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"The Economic Consequences of Legal Origins"

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Abstract

In the last decade, economists have produced a considerable body of research suggesting that the historical origin of a country's laws is highly correlated with a broad range of its legal rules and regulations, as well as with economic outcomes. We summarize this evidence and attempt a unified interpretation. We also examine the effects of legal origins on resource allocation and economic growth. Finally, we address a broad range of objections to the empirical claim that legal origins matter.

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I. Introduction

About a decade ago, the three of us together with Robert Vishny published a pair of articles dealing with legal protection of investors and its consequences (La Porta et al. or LLSV, 1997, 1998). These articles generated a fair amount of follow-up research, and a good deal of controversy. This paper is our attempt to summarize the main findings and the main controversies, and to reach some tentative conclusions. This is very much an interim assessment, as many issues remain unresolved.

LLSV started from a proposition, standard in corporate law (e.g., Clark 1986) and emphasized by Shleifer and Vishny (1997), that legal protection of outside investors limits the extent of expropriation of such investors by corporate insiders, and thereby promotes financial development. This argument followed naturally from the emerging contractual view of corporate governance and finance (Jensen and Meckling 1976, Grossman and Hart 1988, Hart 1995), which sees the protection of the property rights of the financiers as essential to assure the flow of capital to entrepreneurs and firms. The focus on the law as the backbone of corporate governance was nonetheless not entirely trivial, since financial economists have often argued that financial markets are sustained by "market forces" such as competition and reputation (Leland and Pyle 1977, Fama 1980). To the extent that financial research considered institutional differences among countries, those concerned the role of banks (Allen and Gale 1999).

Taking investor protection through the legal system as a starting point, LLSV made two contributions. First, they showed that legal rules governing investor protection can be measured and coded for a broad range of countries using national commercial (primarily corporate and bankruptcy) laws. LLSV coded such rules for both

the protection of outside shareholders, and the protection of outside senior creditors, for 49 countries. The coding showed that some countries offer much stronger legal protection of outside investors' interests than others.

Second, LLSV documented empirically that legal rules protecting investors vary systematically among legal traditions or origins, with the laws of common law countries (originating in English law) being more protective of outside investors than the laws of civil law (originating in Roman law) and particularly French civil law countries. LLSV further argued that legal traditions were typically introduced into various countries through conquest and colonization, and as such were largely exogenous. As a corollary, LLSV used legal origins of commercial laws as an instrument for legal rules in a two stage procedure, where the second stage explained financial development. The purpose was to overcome the reverse causality argument that financial development causes legal development, rather than vice versa.

Subsequent research showed that the influence of legal origins on laws and regulations is not restricted to finance. In several studies conducted jointly with Simeon Djankov and others, we found that such outcomes as government ownership of banks (La Porta et al. 2002), the burden of entry regulations (Djankov et al. 2002), regulation of labor markets (Botero et al. 2004), incidence of military conscription (Mulligan and Shleifer 2005a,b), and government ownership of the media (Djankov et al. 2003c) vary across legal families. In all these spheres, civil law is associated with a heavier hand of government ownership and regulation than common law. Many of these indicators of government ownership and regulation are associated with adverse impacts on markets, such as greater corruption, larger unofficial economy, and higher unemployment.

In still other studies, we have found that common law is associated with lower formalism of judicial procedures (Djankov et al. 2003b) and greater judicial independence (La Porta et al. 2004) than civil law. These indicators are in turn associated with better contract enforcement and greater security of property rights.

Assuming that this evidence is correct, it raises an enormous challenge of interpretation. What is the meaning of legal origin? How can it account for all these correlations? In this paper, we adopt a broad conception of legal origin as a style of social control of economic life (and maybe of other aspects of life as well). This conception follows the standard view of comparative legal scholars: "The following factors seem to us to be those which are crucial for the style of a legal system or a legal family: (1) its historical background and development, (2) its predominant and characteristic mode of thought in legal matters, (3) especially distinctive institutions, (4) the kind of legal sources it acknowledges and the way it handles them, and (5) its ideology" (Zweigert and Kotz 1998, p.68).

Importantly, Zweigert and Kotz include in their characterization of legal families not only the purely judicial institutions, such as legal procedures, forms of legal change, or patterns of judicial recruitment, but also the broader attitude, philosophy, or ideology. They write specifically that "the style of a legal system may be marked by an ideology, that is, a religious or political conception of how economic or social life should be organized" (p. 72). On this view, legal families are expressions of fundamental approaches to solving social problems; not only how to organize a trial, but also how to raise an army. In this paper, we adopt and develop this broader conception, which, for lack of a better term, we call the Legal Origin Theory.

In developing our view of the meaning of legal origins and of their consequences, we need to address many criticisms of LLSV, which relate both to the specific findings of the original papers and to interpretation. First, with respect to measurement, LLSV indicators of the protection of shareholder rights have been challenged for being *ad hoc* (Coffee 1999), incorrect in a few specific instances (Pagano and Volpin 2005), and systematically incorrect because they ignored the difference between mandatory and default rules (Spamann 2006). This criticism caused us to introduce two better theoretically-grounded indicators of shareholder protection, one from securities laws governing the regulation of new stock issues (La Porta et al. 2006), and one from corporate laws and other regulations governing self-dealing transactions (Djankov et al. 2008). Djankov et al. (2008) also revised in light of the criticisms and expanded to 72 countries the original LLSV measures of shareholder protection, although we are now convinced that the more theoretically-grounded measures are preferred. Interestingly, LLSV's original findings that investor protection predicts financial development, and is itself predicted by legal origins, are even stronger with the new measures. So far, the LLSV index of creditor protection has not been challenged as much (but see Dam 2006), and Djankov et al. (2007) extend it to 129 countries.

Second, although the idea of using colonial history as an exogenous predictor of institutional rules is now increasingly accepted, several aspects of our research design have been questioned. Berkowitz et al. (2003) argue that what matters for the quality of legal rules is not so much the origin of the laws, but whether these laws were transplanted voluntarily. Of course, if only voluntarism mattered, legal origin would not, contrary to all the evidence. Yet even if we accept the exogeneity of legal origins, there is a further

question, namely whether they represent valid instruments for investor protection (and for other measures or regulation). The problem here is the risk – which has grown larger as legal origin has been shown to correlate with more characteristics of the legal and regulatory environments – that legal origin affects finance through channels other than the laws protecting investors. For example, legal origin influences the quality of contract enforcement (Djankov et al. 2003b) and might shape financial development through that channel. This critique of instrumental variables has caused us to largely stop using these techniques in our own research, and we have in fact elaborated these concerns about the use of instrumental variables in cross-country regressions in another context (Glaeser et al. 2004). Interestingly, a growing body of research (reviewed in the next section) uses the variation in legal rules over time to identify their influence on outcomes.

The greatest controversy, however, has surrounded the interpretation of legal origins. There are two strands of criticism. The first strand holds that LLSV do not offer a mechanism that explains how legal origin shapes the laws protecting investors. After all, we see some change in legal rules across countries, sometimes at a brisk pace. The central goal of this paper is to develop the Legal Origin Theory more systematically than we have done before, and in this way address this line of criticism.

The second strand of criticism holds that the correlation between legal origins and financial development is spurious. The advocates of the spuriousness thesis have made three distinct arguments. Some critics have argued that what really explains financial development is culture, so that legal origin enters the regressions only in so far as it proxies for cultural beliefs (Stulz and Williamson 2003, Licht et al. 2005). Other critics have argued that what really explains the differences is politics (Rajan and Zingales 2003,

Pagano and Volpin 2005, Perotti and von Thadden 2006, Roe 2000, 2006), so that legal origin enters in the regressions only in so far as it proxies for political choices. Still others have argued that the importance of legal origin in explaining finance is a spurious consequence of the rapid growth of financial markets in the UK, US, Singapore, Hong Kong and a few other common law countries in recent decades. Historically, the argument goes, legal origins did not predict finance (Rajan and Zingales 2003). In these alternative theories, the critics' strong claim is *not* that culture, politics, and history matter in addition to legal origins – these positions are obviously correct. Rather, some critics maintain that legal origins *do not* matter, and only enter in the empirical analysis because they proxy for such omitted variables as culture, politics, or history.

In the remainder of this paper, we address the various issues and debates, with particular attention to the predictive power and the interpretation of legal origins. In Section 2, we describe the principal legal traditions. In Section 3, we document the strong and pervasive effects of legal origins on diverse areas of law and regulation.

In Section 4, we interpret these findings by looking at the evolution of legal systems in England and France, as well as at legal transplantation, and using this information to shed light on the question of why legal origin matters. Our goal is to explore the possibility of a general explanation, rather than parochial theories focused on particular spheres. We develop the Legal Origin Theory, namely that legal origins represent fundamentally different strategies of social control of economic life, which express themselves in how countries confront new economic or political challenges.

In section 5, we examine the relationship between legal origins and resource allocation. While there is some evidence that legal origins predict economic growth, the

aggregate evidence is fragile and inconclusive (much like the rest of the evidence on institutions and growth). On the other hand, the micro evidence that legal origins are related to the efficiency of resource allocation is both strong and rapidly growing.

In sections 6-8, we deal with the three spuriousness arguments: culture, politics, and history. Our strong conclusion is that, while all these factors influence laws, regulations, and economic outcomes, it is almost certainly false that legal origin is merely a proxy for any of them.

Section 9 briefly considers the implications of our work for economic reform, and describes some of the reforms that had taken place. Many developing countries today find themselves heavily over-regulated in crucial spheres of economic life, in part because of their legal origin heritage. The measurement of laws and regulations stimulated by some of our research may have been helpful in encouraging useful reforms.

Section 10 concludes the paper. Although the original LLSV work had taken, and continues to take, multiple bruises, the hypothesis that legal origins -- broadly interpreted as styles of social control -- have profound consequences for laws, regulations, and economic outcomes has accumulated a great deal of additional evidence in its support.

We note that this paper is not a survey, and therefore only introduces particular papers in so far as they enter the discussion of the consequences and the meaning of legal origins. The last decade has witnessed an explosion of research on corporate governance which uses the investor protection framework. Since much of this research has moved well beyond legal origins, we do not cover many significant papers. An informative recent discussion of comparative corporate governance is in Morck, ed. (2005).

II. Background on legal origins.

In their remarkable 300-page survey of human history, "The Human Web," Robert and William McNeill (2003) show how the transmission of information across space shapes human societies. Information is transmitted through trade, conquest, colonization, missionary work, migration, and so on. The bits of information transmitted through these channels include technology, language, religion, sports, but also law and legal systems. Some of these bits of information are transplanted voluntarily, as when people adopt technologies they need. This makes it difficult to study the consequences of adoption because we do not know whether to attribute these consequences to what is adopted, or to the conditions that invited the adoption. In other instances, the transplantation of information is involuntary, as in the cases of forced religious conversion, conquest, or colonization. These conditions, unfavorable as they are, make it easier to identify the consequences of specific information being transplanted.

Legal origins or traditions present a key example of such often involuntary transmission of different bundles of information across human populations. The foundation of research on legal origins is the idea that some national legal systems are sufficiently similar in some critical respects to others to permit classification of national legal systems into major families of law (David and Brierley 1985, Reynolds and Flores 1989, Glendon et al. 1994, Zweigert and Kotz 1998). All writers identify two main secular legal traditions: common law and civil law, and several sub-traditions – French, German, socialist, and Scandinavian – within civil law. Occasionally, countries adopt some laws from one legal tradition and other laws from another, and researchers need to keep track of such hybrids, but generally a particular tradition dominates in each country.

The key feature of legal traditions is that they have been transplanted, typically though not always through conquest or colonization, from relatively few mother countries to most of the rest of the world (Watson 1974). Such transplantation covers both specific laws and codes, but also of individuals with mother-country training and human capital, as well as of the more general approaches or ideologies of the legal system.

Of course, following the transplantation of some basic legal infrastructure, such as the legal codes, legal principles and ideologies, and elements of the organization of the judiciary, the national laws of various countries changed, evolved, and adapted to local circumstances. Cultural, religious, and economic conditions of every society came to be reflected in their national laws, so that legal and regulatory systems of no two countries are literally identical. This adaptation and individualization, however, was not complete. Enough of the basic transplanted elements have remained and persisted (David 1985) to allow the classification into legal traditions. As a consequence, legal transplantation represents the kind of involuntary information transmission that the McNeills have emphasized, which enables us to study the consequences of legal origins.

Before discussing the legal traditions of market economies, we briefly comment on socialist law. The socialist legal tradition originates in the Soviet Union, and was spread by the Soviet armies first to the former Soviet republics and later to Eastern Europe[1]. It was also imitated by some socialist states, such as Mongolia and China. After the fall of the Berlin wall, the countries of the former Soviet Union and Eastern Europe reverted to their pre-Russian-revolution or pre-World War II legal systems, which were French or German civil law. In our work based on data from the 1990's, we have

[1] The socialist legal tradition illustrates the significance of ideologies for legal styles. "…the socialist concept of law can be directly traced to the movement of legal positivism. The movement … sees law as an expression of the will of the legislators , supreme interpreters of justice" (David and Brierley 1985, p.69)

often classified transition economies as having the socialist legal system. However, today, academics and officials from these countries object to such classification, so, in the present paper, we classify them according to their re-adopted legal systems. A couple of countries, such as Cuba, still maintain the socialist legal system, and await liberation and re-classification. These countries typically lack other data and never appear in the analysis. There are no socialist origin countries in the data used in the present paper.

Figure I shows the distribution of legal origins of commercial laws throughout the world. The common-law legal tradition includes the law of England and its former colonies. The common law is formed by appellate judges who establish precedents by solving specific legal disputes. Dispute resolution tends to be adversarial rather than inquisitorial. Judicial independence from both the executive and legislature are central. "English common law developed because landed aristocrats and merchants wanted a system of law that would provide strong protections for property and contract rights, and limit the crown's ability to interfere in markets" (Mahoney 2001, p. 504). Common law has spread to the British colonies, including the United States, Canada, Australia, India, South Africa, and many other countries. Of the maximal sample of 150 countries used in our studies, there are 42 common law countries.

The civil law tradition is the oldest, the most influential, and the most widely distributed around the world, especially after so many transition economies returned to it. It originates in Roman law, uses statutes and comprehensive codes as a primary means of ordering legal material, and relies heavily on legal scholars to ascertain and formulate rules (Merryman 1969). Dispute resolution tends to be inquisitorial rather than adversarial. Roman law was rediscovered in the Middle Ages in Italy, adopted by the

Catholic Church for its purposes, and from there formed the basis of secular laws in many European countries.

Although the origins of civil law are ancient, the French civil law tradition is usually identified with the French Revolution and Napoleon's codes, which were written in the early 19th century. In contrast to common law, "French civil law developed as it did because the revolutionary generation, and Napoleon after it, wished to use state power to alter property rights and attempted to insure that judges did not interfere. Thus, quite apart from the substance of legal rules, there is a sharp difference between the ideologies underlying common and civil law, with the latter notably more comfortable with the centralized and activist government" (Mahoney 2001, p. 505).

Napoleon's armies introduced his codes into Belgium, the Netherlands, Italy, and parts of Germany. In the colonial era, France extended her legal influence to the Near East and Northern and Sub-Saharan Africa, Indochina, Oceania, and French Caribbean Islands. Napoleonic influence was also significant in Luxembourg, Portugal, Spain, and some Swiss cantons. When the Spanish and Portuguese empires in Latin America dissolved in the 19th century, it was mainly the French civil law that the lawmakers of the new nations looked to for inspiration. In the 19th century, the French civil code was also adopted, with many modifications, by the Russian Empire, and through Russia to the neighboring regions it influenced and occupied. These countries adopted the socialist law after the Russian Revolution, but typically reverted to the French civil law after the fall of the Berlin Wall. There are 84 French legal origin countries in the sample.

The German legal tradition also has its basis in Roman law, but the German Commercial Code was written in 1897 after Bismarck's unification of Germany. It

shares many procedural characteristics with the French system, but accommodates greater judicial law-making. The German legal tradition influenced Austria, the former Czechoslovakia, Greece, Hungary, Italy, Switzerland, Yugoslavia, Japan, Korea, and a few countries of the former Soviet Union. Taiwan's laws came from China, which relied heavily on German laws during modernization. There are 19 German legal origin countries in the sample.

The Scandinavian family is usually viewed as part of the civil law tradition, although its law is less derivative of Roman law than the French and German families (Zweigert and Kotz 1998). Most writers describe the Scandinavian laws as distinct from others, and we have kept them as a separate family (with 5 members) in our research.

Before turning to the presentation of results, five points about this classification are in order. First, although the majority of legal transplantation is the product of conquest and colonization, there are important exceptions. Japan adopted the German legal system independently. Latin American former Spanish and Portuguese colonies ended up with codifications heavily influenced by the French legal tradition after gaining independence. Beyond the fact that Napoleon had invaded the Iberian Peninsula, the reasons were partly the new military leaders' admiration for Bonaparte, partly language, and partly Napoleonic influence on the French and Portuguese codes. In this instance, the exogeneity assumption from the viewpoint of studying economic outcomes is still appropriate. The 19th century influence of the French civil law on Russia and Turkey was largely voluntary, as both countries sought to modernize. But the French and German civil law traditions in the rest of the countries in Eastern Europe, the Middle East, and Central Asia are the result of the conquests by the Russian, Austro-Hungarian, Ottoman,

and German empires. The return by these countries to their pre-Soviet legal traditions during the transition from socialism is voluntary as well, but shaped largely by history.

