by Charles II in 1680 that were applicable to all the American colonies (Gacto, Alejandre, and García 2003).

When the Spanish American colonies achieved their independence at the beginning of the nineteenth century, the Spanish law was the basis of their legal systems. In this sense, William W. Howe (1903) emphasized the key relevance of the Spanish law for Central and South America, since all these countries derived their system of law and jurisprudence from Spain.[18] The influence of the Spanish law in the American colonies provided a background of *ius commune* that facilitated the reception of the French Civil Code and other European sources. Many traditional concepts and ideas of the Civil Code, especially those coming from Roman law, constituted no breach with the legal institutions established in Latin America. Therefore, the shared Roman roots of the Spanish and French legal traditions favored the reception of the Civil Code (Zweigert and Kötz 1998; Garro 1992; Mirow 2004).

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[16] An additional distinctive feature that differentiates these countries from the other French civil law countries is their mixed influences, because legislators have increasingly incorporated –particularly over the twentieth century– other legal sources such as the American, German, Italian or Swiss law (for example, Zweigert and Kötz 1998; Garro 1992; Roe and Siegel 2009). Also, a key characteristic of Spanish colonial domination of overseas colonies entailed the legal imposition of the Roman Catholic doctrine and forced conversions or punishment of non-Catholics (Fieldhouse 1966; Burns 1973; Schmidhauser 1992).

[17] It is well-known the fact that the Spanish law tradition is singular in the sense that it has its own history and idiosyncratic features. For instance, Hamilton (1917) stated that the "Spanish Civil Law is the most influential body of law on the globe today [...] It is no copy of the Code Napoleon, although that was carefully consulted". Its singularity comes from the Spanish history and one can find on it "a Roman foundation, Gothic, Moslem, local and maritime elements" (p. 317). Brown (1956) places the Spanish law system in a middle point between the English doctrine of precedent and the French position.

[18] According to Mirow (2001), the study of the Castilian law *Las Siete Partidas* was used, for example, together with the French Civil Code, in the drafting of the prestigious Chilean Civil Code. Dam (2006) also emphasizes the importance of Spanish elements existing in Latin American law. Along similar lines, Peter J. Hamilton (1917) stressed that the Spanish law continues to control the civil relations of Central and South American countries. He pointed out that the *Recopilación de las Indias* still has great value for American countries and even compares the legacy of Spain in Latin America with that of Rome in Europe.

The second feature shared by former Spanish American colonies is the specific way in which the French civil law was received. These territories achieved their independence before Spain adopted a French oriented code. Thus, they received the French civil law by imitation, that is, through voluntary transplant, which increases the chances of receptivity by allowing the adaptation of foreign law to national circumstances (Berkowitz, Pistor, and Richard 2003a). The civil codes of Argentina and Chile exemplify the adaptation of foreign law to local conditions and were taken as referential legal sources by many other Latin American countries (Mirow 2001; Zweigert and Kötz 1998).[19]

For all these reasons, it is clear that the reception of the French civil law in Spanish America differed markedly from that in other regions such as West and Central Africa. The substance of the law is also different because in the latter legal systems are impregnated with African and tribal customs, whereas in the former with the Spanish legal culture. Therefore, legal systems in countries that belonged to the Spanish empire are arguably more developed and effective than those of former French colonies. Regarding the influence of endowments on the implantation of the law, Spain –like France– applied legal rules homogeneously and in a centralized way across its empire. This led to a uniform introduction of the Spanish-Roman oriented law and created similar conditions among the colonies for the reception of the French Civil Code, which implies a constant effect of the Spanish law legacy irrespective of initial endowments.

2.4.3. Others

We create a third group that entails those territories that were colonies of countries other than France and Spain. This is a heterogeneous group of French civil law countries that comprises territories as diverse as the British mandates of the League of Nations for the Middle East, the Portuguese colonies or the Belgian, Dutch and Italian colonies. Given the small number of observations in each sub-category, bringing together colonies of such diverse origin into a residual group, though not ideal, may be the best available option. In addition, by creating this residual group we do not mix these countries with former French and Spanish colonies, which allows for a clearer analysis of the distribution of the civil law in both groups. Regarding the distribution of the law in this third group, we lack an appropriate theory accounting for the way each of these colonial powers implanted their legal systems. Since there is nothing indicating

[19] Hence, the French civil law was not introduced (adopted) exogenously within this group of colonies, which is a point that merits special consideration and further justifies its categorization as a separate group. Nevertheless, it is important to note that Spain did impose its Roman oriented law on these countries. Therefore, in a broad sense the civil law itself is exogenous to former Spanish American colonies.

that the implantation of the law by these countries followed a systematic pattern, we expect no specific relationship between the distribution of the civil law and initial endowments.

Finally, after reviewing how legal traditions were spread around the world in the colonization process, one can still wonder about the ultimate cause of the different colonial legal policies followed by European countries. In particular, why did Britain but not France pursue a more sensitive policy to the presence of indigenous population and native rules? Colonial policies were congruent with the general character of the French and British empires, the former being more centralized and uniform and the latter more decentralized and variable to local conditions (Fieldhouse 1966). However, the question that remains unanswered is why these empires differ. A plausible answer lies in the specific domestic conditions prevailing in each country. The centralist state tradition, the ideological heritage of the Great Revolution, their taste for homogeneity and rationalization were all reflected in the nature of the French colonial empire (Whittlesey 1937). In the case of Britain, their conservatism and preference for gradual changes, their liberalism and a higher economic motivation led to a more pragmatic and variable colonial empire (Fieldhouse 1973). Therefore, French and British imperialism needs to be related to their domestic history (Kumar 2006).[20]

3. Empirical Approach and Data Issues

In order to analyze the patterns of distribution of the British common law and the French civil law we estimate cross-section regressions for a sample of 100 former colonies. An interaction model is used to allow for the possibility of heterogeneity in the relationship between endowments and legal outcomes across legal traditions.[21] The French civil law group is divided into three categories depending on the way the Civil Code was received. Thus, the model to be estimated is as follows:

$$\begin{aligned} Legal\_outcomes_i = {} & \alpha + \beta_1 \cdot implantation\_France_i + \beta_2 \cdot Spanish\_law_i + \beta_3 \cdot Others_i + \\ & \beta_4 \cdot common\_law \times endow_i + \beta_5 \cdot implantation\_France \times endow_i + \\ & \beta_6 \cdot Spanish\_law \times endow_i + \beta_7 \cdot Others \times endow_i + \varepsilon_i \end{aligned} \quad (1)$$

where *legal_outcomes* represents the specific indicator of legal outcomes; α is the constant term; *implantation_France*, *Spanish_law* and *Others* are dummy variables capturing the civil law categories 'Implantation by France', 'Spanish law legacy' and 'Others' (taking the British

[20] For an elaboration and empirical testing of these arguments, see Oto-Peralías and Romero-Ávila (2013).

[21] Other authors studying the influence of legal origin and endowments on institutions and financial development use linear models, which render constant effects for legal traditions (Beck, Demirgüç-Kunt, and Levine 2003a; Levine 2005; Acemoglu and Johnson 2005).

common law as the reference group, reflected in the constant term); $common\_law \times endow$, $implantation\_France \times endow$, $Spanish\_law \times endow$, and $Others \times endow$ represent the respective interaction terms of the common law and civil law groups with the endowments indicator; and ε_i is the error term. Equation (1) is estimated via Ordinary Least Squares (OLS) with heteroscedasticity-consistent standard errors.

This model allows us to test four predictions derived directly from the discussion in the previous section about the distribution of legal traditions. First, the implantation of the common law was unequal among British colonies, with the transfer of legal rules and institutions being inversely related to the presence of native population. Therefore, we expect to find a statistically significant and negative coefficient on the interaction term $common\_law \times endow$ (or positive when higher scores in the legal variable imply worse outcomes). Second, the uniform implantation of the civil law by France in its colonies must be associated with a constant effect by the 'Implantation by France' group, that is, the absence of a systematic relationship between endowments and legal outcomes. Regarding the two other French civil law groups, particularly the 'Spanish law legacy' group, for the reasons given above we also expect a constant effect on legal outcomes.

Third, the model also enables us to test the relative performance of the common law vs. the French civil law categories at different levels of endowments. This can be done by comparing the predicted values of legal outcomes for each legal tradition both at low and high levels of precolonial population density. Since the implantation of the common law was more effective in sparsely populated territories, we expect differences between this legal family and the French civil law categories to be larger at low levels of precolonial population density. Fourth, confronting the coefficients on the dummy variables *implantation_France* and *Spanish_law*, we can test whether –according to our view– 'Spanish law legacy' is associated with better legal outcomes than the 'Implantation by France' group.

Concerning the selection of dependent variables, we rely on the *Doing Business* Project (2012) dataset for the legal and regulatory indicators. This dataset is built following the methodology developed in their papers by such prominent authors as Djankov, La Porta, Lopez-de-Silanes, Shleifer, Vishny and others. A very important advantage of using this source versus the original papers' data is the much wider coverage of countries, feature that is central given our focus only on former colonies. Further advantages are the update of the dataset and enhanced coverage in terms of indicators in addition to improvements to the methodology and the correction of coding errors and inconsistencies in the data. *Doing Business* provides indicators on eleven different topics of business regulations. In order to proceed with the selection of indicators, we consider

three important dimensions of legal rules/outcomes that have been intensively studied in the legal origins literature: a) *creditor and investor rights and disclosure*, b) *legal system efficiency*, and c) *regulation*. From each dimension, we select the most relevant or comprehensive indicators available.

Regarding the first dimension, we select the indicator "Strength of legal rights index", denoted by *creditor rights*, which measures the extent to which collateral and bankruptcy laws protect borrowers and lenders' rights. Another important indicator considered is "Strength of investor protection index" (hereafter *investor protection*), which assesses the strength of minority shareholder protection against directors' misuse of corporate assets for personal gain and self-dealing in related-party transactions. Both indicators range from 0 to 10, with higher scores implying better designed laws to expand access to credit as well as to protect investors. They are clear examples of "law on the books" indicators. The third indicator within this dimension is "Depth of credit information index" (hereafter *information sharing*) that measures –on a scale from 0 to 6– rules and practices affecting the scope, coverage and accessibility of credit information either through a public credit registry or a private credit bureau, with higher values reflecting more information available.

Concerning the second dimension, we select two legal outcome indicators. First, "time required to complete procedures" (henceforth *contract enforcement*) indicates the time (in days) to resolve a commercial sale dispute through the courts. According to Djankov, McLiesh, and Shleifer (2007), this indicator can be considered as an objective measure of efficiency of contract enforcement by courts. Second, "recovery rate" measures the present value of debt recovered by creditors in insolvency proceedings, after deducting the official costs of the proceedings and the loss of value due to assets depreciation. This variable can be considered as a measure of efficiency of debt enforcement. Regarding the third dimension, the regulatory indicators selected are "number of days required to register a firm" (henceforth *starting a business*) and "number of days required to register property" (hereafter *registering a property*).[22]

[22] The year of measurement is 2006, the first for which data are available for all selected variables. As pointed out below, the results are robust to employing legal outcomes data for the year 2010 or an average over the period 2006-2010. Logarithmic transformation is applied to indicators measured in days in order to reduce the high variability in the data. In the absence of a comprehensive indicator that measures the different aspects of a dimension by aggregating other indicators (for example, creditor rights), we prefer indicators measuring the duration of procedures since this is a fundamental feature of legal and judicial systems, which is reflected in the principle "justice delayed is justice denied". Thus, for instance, Djankov et al. (2008a) use days to enforce a contract as a measure of the quality of the legal system. In addition, Spamann (2010b) argues that measures of complexity, such as the number of steps, have an unclear meaning because they combine and uniformly weight disparate steps that differ greatly in importance and length.

The independent variables are the legal origin dummies and the endowments indicator. Our sample of former colonies contains only countries with the British common law and the French civil law.[23] We obtain these variables from La Porta et al. (1999), who identify the legal origin of the Company Law or Commercial Code in each country. Regarding the measure of endowments, our preferred choice is the logarithm of population density in 1500 (also referred to as precolonial or indigenous population density) from AJR (2002). As argued in Section 2, this was an important factor that influenced the colonial strategies of European powers when transferring their legal rules and institutions to colonized territories. Another advantage of indigenous population density over other alternatives is its availability for a larger cross-section of countries.[24] We refer the reader to Table A1 in the Appendix for descriptions and sources of the rest of the variables. Table A2 in the Appendix contains the list of former colonies categorized by legal traditions.

4. Regression Analysis: Basic Results

Table 1 presents the basic results for the seven dependent variables. The first three columns contain the variables related to *creditor and investor rights and disclosure*. Regarding creditor rights and investor protection we observe that the civil law dummies exhibit negative and highly significant coefficients, with the coefficient on 'Implantation by France' being larger in absolute value. In addition, the coefficient on the interaction between the common law and precolonial population density is negative and statistically significant at the 5% level or better, whereas the coefficients on the interaction terms for 'Implantation by France' and 'Spanish law legacy' are insignificant. This result supports our prediction about heterogeneity in the effect of the common law, since this legal tradition leads to higher creditor and investor rights protection in sparsely populated territories than in densely populated places. In contrast, for 'Implantation by France' and 'Spanish law legacy' creditor and investor rights do not vary significantly with the level of endowments. The third group within the French civil law tradition ('Others') shows an inconsistent coefficient on the interaction term, which appears negative and significant when the dependent variable is creditor rights but insignificant for the case of investor protection. In the bottom part of the table, we show the differences in predicted values between each civil law group and the common law for a relatively high value of precolonial population density (a value

[23] There are no colonies with the German and Scandinavian civil law families (LLS 2008).