Second, because Scandinavian countries did not have any colonies, and Germany's colonial influence was short-lived and abruptly erased by the World War I, there are relatively few countries in these two traditions. As a consequence, while we occasionally speak of the comparison between common and civil law, most of the discussion compares common law to the French civil law. This is largely because both traditions include a large number of countries, but also because they represent the two most distinct approaches to law and regulation.

Third, although we often speak of common law and French civil law in terms of pure types, in reality there has been a great deal of mutual influence and in some areas convergence. There is a good deal of legislation in common law countries, and a good deal of judicial interpretation in civil law countries. But the fact that the actual laws of real countries are not pure types does not mean that there are no systematic differences.

Fourth, and related to the previous point, some legal scholars have pointed to the growing importance of legislation in common law countries as proof that judicial law making no longer matters. This is incorrect, for a number of reasons. Statutes in common law countries often follow and reflect judicial rulings, so jurisprudence remains the basis of statutory law. Also, even when legislation in common law countries runs ahead of judicial law making, it often must coexist with, and therefore reflects, pre-existing common law rules. Indeed, statutes in common law countries are often highly imprecise, with an understanding that courts will spell out the rules as they begin to be applied. Finally, and most importantly, to the extent that legal origins reflect

fundamental approaches to social control of business, even legislation in common law countries would express the common law way of doing things. For all these reasons, the universal growth of legislation in no way implies the irrelevance of legal origins.

Fifth, with the re-classification of transition economies from socialist into the French and German civil law families, one might worry that the differences among legal origins described below are driven by the transition economies. They are not. None of our substantive results change if we exclude the transition economies.

With these points in mind, we can turn to the evidence.

III. The Basic Facts.

Figure II organizes some of our own and related research on the economic consequences of legal origins. It shows the links from legal origins to particular legal rules, and then to economic outcomes. Figure II immediately suggests several problems for empirical work. First, in our framework, legal origins have influence many spheres of law-making and regulation, which makes it dangerous to use them an instruments. Second, we have drawn a rather clean picture pointing from particular legal rules to outcomes. In reality, a variety of legal rules (e.g., those governing both investor protection AND legal procedure) can influence the protection of outside investors and hence financial markets. This, again, makes empirical work less clean.

Before turning to the evidence, we make three comments about the data. First, all the data used in this paper, and a good deal more, are available at http://www.andrei-shleifer.com/data.html. Given the focus of this paper, we do not discuss the data in detail, but the descriptions are available in the original papers presenting the data.

Second, the basic evidence we present takes the form of cross-country studies. An important feature of these studies is that all countries receive the same weight. There is no special treatment of mother countries, of rich countries, etc. This design may obscure the differences, discussed below, within legal origins, such as the greater dynamism of law in mother countries than in former colonies.

Third, there is one crucial point about the data. The sources of data on legal rules and institutions vary significantly across studies. Some rules, such as many indicators of investor protection and of various government regulations, come from national laws. Those tend to be "laws on the books." Other indicators are mixtures of national laws and actual experiences, and tend to combine substantive and procedural rules. These variables are often constructed through collaborative efforts with law firms around the world, and yield summary indicators of legal rules and their enforcement. For example, the study of legal formalism (Djankov et al. 2003b) reflects the lawyers' characterization of procedural rules that would typically apply to a specific legal dispute; the study of the efficiency of debt enforcement (Djankov, Hart, McLeish, and Shleifer 2006) incorporates estimates of time, cost, and resolution of a standardized insolvency case. The procedure used in each study has its advantages and problems; the important fact, however, is the consistency of results across both data collection procedures and spheres of activity that we document below.

To organize the discussion, we do not provide a full survey of the available evidence, but rather a sampling with an emphasis on the breadth of the findings. The available studies (with the exception of those dealing with economic growth, discussed in Section V) have followed a similar pattern, outlined in Figure II. They first consider the

effect of legal origins on particular laws and regulations, and then the effects of these laws and regulations on the economic outcomes that they might influence most directly.

The available studies can be divided into three categories. First, several studies following LLSV (1997, 1998) examine the effects of legal origins on investor protection, and then the effect of investor protection on financial development. Some of these studies look at stock markets. The LLSV measure of anti-director rights has been replaced by a measure of shareholder protection through securities laws in the offerings of new issues (La Porta et al. 2006), and by another measure of shareholder protection from self-dealing by corporate insiders through corporate law (Djankov et al. 2008). As outcomes, these studies use such measures as the ratio of stock market capitalization to GDP, the pace of public offering activity, the voting premium (see Dyck and Zingales 2004), dividend payouts (La Porta et al. 2000), Tobin's Q (La Porta et al. 2002), and ownership dispersion (La Porta et al. 1999). Predictions for each of these variables emerge from a standard agency model of corporate governance, in which investor protection shapes external finance (e.g., Shleifer and Wolfenzon 2002) [2].

Other studies in this category look at creditor rights. The LLSV (1997, 1998) measure from bankruptcy laws has been updated by Djankov et al. (2007). Djankov, Hart, McLeish, and Shleifer (2006) take a different approach to creditor protection by looking at the actual efficiency of debt enforcement, as measured by creditor recovery rates in a hypothetical case of an insolvent firm. The latter study addresses a common criticism that it is law enforcement, rather than rules on the books that matters for investor protection by integrating legal rules and characteristics of enforcement in the

[2] The theoretical prediction that investor protection leads to greater ownership dispersion is not unambiguous, and the data on ownership around the world is less clean and satisfactory than that on other variables. Nonetheless, much of the criticism of LLSV has focused on ownership dispersion.

efficiency measure. La Porta et al. (2002) focus on state involvement in financial markets by looking at government ownership of banks. These studies typically consider the size of debt markets as an outcome measure, although Djankov et al. (2007) also examine several subjective assessments of the quality of private debt markets.

In the second category, several papers consider government regulation, or even ownership, of particular economic activities. Djankov et al. (2002) look at the number of steps an entrepreneur must complete in order to begin operating a business legally, a number that in 1999 ranged from 2 in Canada and New Zealand to 22 in the Dominican Republic. They examine the impact of such entry regulation on corruption and the size of the unofficial economy. Botero et al. (2004) construct indices of labor market regulation and examine their effect on labor force participation rates and unemployment. Djankov et al. (2003c) examine government ownership of the media, which remains extensive around the world, particularly for television. Mulligan and Shleifer (2005a,b) look at one of the ultimate forms of government intervention in private life, military conscription.

The third category of papers investigates the effects of legal origins on the characteristics of the judiciary (and other government institutions), and then the effect of those on the security of property rights and contract enforcement. Djankov et al. (2003b) look at the formalism of judicial procedures in various countries, and its effect on the time it takes to evict a non-paying tenant or to collect a bounced check. This variable can be interpreted more broadly as the efficiency of contract enforcement by courts, and in fact turns out to be highly correlated with the efficiency of debt collection obtained in an entirely different way by Djankov, Hart, McLeish, and Shleifer (2006). La Porta et al. (2004) adopt a very different strategy and collect information from national constitutions

on judicial independence (as measured by judicial tenure) and the acceptance of appellate court rulings as a source of law. They then ask directly whether judicial independence contributes to the quality of contract enforcement and the security of property rights.

Tables I-III show a sampling of results from each category of studies. In each Table, the top panel presents the regressions of legal or regulatory institutions on legal origins, controlling only for per capita income. In the original papers, many more controls and robustness checks are included, but here we present the stripped down regressions. The bottom panel of each Table then presents some results of regressions of outcomes on legal rules. We could of course combine the two panels in an instrumental variables specification, but, as we indicated in the introduction, we do not recommend such specifications since legal origins influence a broad range of institutions, and we cannot guarantee that the relevant ones are not omitted in the first stage.

Begin with Table I. Higher income per capita is associated with better shareholder and creditor protection, more efficient debt collection, and lower government ownership of banks (Panel A). Civil law is generally associated with lower shareholder and creditor protection, less efficient debt enforcement, and higher government ownership of banks. The estimated coefficients imply that, compared to common law, French legal origin is associated with a reduction of 0.33 in the anti-self-dealing index (which ranges between 0 and 1), of 0.33 in the index of prospectus disclosure (which ranges between 0 and 1), of 0.84 in the creditor rights index (which ranges from 0 to 4), of 13.6 points in the efficiency of debt collection (out of 100), and a rise of 33 percentage points in government ownership of banks. The effect of legal origins on legal rules and financial institutions is statistically significant and economically large.

Higher income per capita is generally associated with more developed financial markets, as reflected in a higher stock-market-capitalization-to-GDP ratio, more firms per capita, less ownership concentration, a lower control premium, a higher private-credit-to-GDP ratio, and lower interest rate spreads.[3] Investor protection is associated with more developed financial markets (Panel B). The estimated coefficients imply that a two-standard deviation increase in the anti-self dealing index is associated with an increase in the stock-market-to-GDP ratio of 42 percentage points, an increase in listed firms per capita of 38 percentage points, and a reduction in ownership concentration of 6 percentage points. A two-standard deviation improvement in prospectus disclosure is associated with a reduction in the control premium of 0.15 (the mean premium is 0.11). The effect of legal rules on debt markets is also large. A two-standard deviation increase in creditor rights is associated with an increase of 15 percentage points in the private-credit-to-GDP ratio. A two-standard deviation increase in the efficiency of debt collection is associated with an increase of 27 percentage points in the private-credit-to-GDP ratio. A two-standard deviation increase in government ownership of banks is associated with a 16 percentage point rise in the spread between lending and borrowing rates (the median spread is 12).[4]

[3] Recent research has looked at additional outcome variables as well as measures of credit market regulation. Esty and Megginson (2003) find that creditor protection shapes foreign bank lending, while Ongena and Smith (2000) show it influences the number of banking relationships. Qian and Strahan (2007) find that better creditor protection lowers interest rates that lenders charge. Barth et al. (2004) introduce measures of banking regulation and show that they vary systematically by legal origin.

[4] Several studies present evidence that government ownership of banks matters. Sapienza (2004) shows that government-owned banks in Italy lend to big enterprises rather than small ones. Dinc (2005) shows that government-owned banks sharply increase lending in election years. Khwaja and Mian (2005) presents evidence that politically-connected firms in Pakistan get preferential treatment from government-owned banks. They borrow 45 percent more and have 50 percent higher default rates.

Table II presents the results on government regulation. Higher income per capita is correlated with lower entry regulation and government ownership of the media, but not with labor regulation or conscription (Panel A). Both French and German civil origins have more entry and labor regulation, higher state ownership of the media, and heavier reliance on conscription. The estimated coefficients imply that, compared to common law, French legal origin is associated with an increase of 0.69 in the (log) number of steps to open a new business, a rise of 0.26 in the index of labor regulation, a .21 rise in government ownership of the media, and a 0.55 increase in conscription. These are large effects given that the entry regulation measure ranges from 0.69 to 3.0, labor regulation ranges from 0.15 to 0.83, and both media ownership and conscription range from 0 to 1.

According to the estimated coefficients in Panel B, a two-standard deviation increase in the (log) number of steps to open a new business is associated with a 0.71 worsening of the corruption index and a 14 percentage point rise in employment in the unofficial economy. A two-standard deviation increase in the regulation of labor implies a 1.99 percentage point reduction in the male labor force participation rate, a 2.32 percentage point increase in the unemployment rate, and a 5.67 percentage point rise in the unemployment rate of young males.

Table III shows the results on judicial institutions. Higher income per capita is associated with less legal formalism but not with longer judicial tenure or the acceptance of case law (Panel A). Here again, legal origin has a pronounced effect on institutions. Compared to common law countries, civil law countries generally have more legal formalism, lower judicial tenure, and sharply lower constitutional acceptance of case law. The estimated coefficients imply that French legal origin is associated with an increase of

1.49 in the index of legal formalism, a reduction of 0.24 in judicial tenure, and of 0.67 in case law. These are large effects since legal formalism ranges from 0.73 to 6.0, and both judicial tenure and case law range from 0 to 1.

Judicial institutions matter for both the efficiency of contract enforcement and the security of property rights (Panel B). The estimated coefficients imply that a two-standard deviation increase in legal formalism is associated with a 65 percentage point increase in the time to collect on a check and a reduction of 1.1 in the index of contract enforcement (the latter ranges from 3.5 to 8.9). Moreover, a two-standard deviation increase in judicial tenure is associated with a 2.9 point rise in the property rights index. Finally, a two standard deviation increase in case law is associated with an improvement of 1.3 points in the property rights index, which ranges from 1 to 5.

Summary of the Evidence

So, what do we learn from these tables? The economic consequences of legal origins are pervasive. Compared to the French civil law, common law is associated with a) better investor protection, which in turn is associated with improved financial development, better access to finance, and higher ownership dispersion, b) lighter government ownership and regulation, which are in turn associated with less corruption, better functioning labor markets, and smaller unofficial economies, and c) less formalized and more independent judicial systems, which are in turn associated with more secure property rights and better contract enforcement.

The most important aspect of these results from our viewpoint is how pervasive is the influence of legal origins. As we discuss below, many objections have been raised

with respect to individual pieces of this evidence. We address later the most radical objection, that legal origin is a proxy for something else, but deal here with more parochial concerns. The key point to start with, however, is that objections rarely come to grips with the breadth of the influence of legal origins on economic outcomes.

Let us begin with some objections to the evidence on law and finance. The most immediate objection is reverse causality: countries improve their laws protecting investors as their financial markets develop, perhaps under political pressure from those investors. If instrumental variable techniques were appropriate in this context, a two stage procedure, in which in the first stage the rules are instrumented by legal origins, would address this objection. LLSV (1997, 1998) pursue this strategy. But even if instrumental variable techniques are inappropriate because legal origin influences finance through channels other than rules protecting investors, legal origins are still exogenous, and to the extent that they shape legal rules protecting investors, these rules cannot be just responding to market development.

Recent evidence has gone beyond cross-section to look at changes in financial development in response to changes in legal rules, thereby relieving the reverse causality concerns. Greenstone, Oyer, and Vissing-Jørgensen (2006) examine the effects of the 1964 Securities Act Amendments, which increased the disclosure requirements for US over-the-counter firms. They find that firms subject to the new disclosure requirements had a statistically significant abnormal excess return of about 10% over the year and a half that the law was debated and passed relative to a comparison group of unaffected NYSE/AMEX firms. Bushee and Leuz (2005) obtain similar findings using a regulatory change on US over-the-counter markets. Linciano (2003) examines the impact of the

Draghi reforms in Italy, which improved shareholder protection. The voting premium steadily declined over the period that the Draghi committee was in operation, culminating in a drop of 7 percent in the premium at the time of the passage of the law. Nenova (2006) analyzes how the control premium is affected by changes in shareholder protection in Brazil. She documents that the control value more than doubled in the second half of 1997 in response to the introduction of Law 9457/1997, which weakened minority shareholder protection. Moreover, control values dropped to pre-1997 levels when in the beginning of 1999 some of the minority protection rules scrapped by the previous legal change were reinstated.

Turning to the evidence on credit markets, Djankov et al. (2007) show that private credit rises after improvements in creditor rights and in information sharing in a sample of 129 countries. For a sample of 12 transition economies, Haselmann et al (2006) report that lending volume responds positively to improvement in creditor rights. Visaria (2006) estimates the impact of introducing specialized tribunals in India aimed at accelerating banks' recovery of non-performing loans. She finds that the establishment of tribunals reduces delinquency in loan repayment by between 3 and 10 percentage points. Musacchio (2006) finds that the development of bond markets in Brazil is correlated with changes in creditors' rights. Gamboa and Schneider (2007), in an exhaustive study of recent bankruptcy reform in Mexico, show that changes in legal rules lowered the time it takes firms to go through bankruptcy proceedings and raised recovery rates.

A second concern about the law and finance evidence is omitted variables – the very reason IV techniques are not suitable. How do we know that legal origin influences financial development through legal rules, rather than some other channel (or perhaps

even other rules)? The most cogent version of this critique holds that legal origin influences contract enforcement and the quality of the judiciary, and it is through this channel that it effects financial development. Indeed, we know from La Porta et al. (1999, 2004) and Djankov et al. (2003b), as illustrated in Table III above, that common law is associated with better contract enforcement.

This objection is significant since, in reality, enforcement and rules are not entirely separable. A formalistic judiciary might be better able to enforce bright line rules than broad legal standards; an independent judiciary might have a comparative advantage at enforcing standards. One way to address this concern is to control for contract enforcement as best we can. In the regressions above, we control for per capita income, which is a crude proxy of the quality of the judiciary. More recent studies, such as Djankov et al. (2008) and La Porta et al. (2006), also control for the quality of contract enforcement from Djankov et al. (2003b), with the result that both the actual legal rules *and* the quality of contract enforcement matter. For the case of credit markets, Safavian and Sharma (2006) show that creditor rights benefit debt markets if the country has a good enough court system, but not if it does not. Djankov, Hart, McLeish, and Shleifer (2006) combine the rules and their actual enforcement into an integrated measure of debt enforcement efficiency. This measure (see Table I above) is highly predictive of debt market development. The available evidence suggests that both the rules and their enforcement matter, but we are yet to see a clean experiment fully separating the two.

The enforcement issue is closely related to another question raised by the law and finance evidence, namely what do the predictive power of legal origins for legal rules, and of those rules for financial development, actually mean? In what exact ways does

law affect finance? Here again, there are at least two theories. Some writers argue that it is the actual legal rules, which might have come from legislation, from appellate decisions, or from legislation codifying previous appellate decisions, that are shaped by legal origins and in turn shape finance. For example, the extensive approval and disclosure procedures for self-dealing transactions discourage them in common law countries, as compared to the French civil law countries (La Porta et al. 2008).

Other writers argue that it is the open-endedness and flexibility of common law that benefits finance. This is more an "enforcement" than a "rules on the books" argument. One version of this argument suggests that common law judges are able or willing to enforce more flexible financial contracts, and that such flexibility promotes financial development. Lerner and Schoar (2005) and Bergman and Nikolaievsky (2007) present some evidence in support of this view. In the context of labor markets, Ahlering and Deakin (2005) likewise argue that in civil law countries, unlike in common law ones, freedom of contract is counterbalanced by the exercise of public power for the protection of workers in the French tradition, and the communitarian conception of the enterprise in the German one. Pistor (2005) presents a legal and historical account of the greater contractual flexibility in common law, the reason being that contractual freedom is not encumbered by social conditionality[5].

A second version of the flexibility thesis emphasizes the ability of common law courts to use broad standards rather than specific rules in rendering their decisions. This ability enables judges to "catch" self-dealing or tunneling, and thereby discourages it. Coffee (1999) has famously called this phenomenon the smell-test of common law.

[5] Lamoreaux and Rosenthal (2005) dispute the hypothesis of great contractual flexibility in common law by pointing to the broader range of legally acceptable forms of business organization in France than in the United States in the 19th century. We are not sure how far one can generalize this particular finding.

Johnson et al (2000) examine several legal cases concerning tunneling of assets by corporate insiders in civil law countries, and find that the bright line rules of civil law allow corporate insiders to structure legal transactions that expropriate outside investors. In contrast, the broader standards of common law, such as fiduciary duty, discourage tunneling more effectively.

At this point, there is evidence supporting both the "laws on the books" and the "enforcement differences" interpretations of the correlations presented in Table I. As we argue in the next section, both interpretations are also consistent with the fundamental differences between common and civil law. At the same time, the "fiduciary duty" or "smell test" explanations are very specific to finance. The results are easier to explain as reflecting broader differences in the approaches to social control of economic life.

The research on the effects of legal origins on regulatory strategies has exploded, and will be discussed in Section 5. But one study is worth noting here. Ben-Bassat and Dahan (2003) show that constitutional commitments to "social rights" (the right to social security, education, health, housing, and workers rights) are less prevalent in common law countries than in the French civil law ones, suggesting that the differences among legal origins in patterns of social control are broader than we have initially argued.

Some corroborative evidence bearing on our analysis of the judiciary has also appeared. Berkowitz and Clay (2005, 2006, 2007) exploit the fact that ten US states were initially settled by France, Spain, or Mexico to examine the effects of legal origin. They find that states initially settled by civil law countries granted less independence to their judiciaries as recently as 1970-90, had lower quality courts in 2001-03, and used different procedures for setting judicial budgets as late as 1960-2000. Ramseyer and Rasmusen

(1997) present compelling evidence from Japan that judges making ruling that go against the government, as well as judges who belonged to leftist organizations in their youth, are punished in their promotions many years later.

All this evidence leaves us with a major question: why do legal origins matter, and why do they matter in such a pervasive way? What are the historical and structural differences among common and civil law countries that have such pervasive consequences for both the specific legal and regulatory rules and major economic outcomes? In the next section, we attempt to answer this question.

IV. Explaining the Facts

The correlations documented in the previous section require an explanation. LLSV (1997, 1998) do not advance such an explanation, although in a broader study of government institutions, LLSV (1999) follow Hayek (1960) and suggest that common law countries are more protective of private property than French legal origin ones. In the ensuing years, many academics, ourselves included, used the historical narrative to provide a theoretical foundation for the empirical evidence. We first present the alternative historical explanations, and then integrate them into the Legal Origins Theory.

Standard Explanations

The standard explanation of the differences between common law and French civil law in particular, and to a lesser extent German law, focus on 17^{th}-19^{th} century developments (Merryman 1969, Zweigert and Kotz 1998). According to this theory, the English lawyers were on the same winning side as the property owners in the Glorious

Revolution, and in opposition to the Crown and to its courts of royal prerogative. As a consequence, the English judges gained considerable independence from the Crown, including lifetime appointments in the 1701 Act of Settlement. A key corollary of such independence was the respect for private property in English law, especially against possible encroachments by the sovereign. Indeed, common law courts acquired the power to review administrative acts: the same principles applied to the deprivation of property by public and private actors (Mahoney 2001, p. 513). Another corollary is respect for the freedom of contract, including the ability of judges to interpret contracts without a reference to public interest (Pistor 2005). Still another was the reassertion of the ability of appellate common law courts to make legal rules, thereby becoming an independent source of legal change separate from Parliament. Judicial independence and law making powers in turn made judging a highly attractive and prestigious occupation.

In contrast, the French judiciary was largely monarchist in the 18th century (many judges bought offices from the king), and ended up on the wrong side of the French Revolution. The revolutionaries reacted by seeking to deprive judges of independence and law making powers, to turn them into automata in Napoleon's felicitous phrase. Following Montesquieu's (1748) doctrine of separation of powers, the revolutionaries proclaimed legislation as the sole valid source of law, and explicitly denied the acceptability of judge-made law. "For the first time, it was admitted that the sovereign is capable of defining law and of reforming it as a whole. True, this power is accorded to him in order to expound the principles of natural law. But as Cambaceres, principal legal adviser to Napoleon, once admitted, it was easy to change this purpose, and legislators,

outside of any consideration for "natural laws" were to use this power to transform the basis of society" (David and Brierley 1985, p. 60)[6].

To implement this strategy, Napoleon promulgated several codes of law and procedure intended to control judicial decisions in all circumstances. Judges became bureaucrats employed by the State; their positions were seen as largely administrative, low-prestige occupations. The ordinary courts had no authority to review government action, making them useless as guarantors of property against the state.

The diminution of the judiciary was also accompanied by the growth of the administrative, as Napoleon created a huge and invasive bureaucracy to implement the state's regulatory policies (Woloch 1994). Under Napoleon, "the command orders were now unity of direction, hierarchically defined participation in public affairs, and above all the leading role assigned to the executive bureaucracy, whose duty was to force the pace and orient society through the application from above of increasingly comprehensive administrative regulations and practices" (Woolf 1992, p. 95).

Merryman (1969, p. 30) explains the logic of codification: "If the legislature alone could make laws and the judiciary could only apply them (or, at a later time, interpret and apply them), such legislation had to be complete, coherent, and clear. If a judge were required to decide a case for which there was no legislative provision, he would in effect make law and thus violate the principle of rigid separation of powers. Hence it was necessary that the legislature draft a code without gaps. Similarly, if there

[6] Hayek (1960) sees even deeper differences between common and civil law. He notes that there are two views of freedom, which are directly traceable to the predominance of an essentially empiricist view of the world in England and a rationalist approach in France. One finds the essence of freedom in spontaneity and the absence of coercion, the other believes it to be realized only in the pursuit and attainment of an absolute social purpose; one stands for organic, slow, self-conscious growth, the other for doctrinaire deliberateness; one for trial and error procedure, the other for the enforced solely valid pattern (p. 56).

were conflicting provisions in the code, the judge would make law by choosing one rather than another as more applicable to the situation. Hence there could be no conflicting provisions. Finally, if a judge were allowed to decide what meaning to give to an ambiguous provision or an obscure statement, he would again be making law. Hence the code had to be clear."

Yet, according to Merryman (1996), Napoleon's experiment failed in France, as the notion that legislation can foresee all future circumstances proved unworkable. Over decades, new French courts were created, and they as well as older courts increasingly became involved in the interpretation of codes, which amounted to the creation of new legal rules. Even so, the law-making role of French courts was never explicitly acknowledged, and never achieved the scope of their English counterparts.

Perhaps more importantly for cross-country analysis, the developing countries into which the French legal system was transplanted apparently adhered faithfully to the Napoleonic vision. In those countries, judges stuck to the letter of the code, resolving disputes based on formalities even when the law needed refinement. Enriques (2002) shows that, even today, Italian magistrates let corporate insiders expropriate investors with impunity, as long as formally correct corporate decision making procedures are followed. In the transplant and to some extent even in the origin countries, legislation remained, at least approximately, the sole source of law, judicial law-making stayed close to non-existent, and judges retained their bureaucratic status. Merryman memorably writes that "when the French exported their system, they did not include the information that it really does not work that way, and failed to include the blueprint of how it actually does work" (1996, p. 116). This analysis of the "French deviation" may explain the

considerable dynamism of the French law as compared to its transplant countries, where legal development stagnated. The French emphasis on centralized bureaucratic control may have been the most enduring influence of transplantation.

Although less has been written about German law, it is fair to say that it is a bit of a hybrid (Dawson 1960, 1968, Merryman 1969, Zweigert and Kötz 1998). Like the French courts, German courts had little independence. However, they had greater power to review administrative acts, and jurisprudence was explicitly recognized as a source of law, accommodating greater legal change.

So what does this historical analysis imply for the economic consequences of legal origins? There are three basic implications. First, the built-in judicial independence of the common law system, particularly in the cases of administrative acts affecting individuals, suggests that common law is likely to be more respectful of private property and private contract than civil law (La Porta et al. 2004). We see this as the most important difference, and argue this point below, but there are two others.

Second, common law's emphasis on judicial resolution of private disputes, as opposed to legislation, as a solution to social problems, suggests that we are likely to see greater emphasis on private contracts and orderings, and less emphasis on government regulation, in common law countries. To the extent that there is regulation, it aims to facilitate private contracting rather than to direct particular outcomes. Pistor (2005) describes French legal origin as embracing socially-conditioned private contracting, in contract to common law's support for unconditioned private contracting. Damaska (1986) calls civil law "policy-implementing," and common law "dispute resolving."

Finally, the greater respect for jurisprudence as a source of law in the common law countries, especially as compared to the French civil law countries, suggests that common law will be more adaptable to the changing circumstances, a point emphasized by Hayek (1960) and more recently Levine (2005). These adaptability benefits of common law have also been noted by scholars in law and economics (Posner 1973, Rubin 1977, Priest 1977), who have made the stronger claim that through sequential decisions by appellate courts, common law evolves not only for the better, but actually toward efficient legal rules. The extreme hypothesis of common law's efficiency is difficult to sustain either theoretically or empirically, but recent theoretical research does suggest that the ability of judges to react to changing circumstances – the adaptability of common law – tends to improve the law's quality over time.

Along these lines, Gennaioli and Shleifer (2007) argue in the spirit of Cardozo (1921) and Stone (1985) that the central strategy of judicial law-making is distinguishing cases from precedents, which has an unintended consequence that law responds to a changing environment. The quality of law improves on average even when judges pursue their policy preferences; law making does not need to be benevolent. Ponzetto and Fernandez (2006) compare the evolutionary properties of judge and legislature-made law, and argue that the former is more likely to reach efficiency.

The theoretical research on the adaptability of common law has received some empirical support in the work of Beck et al. (2003), who show that the acceptability of case law variable from La Porta et al. (2004) captures many of the benefits of common law for financial and other outcomes. We still lack, however, detailed microeconomic studies of the adjustment of common law to new circumstances.

Medieval Explanations

The idea that the differences between common and civil law manifest themselves for the first time during the Enlightenment seems a bit strange to anyone who has heard of Magna Carta. Some of the differences were surely sharpened, or even created, by the English and the French Revolutions. For example, judges looked to past judicial decisions for centuries in both England and France prior to the revolutions (Gorla and Moccia 1981). However, the explicit reliance on precedent as a source of law (and the term precedent itself) is only a 17th and 18th century development in England (Berman 2003). Likewise, the denial of the legal status of precedent in France is a Napoleonic rather than an earlier development.

But in other respects, important differences seem to predate the revolutions. The English judges fought the royal prerogative, used juries to try criminal cases, and pushed the argument that the King (James) was not above the law early in the 17th century. They looked down on the inquisitorial system that flourished on the Catholic continent. In light of such history, it is hard to sustain the argument that the differences between common and civil law only emerged through revolutions.

Some distinguished legal historians, such as Dawson (1960) and Berman (1983), trace the divergence between French and English law to a much earlier period, namely the 12th and 13th century. According to this view, the French Crown, which barely had full control over the Ile de France let alone other parts of France, adopted the bureaucratic inquisitorial system of the Roman Church as a way to unify and perhaps control the country. The system persisted in this form through the centuries, although judicial independence at times increased as judges bought their offices from the Crown.

Napoleonic bureaucratization and centralization of the judiciary is seen as a culmination of a centuries-old tug of war between the center and the regions.

England, in contrast, developed jury trials as far back as the 12th century, and enshrined the idea that the Crown cannot take the life or property of the nobles without due process in the Magna Carta in 1215. The Magna Carta stated: "No freeman shall be taken or imprisoned or disseised or outlawed or exiled or in any way ruined, nor will we go or send against him, except by the lawful judgment of his peers or by the law of the land." The Magna Carta established the foundations of the English legal order. As in France, such independence was continuously challenged by the Crown, and the courts of royal prerogative, subordinate to the Crown, grew in importance in the 16th century, during the reign of Queen Elizabeth. Yet, as we indicated earlier, even during Elizabeth's reign, and much more so during those of James I and Charles I, Parliament and courts repeatedly reaffirmed the rights of individuals against royal demands. Chief Judge Edward Coke's early 17th century insistence that the king is not above the law is neither a continental nor a post-revolutionary phenomenon. The Glorious Revolution eliminated the courts of royal prerogative, and eventually enshrined the principles of judicial independence in several acts of Parliament.

Glaeser and Shleifer (2002) present a theoretical model intended to capture this comparative 12th and 13th century narrative, but with an economic twist. They argue that England was a relatively peaceful country during this period, in which decentralized dispute resolution on the testimony of independent knights (juries) was efficient. France was a less peaceful country, in which high nobles had the power to subvert decentralized justice, and hence a much more centralized system, organized, maintained, and protected

by the sovereign, was required to administer the law. Roman law provided the backbone of such a system. This view sees the developments of 17th and 18th centuries as reinforcing the structures that evolved over the previous centuries.[7]

Regardless of whether the revolutionary or the medieval story is correct, they have very similar empirical predictions. In the medieval narrative, as in the revolutionary one, common law exhibits greater judicial independence than civil law, as well as greater sympathy of the judiciary toward private property and contract, especially against infringements by the executive. In both narratives, judicial law making and adaptation play a greater role in common than in civil law, although this particular difference might have been greatly expanded in the Age of Revolutions. The historical accounts may differ in detail, but they lead to the same place as to the fundamental features of law. These features, then, will carry through the process of transplantation, and appear in the differences among legal families.

Legal Origins Theory

There is perhaps a way to synthesize these points in a broader theory of legal origins. This synthesis draws heavily on Glaeser and Shleifer (2002), Djankov et al. (2003a) and Mulligan and Shleifer (2005b). It is also intimately related to the discussion of the varieties of capitalism, which (typically in the context of the OECD economies) distinguishes between liberal and coordinated market economies, the latter having firms that "depend more heavily on non-market relationships to coordinate their endeavors with other actors to construct their core competencies" (Hall and Soskice 2001, p. 8). As

[7] Klerman and Mahoney (2007) challenge this interpretation of divergence between England and France, and endorse the standard (revolutionary) explanation.

Pistor (2005) points out, all the liberal market economies in the OECD are common law countries, and all the coordinated ones are civil law ones. The literature on the variety of capitalism has long looked for an objective measure of different types; perhaps they should have looked no further than legal origins.

Legal origins theory has three basic ingredients. First, regardless or whether the medieval or the revolutionary narrative is the best one, they both suggest that by the 18th or 19th centuries, England and Continental Europe, particularly France, have developed very different styles of social control of business, and institutions supporting these styles. Second, legal scholars agree that these styles of social control, as well as legal institutions supporting them, were transplanted by the origin countries to most of the world, rather than written from scratch. Third, although a great deal of legal and regulatory change has occurred, these styles have proved persistent in addressing social problems.