[24] Potential settler mortality rate, from AJR (2001), is another well-known indicator, but it implies a significant reduction in the sample. In addition, it may be argued that due to the widespread use of quinine after 1850, tropical disease declined in importance as an obstacle to European settlements (Olsson 2009), which means that settler mortality may be less relevant for the imperialist wave of colonization. Notwithstanding, as pointed out below, the main results obtained for precolonial population density hold when it is replaced by potential settler mortality.

of 10 that represents the 87th percentile of the distribution). Comparing this information with the coefficients on the civil law dummies, which stand for the differences with respect to the common law when the log of population density is 0,[25] we can observe that differences between the common law and the civil law groups are substantially larger at low levels of population density than at high levels.[26]

Column 3 reports the results for information sharing. In this case, the coefficient on the 'Implantation by France' dummy is only marginally significant, whereas the coefficient on 'Spanish law legacy' is positive and highly significant. Regarding the interaction terms, only for common law countries do we observe a negative and significant relationship between endowments and information sharing, which again gives support to our thesis about the presence of heterogeneity in the distribution of legal traditions. Comparing the coefficient on the 'Implantation by France' dummy (–0.82) with the one provided at the bottom part of the table (0.8), we observe that the common law is associated with higher information sharing than this civil law category at a low level of population density, but the situation is reversed at a high level of indigenous population density –though the difference is not statistically significant in this case. Regarding the relative effect of the common law vs. 'Spanish law legacy', significantly better outcomes are observed in the latter both at low and high levels of population density. This evidence on the favorable effect of 'Spanish law legacy' on promoting information sharing

[25] This corresponds to a value of precolonial population density of 1, which represents the 25th percentile of the distribution.

[26] According to equation (1), predicted values for the common law are calculated as: $\alpha + \beta_4 \times \ln(10)$. Concerning the civil law groups, predicted values for 'Implantation by France' are obtained as: $\alpha + \beta_1 + \beta_5 \times \ln(10)$, proceeding accordingly for the two other civil law groups. The comparison of the coefficients on the civil law dummies with those presented in the bottom part of the table reflects what happens to the relative scores in legal rules/outcomes between civil law groups and the common law when increasing log precolonial population density by 1.48 standard deviations (that is, (2.3–0)/1.55, where 1.55 is the standard deviation of the log of population density).

complements the results by Djankov, McLiesh, and Shleifer (2007), who find a positive impact of the French civil law on the presence of public credit registries.[27]

Legal outcomes related to *legal system efficiency* are introduced in columns 4 and 5. As far as contract enforcement is concerned, we observe that the civil law dummies are positive but statistically insignificant (except for the group 'Others'), thus indicating the absence of significant differences between the common law and the 'Implantation by France' and 'Spanish law legacy' groups at low levels of precolonial population density. The interaction term is positive and highly significant for the common law and insignificant for the civil law groups. This result reflects that, for common law countries, the higher the level of precolonial population density the longer the interval of time required to enforce contracts through the courts and, therefore, the lower the efficiency of the legal system. In the bottom part of the table, the negative signs reflect that contract enforcement is faster in the civil law groups than in the common law at high levels of population density, though the differences are significant only for 'Implantation by France'. Regarding the other indicator of *legal system efficiency*, namely recovery rate, the civil law dummies are negative and significant, with a notably smaller coefficient for 'Spanish law legacy'. The coefficient on the interaction between the common law and indigenous population density is negative and significant, which implies that this legal tradition leads to lower legal system efficiency where precolonial population density was higher. In this case, the interaction term for 'Implantation by France' is positive and significant, whereas for the other civil law groups the coefficients remain insignificant. Again, in the bottom part of the table we observe that the common law is not associated with higher legal system efficiency than the civil law tradition at high levels of precolonial population density (rather the opposite, though the differences are statistically insignificant).

[27] The better performance of 'Spanish law legacy' in information sharing is well reflected in a substantially higher average value (4.9) with respect to 'Implantation by France' (1.2), the other French civil law group (1.6) and common law countries (1.5). Given the different roles that legal traditions assign to government, we analyzed separately the variables "public registry coverage" and "private bureau coverage". We found that 'Spanish law legacy' has much higher public registry coverage than the other legal traditions, whereas there are no significant differences in private registry coverage. However, former French colonies appear to exhibit significantly lower private registry coverage than the British, but no statistical differences exist in terms of public registry coverage. Therefore, the common perception that civil law colonies exhibit significantly better public registry coverage vis-a-vis common law colonies appears to be driven by the high coverage in former Spanish colonies. Besides, the common law interacts negatively with precolonial population density only for the private credit bureau coverage, whereas the coefficient on the respective interaction term is found insignificant for public credit registry. The reason for this is that there are only three British common law colonies with a public credit registry (two of which have a score on the variable close to zero). These results are not reported to conserve space, but they are available in the unpublished appendix accompanying this paper.

Finally, columns 6 and 7 use as dependent variables two indicators related to *regulations*: starting a business and registering a property. The results appear in line with those in previous columns. More specifically, the coefficient on the interaction between the common law and population density is positive and significant, which means that the regulatory burden is positively related to the level of precolonial population density in this legal tradition. 'Implantation by France' and 'Spanish law legacy' exhibit insignificant coefficients on the interaction terms, whereas the group 'Others' presents a coefficient which is significantly negative for starting a business but positive and insignificant for registering a property. Concerning the differences in predicted values between the common law and the French civil law categories, the regulatory burden is significantly lower for the former at a low level of indigenous population density, since the significantly positive coefficient on the civil law dummies reflects that common law countries spend less time completing the formalities required to start a business and register a property. In contrast, at a high level of population density the common law is not associated with less burdensome regulation than the French civil law groups.

The size of the coefficients suggest that precolonial population density exerts a remarkable effect on legal rules/outcomes among common law countries. For instance, India has a high level of precolonial population density of 3.165 (≈ ln(23.7)) and an intermediate score of creditor rights of 6. The coefficient on the interaction term in Table 1 indicates that if India had a population density closer to that of Australia –3.65 (≈ ln(0.026)), then India would exhibit one and half times its current score of creditor rights. Concerning contract enforcement, the same exercise would imply a substantial increase in the efficiency of the Indian legal system by reducing the time to enforce a contract in approximately 1,000 days, thus rendering a score close to Australia that entails 395 days.[28]

[*Insert Table 1 about here*]

In sum, Table 1 reveals four interesting results. First, the effect of the common law on legal rules and outcomes is inversely related to the level of endowments. Second, there is no clear-cut relationship between endowments and legal outcomes for the civil law groups. Third, common law countries perform better than French civil law countries at low levels of population density, whereas differences become smaller and in most cases statistically insignificant at high levels of

[28] More specifically, Δ(creditor rights) = –0.438*Δ(precolonial population density). India's population density equals 3.17 and Australia's –3.65. Then, Δ(creditor rights) = –0.438*(–6.82)= 2.99. As India's creditor rights equals 6, the new score would be 8.99. As regards contract enforcement, Δ(contract enforcement) = 0.176*Δ(precolonial population density) = 0.176*(–6.82)= –1.2. Since India's log of number of days to enforce a contract equals 7.26 (≈ln(1420)), its new level would be 6.06 (≈ln(428)), which implies a reduction of almost 1,000 days.

population density. Fourth, 'Spanish law legacy' exhibits generally better legal outcomes than 'Implantation by France', as becomes apparent when comparing the coefficients on the dummy variables.[29] Thus, these results support our view regarding the presence of heterogeneity in the distribution of the common law and the French civil law. In those places where the common law was extensively implanted (that is, in sparsely populated territories at the time of colonization), we observe the usual features associated with this legal tradition, such as higher creditor and investor rights, more efficient legal systems and less burdensome regulation. In contrast, when the introduction of the common law was superficial, as generally occurred in densely populated areas where indigenous law and rules were already in place, legal systems that emerged are not related (or related to a much lesser extent) to such features.[30] As far as the civil law tradition is concerned, the uniform distribution of the French civil law is reflected in a homogeneous effect on legal rules irrespective of initial conditions.

At first glance, it may result striking that for five of the seven indicators the common law and the French civil law produce similar outcomes in initially densely populated places. If, as is widely recognized (Zweigert and Kötz 1998), the British were more respectful than the French to indigenous rules and customs, why did the common law not produce better outcomes everywhere? As argued in Section 2.3, in densely populated areas with unfavorable disease conditions Britain applied an indirect form of government that, even though it did not try to impose its legal system over the native population, had negative consequences for subsequent institutional and legal development. Interestingly, the two indicators for which the common law predicts higher scores at high levels of population density (creditor rights and investor protection) are those more related to what is called "law on the books", whereas the others are more related to "law in action" or law enforcement. This fact is congruent with our story. Although the application of indirect rule did not completely prevent the inclusion of some

[29] For all the variables except contract enforcement, coefficients on the 'Spanish law legacy' dummy reflect better legal outcomes than those on the 'Implantation by France' dummy. For investor protection, information sharing, recovery rate and registering a property, differences are statistically significant. This result appears in line with Merryman's (1996) prediction that colonies receiving the French Civil Code directly from France itself did so more rigidly and did not receive the blueprints of how courts could interpret the law rather than simply apply it, as postulated by the revolutionary doctrine.

[30] Regarding our results about the distribution of the common law, its relatively poorer performance in the presence of adverse endowments can be related to the findings in Acemoglu and Johnson (2005), who provided evidence that endowments mattered much more for institutions conducive to financial development than legal origin. Thus, when the levels of indigenous population density or potential settler mortality are high, their negative effects appear to dominate the positive effect from being a common law colony. Put it differently, as we find for the case of high population density, the common law by itself does not guarantee the emergence of institutions supportive of high legal system efficiency and a low regulatory burden.

principles in legal provisions, this form of government undermined the foundations for creating effective and efficient legal systems. The attribution of judicial powers to unconstrained chiefs, which harmed the legitimacy of customary institutions, along with the inconsistencies derived from a parallel jurisdictional system and the lack of an effective attempt to introduce European legal procedures and institutions are likely reasons behind the poor performance in terms of law enforcement of the common law in initially densely populated places. At the end, the result was that the superficial implantation of the common law led to similar negative legal outcomes to the more rigid transplantation of the French civil law.[31]

In all, our results do not appear to dispute Merryman's (1996) prediction that it is better to have a law integrated into existing legal and cultural norms (as occurred in the British settler colonies) than having a law rigidly imposed on a society (as occurred in former French colonies). However, what our analysis has uncovered is the fact that in those colonies where the common law was superficially implanted and failed to integrate with local laws and indigenous customs (as occurred in indirectly ruled British colonies), the differences in terms of legal outcomes with respect to former French colonies vanish.

5. Sensitivity Analysis

5.1. Robustness Checks to Baseline Results

In this section we provide extensive robustness checks to the baseline results shown in Table 1. For each dependent variable we conduct three types of robustness checks. Firstly, control variables are incorporated into equation (1) to account for factors that may be correlated with our independent variables and legal rules/outcomes, thereby causing omitted variable bias. 'Years since independence' is a potential determinant of countries' legal systems because a long postcolonial period allows countries to adapt and develop legal rules and institutions according to their needs and eliminate inefficiencies from their colonial past (Beck, Demirgüç-Kunt, and Levine 2003a). Religion is also considered as a possible factor affecting legal systems and institutions. For example, historical hostility of some religions to lending on interest may have

[31] It is also important to note that the common law is not a legal tradition easy to receive, since it consists of "a matrix of case law and statutes" and involves a complex language (Glendon, Carozza, and Picker 2008). In fact, according to Michaels (2009, p. 788), comparative lawyers have traditionally argued that "the civil law should travel more easily than the common law, because its reliance on systematized codification requires less expertise in the recipient country", and it is known that "the transplantation of formal laws cannot succeed unless it comes with the transport of legal expertise". Thus, where the common law was superficially introduced and not complemented with legal expertise, it is not surprising that we do not observe its generally claimed beneficial effects. Also, the proper functioning of this legal tradition depends on the development of a body of judicial precedents, which is not easy to materialize (Glendon, Gordon, and Osakwe 1985). See also Joireman (2004) for the case of Kenya.

influenced the protection of creditor rights (Stulz and Williamson 2003). We also control for the vulnerability of the indigenous population to European diseases. As noted by Easterly and Levine (2012), territories in the New World and Oceania experienced dramatic declines in the native population, which could affect colonial policies.

Another important variable to take into account is ethnolinguistic fractionalization, which is associated with the provision of public goods and the quality of institutions (Alesina, Baqir, and Easterly 1999; Alesina et al. 2003). We also control for a set of variables related to the economic potential of the colonies: the number of years between when a territory was first sighted by Western Europeans and when it was first colonized by a European power, with a shorter gap implying that the territory was more valuable for the colonizer relative to the cost of colonizing it (Woodberry 2004, 2012); an indicator of soil quality as a measure of land suitability for intensive agriculture that may be necessary to sustain large populations (Lange 2009); and landlockedness and distance from the coast as measures of a country's permanent limitation to access large markets and exploit scale economies in production (Sachs and Warner 1995; Easterly and Levine 2003). In the main text we present the *p-value* associated with the joint significance of these four controls, whereas the unpublished appendix contains the statistical significance associated with each individual variable. In addition, the level of economic development, measured by GDP *per capita*, is viewed as an important factor affecting many legal outcomes (LLS 2008). However, controlling for this variable involves problems since it is endogenous to legal rules. This may spuriously reduce the coefficient on the truly exogenous independent variables, as argued in La Porta et al. (1999). To partially mitigate the endogeneity of GDP *per capita*, we include its value for the year 1970 –though the same results follow if measured in 2000. Moreover, as further control variables we add continental dummies for Africa, America and Asia.

Secondly, we use the potential mortality rate of European settlers as an alternative endowments indicator. Although we previously argued that precolonial population density is the best possible indicator of endowments available, we find it appealing to check the empirical validity of our baseline results to this alternative indicator introduced by AJR (2001). According to these authors, a lower mortality rate implied higher feasibility of settlements by Europeans, which resulted in better institutions transferred to the colonies, that is, those protecting property rights and political freedom. In addition, a larger number of European settlers facilitated the introduction and application of European laws in the colonies. Thirdly, we test whether our results are driven by influential observations. We consider several statistical methods to identify

outliers such as leverage, standardized residuals and Cook's distance.[32] Once outliers are detected, we exclude these countries and rerun the regressions.