We have discussed the differences in legal and regulatory styles in a number of places already, but we find summarizing them helpful. All legal systems seek to simultaneously address twin problems: the problem of disorder or market failure, and the problem of dictatorship or state abuse. There is unfortunately an inherent tradeoff in addressing these twin problems: as the state becomes more aggressive in dealing with disorder, it may also become more abusive. We can think of the French civil law family as a system of social control of economic life that is relatively more concerned with disorder, and relatively less with dictatorship, in finding solutions to social and economic problems. In contrast, the common law family is relatively more concerned with dictatorship, and less with disorder. These are the basic attitudes or styles of the legal and regulatory systems, which influence the "tools" they use to deal with social concerns.

Of course, common law does not mean anarchy, as the government has always maintained a heavy hand of social control; nor does civil law mean dictatorship. Indeed, both systems seek a balance between private disorder and public abuse of power. But they seek it in different ways: common law by shoring up markets, civil law by restricting them or even replacing them with state commands.

Legal Origins Theory raises the obvious question of how the influence of legal origins has persisted over the decades or even centuries. Why so much hysterisis? What is it that the British brought on the boat that was so different from what the French or the Spaniards brought, and that had such persistent consequences? Surely, if all that was transplanted is the attitudes toward social control, the effects of these attitudes, like sexual mores, would not be so persistent. But of course what got transplanted are not just the attitudes, but also the laws and other tools of addressing social problems. The legal system supplies the fundamental tools for addressing social concerns, and it is that system, as defined by Zweigert and Kotz, with its codes, distinctive institutions, modes of thought and even ideologies, that is very slow to change.

The account of legal origins has implications for how the government responds to new needs both across activities and over time. Essentially, the toolkit of civil law features more prominently such policies as nationalization and direct state control; the toolkit of common law features more litigation and market-supporting regulation. Mulligan and Shleifer (2005b) argue that, by specializing in such "policy-implementing" solutions, the civil law system tends to expand the scope of government control to new activities when a need arises. Perhaps the best known historical example of this is the vast expansion of military conscription in France under Napoleon, made possible by the

already existing presence of government bureaucracy that could administer the draft in every French village (Woloch 1994). Because the state's presence on the ground is less pervasive under the common law, it tends not to rely as extensively on administrative solutions, and more on "market-supporting" or "dispute-resolving" ones.

Likewise, one can argue that, when the market system gets into trouble or into a crisis, the civil law approach is to repress it or to replace it with state mandates, while the common law approach is to shore it up. One place to see this might be the regulatory response to the Great Depression and financial crises of the 20th century. In many civil law countries, the response to the crisis was nationalization of banks and companies, and suppression of stock markets. In the United States, in contrast, the response was introduction of securities and banking regulation, as well as of deposit insurance. Even Roosevelt's most radical aspirations fell short of nationalization. These strategies intended to rehabilitate and support private arrangements, not to replace them. This contrast between the replacement of market solutions with state ones in civil law countries, and the rehabilitation of markets in common law countries, appears pervasive throughout history, both in finance (Morck and Steier 2005) and elsewhere.

One form of government reaction to new circumstances is the expansion of public involvement into new spheres. Economic historians have sometimes argued that because legal origins have differed for centuries, one should observe equally sharp differences in rules and regulations in the 19th century as well. This, of course, does not follow. To the extent that public intervention in markets changes over time and responds to social needs or political imperatives, laws and regulations will change as well, but in ways that are consistent with legal traditions. Both labor laws and securities laws are creatures of the

20th century; they were introduced as a response to perceived social needs. Yet, as our research illustrates, these laws took different forms in countries from different legal traditions, consistent with broad strategies of how the state intervenes.

Ahlering and Deakin (2005) elaborate this point in the context of labor laws. They argue that the current differences between the labor laws of Britain and Continental Europe can be traced to the differences in the ways common and civil law systems saw the role of the enterprise as far back as the Industrial Revolution. Common law saw the enterprise as an unencumbered property or the employer, with the workers relegated to contractual claims on the surplus from production. In contrast, civil law saw property and responsibility as two sides of the same coin. Thus, the support provided by the legal system to the freedom of contract and property rights was counterbalanced in the French tradition by the exercise of public power for the protection of workers, and in the Germanic tradition by the communitarian conception of the enterprise. Ahlering and Deakin suggest that these differences in "legal cultures" persist even today.

Crucially, the Legal Origins Theory does not say that common law always works better for the economy. As Glaeser and Shleifer (2002, 2003) show, regulation and state control may well be efficient responses to disorder, where common-law solutions fail to sustain markets.[8] Indeed, all countries efficiently resort to the quintessentially civil law solution of planning in time of war, and add good dollops of state interference and control in response to major threats to order, such as terrorism. Glaeser and Shleifer (2003) interpret the rise of the regulatory state in the US at the start of the 20th century as an efficient response to the massive subversion of the justice system by large corporations.

[8] Importantly from the perspective of the developing countries, Glaeser and Shleifer (2003) show that when all mechanisms of state action can be subverted by private interests, the best policy might be to do nothing and leave the markets alone, even in the presence of substantial market failure.

Legal Origin Theory does not imply that the outcomes we observe are always or even typically efficient within a given legal family. There are several reasons for inefficiency, quite aside from interest group politics or other political reasons why regulation might fail. First, at the most basic level, the tools used by a legal system may lead to outcomes that are worse than the initial problem. Excessive regulation of entry in civil law countries is a good example. Second, courts or legislators in a country might bring into one domain a set of tools that has been used in another, out of either habit or a desire for consistency, with adverse results. For example, the strategy of extensive interlocutory appeals that is standard in a civil law system can slow down a bankruptcy proceeding, where time is of the essence, and lead to a large loss of value (Djankov, Hart, McLeish, and Shleifer 2006). Third, additional and perhaps largest inefficiencies may arise from transplantation. A regulatory approach that works well in France may become little but a source of corruption and delay in a poor West African country.

To reiterate, no country exhibits a system of social control that is an ideal type; all countries mix the two approaches. Moreover, common law countries are quite capable of civil law solutions, and vice versa. Nonetheless, the empirical prediction of the Legal Origin Theory is that some of the differences between the legal origins are deep enough that we observe them expressed in the different strategies of social control of economic life even after centuries of legal and regulatory evolution. Legal origins are not like sexual mores, which change rapidly over time. Perhaps because the legal system is such a difficult-to-change element of social order, supported by both human capital and expectations, legal origins survive both time and transplantation. This, we submit, is what gives them explanatory power.

Interpretation of the Evidence

In interpreting the evidence in light of the Legal Origins Theory, it is easiest to proceed in reverse: from judicial independence to government regulation to finance. The evidence on judicial independence directly confirms the predictions. As we saw in Table III, compared to French civil law, common law countries have less formalized contract enforcement, longer constitutional tenure of Supreme Court judges (a direct indicator of independence), and greater recognition of case law as a source of law, which Beck et al. (2003) use as an indicator of adaptability. Also consistent with the Legal Origins Theory, these characteristics of legal systems predict both the efficiency of contract enforcement – measured objectively *and* subjectively – and the security of property rights.

The evidence on government regulation is consistent with the Legal Origins Theory as well. The historical evidence suggests that civil law countries are more likely to address social problems through government ownership and mandates, whereas common law countries are more likely to do so through private contract and litigation. When common law countries regulate, we expect their regulation to support private contracting rather than dictate outcomes. We see those differences across a broad range of activities – from entry to labor to recruiting armies. We also see that civil law countries exhibit heavier government ownership of the press, as well as of banks. The implication that legal origins lead to different patterns of social control is thus also consistent with the evidence.

The theory is also broadly consistent with the evidence on finance. The better protection of both shareholders and creditors in common law countries than especially in the French civil law countries is consistent with the principal historical narrative of the

greater security of private property under common law. Moreover, as pointed out by Beck et al (2003), financial markets may be an area where common law has a particular advantage because these markets change quickly, so the law needs to evolve to support the changing market environment. The adaptability of judge-made law, as exemplified by the American Delaware courts, might reflect this particular benefit of common law.

Some critics, such as Roe (2006), point out that many of the legal rules protecting investors in common law countries are statutory rather than judge-made, so in many crucial respects it is regulation rather than judge-made law that is responsible for investor protection. Securities laws, for example, which La Porta et al. (2006) show to provide some of the most effective investor protections, are entirely statutory. So is finance an example of a sphere where common law countries do better because they regulate more?

The answer is no. Rather, common law countries succeed in finance because their regulatory strategies seek to sustain markets rather than replace them. Returning to the examples of the securities regulation and of the often-statutory regulation of self-dealing transactions, the statutory requirements of disclosure originate in the common law of fiduciary relationships. Market forces on their own are not strong enough, and contract claims not cheap enough to pursue, to protect investors from being cheated. A regulatory framework that offers such protection, and makes it easier for investors to seek legal remedies to rectify the wrongs, allows more extensive financial contracting[9]. In our view, then, the nature of statutory protection of investors in common law countries, as compared to civil law countries, is consistent with Legal Origins Theory. Finance falls into line with other pieces of the evidence.

[9] Jackson (2005) finds that rich common law countries spend more money on the enforcement of securities regulation than rich civil law ones, and incorrectly takes this as evidence against our theory. We predict that common law countries will regulate markets differently; they may well spend more on enforcement.

V. Legal Origins, Resource Allocation, and Economic Growth

Although LLSV did not emphasize growth in their original papers, a central question for many economists is whether legal origins directly or indirectly influence growth. This question fits naturally with our discipline's most fundamental concern, which goes back to Montesquieu (1748) and Smith (1776), as to whether institutions protecting property rights influence investment and growth. This area of inquiry has experienced a renaissance recently. In the mid 1990s, several authors used cross-country evidence to argue that measures of institutional quality predict economic growth. Some studies, such as DeLong and Shleifer (1993), use centuries of historical data on city growth; most others examine income growth since 1960 (Knack and Keefer 1995, Mauro 1995, Hall and Jones 1999). To varying degrees, these studies suffer from the obvious endogeneity problem: do institutions cause growth, or does growth improve institutions? Without instruments, this question is difficult to answer.

Acemoglu, Johnson, and Robinson (2001) propose to solve this problem by following LLSV (1997, 1998) and looking at colonial history, but doing so in an entirely different way. The authors argue that a central distinction among places that the Europeans colonized is whether these Europeans settled there themselves, or simply established outposts and plundered. The Europeans' decision to settle was shaped by the disease environment of the territory, which shaped settler mortality. According to Acemoglu et al., the Europeans settled where their mortality was low, and plundered where their mortality was high. This, according to the authors, had enormous implications for subsequent development. When Europeans settled, they brought their institutions with them; when they plundered, they did not. These imported institutions

had long-term beneficial influence on the security of property rights and economic growth. Countries with European settlers grew; countries without them stagnated.

Acemoglu, Johnson, and Robinson collect data on settler mortality around the time of colonization, and offer impressive evidence to support their theory. Settler mortality is highly correlated with such measures of modern institutional quality as constraints on the executive and security of property rights, which are in turn highly correlated with levels of income per capita.

More recently, clouds appeared on the horizon. Albouy (2006) raises questions about the Acemoglu et al. data on settler mortality; they reply on their websites. Data issues aside, there are two significant empirical concerns. First, the measures of institutional quality used by Acemoglu et al, as well as in most other recent studies, are outcome measures, they are not permanent features of the environment that North (1981) and others call institutions. As such, they are highly volatile, often characterizing the quality of the most recent government or election. Because these data do not measure institutions, it is unlikely that they can speak to whether institutions cause growth.

Second, even accepting the empirical finding that settler mortality influenced settlement, it is far from obvious that the crucial "capital" that the settlers brought with them was institutions. What the settlers brought on the boat is also themselves, including their human and social capital. It is this capital that might have become the source of subsequent accumulation of human, physical, and institutional capital, and therefore of economic growth. In the data, human capital is at least as durable as the measured institutional outcomes, as highly correlated with settler mortality, and as good or better a predictor of economic growth. Settler mortality is not a valid instrument for institutional

outcomes because it fails to obey the exclusion restriction. Glaeser et al. (2004) develop these points, and conclude that the Acemoglu, Johnson, and Robinson's study does not distinguish between human capital and institutions as sources of long run growth.

Legal origins may help get around some of these problems, but there are many remaining pitfalls. On the one hand, legal traditions are clearly features of the permanent institutional environment as suggested by North's (1981) definition. On the other hand, as we have repeatedly indicated in this paper, the problem of the validity of instruments is pervasive. So what do the data say?

Cross-Country Evidence

Mahoney (2001) presents the first OLS regressions of growth on legal origins, and shows that, in the recent period, common law countries have grown faster than French legal origin countries. Table IV presents similar regressions using more recent data. It is indeed the case that during 1960-2000, compared to the common law countries, GDP per capita in the French legal origin countries has grown about 0.6 percentage point slower per year. On the other hand, German legal origin countries grew faster than the common law countries. Depending on the specification, we also see these differences in the growth rates of GDP per worker, capital stock per worker, and productivity. Over 1960-2000, then, legal origins seem to matter for growth.

A couple of points, however, are worth noting. First, the difference in growth between common law and French legal origin countries is much stronger during 1980-2000 than during 1960-1980. To some extent, this difference reflects the stagnation of Latin America in the later period, which might or might not be attributable to legal

origins. Second, the 1960-2000 growth effects are weaker once we control for a measure of human capital, namely average years of schooling in 1960 – a standard control in such regressions. Indeed, throughout the 1960-2000 period, years of schooling are sharply higher in common law countries than in French legal origin ones, even holding per capita income constant. Interestingly, Rostowski and Stacescu (2006) argue that legal origins should enter the growth equation precisely through education because England pursued more enlightened educational policies in its colonies than did France. French colonial education was largely guided by the idea of assimilation, with French textbooks, French teachers, and instruction in French. The British, in contrast, adapted colonial education to local conditions, and taught in vernacular. The story is intriguing, but we would nonetheless urge caution in interpreting the growth evidence given its lack of stability.

What about the indirect effects? The most obvious potential channel of influence is financial development, since legal origins have such strong effects on finance. A long tradition in economics, associated with Schumpeter (1934) and Goldsmith (1969), holds that finance causes growth. This tradition was rejuvenated in a cross-country context by King and Levine (1993), but the problem of endogeneity of finance remained. With various co-authors, Levine then examined the finance-growth nexus using instrumental variable techniques, with legal origins as instruments (Beck et al. 2000a,b). Table V revisits some of this evidence in a slightly different format.

Panel A presents OLS regressions a la King-Levine, and shows that, even controlling for years of schooling, two measures of debt market development – the ratio of liquid liabilities to GDP circa 1960 and the ratio of private credit to GDP circa 1960 – predict growth in GDP per worker, in capital stock per worker, and in productivity over

the subsequent forty years. We focus on the results for debt markets because there is no evidence that stock market development helps growth. The sample is smaller than that in Table IV because of data availability. Panel B then presents the second stage instrumental variable results, with legal origins used as instruments for 1960 financial development.[10] As in Beck et al. (2000a,b), Panel B shows strong effects of finance on all three measures of growth: GDP per worker, capital stock per worker, and productivity.

Again, however, the picture is not so clear. First, the F-statistics for excluded instruments are all below 10, indicating that legal origins are weak instruments. Second, many variables that might both influence growth and be influenced by legal traditions are excluded from these regressions. We consider some of them below, but note only that the exclusion restriction is unlikely to be satisfied. Third, although we have not exhaustively examined the robustness of these results, one should clearly be careful. For example, if we replace years of schooling in 1960 by percent high school enrollment in 1960 as a measure of human capital, the results on liquid liabilities remain strong, but those on private credit go away. The evidence is far from conclusive.

What about the other indirect channels? Table VI presents some OLS and some instrumental variable regressions of growth of output per worker on some of the variables we examined in Tables II and III. Case law, judicial tenure, and entry regulations do not appear to matter. In contrast, labor regulations, the measure of debt enforcement from Djankov, Hart, McLeish, and Shleifer (2006) and time to collect a check from Djankov et

[10] Beck et al. (2000a, b) also run regressions using GMM dynamic panel techniques (see also Benhabib and Spiegel 2000 and Beck and Levine 2004) and find that financial development has a large effect on growth. However, Favara (2006) argues that the standard errors from the two-step GMM procedure used by Beck et al. (2000a) are biased downward. He shows that the coefficient on financial development is insignificant in most specifications when using the one-step GMM estimator with standard errors corrected for heteroskedasticity. Hauk and Wacziarg (2004) show that dynamic panel techniques are quite sensitive to even small model permutations.

al. (2003b) enter with large and statistically significant coefficients. However, only the coefficient for debt enforcement remains significant in the IV specification. Even in the case of debt enforcement, the F-statistic for the excluded instruments is only 4.91.

So what is the bottom line? There seems to be some evidence in the recent period that common law has exerted a beneficial effect on growth compared to the French civil law, both directly and through some obvious channels, such as finance and contract enforcement. But this evidence has clear problems of robustness and of instrument validity. The problem reflects a broader concern with cross-country growth regressions, which might explain the decline in the popularity of this research in recent years. While economists have come up with a growing number of exogenous variables that might influence growth – from geography, to past and present disease environment, to legal origin – in the data many of these exogenous variables predict multiple "intermediate" conditions that in turn might influence growth. To the extent that we are interested in the policy question of which is of these "intermediate" conditions – human capital, contract enforcement, finance, etc. – matter for development, we do not get the answer from cross-country growth regressions. Like other geographic and historical variables, legal origins appear to matter for growth in the recent period, but how they matter has not been (and perhaps cannot be) resolved through the cross-country growth regressions.

Some Micro Evidence

Although the aggregate evidence is inconclusive, a growing body of industry- and firm-level evidence supports the proposition that the "intermediate" conditions that are influenced by legal origin in turn have an effect on resource allocation. This evidence

does not resolve the questions of whether and how legal origin affects aggregate growth, but it bolsters the case that it does.

In finance and growth, the seminal cross-industry paper is Rajan and Zingales (1998). They find that, in financially developed countries, sectors which for technological reasons depend more on external finance, grow faster. The authors include both country and industry fixed effects in their analysis, making it easier to attribute industry-level growth to finance. Several studies extended, elaborated, and corroborated these findings, including Claessens and Laeven (2003), Braun (2003), Beck et al. (2005), Perotti and Volpin (2004), and De Serres et al. (2006). A separate series of studies shows that financial development contributes to more efficient resource allocation across activities. Wurgler (2000) finds that financially developed countries exhibit a higher responsiveness of investment to growth opportunities. This study as well was followed by several supporting ones, including Fisman and Love (2004a, b), Ciccone and Papaioannou (2006a), Papaioannou (2006), and Bekaert et al. (2007).

A growing body of firm-level evidence also suggests that financial development facilitates growth and external finance of firms, particularly small ones. An early paper is Demirguc-Kunt et al. (1998); a more recent study is Beck et al. (2005). Guiso, Sapienza, and Zingales (2004a) demonstrate beneficial effects of financial development on entrepreneurship and firm growth looking across Italian regions.

Some micro-level studies look at policy changes. Gelos and Werner (2002) find that banking deregulation in Mexico improved the access of small firms to the credit market. Bertrand et al. (2004) find that banking deregulation in France increased entry and exit, and precipitated large improvements in firm level productivity. Along with the

macro evidence on capital account liberalization, Chari and Henry (2004a) show that such liberalizations disproportionately benefit firms with good growth prospects, while Mitton (2006) finds significant firm level benefits for sales growth and productivity.

Nor is the evidence confined to finance. Several studies use the data from Botero et al. (2004) to examine the effects of labor regulation on resource allocation, a topic that has preoccupied labor economists since the pioneering work of Lazear (1990) and Blanchard and Wolfers (2000). Gaëlle and Scarpetta (2007) find that employment regulations lead to substitution from permanent to temporary employment. Haltiwanger et al. (2006) find that legal employment protections reduce labor turnover, especially in industries requiring more frequent labor adjustment. Micco and Pages (2006) also find that employment protections slow down job turnover and reduce entry by firms. Cunat and Melitz (2006) find that countries with light labor market regulations specialize in volatile industries. Lafontaine and Sivadasan (2007) study employment practices of one firm operating in 43 countries, and find that employment protections lead to labor misallocation, delayed entry, and operation of fewer outlets.

Individual country studies paint a very consistent picture. Kugler (2004) shows that a reduction in firing costs in Colombia helped reduce unemployment. Autor et al. (2006) find in the U.S. that wrongful discharge protections reduce employment flows and firm entry rates, thereby adversely affecting productivity. Insofar as legal origins affect labor regulations, French legal origin countries will have less efficient labor markets.

Recent research also shows that entry regulations, another sphere influenced by legal origins, affect resource allocation. Yakovlev and Zhuravskaya (2007) for the case of Russia and Kaplan, Piedra, and Seira (2007) for the case of Mexico find that

reductions in entry regulations increase new business startups. Fisman and Sarria-Allende (2004) find that entry regulations distort industry structure and promote concentration. Klapper et al. (2006) show that such regulations stifle entry. Ciconne and Papaioannou (2006b) report that countries with lower entry regulations see more entry in industries that experience expanding global demand and technology shifts. Alesina et al. (2005) find that reductions in entry regulations in OECD promote investment. Aghion et al. (2007) show that entry and labor market regulations interact: a reduction in entry regulations in India has the strongest benefit in states with low labor regulations.

Two other papers use our variables to examine the effects of contract enforcement on the structure of production. Nunn (2007) finds that countries with good contract enforcement specialize in the production of goods for which relationship-specific investments are more important. Antras, Desai, and Foley (2007) find that weak investor protections limit the scale of multi-national firm activity, increase the reliance on FDI flows, and alter the decision to deploy technology through FDI rather than licensing.

Finally, a growing body of research shows that costly regulation can reduce the benefits of free trade. Lopez-de-Cordova (2007) finds that exporting firms grow 4 percentage points faster after trade liberalization in countries with less burdensome labor regulations. Using cross-country data, Freund and Bolaki (2007) show that trade openness has a positive impact on per capita income only in countries with low regulation of entry. Chang et al. (2005) present a similar finding for labor market regulation. Helpman et al. (2007) find that the probability that two countries trade is smaller when the cost of entry regulation is high in both countries. Djankov et al. (2007) gather data on

the days in takes to move cargo from the factory gate to the ship, and find that each day that a product is delayed prior to being shipped reduces trade by at least 1 percent.

All this evidence suggests that through their effect on finance, labor markets, and competition, legal origins indeed influence resource allocation, and in ways consistent with the observation that productivity and output have recently grown faster in common law than in the French legal origin countries. This evidence is consistent with the aggregate findings, but many questions remain. The story of legal origins and growth, just as the broader story of institutions and growth, is evolving and is far from settled.

VI. Legal Origins and Culture.

In this section and the next two, we address the central criticism of research on legal origins: that they are merely proxy for other factors influencing legal rules and outcomes. The factor we begin with is culture, which has attracted some attention as the potential explanation of the evidence. Specifically, Stulz and Williamson (2003) suggest that, in light of the hostility of some of the religious traditions to lending on interest, religion may be a more fundamental determinant of legal rules governing creditor protection than legal tradition. Licht et al. (2005) present a more sweeping theoretical and empirical case for culture, using broad sociological measures of cultural attitudes.

Both of these studies present a range of evidence, and we cannot address it in detail here. Table VII, however, shows the basic facts. First, religion is not nearly as important a determinant of creditor rights as legal origin (see also Djankov et al. 2007). Second, most indices of cultural attitudes do not appear to influence creditor rights holding legal origin constant. There is some evidence that a nation's masculinity

(defined as "the degree to which the society reinforces, or does not reinforce, the traditional masculine work role model of achievement, control, and power") is not conducive to creditor protection, while belief in the independence of children is, but neither variable makes much of a dent in the effect of legal origin on creditor rights.

In concluding this discussion of culture, two key points should be noted. First, we do not present this evidence to propose that culture is unimportant. Guiso, Sapienza, and Zingales (2004b, 2006) have recently presented a variety of evidence that it is. The evidence does show, however, that the effects of legal origin remain large and significant even when we control for culture. Second, we have used the sociological notions of what culture is, focusing on religion and broad social attitudes. One can alternatively include in culture something like "legal culture," which would make culture indistinguishable from legal origins. This theory of culture, of course, we do not reject.

VII. Legal Origins and Politics.

A broader challenge to the explanatory power of legal origins has been posed by political theories of corporate finance. There are now many papers in this literature, including Hellwig (2000), Rajan and Zingales (2003), Pagano and Volpin (2005, 2006), Perotti and von Thadden (2006), and Roe (2000, 2006). Although they differ in detail, they have a common theme, so we take the liberty of providing an integrated account. Also, while some of the papers cover developing countries, virtually all of them deal with Western Europe, or the Wealthy West, a point we return to below.

According to the political theories, sometime in the middle of the 20th century, Continental European countries formed alliances between families that controlled firms

and (typically organized) labor. In many cases, these alliances were a response to crises from hyperinflation, depression, or defeat in war. These political alliances sought to win elections in order to secure the economic rents of the insiders, and to keep them from the "outsiders," such as unorganized labor, minority shareholders, corporate challengers, or potential entrants. When these alliances won elections, they wrote legal rules to benefit themselves. The families secured poor protection of outside shareholders, so they could hold on to the private benefits of control. Labor got social security and worker protection laws, which maintained employment and wages of the insiders. Both the families and labor secured the laws protecting them against product market competition, such as regulations of entry. The legal rules observed in the data, then, are outcomes of this democratic process, and not of any "permanent" conditions, such as legal origins.

The political story is part of a broader narrative of Continental European history in the 20th century, in which the response to crisis is variously characterized by the rise of proportional representation (Alesina and Glaeser 2004, Persson and Tabellini 2003), socialist politics (Alesina and Glaeser 2004), and social democracy (Roe 2000). The United States was spared these political developments, and therefore did not get the laws adopted on the Continent. Some implications of these theories are broadly consistent with the evidence: countries that have strong shareholder protections indeed have weak protections of labor and low regulations of entry. The implication of this research is that legal origin enters the various regressions summarized in Section III spuriously, with French (and German) legal origins serving as proxies for – depending on the exact paper – social democracy, leftist politics, or proportional representation. If politics were appropriately controlled for in the regressions, legal origin would not matter.

The political story is at some level very plausible, since we see social democracies in Continental Europe but not in the United States. For this reason, we consider it in some detail. We do so in three steps. First, we briefly look at the logic of the story. Second, we show what happens when some of the political variables proposed in this literature are actually added to the regression. Third, we test what is possibly the most robust implication of all the available political models , namely that the formation of laws is a consequence of democratic politics. This prediction implies, most immediately, that the relationship between legal origins and laws should not hold outside democracies.

With respect to the logic of the story, it is hard to understand why organized labor accepts rules that facilitate the diversion of corporate wealth, or tunneling – something we see on a fairly large scale in, say, Italy or Belgium. We can see the argument for the Swedish system, in which the leading families stay in control, but are kept on a tight leash through government regulations, and certainly not allowed to expropriate investors. Sweden indeed has a valuable stock market and low private benefits of control. It is harder to accept the notion that organized labor endorses tunneling of corporate wealth, since presumably such wealth could be taxed or shared with the workers.

But what do the data say? Table VIII presents regressions of the legal and institutional rules on three variables considered by the political theories. The first one is proportional representation, the form of democracy seen as an adaptation to political demands of labor in the early 20th century (Alesina and Glaeser 2004, Persson and Tabellini 2003). We obviously run these regressions for democracies only. The second variable, collected by Botero et al. (2004) for 85 countries, is the share of years between 1928-1995 when the chief executive and the largest party in the legislature were leftist or

centrist. The third variable is union density, defined as the percentage of the total work force affiliated to labor unions in 1997. The regressions in Table VIII cover the whole sample and are not confined to Western Europe or the OECD.

For all three variables, the results in Table VIII are straightforward. Political variables explain the variation in legal rules only occasionally. In contrast, legal origins continue to explain the variation even with political variables in the regression, and the difference between common law and French civil law remains highly statistically significant. This is so for all three political variables aiming to get at the political explanation of legal rules. While each political variable is surely measured with error, and our specifications surely do not capture the full subtlety of the political theories, political variables are rarely significant. In contrast, legal origins are consistently significant, even with political variables in the regression.

In Table IX, we examine another key prediction of the political theories, namely that the democratic process leads to the observed legal rules. If this were the case, legal origins would not predict legal rules in autocracies. In contrast, under Legal Origins Theory, they should predict legal rules in both autocracies and democracies. In Table IX, we focus on autocracies (countries for which the autocracy score from Alvarez et al. 2000 is positive). For nearly all our variables, the differences between common law and French legal origin remain significant among autocracies. This result holds for other measures of non-democratic government as well. We see this evidence as a direct rejection of the available political theories, in which elections play a crucial role. Perhaps the political theories can be adjusted to incorporate autocracies as well. Pending such an adjustment, however, the data are fundamentally inconsistent with these theories.

As before, we wish to end on a note of caution. It is not our conclusion that politics do not matter for corporate governance, government regulation, or the structure of the judiciary. The critics offered a different hypothesis, namely that legal origin is merely a stand-in for politics. For this hypothesis, there is no support.

VIII. Legal Origins and History.

Perhaps the most difficult challenge to the hypothesis that legal origins cause outcomes has been posed by historical arguments. Because virtually all of these arguments focus on finance, we likewise focus on finance in this section, but bearing in mind that an alternative theory must address all the evidence. At the broadest level, historical arguments suggest that the positive correlation between common law and finance is a 20th century phenomenon. According to the critics, if one looks at historical data, and particularly at the data from the early 20th century, the correlation does not exist. Because legal traditions predate the 20th century, they cannot, say the critics, account for the differences in financial development.

It is useful to break down the historical argument into three component parts, and to address them sequentially. This also allows us to consider several influential papers.

The first element of the historical objection is due to Rajan and Zingales (2003). The authors present evidence showing that in 1913, French civil law countries had more developed financial markets than common law countries. In their sample, as of 1913, the five common law countries had the average stock market to GDP ratio of 53%, compared to 66% for the ten French civil law countries.

Second, several writers maintain that shareholder protection in Britain at the beginning of the 20th century was minimal. The evidence that Britain was financially developed at the time, including having some ownership dispersion, must therefore be accounted for not by law, but by alternative mechanisms, such as trust and financial intermediaries (Cheffins 2001, Franks et al. 2005).

Third, the historical critique holds that the correlation between common law and financial development emerges over the 20th century, a finding it sees as inconsistent with LLSV. In contrast to the superiority of financial development in the French legal origin countries, as compared to the common law countries, circa 1913, Rajan and Zingales find that the respective average stock market for common law and French civil law countries were 130% and 74% by 1999. They call this the Great Reversal (see Figure III).

Critics propose two explanations of how common law countries came to excel in finance. The first is the political argument, namely that common law countries happened to have more favorable democratic politics, which we have already discussed and rejected. In addition, according to Roe (2006), civil law countries suffered greater destruction during World War II, which radicalized their politics and in this way led to pro-labor and anti-capital laws and regulations.

It is easiest to take up the three pieces of the historical critique in turn.

Rajan and Zingales

Rajan and Zingales (2003) present the ratio of stock market capitalization to GDP, a variable used by La Porta et al. (1997, 1998), for 6 common law and 18 civil law countries (10 of them French civil law) starting in 1913. To do so, they find a separate

data source for each country that reports aggregate stock market capitalization. Their findings of a higher ratio of stock market value to GDP in civil than in common law countries, reproduced in Table X and illustrated in Figure III is the starting point of most historical critique of LLSV, as well as of political accounts of finance in the 20th century.

We have looked at some of the Rajan and Zingales's data using their own sources. Here we focus on stock market capitalization as a measure of financial development. Conceptually, the measure of a country's stock market capitalization relevant for testing the influence of legal origins is the capitalization of equities listed on that country's stock exchange(s) whose shareholders are subject to protection of that country's laws. Impressively, Rajan and Zingales undertook to find such numbers, but doing so for the early 20th century is especially difficult for two reasons. First, many – perhaps even most -- securities that traded on stock exchanges were bonds rather than stocks, and most of those were *government* bonds. Second, many of the companies listed on the exchanges of developing countries were incorporated (and therefore subject to shareholder protection rules), and even had their primary listings, in Europe or the U.S. (see Wilkins and Schroter 1998). For a developing country, both of these factors may lead to an overestimate of market value of equities subject to national shareholder protection laws.

Take a few examples. In 1913, the most financially developed country in the Rajan and Zingales sample is Cuba. Cuba at that time is a French legal origin country, but also an American colony, with a reported stock market capitalization to GDP ratio of 219%. We have looked at this observation, and discovered that if one excludes bonds and only looks at stocks, the actual ratio falls to 33%. Moreover, by far the largest company with its stock listed in Cuba is Havana Electric, a company incorporated in New

Jersey, subject to New Jersey laws, and with a primary listing in New York. We suspect that concerns of Havana Electric shareholders would have been addressed by either New Jersey courts or the US marines. Many other companies listed in Cuba appear to be like Havana Electric; indeed – and perhaps not surprisingly – there does not seem to be much of an indigenously Cuban stock market valuation at all. Given the small size of their sample, the elimination of bonds from the Cuban data point by itself reduces the Rajan and Zingales 1913 average French civil law stock market to capitalization ratio from 66% to 47%, *below* their common law estimated average.

The second most financially developed country in the 1913 Rajan and Zingales sample is also a French civil law country, namely Egypt, with a stock market to GDP ratio of 109%. It appears from Tignor (1984) that this ratio, as for Cuba, includes debt. Moreover, virtually all of the largest companies listed in Egypt were incorporated in England or in France, and many were listed there as well. (Egypt in 1913 was under British protection.) We estimate that a correct observation for Egypt (specifically, a stock market to GDP ratio of at most 40%) would further reduce the Rajan-Zingales French civil law average in 1913 by 6 percentage points.