Tables 2 to 8 present the results from the application of all these robustness checks to the seven indicators covering the dimensions *creditor and investor rights*, *disclosure*, *legal system efficiency* and *regulation*. We anticipate that our previous findings are broadly confirmed. As shown in Tables 2 and 3 for creditor and investor rights, the effect of the common law appears negatively related to the level of precolonial population density.[33] In contrast, endowments do not play any role in explaining the effect of 'Implantation by France' and 'Spanish law legacy'. These diverging patterns among legal traditions are responsible for the fact that differences between the common law and the civil law categories are larger at low levels of indigenous population density than they are at high levels, as observed by comparing the coefficients on the civil law dummies with those in the bottom part of the tables. It can also be noted that the negative coefficients on the dummy variable for 'Spanish law legacy' are smaller than those for 'Implantation by France', thus supporting the existence of higher creditor and investor rights in the former. Regarding information sharing (Table 4), we observe that the effect of the common law is negatively related to endowments, whereas the interaction terms for the civil law groups are always insignificant. Again, 'Spanish law legacy' is associated with deeper credit information than the common law and the other civil law categories.

[*Insert Tables 2 to 4 about here*]

Tables 5 and 6 include contract enforcement and recovery rate as dependent variables and the results appear in line with our baseline findings. In common law countries we consistently observe for both indicators that the more adverse the endowments (as implied by higher values of precolonial population density or settler mortality) the lower the legal system efficiency. In civil law countries no significant relationship is observed, except for the 'Implantation by France' group when recovery rate is the dependent variable. In this case, the coefficient on the interaction term is positive, but shifts signs when settler mortality is used as endowment. Finally, Tables 7 and 8 present the robustness checks for our regulation indicators: starting a business and registering a property. As with the other legal indicators, we find evidence of heterogeneity

[32] The cut-offs of the detection methods are: leverage, $2 \cdot k/n$; standardized residuals, $|2|$; Cook's distance, $4/n$; where k is the number of parameters and n is the number of observations. Similar results follow with the DFITS criterion.

[33] Only in one specification does the interaction term lose the statistical significance. It is when we include GDP *per capita* as a control variable for investor protection. However, we previously warned about the endogeneity problems associated with this control variable, which may spuriously reduce the coefficient and significance of the truly exogenous regressors.

in the distribution of legal traditions. The positive and significant coefficient on the interaction between the common law and endowments implies that the regulatory burden in common law countries is positively related to the level of initial endowments, whereas for 'Implantation by France' and 'Spanish law legacy' there is no clear evidence of such a relationship.

[*Insert Tables 5 to 8 about here*]

In summary, our basic findings shown in Table 1 are robust to the inclusion of additional control variables,[34] the use of the potential settler mortality rate as an alternative endowments indicator and the exclusion of outliers. As further unreported robustness checks, we run all regressions –and not just the basic specification– using the potential settler mortality rate, and it is remarkable that the baseline results broadly hold. Moreover, to be sure that our findings are not affected by the residual category of French civil law countries 'Others', we redid the analysis without the 18 countries belonging to that group. Remarkably, the results remain fairly robust with the reduced sample of colonies. Finally, the baseline results are also robust to employing legal rules/outcomes data for the year 2010 or an average over the period 2006-2010. In support of the presence of higher heterogeneity in the distribution of the common law vs. the civil law categories, we also show that the standard deviation and coefficient of variation of each dependent variable is generally higher in the common law than in the 'Implantation by France' and 'Spanish law legacy' groups.[35]

5.2. Using Business and Household Survey Data on Legal Outcomes

In this subsection we complement the previous analysis that employed rule-based indicators of legal and regulatory institutional structures from *Doing Business* with a wide array of *de facto* indicators measuring how firms and households perceive and experience the legal and regulatory systems. The use of outcome-based legal indicators derived from the direct experience of firms and households enables us to better measure the consequences arising from the actual implementation and enforcement of laws in practice. Several sources of enterprise and household survey data are employed. Concerning the former, we use the Enterprise Surveys (ES) and the World Business Environment Survey (WBES) of the World Bank Group (see World Bank

[34] Of all controls, the set of economic potential indicators and GDP *per capita* appear significantly related to better legal institutions for five of the seven dependent variables, while the continental dummies are statistically significant for four, years since independence for three and religion for only two.

[35] For reasons of space, all these results are not reported but are available in the unpublished appendix.

[2013] and Kaufmann and Stone [2003], respectively). As for the latter, we employ data from the Gallup World Poll –GWP hereafter– (2013) and the World Justice Project (WJP).[36]

As mentioned in the ES homepage, data from ES and WBES (obtained from face-to-face interviews with managers) are highly complementary to *Doing Business* data (obtained from local experts on a specific legal/regulation area). Whereas the latter measures what a standardized firm should expect if it complies with all official regulations and legal requirements in place, the former measures the actual experiences of a firm regarding a particular legal or regulatory aspect in the normal course of business, which does not necessarily entail the full compliance or enforcement of the laws and regulations in place. The variables we select from the surveys are those that better reflect firms' (and households' when it comes to household surveys) view on the quality of courts, enforcement of regulations, and other aspects related to the availability of information on laws and regulations and their actual consistency and predictability. More specifically, the indicator taken from ES relates to firms' assessment of whether courts are fair, impartial and uncorrupted. From WBES, which contains a larger number of indicators of legal outcomes, we retrieve the following measures: availability of information on laws and regulations, interpretation of laws and regulations are consistent, overall quality and efficiency of courts, courts are fair and impartial, courts are honest and uncorrupted, and court decisions are enforced.[37]

As far as household surveys data are concerned, we employ an indicator of confidence in the judicial and security systems constructed on the basis of the following subject areas considered by the GWP: confidence in the police force, confidence in the judicial system, have you had money property stolen from you or another household member?, and have you been assaulted or mugged? In addition, we employ the following WJP indicators related to regulatory enforcement and civil justice functioning and enforcement: government regulations are effectively enforced, government regulations are applied and enforced without improper influence, civil justice is free

[36] The ES and WBES are conducted for a large number of firms in the main sectors of economic activity in a large number of countries. Other papers using WBES data are Acemoglu and Johnson (2005), Beck, Demirgüç-Kunt, and Maksimovic (2005), and Beck, Demirgüç-Kunt, and Levine (2005). The GWP is a survey polling representative samples of households in a large sample of countries, and the WJP is a survey that combines expert opinion with rigorous polling of 1,000 general public respondents in a large sample of countries (Botero and Ponce 2010). In the four cases, we take averages of the scores obtained for all units surveyed in each country.

[37] The ES indicator ranges from 1 (strongly disagree) to 4 (strongly agree), and the WBES indicators' scores range from 1 (fully agree) to 6 (fully disagree). We rescale WBES indicators so that higher scores imply better legal and regulatory outcomes for the respondents. Since the average for each country is calculated from microdata, the regressions are weighted by the inverse of the standard errors of the mean values for each country, thus taking into account the precision of the average values estimated.

of improper government influence, civil justice is not subject to unreasonable delays, civil justice is effectively enforced, and alternative dispute resolution mechanisms are accessible, impartial, and effective.[38]

Table 9 presents the baseline results for the 14 survey-based legal/regulatory indicators. As with *Doing Business* data, we find strong evidence of heterogeneity in the effect of legal traditions on legal outcomes, since the coefficient on the interaction between the common law and endowments is consistently negative and significant, whereas the respective coefficient for the civil law groups is generally insignificant. This implies that the common law leads to better legal and regulatory outcomes at low levels of indigenous population density, whereas at high levels the difference with the civil law groups generally vanishes (as presented in the bottom panel of the table). This makes us confident that what we are capturing is not an artifact caused by the use of rule-based indicators, but it represents the distinct influence that legal traditions and their interaction with initial endowments exert on the actual experiences of firms and households in their dealings with the courts and the legal and regulatory system (that is, on law in action).

[*Insert Table 9 about here*]

6. Exploring the Mechanisms

In the previous section we provided evidence that the level of endowments is negatively related to current legal rules and outcomes in British common law colonies, whereas they appear unrelated in former French and Spanish civil law colonies. We explained the results on the basis of the differences in response of western powers' colonial strategies to the level of endowments present in the colonies, with the British colonial strategy being the only one responsive to endowments. In this section, we build on these arguments and try to trace the link between initial endowments and current legal rules/outcomes through the colonial strategy. Since British common law colonies are the only group for which current legal rules/outcomes are clearly related to the level of endowments, we build our identification strategy with this group in mind. Also related is the great variability in colonial arrangements found in the British Empire relative to the French and Spanish empires. In short, direct rule prevailed in extreme form in the case of the settler colonies of North America and Australasia that attracted massive European immigration and featured representative constitutional systems. Direct rule was also prevalent in

[38] The use of the latter indicator constitutes a novelty in the literature that has focused exclusively on public contract enforcement institutions. This variable is related to private arrangements for dispute resolution and allows us to shed some light on the effect of legal traditions on households' perceptions about the functioning of institutions of private contract enforcement. See Beck (2012) for a discussion about the need to complement the use of indicators of public institutions outcomes with those of private legal mechanisms for conflict resolution.

two types of colonies despite not having attracted a large number of European settlers: the strategically trade-oriented colonies of Hong Kong and Singapore and the plantation colonies of the West Indies.[39] At the other end, indirect rule was widespread among extractive colonies, particularly in sub-Saharan Africa and some parts of Asia, although implemented in different degrees depending on their initial endowments (Lange 2004, 2009). Somewhere in the middle, a hybrid form of colonialism was present in colonies like South Africa, Zimbabwe, Kenya and India (Lange et al. 2006).

As emphasized by Lange (2009, p. 28), while direct rule "entails the construction of a complete system of colonial domination in which both local and central institutions are well integrated and governed by the same authority and organization principles", indirect rule implies "domination via collaborative relations between a dominant colonial center and several regionally based indigenous institutions". The latter led to a bifurcated form of rule: one dominated by local chiefs that ruled the countryside, and another controlled by the tiny colonial administration that normally lacked state capacity to rule beyond the colonial capital city. In contrast, in directly ruled areas, the colonial legal-administrative apparatus was more centralized and bureaucratized, and could broadcast power throughout an entire territory (system of "integrated domination" versus that of "dispersed domination" in indirectly ruled areas, –see Migdal [1994]; Lange [2009]). Social and society-state relations are regulated countrywide by the same rules, which are enforced by courts presided over by British officials and are entirely based on British colonial law. Whereas direct rule enabled colonies to build legal-administrative capacity through centralization, bureaucratic organization and inclusiveness, which is required for the provision of basic public goods and maintenance of law and order, indirect rule led to ineffective states that lacked infrastructural power and bureaucratization (Lange 2009).[40]

To operationalize the identification strategy we need to employ a suitable measure of the extent of direct/indirect rule in each colony, which can account for the main differences in terms of their legal-administrative apparatus. For that purpose, we employ the ratio of colonially

[39] Direct rule was also instituted in Sri Lanka (Lange 2009) and Papua New Guinea (Ottley 1995).

[40] Even if one might be inclined to think that indirect rule ended when the British left the colonies, in the postcolonial period many native governance and legal structures employed to maintain order and enforce law in the countryside have persisted. This has been particularly the case in former African colonies, where the postcolonial state has been unable to control territories far from the capital (Bates 1983; Herbst 2000; Michalopoulos and Papaioannou 2013a). Acemoglu et al. (2014) point out that indirect rule strengthened local elites, who were largely unaccountable to their people, and undermined the colonial and postcolonial central state that was non-bureaucratized, lacked a monopoly of violence and a well-functioning fiscal system, thus failing to provide even the most basic public goods. Acemoglu, Reed, and Robinson (2014) provide evidence consistent with these claims for Sierra Leone.

recognized customary court cases over the total number of court cases in 1955, with the latter comprising both customary court cases heard by native chiefs and magistrate court cases handled by British officials.[41] It captures the extent to which British colonial rule hinged on customary legal institutions to regulate social relations, thereby providing an indirect measure of the size of the legal-administrative apparatus of the local traditional administration versus the central colonial administration. Therefore, in directly ruled areas, where magistrate courts presided over by colonial officials applied the British common law uniformly across the whole territory, this measure should take a value of zero.

According to our theory, what lies between colonies' initial endowments and their current legal institutions/outcomes is the form of colonialism implemented and, in turn, the type of legal-administrative institutions present in colonial times. Therefore, our identification strategy based on a Two-stage Least Squares (2SLS) framework is simple. In a first stage, we try to explain the extent of indirect rule on the basis of initial endowments (precolonial population density and settler mortality) and early European settlement.[42] As argued in Section 2.3, such initial conditions could affect the type of colonial strategy that Britain followed. The first stage is represented by the following specification:

$$customary\ courts_i = \gamma_0 + \gamma_1 \cdot endowments_i + \gamma_2 \cdot early\ European\ settlement_i + X_i'\beta + \varepsilon_i \quad (2)$$

where *customary courts* stands for the extent of indirect rule, *endowments* represents precolonial population density or potential mortality rate of European settlers, *early European settlement* reflects the European population share in 1900, and *X* represents a set of exogenous variables capturing the economic potential of a colony from the perspective of the colonizer (the gap between first sighted and colonized, soil quality, landlockedness and distance from the coast).

[41] These data are collected by Lange (2004, 2009) from annual colonial reports, annual judicial reports and other primary sources. When colonies gained independence prior to 1955, he takes the latest available colonial-era data.

[42] Lange (2004, 2009) forcefully argues for including European settlement in the set of explanatory factors of the extent of indirect rule. This is because the number of European settlers is one of the factors (though not the only one) responsible for the implementation of direct or indirect forms of colonialism. Note, for instance, the case of the settler colonies for which a reception of a large mass of European immigrants was key to the implementation of direct rule and the full implantation of the common law, as it was applied to people who already knew the basic principles. This contrasts with the plantation colonies in the West Indies that received much less European immigration, probably due to the adverse disease conditions to settlement, but were also directly ruled. However, instead of employing an instrumental variables framework to build an identification strategy in similar spirit to ours, Lange (2004, 2009) runs OLS regressions of postcolonial political and development outcomes on the extent of indirect rule, which is considered exogenous and appears included in the same specification along with other possible determinants of indirect rule such as precolonial population density or European settlement.

In a second stage, we regress our seven *Doing Business* legal and regulatory indicators on the extent of indirect rule as well as on a set of exogenous controls capturing the economic potential of the colonies before colonization. The second-stage specification is as follows:

$$legal\_outcome_i = \delta_0 + \delta_1 \cdot customary\ courts_i + X_i^{'}\varphi + \nu_i \quad (3)$$

Endowments and early European settlement are considered exogenous regressors employed to extract the exogenous component of colonial strategy and, as such, they are excluded from the second stage. The exclusion restriction entails that, conditional on the controls included in the regression, initial endowments and early European settlement do not affect current legal outcomes directly, but through their impact on the colonial strategy. In other words, our instruments must be uncorrelated with any other determinants of legal outcomes as follows: $corr(instruments_i, \nu_i) = 0$. The results of the overidentification test are presented in Panel C of Table 10.[43] If the results indicate that the extent of indirect rule instrumented through endowments and early European settlement is significant after controlling for colonies' economic potential, we would be ruling out the possibility that colonies with better initial conditions developed faster for other reasons than the colonial strategy implemented, and thus could afford to have more effective legal institutions over the colonial and postcolonial periods.

The result of the first stage is presented in Panel B of Table 10 for the case in which precolonial population density is the only instrument for the extent of indirect rule and the case in which the instruments are precolonial population density and the European population share in 1900.[44] In both first stages, precolonial population density is significantly and positively associated with the extent of indirect rule. When early European settlement is incorporated into the instrument set, this variable enters significantly with a negative sign, indicating that higher European immigration to the colonies led to more direct forms of rule. Regarding the controls for colonies' economic potential, landlockedness, higher distance from the coast and lower land suitability for agriculture lead to more indirect forms of colonialism. Turning to the 2SLS estimate of the effect of the extent of indirect rule on current legal rules/outcomes, Panel A of Table 10 shows strong evidence of a highly significant effect operating in the expected direction

[43] The conclusions from this analysis must be tempered due to the limited number of observations available, which prevented us from including more controls beyond measures of colonies' economic potential.

[44] We leave for the unpublished appendix the case in which settler mortality is added to the instrument set since it reduces the sample of British colonies from 37 to 25. Notwithstanding, the results are fairly robust to this change.

in all 14 cases. Similar results presented in the unpublished appendix would also follow if we employ OLS to estimate Panel A of Table 10.[45]

Panel C provides the *p-value* from the χ^2 over-identification test for the specification with two instruments, which serves as a general test for their overall validity. The result of the test appears to favor our identification strategy, as we fail to reject the null hypothesis even at the 10% level irrespective of the legal rules/outcomes employed. This holds when potential settler mortality is added to the instrument set for six of the seven dependent variables. This suggests that initial endowments and early European settlement may affect current legal outcomes via the colonial form of rule implemented in former British colonies.

A final check is presented in Panel D, where the European population share in 1960 is included as an exogenous control in the second stage. If the effect we are capturing represents simply the fact that those countries with a higher presence of modern-day descendants of European settlers are more likely to implant the common law than societies with more modern-day descendants of the indigenous population –that may be more adept at implementing legal practices based on native rules and customary courts– (as suggested by Berkowitz, Pistor and Richard 2003a, b), the European population share in 1960 should enter with a significantly positive coefficient and indirect rule should become insignificant. It is worth highlighting that the *customary courts* indicator remains highly significant for each of the seven current legal rules/outcomes, whereas the European population share in 1960 is marginally significant in only four cases (out of 14) and enters with the wrong sign. This supports the fact that if European settlement has an effect on current legal outcomes is through its impact on the colonial strategy followed, rather than directly. Of course keeping in mind that colonial legal-administrative structures were in most cases maintained after independence, which have led to the persistence of inclusive institutions

[45] The impact of precolonial population density working through indirect rule on current legal rules/outcomes is not trivial. For instance, if we consider the specification in column 1 (Panel A, Table 10), increasing precolonial population density one standard deviation (1.55) should reduce creditor rights by $1.55*\gamma_1*\delta_1$, where γ_1 is the effect of population density on *customary courts* and δ_1 is the effect of *customary courts* on creditor rights. Thus, the estimated effect of indigenous population density on creditor rights running through indirect rule is 1.55*9.95*(–0.05) = –0.77. Remarkably, this appears similar to the reduced-form effect of precolonial population density on creditor rights from a comparable specification (Table 2, column 5), which equals –0.76 (obtained by multiplying the standard deviation of indigenous population density times the coefficient on the interaction term between population density and the common law). This appears to support our argument that the reduced-form effect of indigenous population density on current legal institutions works through the form of rule that Britain imposed in its colonies.

in most directly ruled colonies over the postcolonial era, while extractive and clientelistic ones in indirectly ruled colonies.[46]

[*Insert Table 10 about here*]

We next provide a preliminary falsification test to show that, unlike the British, French colonial rule did not respond to the level of endowments. Since Lange's measure of the extent of indirect rule is not available for former French colonies, we employ instead the number of Africans per European administrator, with a higher value implying a more indirect form of rule. This variable is taken from Richens (2009) and is available for 33 sub-Saharan former colonies. As shown in the unpublished appendix, initial endowments appear unrelated to the number of Africans per administrator in the French sample of colonies, whereas they appear significantly and positively related to that variable in the group of former British colonies.

Before concluding, we also test whether indirect rule worked worse in those places with fragmented and acephalous societies that lacked precolonial centralized polities –since the British granted authority to "warrant chiefs" that lacked legitimacy to their people and distorted customary law and the functioning of native courts– versus those territories with societies exhibiting centralized authority and administrative and judicial institutions –where the British could incorporate legitimate native rulers into the colonial administration structure. Toward this end, we run simple OLS regressions of current legal outcomes on the extent of indirect rule, precolonial centralization and their interaction.[47] The results reported in the unpublished appendix indicate that the negative effect of the *customary courts* indicator on current legal outcomes is reduced as the level of precolonial centralization rises, which is consistent with our arguments. This holds in the case of four of the seven legal indicators employed.[48] This result somehow allows us to reconcile the view on the adverse effects of indirect rule on postcolonial

[46] Our cross-country evidence favoring the system of direct rule in British colonies appears in line with the within-country findings for the case of British India provided by Banerjee and Iyer (2005). They find that a cultivator-based land revenue system, where the ruler is in charge of collecting the revenue directly from cultivators, led to significantly higher agricultural investments and productivity as well as higher investments in education and health in the post-independence period than a landlord-based revenue system, in which the revenue collection is assigned to landlords. This suggests that a system of direct taxation was superior to a system of indirect taxation exercised via powerful landlords.

[47] Precolonial centralization is measured through a country's percentage of population that belonged to centralized ethnic groups, as in Gennaioli and Rainer (2007). Since that measure is only provided for sub-Saharan African countries, we compute it for the remaining former British colonies using the Atlas Narodov Mira (1964) and the Ethnographic Atlas of Murdock (1967).

[48] See Richens (2009) for a similar result but for a sample of 33 sub-Saharan African colonies, with economic growth entering as the dependent variable and the number of Africans per colonial administrator measuring the extent of indirect rule.

development (Lange 2004, 2009; Mamdani 1996, among others) with the view on the positive impact of having precolonial centralization versus fragmentation on subsequent development (Gennaioli and Rainer 2007; Michalopoulos and Papaioannou 2013b).

7. Conclusions

According to LLS (2008), four propositions are correct regarding the Legal Origins Theory: "First, legal rules and regulations differ systematically across countries [...] Second, these differences in legal rules and regulations are accounted for to a significant extent by legal origins. Third, the basic historical divergence in the styles of legal traditions [...] explains well why legal rules differ. Fourth, the measured differences in legal rules matter for economic and social outcomes." (p. 326). Our paper qualifies points two and three. "[D]ifferences in legal rules and regulations" depend not just on legal origins but also on the way the mother country implanted the legal system in the recipient country. Incorporating this additional dimension is crucial to understand the relation between legal origins and legal rules. In fact, our results indicate that the superior performance of the common law is largely driven by countries where Britain extensively implanted its legal tradition. But in those places where the common law was hardly introduced, this legal tradition is not generally associated with better legal outcomes than the French civil law. Thus, to explain "why legal rules differ" one must consider both the contents or styles of legal traditions and the way they were distributed by the origin countries.

We argue that the process of distribution of the common law differed from that of the French civil law. The implantation of the common law was not uniform because Britain conducted a colonial strategy that did not seek to transfer its legal rules and institutions to territories politically organized and densely populated at the time of colonization, which normally had their own native rules. In contrast, France did introduce its legal system uniformly in its empire, irrespective of the initial conditions in each territory. This was due to the particular features of the French colonial empire, its centralism and bureaucratic control, and the ideology of assimilation that impregnated its colonial policy. We further argue that, by paying attention to the distribution of the French legal tradition, one can divide this legal family into three categories, depending on the way the Civil Code was received. In support of the claim that the French Civil Code was better received in Spanish American colonies than in French colonies, we generally observe that the former group enjoys higher creditor and investor rights and a more efficient legal system than the latter.

The Legal Origins Theory has deeply influenced our understanding about how to improve legal systems in order to foster financial development and promote economic activity. The pretended

superiority of the common law in many areas of the legal system advocated by the extant legal origins literature has had important consequences. Policy makers in the law-making sphere imitate tools related to the common law ("the winning origin") by adopting, for instance, private micro-institutions of investor protection instead of improving existing institutions of public enforcement through securities laws (Roe and Siegel 2009). If, as shown in this article, the common law does not systematically lead to better legal rules and institutions than the French civil law, then it is not clear that adopting common law tools will improve the performance and efficiency of the legal system. Additional considerations beyond formal rules need to be raised, some of them related to factors that were present when legal traditions were implanted. For example, the rigid application of the Civil Code by France led to collisions with local rules that resulted in illegitimate legal systems, whereas the empowerment of local elites in indirectly ruled British colonies led to abuse of power and perversion of traditional customs. These colonial legacies surely contribute to some extent to the fact that at least eighty percent of the population in many developing countries –particularly in Africa– resolves their disputes using traditional mechanisms outside the official legal system (Daniels, Trebilcock, and Carson 2011). Many of these problems rooted historically in the distant past are still undermining the development of legal systems in many nations. Providing a satisfactory solution to them may have more to do with adapting or improving existing rules and institutions than with imitating other legal traditions.

Appendix

Table A1

Definitions and Data Sources

Variable	Description	Source
Dependent Variables		
Creditor rights	The strength of legal rights index. According to the Doing Business' methodology, this index *"measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders. It includes eight aspects related to legal rights in collateral law and two aspects in bankruptcy law. A score of 1 is assigned for each of such aspects of the laws considered."* The indicator ranges from 0 to 10, with higher scores implying higher creditor rights.	Doing Business Project (2012) (www.doingbusiness.org)
Investor protection	The strength of investor protection index. According to the Doing Business' methodology, this indicator "*measures the strength of minority shareholder protections against directors' misuse of corporate assets for personal gain. It distinguishes three dimensions of investor protections: transparency of related-party transactions (extent of disclosure index), extent of liability for self-dealing (extent of director liability index) and shareholders' ability to sue officers and directors for misconduct (the ease of shareholder suits index). The strength of investor protection index averages the three indices and ranges from 0 to 10, with higher values indicating more investor protection."*	Doing Business Project (2012)
Information sharing	The depth of credit information index. According to the Doing Business' methodology, this indicator *"measures rules and practices affecting the coverage, scope and accessibility of credit information available through either a public credit registry or a private credit bureau. A score of 1 is assigned for each of the six features of the public credit registry or private credit bureau (or both)."* The indicator ranges from 0 to 6, with higher values reflecting more information available.	Doing Business Project (2012)
Contract enforcement	Time (in days) to enforce contracts. We apply the logarithmic transformation. This is a measure of the efficiency of the judicial system in resolving a commercial dispute. According to the Doing Business' methodology, it "*represents the number of calendar days counted from the moment the plaintiff decides to file the lawsuit in court until payment. This includes both the days when actions take place and the waiting periods between. The average duration of different stages of dispute resolution is recorded: the completion of service of process (time to file and serve the case), the issuance of judgment (time for the trial and obtaining the judgment) and the moment of payment (time for enforcement of the judgment)."*	Doing Business Project (2012)
Recovery rate	*"The recovery rate measures the outcome of insolvency proceedings involving domestic entities. This measure is recorded as cents on the dollar recouped by creditors through reorganization, liquidation or debt enforcement (foreclosure) proceedings. The calculation takes into account the outcome: whether the business emerges from the proceedings as a going concern or the assets are sold piecemeal. Then the costs of the proceedings are deducted (1 cent for each percentage point of the value of the debtor's estate). Finally, the value lost as a result of the time the money remains tied up in insolvency proceedings is taken into account, including the loss of value due to depreciation. The recovery rate is the present value of the remaining proceeds."* (Doing Business' methodology).	Doing Business Project (2012)
Registering a property	Number of days required to register a property. We apply the logarithmic transformation. According to the Doing Business' methodology, this variable "*captures the median duration (in calendar days) that property lawyers, notaries or registry officials indicate is necessary to complete a procedure. It is assumed that the minimum time required for each procedure is one day. Although procedures may take place simultaneously, they cannot start on the same day. It is assumed that the buyer does not waste time and commits to completing each remaining procedure without delay. If a procedure can be accelerated for an additional cost, the fastest legal procedure available and used by the majority of property owners is chosen. If procedures can be undertaken simultaneously, it is assumed that they are .*"	Doing Business Project (2012)
Starting a business	Number of days required to register a firm. We apply the logarithmic transformation. According to the Doing Business' methodology, this variable "*captures the median duration (in calendar days) that incorporation lawyers indicate is necessary in practice to complete a procedure with minimum follow-up with government agencies and no extra payments. It is assumed that the minimum time required for each procedure is one day. Although procedures may take place simultaneously, they cannot start on the same day (that is, simultaneous procedures start on consecutive days). A procedure is considered completed once the company has received the final document, such as the company registration certificate or tax number. If a procedure can be accelerated for an additional cost, the fastest procedure is chosen if that option is more beneficial to the economy's ranking. "*	Doing Business Project (2012)