Some corrections appear to be in order for the rich countries as well. For France, Rajan and Zingales estimate a ratio of 78%. A more recent estimate by Bozio (2002) puts this number at 54%. Sylla (2006) criticizes Rajan and Zingales for presenting too low a number of 39% for the United States, and proposes the alternative 95% from Goldsmith (1985). Both of these corrections favor the common law countries. The various corrections together, especially the one for Cuba, put the common law average stock market to GDP ratio comfortably ahead of the French civil law one in 1913.

To be sure, we have selected Cuba and Egypt non-randomly as two obviously bizarre observations. A more systematic treatment of the data would reveal over-estimates in common law, and not just civil law, countries. Some such errors are inevitable, and we expect we have ourselves made many even with more recent data. What is beyond doubt, however, is that the strong conclusions reached by Rajan and Zingales on comparative financial development cannot be drawn from their sample.

Perhaps a better way to get at this issue is to compare the two mother countries: England and France. Rajan and Zingales recognize that England was more financially developed than France at the start of the century, but the comparison can be expanded because Bozio (2002) reports new numbers for France, and adequate data are available for Britain from Michie (1999). Michie's numbers of the value of the stock market include corporate bonds, so we correct them using data from Goldsmith (1985).

In Figure IV, we present Bozio's numbers for France and adjusted numbers for domestic stocks in Britain. The results show that Britain always had a higher stock market capitalization to GDP ratio than France, often by a wide margin. This is true in 1913, but also before and after.

We can also look at Goldsmith's (1985) data on the ratio of stock market to GDP, reproduced in Table XI.[11] The first point that emerges from Table XI is that, consistent with Kindleberger's (1984) assessment of Paris as a financial backwater, Britain is ahead of France as far back as the middle of the 19th century, and perhaps even earlier. So, interestingly, is the United States. Goldsmith's sample allows also for a more general

[11] Goldsmith (1985) acknowledges the limitations of his data on corporate securities. In principle, Goldsmith's data for corporate stock includes unlisted firms. In practice, information on corporate shares "… is generally limited to securities listed on exchanges, so that comprehensive figures must be derived, if at all, by a blowup, often on a precarious basis" (page 337).

comparison of common and civil law countries in 1913. If we pull in the US observation from 1912, Goldsmith only has 4 common law countries, and 7 civil law ones. Even so, with India pulling the common law average sharply down and *no* poor civil law countries in the sample, the common law average in 1913 is 88%, the French legal origin average based only on France and Belgium is 77%, and the overall civil law average is 69%. Goldsmith's data have many problems of their own, and we have not examined them closely. But they independently confirm the point that the relative financial underdevelopment of common law countries at the start of the 20th century is a myth.

The bottom line, then, is that, contrary to Rajan and Zingales, common law countries appear to be more financially developed than civil law ones at the start of the 20th century, and in particular Britain is ahead of France. Over the course of the 20th century, the differences widen, a divergence that needs to be explained. But – with all due reservations about the severe problems of the data -- the alleged Great Reversal that animates so many political and legal writings did not really happen.

Britain at the start of the 20th century

A small but lively historical literature argues that Britain had a well developed stock market at the beginning of the 20th century, with beginnings of ownership dispersion, but that this had nothing to do with the law (Cheffins 2001, Franks et al. 2005). Looking both at the LLSV indices of shareholder protection and at legal rulings, this research sees the rights of minority shareholders in the UK as only weakly protected. With the law playing a minor role, the researchers credit financial development in England to other mechanisms, such as the bonding role of intermediaries and trust.

The position that British shareholders were utterly unprotected has proved controversial. Several authors, for example, argue that Britain led the world in securities regulation in general, and corporate disclosure in particular (Coffee 2001, Gower 1954, Sylla and Smith 1995). Britain passed the Directors Liability Act in 1890, and Companies Act in 1900, with the effects of both mandating significant disclosure in the prospectus, and of holding directors accountable for inaccuracies. Subsequent legislation in the early 20th century, according to Coffee (2001), mandated on-going financial disclosure, and addressed some abuses in the new issues market. Britain also had perhaps the best commercial courts in the world, with most professional and least corrupt judges, with centuries of precedent and experience at dealing with fraud.

This small literature is at a standstill, with some writers arguing the British shareholder protection glass was half empty, and others countering that it was half full. What makes this debate utterly frustrating is that it is not comparative, so except with a few remarks on Britain versus the US (Coffee 2001), we know very little of how the British shareholders were protected compared to the French and German ones. To the extent that the literature has a bottom line, it is that shareholder rights have improved enormously in Britain over the course of the 20th century, parallel to the growth of its markets. Explaining this parallel growth is a challenge to the Legal Origins Theory.

World War II Destruction

Roe (2006) claims that poor economic performance, particularly associated with the destruction of capital stocks in World War II, has radicalized continental European politics, leading to legal rules that were hostile to financial markets and favorable to

labor. To test this theory, Roe regresses modern ownership concentration on GDP growth between 1913 and 1945 in a sample of 27 countries, and finds that countries with worse economic growth have higher ownership concentration. Interestingly, Roe's results fall apart under just about any perturbation: if we use a broader sample of countries, if we use alternative measures of financial development (e.g. stock market capitalization, block premium, or private credit), or if we look at other predictions of his theory. Let us be brief but specific. Begin with ownership. Since there is no generally accepted scientific reason to selectively throw out data, we use the full available sample to run the Roe regression. When we do so, the correlation reported by Roe disappears, as illustrated in Figure V. This is not surprising: many developing countries have stayed out of World War II, yet have remained financially underdeveloped. Continue with Roe's other prediction that World War II devastation leads to pro-labor laws. This also is not true in a broader sample, as illustrated in Figure VI. We move on to the next challenge.

Explaining Divergence

Although we do not see any evidence for the reversal of rankings between common and civil law countries in financial development over the course of the 20th century, the historical research yields two important findings that require an explanation. First, as shown by Rajan and Zingales (2003) and in Figure III, common law countries appear to have moved sharply ahead of civil law ones in financial development over the course of the 20th century. Second, it is unambiguously true that investor protection improved sharply in the common law countries over the same time period (Coffee 1999,

Cheffins 2001, Franks et al. 2005). We suggest that Legal Origins Theory quite naturally accounts for these findings.

The 20th century represented a period of explosive growth of the world economy, including of countries that were the wealthiest at the beginning of that century. That growth relied to a significant extent on outside capital. That growth was also far from smooth: it was punctuated by World Wars, the Great Depression, and significant economic and financial crises. The countries that grew successfully found their own ways to deliver capital to firms and to survive the crises. For some countries, such success involved massive state involvement in finance and development. For other countries, such success to a much greater extent relied on shoring up markets.

Here is where legal origins come in. As Morck and Steier (2005) make clear, civil law countries in the middle of the century relied heavily on state supply of finance, bank nationalization, and state investment companies to promote economic growth and resolve crises. These were the standard civil law solutions to addressing social problems, going back at least to Napoleon. Common law countries, particularly the US and the UK, in contrast, relied more heavily on market-supporting regulations, such as securities laws, deposit insurance, and court-led improvements in the corporate law. This was the standard common law solution to social problems. These differences of course were not absolute, with many nationalizations in common law countries and many market-supporting reforms in civil law ones, but they were pronounced nonetheless. We saw this, for example, in the La Porta et al. (2002) data on government ownership of banks.

In these very different ways, both some of the civil law countries and some of the common law ones successfully solved their problems. In the second half of the century,

however, the world became a good deal more peaceful and orderly. In such a world, the market-supporting solutions of the common law, whether in the form of judicial decisions or regulations, worked better than the policy-implementing solutions of civil law. As a consequence of their 20th century legal and regulatory evolution, common law countries ended up with sharply better investor protections and their financial markets ran away from the civil law ones, just as we see in the data. Looking back over the course of the 20th century, we see the basic differences in the legal traditions and regulatory strategies playing out in how both the laws and the markets evolve.

IX. Measurement ahead of Policy.

Over the last quarter century, the world economy embraced markets. Socialism has been all but abandoned around the world. Macroeconomic policy and central banking became much more responsible. The world saw tremendous liberalization of trade, exchange rates, and capital markets more generally. Tax rates have fallen. Perhaps not surprisingly in light of these policies, the world economy grew faster over the last quarter century than at any point in its history. Indeed, billions of people have been lifted out of poverty, especially in Asia, and poverty is expected to continue falling rapidly.

Yet much still remains to be done to promote markets, entrepreneurship, and growth. The research described here can and has been used to shed light both on the nature of good reforms, and on the specific policy levers. At the conceptual level, our analysis might help understand why so many developing countries end up with inefficiently high levels of regulation, especially in the civil law world. Even in the developed countries, the levels of regulation of many activities, such as labor markets and

entry, were probably adopted in a less orderly environment, or for reasons of consistency or habit, and as such are excessive for modern markets. In finance, institutions that replaced markets must now be replaced by those that sustain them. In the developing countries, which received both the specific rules and the general strategies of social control through transplantation, the mismatch between the institutions and needs is even greater. For the heavy-handed regulatory policy that might work tolerably well in continental Europe translates into over-regulation, corruption, and suppression of entrepreneurship in the developing world (De Soto 1989, Shleifer and Vishny 1998).

The assembly and publication of data on comparative laws and regulations also sheds light on the exact areas where the current institutions are inappropriate. This analysis has been greatly stimulated by a World Bank initiative, the *Doing Business* report, which assembles and updates much of the information on laws and regulations discussed in this paper, as well as some additional indicators. Even the publication of the report has proved controversial, with the French government accusing its authors of an Anglo-Saxon bias. Nonetheless, the report has proved popular, and has encouraged regulatory reforms in dozens of countries.

The use of our indicators of laws and regulations, with their clear correlations with legal origins, for policy analysis has stimulated two objections. Some writers accuse us of suggesting that legal origin is destiny, and that therefore reform in investor protection or in other legal spheres is doomed to failure. We have suggested nothing of a kind, and indeed show below that the world is seeing many successful reforms in both civil and common law countries. Our work does indicate, however, that individual legal reforms should be sensitive to the broader legal framework of a country.

More seriously, some critics argue that the legal rules we measure are not the right ones. Even if these rules capture the broad stance of the law toward investor or worker protection, the most relevant legal rules, doctrines, or even patterns of judicial behavior responsible for the observed outcomes might be different from what we measure. Focusing the reforms formalistically on our sub-indices will then be futile. For example, if judges are reluctant to take on corporate self-dealing cases, and find technical or procedural excuses to throw them out, changing the rules of approval of self-dealing transactions might be futile. As Berkowitz et al. (2003) and Mauro et al. (2006) find, reforms are more likely to succeed when people they affect choose to accept them.

We definitely agree with this second criticism, and believe that legal or regulatory reform in any country must be sensitive to the actual legal or regulatory bottlenecks. Understanding what actually happens on the ground would be very helpful in this regard. So if judges throw out self-dealing cases, one might want to find out why they do so, and focus on how to get them to stop. If labor courts rule for employees regardless of what the law says, this surely is of relevance to labor market reformers[12].

Having said this, in many circumstances the actual laws on the books that we measure are indeed the reason for inefficient outcomes. The heavy regulations of entry are probably one such example, procedural formalism is another. And even when the legal rules we measure are not the entire problem, and thoughtless formalistic reforms are likely to fail, the rules can point the reformer much closer to where the problem actually lies. In either case, the measured rules provide highly relevant data.

[12] Algan and Cahuc (2006) argue that the successful Danish flexicurity system, which combines high unemployment benefits with low job protection and high participation rate is unlikely to work in Mediterranean European countries, because of the low public-spiritedness of their citizens.

Recent experience is broadly consistent with this optimistic view, although the evidence, unfortunately, remains sketchy. Perhaps the greatest progress has been made in the reductions of entry regulations. According to the 2006 *Doing Business* report, in 2005 and 2006 fifty five countries undertook reforms that lowered administrative costs of starting a business and obtaining a license. Yakovlev and Zhuravskaya (2007) show that in Russia, one of the most aggressive reformers in this area, the effects on the entry of new firms have been highly beneficial.

The picture is more mixed for labor markets. OECD (2006) reports that labor markets were liberalized in OECD countries in the last 15 years, although most reforms pertained to temporary rather than permanent employment. In contrast, Heckman and Pages (2004) see no tendency for liberalization in Latin America during the 1990s.

With respect to investor protection, Pagano and Volpin (2005) report gains in shareholder rights in OECD countries during the 1990s. Enriques and Volpin (2007) describe a tendency toward improving shareholder rights in the EU. At the same time, they note that "far too little has been done to resolve the problem of related-party transactions, which is the most common form of self-dealing in Europe." We are aware of no systematic evidence for emerging markets, although there are examples of improvement, such as the Mexican bankruptcy reform (Gamboa and Schneider 2007).

Although all this evidence is just beginning to come in, and much of it is unfortunately confined to the developed world, at last some countries seem to be moving toward market-friendlier government interventions. If the world remains peaceful and orderly, the attraction of such reforms will only grow.

X. Conclusion.

Since their publication about a decade ago, the two LLSV articles have attracted a lot of criticism, and have surely sustained some damage. We now accept different measures of shareholder protection, and are deeply skeptical about the use of instrumental variables to establish causality. The interpretation of the meaning of legal origins has evolved considerably over time. But the damage notwithstanding, the basic contribution appears to us to still be standing, perhaps even taller than a decade ago. And that is the idea that legal origins – broadly interpreted as highly persistent systems of social control of economic life -- have significant consequences for the institutional framework of the society, as well as for economic outcomes. In fact, the empirically documented range of legal, economic, and social spheres where legal origins have consequences has broadened over the past decade.

More specifically, at the end of our overview of this research, we believe that four propositions are correct, at least given the current state of our knowledge. First, legal rules and regulations differ systematically across countries, and these differences can be measured and quantified. Second, these differences in legal rules and regulations are accounted for to a significant extent by legal origins. Third, the basic historical divergence in legal traditions – the policy-implementing focus of civil law versus the dispute-resolving focus of common law – explains well why legal rules differ. Fourth, the measured differences in legal rules matter for economic and social outcomes.

The fact that the outlines of a coherent theory have emerged over the last decade does not mean that all, or most, of the empirical issues have been settled, or, for that matter, that the theory will survive further scrutiny. Large gaps in our knowledge remain,

and the evidence is not so clear as to reject alternative hypotheses outright. From our perspective, the following are some of the most interesting open issues.

First, the historical record remains extremely blurry. We know very little not only about comparative legal rules a century ago, and even about comparative economic outcomes, such as financial development. A systematic comparative analysis of the evolution of legal rules and financial markets remains a significant priority.

Second, legal origins do not proxy for politics. However, they do shape the way in which nations respond to political imperatives. The central prediction of the Legal Origins Theory is that civil law countries are more likely to respond to crises and social needs by replacing markets with direct state mandates, whereas common law countries are more likely to respond to similar situations by trying to rescue and support markets. The interaction between legal origins and politics needs to be spelled out and evaluated empirically far more systematically than we have done here.

Third, we need to understand a good deal better the many channels through which legal origins influence institutions and economic outcomes, if for no other reasons than to evaluate alternative reform strategies. Surely, legal origins impose limits on what countries can do in the reforms of their corporate and securities laws, bankruptcy laws, legal procedures, and so on, but these limits are not so tight as to prevent many successful reforms. The hard question is to what extent reforms can focus on the quantitative indicators we have assembled, and to what extent they require more nuanced inquiries into law enforcement in different countries. As the data collection efforts by the World Bank and others in this area expand, and cross-sectional studies are gradually replaced by the analyses of reforms, our knowledge in this area will grow dramatically.

Fourth, the last decade of research might have given the incorrect impression of our Anglo-Saxon bias, the belief that common law is automatically superior in all circumstances. This is not what the theory says; indeed the theory points clearly to the superiority of civil law and regulatory solutions when the problem of disorder is sufficiently (but not too) severe. We have tried to come up with situations where civil law works better, and there are some examples (information sharing institutions supporting credit markets in less developed countries appear to work better in civil law countries, according to Djankov et al. 2007). On the other hand, our attempt to find evidence for the commonly made defense of civil law that it provides greater fairness or better access to justice have failed; the data suggest the opposite (Djankov et al. 2003b). Finding the spheres and the circumstances is which civil law works better and understanding why remains an important and open challenge.

But perhaps the most interesting question to us is whether the differences between common and civil law are likely to persist into the future. Since we have shown legal origins to be closely related to the types of capitalism, this question can be rephrased as follows: what kind of capitalism is likely to prevail in the long run? Will it be the more market-focused Anglo-Saxon capitalism, or the more state-centered capitalism of Continental Europe and perhaps Asia?

There are many arguments for convergence. Globalization leads to a much faster exchange of ideas, including ideas about laws and regulations, and therefore encourages the transfer of legal knowledge. Globalization also encourages competition among countries for foreign direct investment, for capital, and for business in general, which must as well put some pressure toward the adoption of good legal rules and regulations.