Table A1 (*Continued*)

Variable	Description	Source
Court system is fair, impartial and uncorrupted	Firms' assessment of whether courts are fair, impartial and uncorrupted. It ranges from 1 (strongly disagree) to 4 (strongly agree).	Enterprise Surveys (Standardized Dataset 2006-2013) (World Bank, 2013)
Availability of information on law and regulations	In general, information on the laws and regulations affecting my firm is easy to obtain: (1) fully agree, (2) agree in most cases, (3) tend to agree, (4) tend to disagree, (5) disagree in most cases, (6) fully disagree. The indicator is rescaled so that higher scores imply better legal and regulatory outcomes for the respondents.	WBES (Kaufmann and Stone, 2003)
Interpretation of law and regulations are consistent	In general, interpretation of regulations affecting my firm is consistent and predictable: (1) fully agree, (2) agree in most cases, (3) tend to agree, (4) tend to disagree, (5) disagree in most cases, (6) fully disagree. The indicator is rescaled so that higher scores imply better legal and regulatory outcomes for the respondents.	WBES (Kaufmann and Stone, 2003)
Quality and efficiency of courts	Overall quality and efficiency of the judiciary/courts:(1) very good, (2) good, (3) slightly good, (4) slightly bad, (5) bad, (6) very bad. The indicator is rescaled so that higher scores imply better legal outcomes for the respondents.	WBES (Kaufmann and Stone, 2003)
Courts are fair and impartial	In resolving business disputes, do you believe your country's courts to be fair and impartial: (1) always, (2) usually, (3) frequently, (4) sometimes, (5) seldom, (6) never. The indicator is rescaled so that higher scores imply better legal outcomes for the respondents.	WBES (Kaufmann and Stone, 2003)
Courts are honest	In resolving business disputes, do you believe your country's courts to be honest and uncorrupted: (1) always, (2) usually, (3) frequently, (4) sometimes, (5) seldom, (6) never. The indicator is rescaled so that higher scores imply better legal outcomes for the respondents.	WBES (Kaufmann and Stone, 2003)
Courts enforceability	In resolving business disputes, do you believe your country's courts to enforce decisions: (1) always, (2) usually, (3) frequently, (4) sometimes, (5) seldom, (6) never. The indicator is rescaled so that higher scores imply better legal outcomes for the respondents.	WBES (Kaufmann and Stone, 2003)
Confidence in judicial system and security	It is constructed as the average of the following variables: confidence in the police force, confidence in the judicial system, have you had money property stolen from you or another household member?, and have you been assaulted or mugged? It ranges from 0 to 1, with higher values implying greater confidence. Year 2010.	Worldwide Governance Indicators Data Sources: Gallup World Poll (Dimension of Rule of Law)
Enforcement of Gov. regulations	Government regulations are effectively enforced. It ranges from 0 to 1, with higher values implying better outcomes. World Justice Project: Rule of Law Index 2012-2013.	World Justice Project (Botero and Ponce, 2010)
No improper influence in applying Gov. regulations	Government regulations are applied and enforced without improper influence. It ranges from 0 to 1, with higher values implying better outcomes. World Justice Project: Rule of Law Index 2012-2013.	World Justice Project (Botero and Ponce, 2010)
No improper Gov. influence on civil justice	Civil justice is free of improper government influence. It ranges from 0 to 1, with higher values implying better outcomes. World Justice Project: Rule of Law Index 2012-2013.	World Justice Project (Botero and Ponce, 2010)
No unreasonable delays	Civil justice is not subject to unreasonable delays. It ranges from 0 to 1, with higher values implying better outcomes. World Justice Project: Rule of Law Index 2012-2013.	World Justice Project (Botero and Ponce, 2010)
Enforcement of civil justice	Civil justice is effectively enforced. It ranges from 0 to 1, with higher values implying better outcomes. World Justice Project: Rule of Law Index 2012-2013.	World Justice Project (Botero and Ponce, 2010)
Alternative dispute resolution mechanisms	Alternative dispute resolution mechanisms are accessible, impartial, and effective. It ranges from 0 to 1, with higher values implying better outcomes. World Justice Project: Rule of Law Index 2012-2013.	World Justice Project (Botero and Ponce, 2010)
Main Independent Variables and Controls		
Legal origin	Legal origin variable: English Common Law, French Commercial Code and Socialist/Communist Laws. We complement this variable for three countries (Cambodia, Lao PDR and Vietnam) with information from La Porta *et al.* (2008).	La Porta *et al.* (1999), from Teorell *et al.* (2011)
Colonizing country	French, British, Spanish and 'Others' former colonies. In the event that a particular colony was colonized by several colonial powers, the last one that occupied the territory is considered, provided that the domain lasts for a period of no less than 10 years. The US, Canada, Australia, New Zealand and Hong Kong are considered former colonies.	Teorell and Hadenius (2005), from Teorell et al. (2011)

Table A1 (*Continued*)

Variable	Description	Source
Population density	Logarithm of population density in 1500 (total population divided by total arable land).	AJR (2002)
Settler mortality	Logarithm of potential European settler mortality rate, measured in terms of deaths per annum per 1,000.	AJR (2001)
Years since independence	2000 minus year of independence.	Olsson (2009)
Religion	Protestants, Catholics, Muslims and others as a percentage of population in 1980.	La Porta *et al.* (1999), from Teorell *et al.* (2011)
High indigenous mortality	Dummy variable indicating whether the country belongs to the New World (North America, the Caribbean and Latin America) or Oceania, which were the territories where the contact with European colonizers caused a more dramatic decline in native population due to vulnerability to European diseases.	Own elaboration according to Easterly and Levine (2012)'s methodology
Ethnic fractionalization	Probability that two randomly selected individuals from a given country do not belong to the same ethnolinguistic group.	Alesina *et al.* (2003), from Teorell *et al.* (2011)
Gap betweem first sighted and colonized	Number of years between when a territory was first sighted by Western Europeans and when it was first colonized by a European power.	Woodberry (2004, 2012)
Land suitability for cultivation	Measure of land suitability for agriculture. It is calculated as the amount of land suitable for cultivation over total land area.	Global Land Use Database (SAGE) (Ramankutty *et al* . 2002)
Landlockedness	Dummy variable taking a value of one for countries with no direct access to the sea.	Own elaboration using ArcGIS
Distance from the coast	Distance in hundreds of kilometers from the centroid of the country to the nearest coast.	Own elaboration using ArcGIS
Ln GDP pc 1970	Real GDP per capita (Constant Prices: Chain series). Year 1970.	Heston, Summers, and Aten (2009)
Continental dummies	Continental dummies for Africa, America and Asia.	Own elaboration
Robustness Checks		
Customary courts	Ratio of colonially recognized customary court cases over the total number of court cases in 1955, with the latter comprising both customary court cases heard by native chiefs and magistrate court cases handled by British officials.	Lange (2004, 2009)
Early European settlement	European population share in 1900.	AJR (2001)
European population share in 1960	European population share in 1960.	Atlas Narodov Mira (1964)
Africans per European administrator	Number of Africans per European administrator.	Richens (2009)
Precolonial centralization	A country's percentage of population that belonged to centralized ethnic groups, as in Gennaioli and Rainer (2007).	Gennaioli and Rainer (2007), Atlas Narodov Mira and Ethnographic Atlas of Murdock (1967)

Table A2
List of Former Colonies

British Common Law		French Civil law		
Antigua and Barbuda	South Africa	**Implantation by France**	**Spanish Law legacy**	**Others**
Australia	Sri Lanka	Algeria	Argentina	Angola
Bangladesh	St. Kitts and Nevis	Benin	Bolivia	Brazil
Belize	St. Lucia	Burkina Faso	Chile	Burundi
Botswana	St. Vincent and the Gr.	Cambodia	Colombia	Cape Verde
Canada	Sudan	Cameroon	Costa Rica	Congo, Dem. Rep.
Dominica	Swaziland	Central African Rep.	Dominican Rep.	Egypt, Arab Rep.
Gambia, The	Tanzania	Chad	Ecuador	Eritrea
Ghana	Trinidad and Tobago	Comoros	Equatorial Guinea	Guinea-Bissau
Grenada	Uganda	Congo, Rep.	Guatemala	Indonesia
Guyana	United Arab Emirates	Côte d'Ivoire	Honduras	Iraq
Hong Kong	United States	Gabon	Mexico	Jordan
India	Zambia	Guinea	Nicaragua	Kuwait
Jamaica	Zimbabwe	Haiti	Panama	Mozambique
Kenya		Lao PDR	Peru	Oman
Lesotho		Lebanon	Paraguay	Philippines
Malawi		Madagascar	El Salvador	Rwanda
Malaysia		Mali	Uruguay	Suriname
Namibia		Mauritania	Venezuela, RB	Yemen, Rep.
New Zealand		Morocco		
Nigeria		Niger		
Pakistan		Senegal		
Papua New Guinea		Syrian Arab Rep.		
Sierra Leone		Togo		
Singapore		Tunisia		
		Vietnam		

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TABLES AND FIGURES

Table 1

Main Regressions

Dependent variable	Creditor and investor rigths and disclosure			Legal system efficiency		Regulations	
	Creditor rights	Investor protection	Information sharing	Contract enforcement	Recovery rate	Starting a business	Registering a property
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
- Common law (Ref. group)							
- Civil law groups:							
• Implantation by France	-4.370**	-2.515**	-0.824^{+}	0.142	-34.981**	0.832**	0.864*
	(0.35)	(0.43)	(0.42)	(0.12)	(4.51)	(0.26)	(0.35)
• Spanish law legacy	-3.779**	-1.582**	2.944**	0.171	-12.061*	0.754**	0.071
	(0.43)	(0.40)	(0.40)	(0.11)	(5.33)	(0.19)	(0.20)
• Others	-4.051**	-1.458**	0.117	0.265^{+}	-28.960**	1.387**	0.450
	(0.37)	(0.46)	(0.59)	(0.15)	(4.91)	(0.29)	(0.28)
- Common law × Pop. dens.	-0.438**	-0.341*	-0.632**	0.176**	-7.411**	0.224*	0.314**
	(0.15)	(0.16)	(0.18)	(0.05)	(2.02)	(0.10)	(0.09)
- Civil law groups × Pop. dens.:							
• Implantation by France × Pop. dens.	-0.112	0.209	0.075	-0.064	9.552**	-0.254	-0.202
	(0.25)	(0.23)	(0.29)	(0.07)	(2.62)	(0.16)	(0.19)
• Spanish law legacy × Pop. dens.	0.191	-0.277	-0.225	0.015	0.199	0.088	-0.082
	(0.29)	(0.20)	(0.21)	(0.06)	(3.95)	(0.11)	(0.09)
• Others × Pop. dens.	-0.269*	-0.056	-0.200	-0.051	1.132	-0.384**	0.065
	(0.11)	(0.17)	(0.22)	(0.07)	(1.26)	(010)	(0.13)
Constant	7.343**	5.886**	1.934**	6.326**	38.137**	3.246**	3.754**
	(0.29)	(0.28)	(0.32)	(0.08)	(3.60)	(0.15)	(0.15)
R^2	0.72	0.37	0.50	0.23	0.43	0.36	0.23
Number of observations	100	100	100	100	100	100	100
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)							
Imp. by France - Common law	-3.6*	-1.2*	0.8	-0.4*	4.1	-0.3	-0.3
Spanish law leg.- Common law	-2.3*	-1.4*	3.9*	-0.2	5.5	0.4	-0.8*
Others - Common law	-3.7*	-0.8	1.1	-0.3	-9.3	0.0	-0.1

Note. This table presents results from estimating equation (1) for the seven dependent variables. The description of variables is provided in Table A1. The sample contains non-European countries colonized by Western powers (Table A2). Robust standard errors are in parentheses. In the bottom part of the table we show the differences in predicted values between the common law and each civil law category when pre-colonial population density is equal to 10 (log=2.3). For the sake of simplicity, the statistical significance of the differences in predicted values is assessed only at the 5% level.

$^{+}$ Statistically significant at the 10% level.