The convergence is working both by civil law countries increasingly accepting common law solutions, and vice versa. In one area where heavy regulation appears patently absurd – the entry of new firms – countries are rapidly tearing down the barriers. In Europe at least, there are some reductions in labor regulations, as well as gains in shareholder rights. At the same time, common law countries are increasingly resorting to legislation to address social problems, the Sarbanes-Oxley Act being the most recent example of such financial regulation in the U.S. Mediating against convergence is the fact that civil law countries continue to resort to "policy-implementing" solutions to newly arising problems. The bias toward using the state mandates to solve social problems, such as the 35 hour workweek in France, is huge.

All this, of course, leaves open the question of what legal rules and regulations the countries are likely to move toward, even if they do not converge. So, in conclusion, let us again rely on theory to make a prediction. The world economy in the last quarter century has been surprisingly calm, and has moved sharply toward capitalism and markets. In that environment, our framework suggests, the common law approach to social control of economic life performs better than the civil law approach. When markets work or can work well, it is better to support than to replace them. As long as the world economy remains free of war, major financial crises, or order extraordinary disturbances, the competitive pressures for market-supporting regulation will remain strong, and we are likely to see continued liberalization. Of course, underlying this prediction is a hopeful assumption that nothing like World War II or the Great Depression will repeat itself. If it does, countries are likely to embrace civil law solutions, just as they did back then.

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Figure I: The distribution of Legal Origin

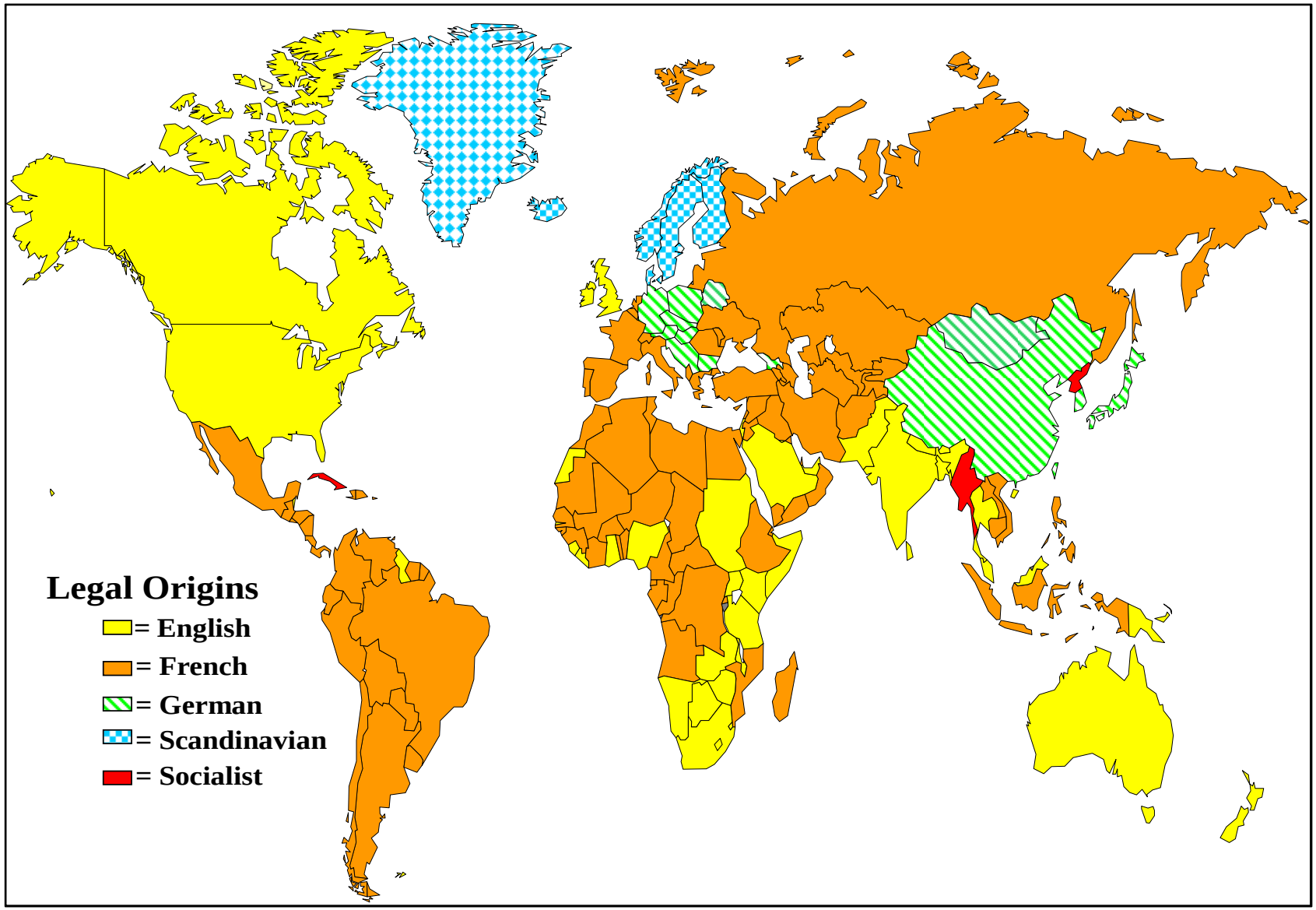

Figure II -- Legal Origin, Institutions, and Outcomes

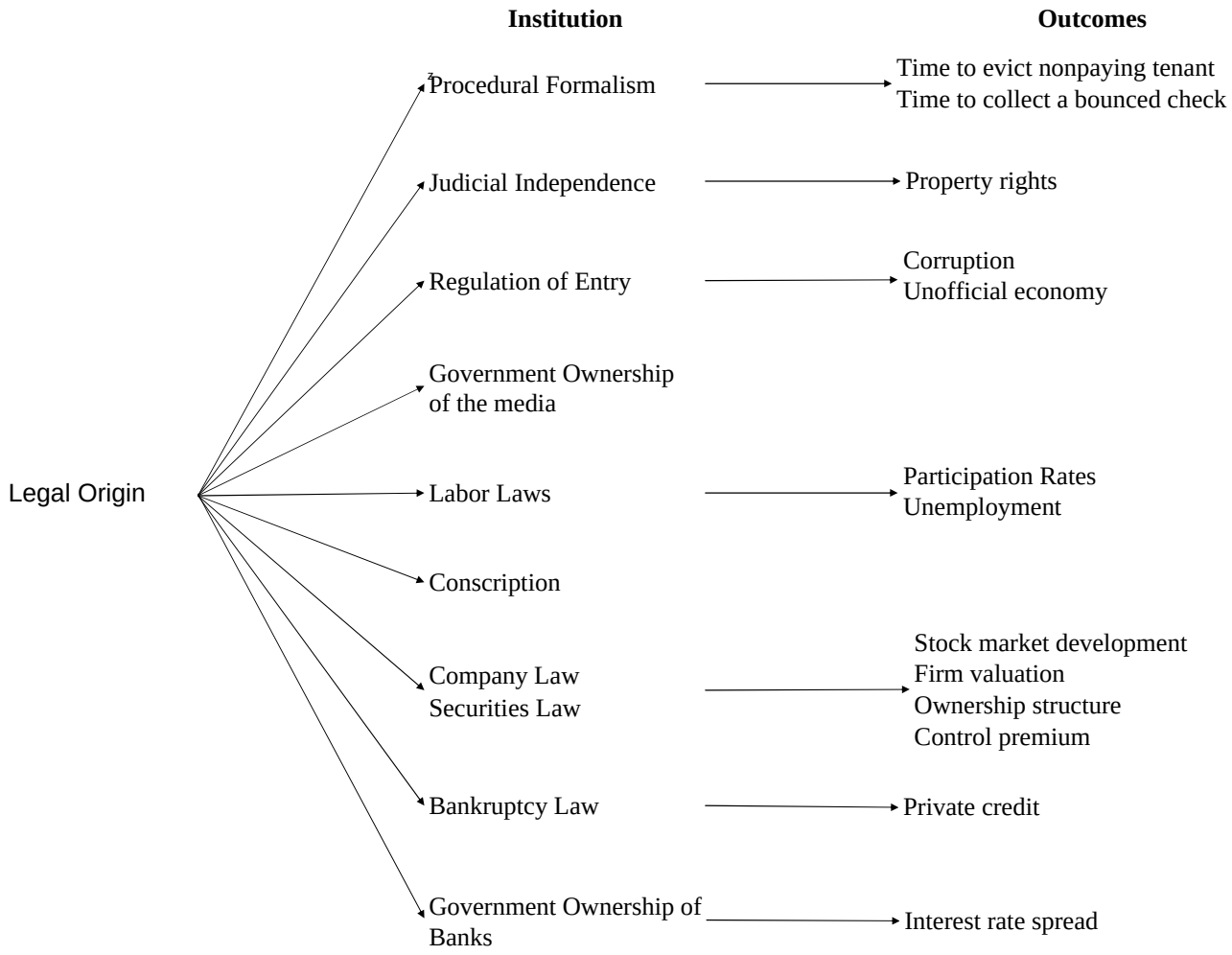

Figure III: Stock market capitalization over GDP based on Rajan and Zingales (2003)

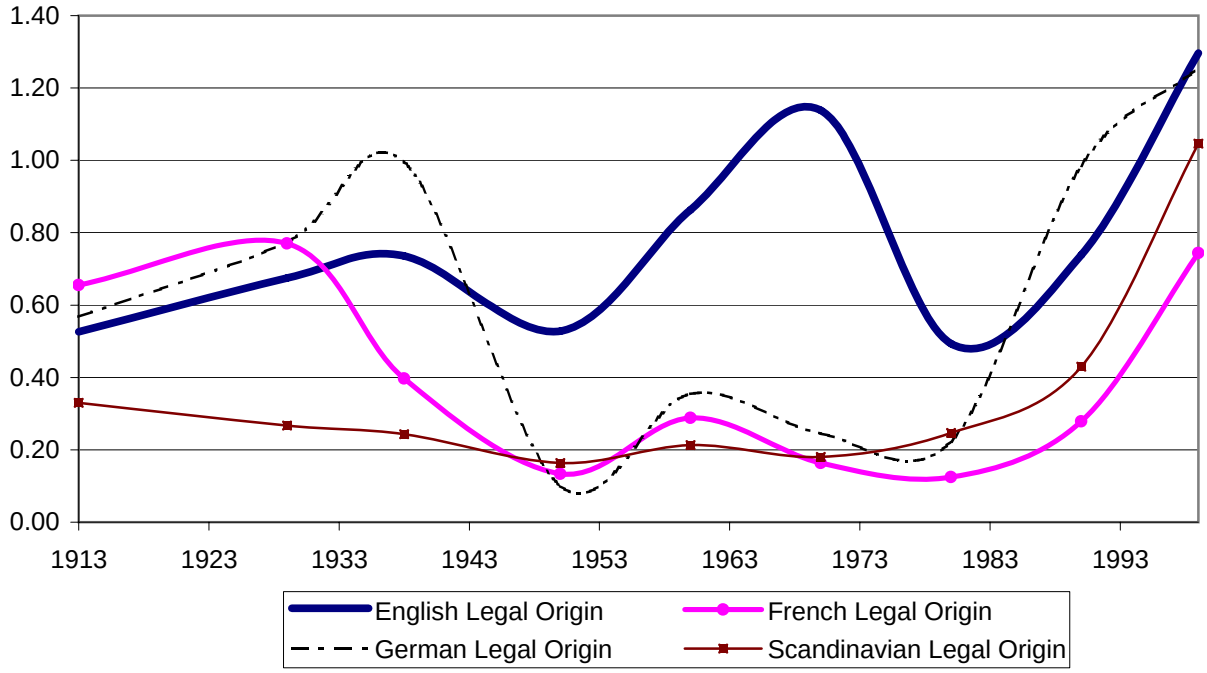

Figure IV: Stock market capitalization over GDP France and Great Britain (Bozio 2002, Michie 1999)