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

Table 2
Robustness Checks: Creditor Rights

	Control variables							Settler mortality as endowments indicator	Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)		Leverage	Standard. Residuals	Cook's D.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	-4.379**	-4.270**	-4.325**	-4.209**	-4.129**	-4.144**	-4.279**	-7.297**	-4.484**	-4.640**	-4.826**
	(0.35)	(0.38)	(0.39)	(0.45)	(0.48)	(0.36)	(0.38)	(1.75)	(0.35)	(0.31)	(0.30)
• Spanish law legacy	-3.921**	-3.654**	-3.861**	-3.761**	-3.947**	-3.867**	-3.861**	-6.954	-4.150**	-3.992**	-4.204**
	(0.56)	(0.60)	(0.48)	(0.43)	(0.51)	(0.44)	(0.50)	(4.30)	(0.46)	(0.40)	(0.49)
• Others	-4.059**	-3.837**	-4.026**	-3.917**	-3.988**	-3.984**	-4.044**	-0.488	-4.018**	-4.265**	-4.324**
	(0.38)	(0.46)	(0.39)	(0.40)	(0.48)	(0.36)	(0.38)	(1.81)	(0.37)	(0.34)	(0.35)
- Common law × endowments	-0.430**	-0.366*	-0.426**	-0.392*	-0.488**	-0.354*	-0.432**	-0.525*	-0.438**	-0.450**	-0.517**
	(0.16)	(0.18)	(0.15)	(0.16)	(0.16)	(0.17)	(0.15)	(0.25)	(0.15)	(0.13)	(0.12)
- Civil law × endowments:											
• Implantation by France × endowments	-0.106	-0.054	-0.104	-0.183	-0.199	-0.188	-0.133	0.130	0.051	-0.080	0.113
	(0.25)	(0.28)	(0.25)	(0.26)	(0.32)	(0.26)	(0.24)	(0.22)	(0.31)	(0.18)	(0.08)
• Spanish law legacy × endowments	0.198	0.192	0.196	0.221	0.183	0.271	0.197	0.226	1.363*	0.191	0.863
	(0.29)	(0.30)	(0.29)	(0.30)	(0.28)	(0.29)	(0.29)	(0.92)	(0.58)	(0.29)	(0.67)
• Others × endowments	-0.265*	-0.254*	-0.253*	-0.282*	-0.206	-0.206+	-0.254*	-1.199**	-0.373**	-0.269*	-0.269*
	(0.12)	(0.12)	(0.12)	(0.12)	(0.15)	(0.11)	(0.12)	(0.27)	(0.10)	(0.11)	(0.11)
Control variables	0.001	[0.953]	0.150	-0.396	[0.300]	0.264	[0.879]				
	(0.00)		(0.45)	(0.64)		(0.18)					
Constant	7.291**	7.653**	7.284**	7.492**	7.073**	5.223**	7.388**	9.543**	7.343**	7.556**	7.616**
	(0.33)	(0.99)	(0.36)	(0.37)	(0.70)	(1.41)	(0.47)	(1.12)	(0.29)	(0.25)	(0.27)
R^2	0.72	0.71	0.72	0.71	0.73	0.72	0.72	0.68	0.72	0.80	0.80
Number of observations	100	98	100	98	98	98	100	75	92	94	91
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	-3.6*	-3.6*	-3.6*	-3.7*	-3.5*	-3.8*	-3.6*	-3.2*	-3.4*	-3.8*	-3.4*
Spanish law leg.- Common law	-2.5*	-2.4*	-2.4*	-2.4*	-2.4*	-2.4*	-2.4*	-2.3	0.0	-2.5*	-1.0
Others - Common law	-3.7*	-3.6*	-3.6*	-3.7*	-3.3*	-3.6*	-3.6*	-4.7*	-3.9*	-3.8*	-3.8*

Note. The dependent variable is creditor rights. The endowments indicator is population density in 1500, except in column 8. Variable descriptions are provided in Table A1. The sample contains non-European countries colonized by Western powers (Table A2). Robust standard errors are in parentheses. Figures in square brackets represent p-values of joint significance. In the bottom part of the table we show the differences in predicted values between the common law and each civil law category when precolonial population density is equal to 10 (log=2.3) (in column 8, we take a value for settler mortality of 500 (log=6.2)). For the sake of simplicity, the statistical significance of the differences in predicted values is assessed only at the 5% level.

+ Statistically significant at the 10% level.
* Statistically significant at the 5% level.
** Statistically significant at the 1% level.

Table 3
Robustness Checks: Investor Protection

	Control variables							Settler mortality as endowments indicator	Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)		Leverage	Standard. Residuals	Cook's D.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	-2.578**	-2.458**	-2.379**	-2.485**	-2.223**	-2.060**	-1.968**	-7.534**	-2.394**	-2.524**	-2.700**
	(0.45)	(0.48)	(0.49)	(0.44)	(0.46)	(0.44)	(0.55)	(1.51)	(0.44)	(0.41)	(0.37)
• Spanish law legacy	-2.525**	-1.355*	-1.834**	-1.511**	-1.763**	-1.759**	-1.678**	-7.133*	-1.553**	-1.590**	-1.501**
	(0.53)	(0.54)	(0.39)	(0.42)	(0.46)	(0.40)	(0.37)	(3.18)	(0.52)	(0.38)	(0.41)
• Others	-1.508**	-1.405*	-1.380**	-1.391**	-1.765**	-1.576**	-1.480**	-2.535	-0.988*	-1.139**	-1.050**
	(0.44)	(0.57)	(0.52)	(0.47)	(0.54)	(0.47)	(0.46)	(4.61)	(0.46)	(0.35)	(0.38)
- Common law × endowments	-0.287^{+}	-0.317^{+}	-0.305^{+}	-0.297^{+}	-0.368*	-0.172	-0.331*	-0.808**	-0.341*	-0.309*	-0.281^{+}
	(0.16)	(0.17)	(0.17)	(0.16)	(0.15)	(0.15)	(0.14)	(0.21)	(0.16)	(0.15)	(0.16)
- Civil law × endowments:											
• Implantation by France × endowments	0.247	0.153	0.231	0.229	-0.009	0.055	-0.013	0.230	0.036	0.209	0.346^{+}
	(0.24)	(0.26)	(0.24)	(0.24)	(0.30)	(0.23)	(0.26)	(0.20)	(0.29)	(0.23)	(0.19)
• Spanish law legacy × endowments	-0.234	-0.266	-0.262	-0.285	-0.332	-0.116	-0.255	0.416	-0.367	-0.277	-0.277
	(0.20)	(0.20)	(0.20)	(0.20)	(0.25)	(0.23)	(0.20)	(0.65)	(0.85)	(0.20)	(0.20)
• Others × endowments	-0.033	-0.087	-0.008	-0.048	0.056	0.076	-0.029	-0.551	-0.442*	-0.201	-0.201
	(0.15)	(0.18)	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)	(0.87)	(0.19)	(0.13)	(0.13)
Control variables	0.008*	[0.892]	0.460	0.111	[0.014]	0.531**	[0.013]				
	(0.00)		(0.45)	(0.63)		(0.16)					
Constant	5.540**	5.817**	5.704**	5.769**	6.252**	1.619	6.535**	9.649**	5.886**	5.894**	5.806**
	(0.33)	(0.95)	(0.39)	(0.46)	(0.66)	(1.25)	(0.44)	(0.96)	(0.28)	(0.24)	(0.28)
R^2	0.39	0.35	0.38	0.34	0.45	0.43	0.44	0.56	0.39	0.44	0.38
Number of observations	100	98	100	98	98	98	100	75	92	95	97
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	-1.3*	-1.4*	-1.1*	-1.3*	-1.4*	-1.5*	-1.2*	-1.1*	-1.5*	-1.3*	-1.3*
Spanish law leg.- Common law	-2.4*	-1.2	-1.7*	-1.5*	-1.7*	-1.6*	-1.5*	0.5	-1.6	-1.5*	-1.5*
Others - Common law	-0.9*	-0.9	-0.7	-0.8	-0.8	-1.0*	-0.8	-0.9	-1.2*	-0.9*	-0.9

Note. The dependent variable is investor protection. See notes to Table 2 for the rest.

Table 4
Robustness Checks: Information Sharing

	Control variables								Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)	Settler mortality as endowments indicator	Leverage	Standard. Residuals	Cook's D.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	-0.992*	-0.852^{+}	-0.951*	-0.640	-1.046*	-0.326	-0.480	-5.364**	-0.707^{+}	-0.513	-0.452
	(0.44)	(0.49)	(0.47)	(0.45)	(0.45)	(0.37)	(0.49)	(1.06)	(0.39)	(0.39)	(0.37)
• Spanish law legacy	0.418	2.698**	3.177**	2.953**	2.184**	2.750**	3.377**	-1.382	2.891**	3.255**	3.132**
	(0.54)	(0.73)	(0.55)	(0.42)	(0.50)	(0.38)	(0.56)	(3.52)	(0.41)	(0.37)	(0.39)
• Others	-0.016	0.173	0.044	0.301	-0.562	0.219	0.022	-7.675**	0.164	0.427	0.216
	(0.45)	(0.63)	(0.62)	(0.59)	(0.62)	(0.62)	(0.60)	(2.74)	(0.52)	(0.57)	(0.52)
- Common law × endowments	-0.489**	-0.652**	-0.666**	-0.586**	-0.618**	-0.448*	-0.657**	-1.184**	-0.632**	-0.837**	-0.828**
	(0.16)	(0.19)	(0.18)	(0.19)	(0.17)	(0.19)	(0.16)	(0.17)	(0.18)	(0.18)	(0.17)
- Civil law × endowments:											
• Implantation by France × endowments	0.178	-0.003	0.054	-0.013	0.533	-0.094	-0.177	-0.139	-0.091	0.075	-0.187
	(0.30)	(0.33)	(0.30)	(0.29)	(0.39)	(0.22)	(0.31)	(0.11)	(0.21)	(0.29)	(0.20)
• Spanish law legacy × endowments	-0.111	-0.202	-0.239	-0.189	-0.366^{+}	-0.049	-0.231	-0.206	-0.057	-0.225	-0.225
	(0.18)	(0.23)	(0.22)	(0.22)	(0.20)	(0.19)	(0.22)	(0.78)	(0.54)	(0.21)	(0.21)
• Others × endowments	-0.139	-0.231	-0.245	-0.210	0.039	-0.059	-0.262	0.421	-0.361	-0.200	-0.146
	(0.13)	(0.20)	(0.22)	(0.21)	(0.22)	(0.23)	(0.24)	(0.49)	(0.25)	(0.22)	(0.15)
Control variables	0.020**	[0.663]	-0.426	-0.485	[0.008]	0.581**	[0.030]				
	(0.00)		(0.57)	(0.67)		(0.18)					
Constant	1.008**	0.525	2.103**	2.129**	3.389**	-2.736^{+}	2.814**	7.352**	1.934**	1.624**	1.746**
	(0.35)	(1.13)	(0.40)	(0.49)	(0.75)	(1.43)	(0.46)	(0.81)	(0.32)	(0.28)	(0.30)
R^2	0.61	0.51	0.50	0.50	0.57	0.55	0.55	0.74	0.50	0.60	0.60
Number of observations	100	98	100	98	98	98	100	75	92	97	95
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	0.5	0.6	0.7	0.7	1.6*	0.5	0.6	1.1*	0.5	1.6*	1.0
Spanish law leg.- Common law	1.3	3.7*	4.2*	3.9*	2.8*	3.7*	4.4*	4.7*	4.2*	4.7*	4.5*
Others - Common law	0.8	1.1	1.0	1.2	1.0	1.1	0.9	2.3*	0.8	1.9*	1.8*

Note. The dependent variable is information sharing. See notes to Table 2 for the rest.

Table 5
Robustness Checks: Contract Enforcement

	Control variables							Settler mortality as endowments indicator	Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)		Leverage	Standard. Residuals	Cook's D.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	0.136	0.109	0.183	0.106	0.164	0.106	0.135	0.875	0.206^{+}	0.156	0.196^{+}
	(0.12)	(0.12)	(0.13)	(0.12)	(0.16)	(0.14)	(0.13)	(0.59)	(0.12)	(0.11)	(0.11)
• Spanish law legacy	0.081	0.034	0.095	0.159	0.078	0.184	0.045	1.543^{+}	0.164	0.185^{+}	0.193^{+}
	(0.16)	(0.17)	(0.13)	(0.12)	(0.13)	(0.11)	(0.13)	(0.92)	(0.12)	(0.11)	(0.11)
• Others	0.260^{+}	0.242	0.288^{+}	0.254^{+}	0.305^{+}	0.326*	0.286^{+}	2.282**	0.203	0.123	0.151
	(0.16)	(0.18)	(0.15)	(0.15)	(0.16)	(0.16)	(0.15)	(0.84)	(0.17)	(0.12)	(0.12)
- Common law × endowments	0.181**	0.165**	0.187**	0.162**	0.172**	0.163**	0.184**	0.155**	0.176**	0.167**	0.198**
	(0.05)	(0.06)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.06)	(0.05)	(0.04)	(0.04)
- Civil law × endowments:											
• Implantation by France × endowments	-0.060	-0.051	-0.057	-0.052	-0.025	-0.052	-0.032	-0.027	-0.156*	-0.064	-0.110^{+}
	(0.07)	(0.07)	(0.07)	(0.07)	(0.10)	(0.07)	(0.07)	(0.09)	(0.06)	(0.07)	(0.07)
• Spanish law legacy × endowments	0.019	0.006	0.020	0.010	-0.005	0.003	0.020	-0.163	0.038	0.015	0.015
	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)	(0.06)	(0.06)	(0.18)	(0.16)	(0.06)	(0.06)
• Others × endowments	-0.049	-0.044	-0.036	-0.045	-0.048	-0.062	-0.031	-0.271	-0.085	-0.010	-0.024
	(0.07)	(0.07)	(0.06)	(0.07)	(0.07)	(0.07)	(0.06)	(0.17)	(0.09)	(0.06)	(0.03)
Control variables	0.001	[0.827]	0.139	0.066	[0.358]	-0.041	[0.236]				
	(0.00)		(0.14)	(0.17)		(0.06)					
Constant	6.293**	6.277**	6.271**	6.310**	6.431**	6.655**	6.197**	5.695**	6.326**	6.311**	6.304**
	(0.10)	(0.30)	(0.10)	(0.12)	(0.17)	(0.49)	(0.12)	(0.30)	(0.08)	(0.07)	(0.07)
R^2	0.23	0.22	0.24	0.20	0.26	0.25	0.26	0.17	0.25	0.24	0.29
Number of observations	100	98	100	98	98	98	100	75	92	95	92
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	-0.4*	-0.4*	-0.4*	-0.4*	-0.3	-0.4*	-0.4*	-0.3	-0.6*	-0.4*	-0.5*
Spanish law leg.- Common law	-0.3	-0.3	-0.3	-0.2	-0.3	-0.2	-0.3	-0.4	-0.2	-0.2	-0.2
Others - Common law	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.4	-0.4*	-0.3	-0.4*

Note. The dependent variable is contract enforcement. See notes to Table 2 for the rest.

Table 6
Robustness Checks: Recovery Rate

	Control variables							Settler mortality as endowments indicator	Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)		Leverage	Standard. Residuals	Cook's D.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	-35.948**	-35.949**	-34.811**	-36.092**	-35.154**	-27.935**	-30.074**	-40.764^{+}	-35.923**	-37.131**	-31.073**
	(4.79)	(5.07)	(4.50)	(4.55)	(4.22)	(4.43)	(5.01)	(22.28)	(4.76)	(4.19)	(4.40)
• Spanish law legacy	-26.615**	-11.906	-12.376^{+}	-10.752^{+}	-16.104**	-14.804**	-9.644	-13.73	-15.570**	-16.808**	-12.408*
	(6.98)	(8.08)	(7.23)	(5.45)	(6.01)	(5.09)	(7.68)	(51.98)	(5.19)	(4.55)	(4.98)
• Others	-29.725**	-30.501**	-28.862**	-29.740**	-35.173**	-30.945**	-29.689**	-42.921^{+}	-25.910**	-31.110**	-26.229**
	(5.37)	(5.05)	(4.76)	(5.02)	(4.84)	(4.19)	(3.91)	(25.12)	(6.39)	(4.62)	(4.96)
- Common law × endowments	-6.585**	-8.218**	-7.366**	-6.981**	-7.074**	-4.798*	-7.527**	-9.934**	-7.411**	-6.984**	-6.241**
	(1.93)	(2.44)	(2.15)	(2.19)	(1.87)	(1.95)	(1.75)	(2.32)	(2.03)	(1.82)	(2.26)
- Civil law × endowments:											
• Implantation by France × endowments	10.142**	7.061*	9.580**	10.766**	10.631**	7.166*	6.817^{+}	-5.730^{+}	10.888**	9.552**	7.614**
	(2.88)	(2.74)	(2.67)	(2.63)	(3.08)	(3.09)	(3.83)	(3.13)	(3.48)	(2.63)	(2.12)
• Spanish law legacy × endowments	0.859	0.206	0.217	-0.304	-1.093	2.688	0.266	-10.272	11.273	-2.956	-1.106
	(3.91)	(4.09)	(3.96)	(3.99)	(4.10)	(3.72)	(3.97)	(11.30)	(8.35)	(2.25)	(3.11)
• Others × endowments	1.486	-0.088	1.192	1.326	2.430	2.895**	0.854	-7.418^{+}	-2.364	1.132	1.132
	(1.70)	(1.16)	(1.51)	(1.30)	(1.49)	(0.99)	(1.28)	(4.16)	(2.40)	(1.27)	(1.26)
Control variables	0.116*	[0.112]	0.575	6.700	[0.003]	8.220**	[0.010]				
	(0.05)		(6.78)	(6.62)		(1.97)					
Constant	32.801**	27.182^{+}	37.909**	34.013**	52.885**	-27.923^{+}	47.092**	86.741**	38.137**	40.287**	35.407**
	(4.52)	(16.31)	(3.83)	(5.24)	(6.46)	(15.41)	(4.28)	(11.98)	(3.61)	(3.18)	(3.66)
R^2	0.47	0.44	0.43	0.42	0.50	0.52	0.49	0.56	0.44	0.54	0.39
Number of observations	100	98	100	98	98	98	100	75	92	93	94
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	2.6	-0.8	4.2	4.8	5.6	-0.4	3.0	-14.6*	6.2	0.9	0.8
Spanish law leg.- Common law	-9.5	7.5	5.1	4.6	-2.3	2.4	8.3	-15.8	27.5	-7.5	-0.6
Others - Common law	-11.1	-11.8*	-9.2	-10.6	-13.3*	-13.2*	-10.4	-27.3*	-14.3*	-12.4*	-9.3

Note. The dependent variable is recovery rate. See notes to Table 2 for the rest.

Table 7
Robustness Checks: Starting a Business

	Control variables							Settler mortality as endowments indicator	Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)		Leverage	Standard. Residuals	Cook's D.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	0.864**	0.955**	0.707*	0.741*	0.851**	0.556^{+}	0.686^{+}	1.005	0.901**	0.854**	0.775**
	(0.29)	(0.27)	(0.32)	(0.32)	(0.31)	(0.28)	(0.35)	(1.04)	(0.28)	(0.26)	(0.26)
• Spanish law legacy	1.230**	1.221**	0.985**	0.767**	0.868**	0.861**	0.920**	4.100^{+}	0.841**	0.776**	0.747**
	(0.37)	(0.33)	(0.23)	(0.21)	(0.22)	(0.19)	(0.24)	(2.11)	(0.22)	(0.18)	(0.19)
• Others	1.412**	1.692**	1.315**	1.342**	1.651**	1.453**	1.370**	4.542^{+}	1.204**	1.333**	1.209**
	(0.28)	(0.29)	(0.31)	(0.29)	(0.31)	(0.28)	(0.29)	(2.57)	(0.31)	(0.27)	(0.24)
- Common law × endowments	0.197*	0.256*	0.191^{+}	0.210^{+}	0.233**	0.122	0.213*	0.253*	0.224*	0.259**	0.174*
	(0.09)	(0.12)	(0.10)	(0.11)	(0.09)	(0.09)	(0.10)	(0.11)	(0.10)	(0.08)	(0.08)
- Civil law × endowments:											
• Implantation by France × endowments	-0.273	-0.224	-0.275	-0.202	-0.257	-0.161	-0.227	0.128	-0.352^{+}	-0.254	-0.172
	(0.17)	(0.15)	(0.17)	(0.19)	(0.19)	(0.17)	(0.19)	(0.14)	(0.20)	(0.16)	(0.14)
• Spanish law legacy × endowments	0.067	0.144	0.075	0.067	0.091	-0.009	0.077	-0.501	-0.185	0.088	0.088
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.46)	(0.27)	(0.11)	(0.11)
• Others × endowments	-0.396**	-0.384**	-0.428**	-0.370**	-0.475**	-0.463**	-0.414**	-0.455	-0.258	-0.394**	-0.308**
	(0.10)	(0.10)	(0.11)	(0.10)	(0.11)	(0.11)	(0.10)	(0.50)	(0.19)	(0.10)	(0.08)
Control variables	-0.004	[0.004]	-0.422	0.288	[0.092]	-0.322**	[0.406]				
	(0.00)		(0.28)	(0.36)		(0.09)					
Constant	3.421**	3.432**	3.413**	3.112**	3.128**	5.835**	3.207**	2.058**	3.246**	3.224**	3.253**
	(0.20)	(0.79)	(0.18)	(0.26)	(0.31)	(0.74)	(0.21)	(0.59)	(0.15)	(0.13)	(0.14)
R^2	0.39	0.42	0.39	0.36	0.43	0.44	0.38	0.31	0.31	0.42	0.32
Number of observations	100	98	100	98	98	98	100	75	92	95	94
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	-0.2	-0.1	-0.4	-0.2	-0.3	-0.1	-0.3	0.2	-0.4	-0.3	0.0
Spanish law leg.- Common law	0.9*	1.0*	0.7	0.4	0.5	0.6	0.6	-0.6	-0.1	0.4	0.5
Others - Common law	0.0	0.2	-0.1	0.0	0.0	0.1	-0.1	0.1	0.1	-0.2	0.1

Note. The dependent variable is starting a business. See notes to Table 2 for the rest.

Table 8
Robustness Checks: Registering a Property

	Control variables							Settler mortality as endowments indicator	Outliers		
	Years since independence	Religion (p-value)	High indigenous mortality	Ethnic fractiona-lization	Economic potential (p-value)	Ln GDP pc 1970	Continental dummies (p-value)		Leverage	Standard. Residuals	Cook's D.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
- Common law (Ref. group)											
- Civil law:											
• Implantation by France	0.868*	0.945**	0.875*	0.778^{+}	1.114**	0.605^{+}	0.666^{+}	2.113^{+}	0.726*	0.516*	0.516*
	(0.34)	(0.30)	(0.38)	(0.43)	(0.27)	(0.34)	(0.38)	(1.19)	(0.35)	(0.25)	(0.25)
• Spanish law legacy	0.124	-0.142	0.052	0.119	-0.011	0.172	-0.182	-1.693	0.048	-0.065	-0.065
	(0.47)	(0.37)	(0.27)	(0.21)	(0.21)	(0.21)	(0.24)	(2.15)	(0.20)	(0.18)	(0.18)
• Others	0.453	0.546^{+}	0.456	0.497^{+}	0.753*	0.580^{+}	0.505^{+}	3.099*	0.239	0.314	0.168
	(0.28)	(0.33)	(0.28)	(0.27)	(0.30)	(0.30)	(0.25)	(1.30)	(0.34)	(0.26)	(0.25)
- Common law × endowments	0.311**	0.400**	0.317**	0.320**	0.270**	0.218*	0.329**	0.445**	0.314**	0.341**	0.341**
	(0.09)	(0.09)	(0.08)	(0.09)	(0.07)	(0.09)	(0.09)	(0.13)	(0.09)	(0.07)	(0.07)
- Civil law × endowments:											
• Implantation by France × endowments	-0.205	-0.053	-0.201	-0.135	-0.207	-0.114	-0.056	0.077	-0.006	-0.096	-0.096
	(0.19)	(0.18)	(0.19)	(0.24)	(0.19)	(0.19)	(0.19)	(0.19)	(0.21)	(0.16)	(0.16)
• Spanish law legacy × endowments	-0.085	-0.089	-0.081	-0.110	-0.089	-0.174	-0.079	0.810^{+}	-0.009	-0.082	-0.082
	(0.10)	(0.10)	(0.09)	(0.10)	(0.10)	(0.11)	(0.09)	(0.46)	(0.23)	(0.09)	(0.09)
• Others × endowments	0.064	0.148	0.069	0.096	0.079	0.004	0.101	-0.036	0.243	0.065	0.067
	(0.13)	(0.12)	(0.13)	(0.13)	(0.13)	(0.12)	(0.10)	(0.25)	(0.19)	(0.13)	(0.10)
Control variables	0.000	[0.020]	0.036	0.373	[0.002]	-0.303**	[0.022]				
	(0.00)		(0.29)	(0.46)		(0.11)					
Constant	3.773**	3.839**	3.740**	3.549**	3.240**	6.190**	3.243**	1.981**	3.754**	3.890**	3.890**
	(0.18)	(0.50)	(0.18)	(0.28)	(0.36)	(0.87)	(0.27)	(0.67)	(0.15)	(0.11)	(0.11)
R^2	0.23	0.31	0.23	0.25	0.37	0.30	0.31	0.35	0.26	0.26	0.28
Number of observations	100	98	100	98	98	98	100	75	92	97	93
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)											
Imp. by France - Common law	-0.3	-0.1	-0.3	-0.3	0.0	-0.2	-0.2	-0.2	0.0	-0.5	-0.5
Spanish law leg.- Common law	-0.8	-1.3*	-0.9	-0.9*	-0.8*	-0.7	-1.1*	0.6	-0.7	-1.0*	-1.0*
Others - Common law	-0.1	0.0	-0.1	0.0	0.3	0.1	0.0	0.1	0.1	-0.3	-0.5

Note. The dependent variable is registering a property. See notes to Table 2 for the rest.

Table 9

Legal Outcome Variables from Business and Household Surveys

Dependent variable	Enterprise Surveys	World Business Environment Survey						Gallup World Poll	World Justice Project					
	Court system is fair, impartial and uncorrupted	Availability of information on law and regulations	Interpretation of law and regulations consistent	Quality and efficiency of courts	Courts are fair and impartial	Courts are honest	Courts enforceability	Confidence in judicial system and security	Enforcement of Gov. regulations	No improper influence in applying Gov. regulations	No improper Gov. influence on civil justice	No unreasonable delays	Enforcement of civil justice	Alternative dispute resolution mechanisms
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
- Common law (Ref. group)														
- Civil law groups:														
• Implantation by France	-0.337*	-0.954*	-0.918**	-1.627**	-1.847**	-1.896**	-1.314**	-0.047	-0.097	-0.107	-0.193*	-0.119	-0.164^{+}	0.044
	(0.13)	(0.38)	(0.31)	(0.22)	(0.30)	(0.36)	(0.36)	(0.06)	(0.06)	(0.10)	(0.08)	(0.10)	(0.10)	(0.09)
• Spanish law legacy	-0.668**	-0.318*	-0.554**	-1.103**	-1.400**	-1.246**	-0.907**	-0.176**	-0.062^{+}	-0.024	-0.123**	-0.126**	-0.155**	-0.03
	(0.10)	(0.12)	(0.13)	(0.17)	(0.21)	(0.24)	(0.18)	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)	(0.04)	(0.03)
• Others	-0.002	-0.632**	-0.740**	-0.712**	-0.943*	-1.042*	-0.543	-0.011	-0.019	0.017	0.012	-0.108*	-0.174**	-0.121**
	(0.36)	(0.23)	(0.22)	(0.23)	(0.42)	(0.51)	(0.38)	(0.04)	(0.04)	(0.05)	(0.06)	(0.04)	(0.04)	(0.04)
- Common law × Pop. dens.	-0.112*	-0.160**	-0.164**	-0.182*	-0.173^{+}	-0.271**	-0.191*	-0.024**	-0.063**	-0.088**	-0.029*	-0.054**	-0.065**	-0.038**
	(0.05)	(0.05)	(0.05)	(0.07)	(0.09)	(0.10)	(0.08)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
- Civil law groups × Pop.														
• Implantation by France × Pop. dens.	0.065	0.591^{+}	0.520^{+}	0.720*	0.553	0.591	0.617^{+}	0.007	0.011	-0.025	0.045	0.054	0.038	-0.061
	(0.12)	(0.32)	(0.27)	(0.27)	(0.38)	(0.41)	(0.33)	(0.03)	(0.04)	(0.05)	(0.04)	(0.06)	(0.05)	(0.04)
• Spanish law legacy × Pop. dens.	-0.141	-0.018	0.047	0.070	-0.053	-0.310	-0.288^{+}	-0.026	-0.040	-0.032	-0.022	-0.028	-0.058	-0.022^{+}
	(0.10)	(0.11)	(0.12)	(0.11)	(0.13)	(0.25)	(0.16)	(0.02)	(0.03)	(0.04)	(0.04)	(0.03)	(0.05)	(0.01)
• Others × Pop. dens.	0.110	0.063**	0.248**	0.303**	0.277*	0.264^{+}	0.144	0.027^{+}	-0.011	-0.019	0.002	0.011	0.016	0.010
	(0.10)	(0.02)	(0.02)	(0.02)	(0.11)	(0.14)	(0.12)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.03)	(0.01)
Constant	2.485**	4.369**	4.071**	4.096**	4.298**	4.139**	3.935**	0.704**	0.513**	0.576**	0.621**	0.418**	0.542**	0.686**
	(0.05)	(0.09)	(0.10)	(0.13)	(0.15)	(0.17)	(0.13)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)
R^2	0.31	0.47	0.56	0.66	0.62	0.56	0.54	0.36	0.51	0.55	0.28	0.48	0.55	0.45
Number of observations	78	47	47	47	47	47	47	87	53	53	53	53	53	53
Differences in predicted values when precolonial population density is equal to 10 (log=2.3)														
Imp. by France - Common law	0.1	0.8	0.7	0.5	-0.2	0.1	0.5	0.0	0.1	0.0	0.0	0.1	0.1	0.0
Spanish law leg.- Common law	-0.7*	0.0	-0.1	-0.5	-1.1*	-1.3*	-1.1*	-0.2*	0.0	0.1	-0.1	-0.1	-0.1	0.0
Others - Common law	0.5	-0.1	0.2	0.4	0.1	0.2	0.2	0.1*	0.1	0.2*	0.1	0.0	0.0	0.0

Note. This table presents results from estimating equation (1) for 14 dependent variables obtained from business and household surveys. Higher values for these dependent variables imply better legal outcomes. The description of variables is provided in Table A1. The sample contains non-European countries colonized by Western powers (Table A2). Columns (1) to (7) represent regressions weighted by the inverse of the standard error of the mean of the dependent variable for each country. Robust standard errors are in parentheses. In the bottom part of the table we show the differences in predicted values between the common law and each civil law category when pre-colonial population density is equal to 10 (log=2.3). For the sake of simplicity, the statistical significance of the differences in predicted values is assessed only at the 5% level.

$^{+}$ Statistically significant at the 10% level.
* Statistically significant at the 5% level.
** Statistically significant at the 1% level.

Table 10

Exploring the Mechanisms

Dependent variable	Creditor rights		Investor protection		Information sharing		Contract enforcement		Recovery rate		Starting a business		Registering a property	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Panel A: Two-stage Least Squares Results														
Customary court cases (% of total)	-0.053*	-0.051*	-0.046**	-0.047**	-0.050*	-0.054**	0.019**	0.017**	-0.700**	-0.717**	0.031**	0.033**	0.032**	0.034**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.21)	(0.16)	(0.01)	(0.01)	(0.01)	(0.01)
Land suitability for cultivation	1.926	2.066	-9.119	-8.710	-52.984**	-51.379**	2.248	2.766	-484.526**	-484.217**	2.770	1.953	12.748	13.891+
	(12.94)	(12.96)	(11.90)	(12.02)	(11.88)	(12.45)	(4.39)	(4.36)	(154.89)	(163.23)	(6.27)	(6.41)	(7.76)	(7.92)
Landlockedness	0.556	0.519	-1.081	-1.064	0.512	0.562	-0.346	-0.316	4.012	4.344	0.484	0.459	-0.263	-0.324
	(0.94)	(0.95)	(0.80)	(0.81)	(0.99)	(1.00)	(0.27)	(0.26)	(10.57)	(10.68)	(0.47)	(0.49)	(0.42)	(0.46)
Distance to the coast	0.246+	0.240+	0.133	0.138	0.068	0.084	-0.067+	-0.059+	2.015+	2.080+	-0.152*	-0.160*	-0.176*	-0.183*
	(0.14)	(0.13)	(0.14)	(0.14)	(0.15)	(0.14)	(0.04)	(0.03)	(1.10)	(1.06)	(0.06)	(0.06)	(0.08)	(0.08)
Gap between first sighted and colonized	0.003	0.002	0.003	0.003	-0.004	-0.004	-0.002*	-0.002*	-0.012	-0.012	-0.002	-0.002	-0.001	-0.002
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.04)	(0.04)	(0.00)	(0.00)	(0.00)	(0.00)
Panel B: First Stage		Columns 1, 3, 5, 7, 9, 11, 13						Columns 2, 4, 6, 8, 10, 12, 14						
Population density in 1500			9.948**							7.630**				
			(1.73)							(2.11)				
Euro share in 1900										-0.223+				
										(0.13)				
Land suitability for cultivation			-269.689+							-273.277+				
			(145.76)							(150.33)				
Landlockedness			29.632**							22.529+				
			(9.77)							(11.35)				
Distance to the coast			2.817*							3.317*				
			(1.27)							(1.31)				
Gap between first sighted and colonized			0.037							0.031				
			(0.04)							(0.04)				
Partial R^2			0.42							0.45				
F- statistic			33.13							19.26				
R^2			0.63							0.64				
Observations			37							36				
Panel C: Test of Overidentification		(2)		(4)		(6)		(8)		(10)		(12)		(14)
P-value		0.764		0.804		0.525		0.295		0.807		0.406		0.498
Panel D: Second Stage with Modern-day European Descendants as Exogenous Variable														
Customary court cases (% of total)	-0.080*	-0.083**	-0.066**	-0.069**	-0.083*	-0.088**	0.028*	0.028*	-1.108**	-1.177**	0.035**	0.036**	0.021+	0.022*
	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.01)	(0.01)	(0.37)	(0.36)	(0.01)	(0.01)	(0.01)	(0.01)
Modern-day European descendants (%)	-2.090+	-2.252+	-1.518	-1.663	-2.548	-2.724+	0.688	0.774	-31.171	-34.911+	0.285	0.265	-0.838	-0.733
	(1.22)	(1.20)	(1.07)	(1.06)	(1.55)	(1.52)	(0.55)	(0.56)	(20.04)	(20.25)	(0.54)	(0.55)	(0.66)	(0.65)
P-value (overid-test)		0.700		0.347		0.072		0.775		0.241		0.272		0.644
Observations	37	36	37	36	37	36	37	36	37	36	37	36	37	36

Note. Panel A presents the two-stage least-squares estimates with *Doing Business* indicators employed as the dependent variable. Panel B reports the corresponding first stage for the case in which precolonial population density is the only instrument for the extent of indirect rule and the case in which the instruments are precolonial population density and the European population share in 1900. Panel C reports the *p-value* associated with the overidentification test, and Panel D presents the results from the two-stage least-squares regression into which the modern-day European population share is incorporated as an exogenous variable. Regressions include a constant term which is omitted to save space. Regressions in panel D also include the following controls: land suitability, landlockedness, distance to the coast and gap between first sighted and colonized. The description of variables is provided in Table A1. The sample contains non-European countries colonized by Western powers (Table A2). Robust standard errors are in parentheses. Small-sample correction for standard errors is applied.

+ Statistically significant at the 10% level.

* Statistically significant at the 5% level.

** Statistically significant at the 1% level.

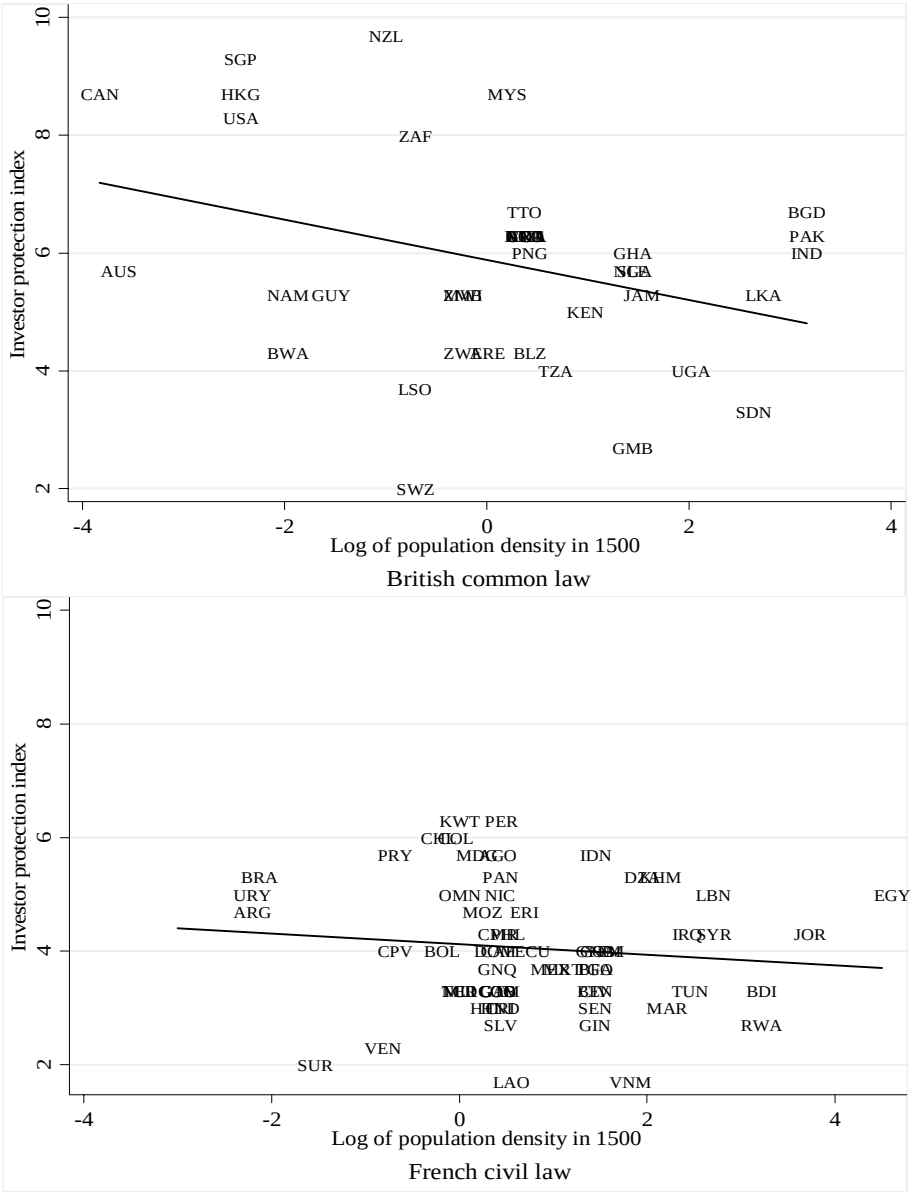

Figure 1. The Distribution of the British common law and the French civil law: Investor protection

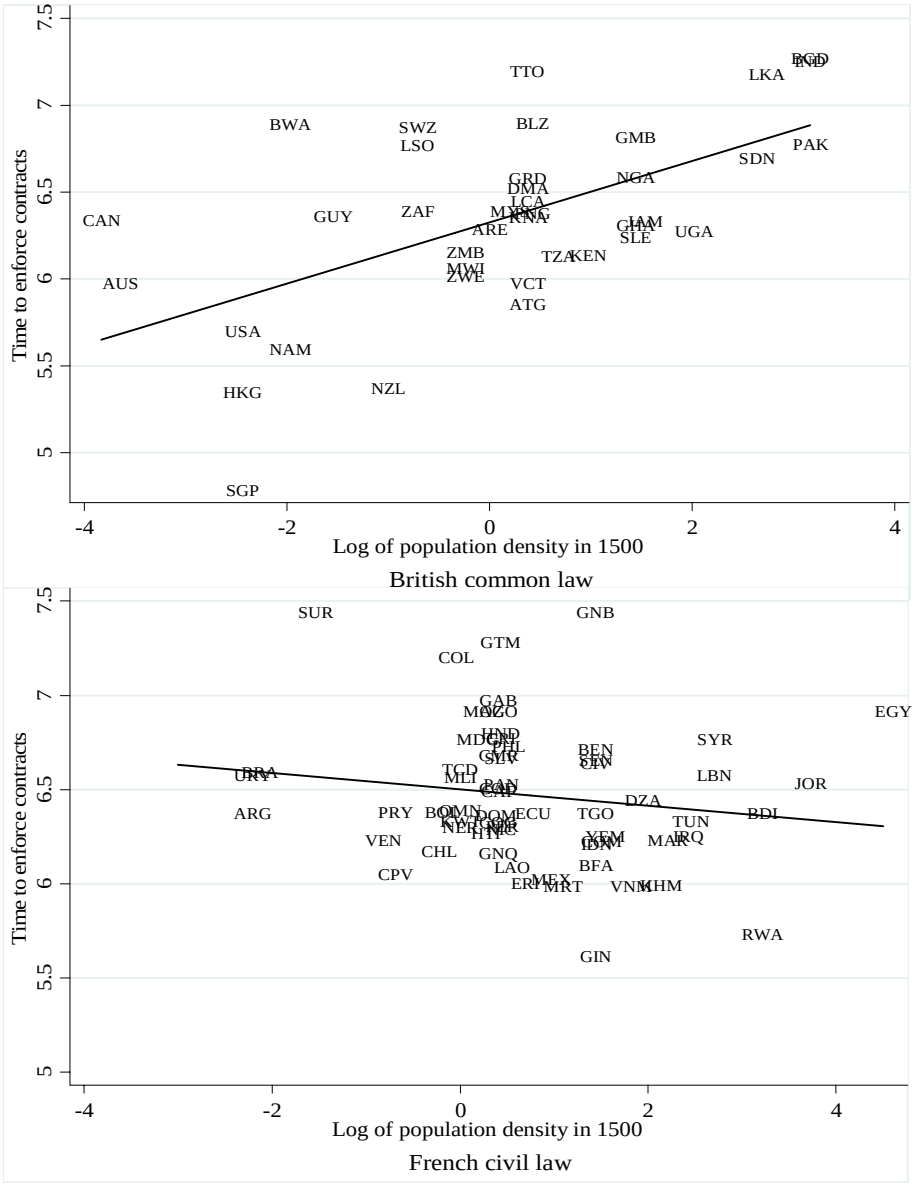

Figure 2. The Distribution of the British common law and the French civil law: Contract enforcement