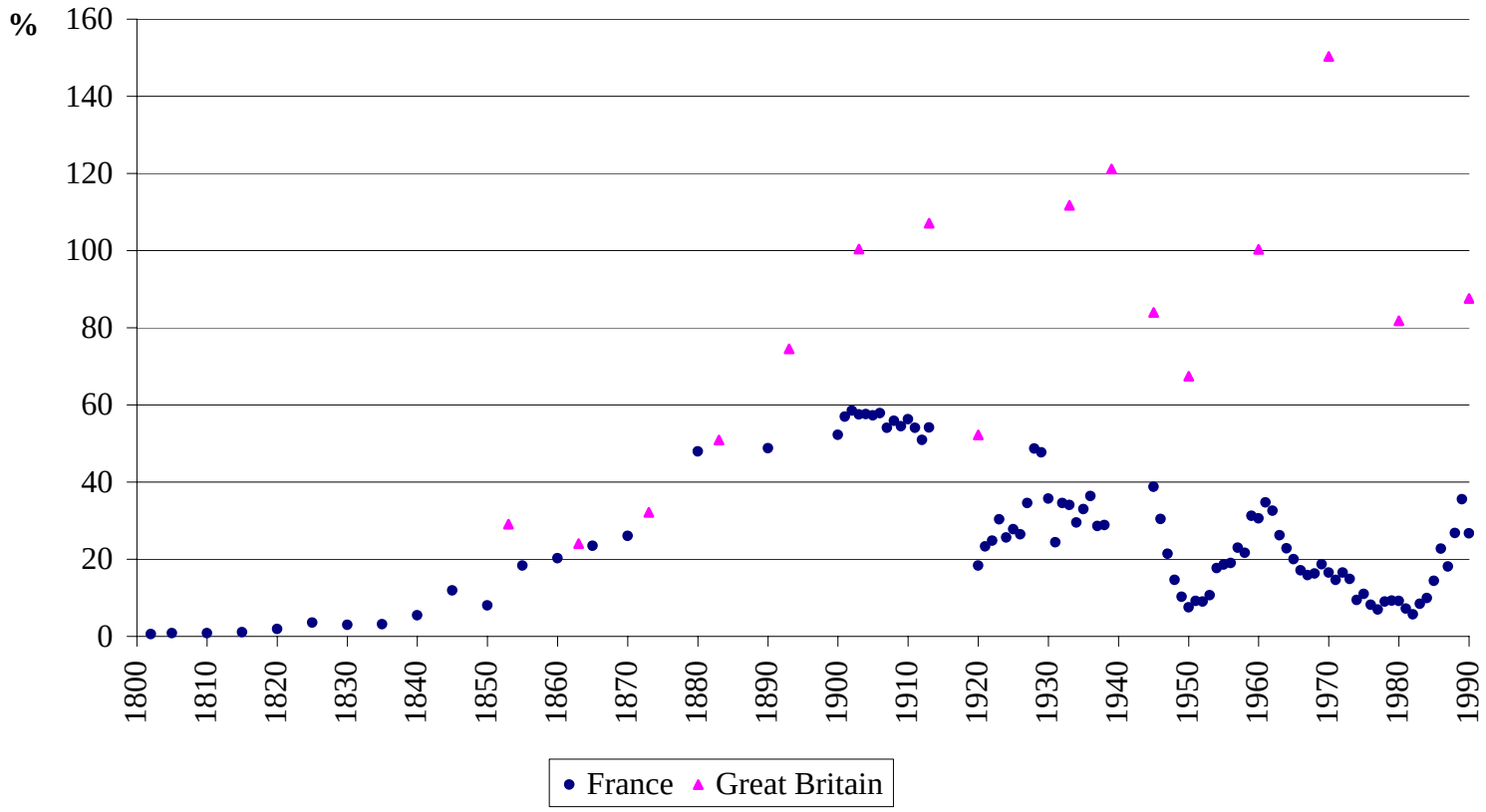

Figure V: Ownership concentration and GDP growth 1913-1945

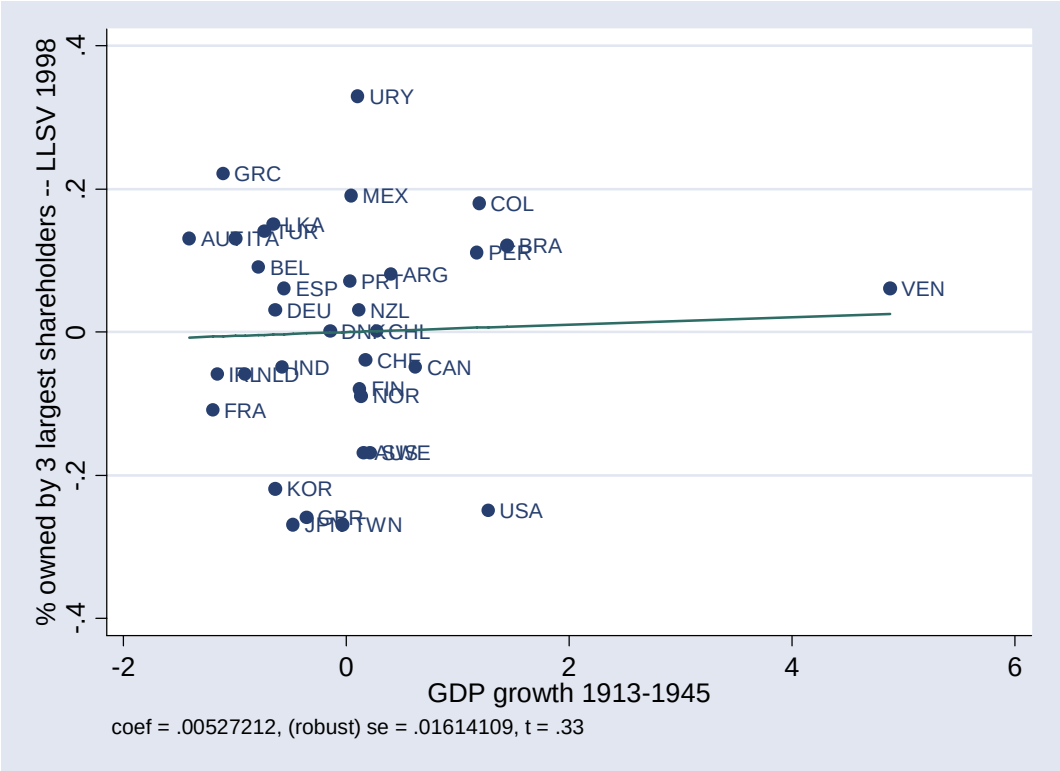

Figure VI: Labor laws and GDP growth 1913-1945

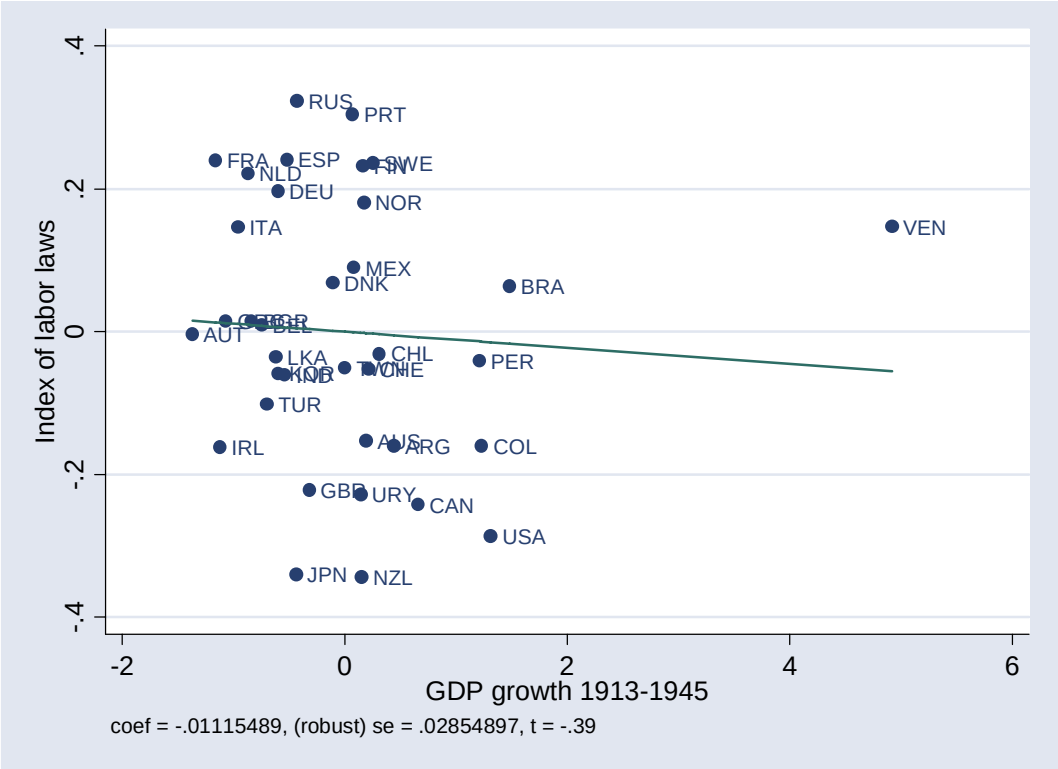

Table I: Financial Institutions and Capital Markets Development

Panel A: Financial Institutions and Legal Origin

	(1)	(2)	(3)	(4)	(5)
	Anti-Self-Dealing Index	Prospectus Disclosure	Creditor Rights Index (2003)	Debt Enforcement	Bank Government Owernship (1970)
French Legal Origin	-0.3334[a]	-0.3298[a]	-0.8394[a]	-13.6361[b]	0.3316[a]
	(0.0511)	(0.0577)	(0.2251)	(5.6535)	(0.0755)
German Legal Origin	-0.3454[a]	-0.2370[b]	-0.1714	-8.8577	0.3456[a]
	(0.0736)	(0.0966)	(0.2579)	(5.8022)	(0.1060)
Scandinavian Legal Origin	-0.3820[a]	-0.2867[a]	-0.9435[c]	5.2707	0.3109
	(0.0642)	(0.0478)	(0.4865)	(5.8212)	(0.1545)
Ln (GDP per capita)	0.0728[a]	0.0618[b]	0.2022[b]	19.8980[a]	-0.1808[a]
	(0.0263)	(0.0261)	(0.0875)	(2.7517)	(0.0377)
Constant	0.0177	0.2102	0.6043	-124.6692[a]	1.6206[a]
	(0.2433)	(0.2422)	(0.7560)	(26.9421)	(0.2876)
Observations	71	49	130	85	74
R-squared	45%	0.45	18%	0.57	37%

Panel B: Financial Institutions and Capital Markets Development

	(1)	(2)	(3)	(4)	(5)	(6)
	Stock-market-to-GDP (1999-2003)	Ln(Firms/Pop) (1999-2003)	Ownership Concentration	Control Premium	Private-credit-to-GDP (1999-2003)	Interest spread (1970-95)
Anti-self-dealing Index	0.8940[b]	0.8004[c]	-0.1277[c]			
	(0.3674)	(0.4750)	(0.0724)			
Prospectus Disclosure				-0.3254[a]		
				(0.0807)		
Credit Rigths Index					0.0645[c]	
					(0.0336)	
Debt Enforcement					0.0053[a]	
					(0.0015)	
Government Ownership of Banks -- 1970						22.0813[a]
						(7.3675)
Ln GDP per capita	0.3204[a]	0.9794[a]	-0.0495[b]	-0.0273	0.2546[a]	1.8522
	(0.0601)	(0.1346)	(0.0200)	(0.0238)	(0.0604)	(3.0169)
Constant	-2.7604[a]	-6.9496[a]	0.9844[a]	0.5524[b]	-2.1494[a]	-4.4219
	(0.5558)	(1.2352)	(0.1761)	(0.2202)	(0.4912)	(23.0311)
Observations	72	72	49	37	85	57
R-squared	40%	47%	20%	36%	52%	10%

[a] Significant at the 1% level.
[b] Significant at the 5% level.
[c] Significant at the 10% level.

Table II: Government Regulation

Panel A: Government Regulation and Legal Origin

	(1)	(2)	(3)	(4)
	Regulation of Entry (1999)	Regulation of Labor (1997)	Press Government Ownership (1999)	Conscription (2000)
French Legal Origin	0.6927[a]	0.2654[a]	0.2095[a]	0.5468[a]
	(0.0929)	(0.0362)	(0.0834)	(0.0772)
German Legal Origin	0.5224[a]	0.2337[a]	0.1100	0.8281[a]
	(0.1206)	(0.0473)	(0.0926)	(0.0794)
Scandinavian Legal Origin	-0.1922	0.3978[a]	0.1308[b]	0.7219a
	(0.1352)	(0.0443)	(0.0555)	(0.2015)
Ln (GDP per capita)	-0.1963[a]	-0.0083	-0.1753[a]	-0.0382
	(0.0367)	(0.0164)	(0.0307)	(0.0331)
Constant	3.4367[a]	0.3703[b]	1.6565[a]	0.4702[c]
	(0.3037)	(0.1520)	(0.3024)	(0.2802)
Observations	85	84	95	146
R-squared	61%	42%	37%	34%

Panel B: Government Regulation, Corruption, Unofficial Economy, and Labor Market Outcomes

	(1)	(2)	(3)	(4)	(5)
	Corruption Index (1996-2000)	Employment Unofficial Economy	Labor Participation -- Male	Unemployment Rate (1991-2000)	Unemployment Rate for Men Aged 20-24
Regulation of Entry	-0.6733[a]	13.2601[a]			
	(0.0998)	(4.4569)			
Regulation of Labor			-5.2009[a]	6.0738[b]	14.8363[a]
			(1.7319)	(2.7868)	(4.2699)
Ln GDP per capita	0.6194[a]	-5.7288[a]	-1.9305[a]	-0.9913[c]	-1.1890
	(0.0537)	(2.0969)	(0.3982)	(0.5795)	(1.1308)
Constant	-3.6273[a]	58.7496[b]	102.5096[a]	14.8245[b]	18.4049
	(0.5800)	(25.8820)	(3.3120)	(6.0449)	(11.4316)
Observations	85	46	78	65	52
R-squared	80%	42%	32%	11%	15%

[a] Significant at the 1% level.

[b] Significant at the 5% level.

[c] Significant at the 10% level.

Table III: Judicial Institutions

Panel A: Legal Origin and Judicial Institutions

	(1)	(2)	(3)
	Formalism Check Collection	Tenure of judges	Case law
French Legal Origin	1.4945[a]	-0.2375[a]	-0.6733[a]
	(0.1841)	(0.0620)	(0.0951)
German Legal Origin	0.9917[a]	-0.4627[a]	-0.2874
	(0.2013)	(0.1459)	(0.2156)
Scandinavian Legal Origin	0.7623[a]	-0.0636	0.046
	(0.2966)	(0.0470)	(0.0727)
Ln (GDP per capita)	-0.2610[a]	0.0412	-0.0004
	(0.0707)	(0.0295)	(0.0337)
Constant	5.0505[a]	0.6514[a]	0.9578[a]
	(0.6103)	(0.2500)	(0.2850)
Observations	109	65	65
R-squared	45%	25%	44%

Panel B: Judicial Instititutions and Outcomes

	(1)	(2)	(3)	(4)
	Time to collect on bounced check	Contract Enforcement	Property Rights (2004)	Property Rights (2004)
Legal Formalism -- Bounced Check	0.3095[a]	-0.5099[a]		
	(0.0519)	(0.0966)		
Tenure of judges			1.2066[a]	
			(0.2547)	
Case law				0.5596[a]
				(0.2035)
Ln GDP per capita	0.0402	1.0544[a]	0.8673[a]	0.8767[a]
	(0.0546)	(0.1410)	(0.0818)	(0.0886)
Constant	3.7354	-1.7313	-5.6499[a]	-5.0485[a]
	(0.5251)	(1.5253)	(0.7439)	(0.8288)
Observations	109	52	64	64
R-squared	12%	74%	69%	67%

[a] Significant at the 1% level.
[b] Significant at the 5% level.
[c] Significant at the 10% level.

Table IV: Growth and Legal Origin

	Dependent Variable:				
	Growth GDP per capita	Growth GDP per worker	Growth capital stock per worker	Growth productivity	Growth GDP per capita (sample with liquid liab)
	(1)	(2)	(3)	(4)	(5)
	Panel A: Results for 1960-2000				
French Legal Origin	-0.6171[c]	-0.5423	-0.4423	-0.7532[a]	-0.8788[b]
	[0.3280]	[0.3340]	[0.5342]	[0.2575]	[0.4221]
German Legal Origin	1.6120[c]	1.5027[c]	1.9864[b]	0.4163	1.6883[c]
	[0.8767]	[0.7618]	[0.8112]	[0.5272]	[0.9355]
Scandinavian Legal Origin	0.1119	0.0040	0.0692	-0.2200	0.6620
	[0.3964]	[0.3866]	[0.4506]	[0.2718]	[0.4366]
Ln (Income in 1960)	0.3085[b]	0.1197	-0.2071	0.1936	-0.0984
	[0.1531]	[0.1344]	[0.2182]	[0.1325]	[0.2248]
Constant	-0.2956	0.9406	3.4131	-0.5561	2.8557
	[1.1956]	[1.1726]	[2.1535]	[1.1753]	[1.8578]
Observations	98	96	96	73	57
R-squared	17%	12%	8%	17%	25%
	Panel B: Results for 1960-1980				
French Legal Origin	-0.7360[c]	-0.4094	-0.2891	-0.5578	0.0798
	[0.4260]	[0.4006]	[0.4762]	[0.3665]	[0.5060]
German Legal Origin	1.1326	1.0897	1.2849	0.3980	2.4169b
	[0.9366]	[0.8468]	[0.7935]	[0.7541]	[0.9888]
Scandinavian Legal Origin	-0.0203	-0.5639	-0.1103	-0.7300c	1.1556c
	[0.5315]	[0.4736]	[0.4280]	[0.3886]	[0.5831]
Ln (Income in 1960)	0.3916[c]	0.2082	-0.3013	0.3038	0.0346
	[0.2003]	[0.1852]	[0.2394]	[0.2045]	[0.3026]
Constant	-0.2151	0.9590	4.6133b	-0.8759	1.8566
	[1.5807]	[1.6260]	[2.2861]	[1.8185]	[2.4388]
Observations	109	107	107	81	60
R-squared	9%	5%	4%	7%	13%
	Panel C: Results for 1980-2000				
French Legal Origin	-1.2832[a]	-1.2339[a]	-0.9232	-1.1532[a]	-1.6117[a]
	[0.3808]	[0.4301]	[0.7027]	[0.3052]	[0.4031]
German Legal Origin	0.5766	1.0903	2.4380[c]	0.6468	1.2797
	[1.0583]	[0.9040]	[1.4016]	[0.5945]	[1.2574]
Scandinavian Legal Origin	-0.7133c	-0.0464	-0.1621	0.0812	-0.5686
	[0.4156]	[0.4463]	[0.6335]	[0.3121]	[0.4469]
Ln (Income in 1980)	0.3673c	0.1435	0.0298	0.1094	0.2526
	[0.1877]	[0.1788]	[0.2530]	[0.1326]	[0.2044]
Constant	-0.9454	0.3533	1.1892	-0.3388	0.0291
	[1.6248]	[1.7155]	[2.5808]	[1.2764]	[1.7573]
Observations	108	103	97	80	90
R-squared	18%	15%	9%	23%	25%

[a] Significant at the 1% level.
[b] Significant at the 5% level.
[c] Significant at the 10% level.

Table V: Growth and financial development

Panel A: Growth and financial development in OLS regressions

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent Variable:					
	Growth GDP per worker	Growth capital stock per worker	Growth productivity	Growth GDP per worker	Growth capital stock per worker	Growth productivity
Liquid Liabilities / GDP in 1960	3.9472[a]	3.7856[a]	2.6565[a]			
	(1.4708)	(1.4570)	(1.0374)			
Private Credit / GDP in 1960				1.9690[c]	2.4872[b]	1.0736
				[1.0249]	[1.0314]	[0.6924]
Ln (Years of schooling 1960)	0.7959[b]	0.5192	0.6085[a]	0.7733[b]	0.4661	0.6634[a]
	(0.3536)	(0.5830)	(0.1821)	[0.3825]	[0.6687]	[0.2220]
Ln (GDP per worker in 1960)	-1.3595[a]	-1.4834[a]	-0.8134[a]	-1.0646[a]	-1.2172[b]	-0.6256[a]
	(0.2820)	(0.4089)	(0.1782)	[0.3535]	[0.4643]	[0.2252]
Constant	11.9651[a]	13.1577[a]	6.6251[a]	10.1757[a]	11.4816[a]	5.4958[a]
	(2.3611)	(3.3621)	(1.4850)	[2.9022]	[3.6849]	[1.8543]
Observations	48	48	48	53	53	53
R-squared	39%	25%	44%	18%	16%	21%

Panel B: IV regression for growth and financial development (constant sample)

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent Variable:					
	Growth GDP per worker	Growth capital stock per worker	Growth productivity	Growth GDP per worker	Growth capital stock per worker	Growth productivity
Liquid Liabilities / GDP in 1960	7.7363[a]	8.1310[a]	4.9739[a]			
	[1.9444]	[2.9693]	[1.0933]			
Private Credit / GDP in 1960				5.1234[a]	4.8586[c]	2.6651[b]
				[1.9577]	[2.5422]	[1.1063]
Ln (Years of schooling 1960)	0.6041[b]	0.2571	0.4885[a]	0.7334[b]	0.6761	0.5814[a]
	[0.2898]	[0.4917]	[0.1497]	[0.3327]	[0.5548]	[0.1986]
Ln (GDP per worker in 1960)	-1.6926[a]	-1.8812[a]	-1.0023[a]	-1.4787[a]	-1.6224[a]	-0.7727[a]
	[0.3752]	[0.5284]	[0.2125]	[0.4438]	[0.5345]	[0.2469]
Constant	14.1586[a]	15.8293[a]	7.8501[a]	13.2308[a]	14.2053[a]	6.5724[a]
	[3.0528]	[4.3179]	[1.7096]	[3.5869]	[4.3579]	[1.9943]
Observations	48	48	48	53	53	53
F-stat for the excluded instruments	8.35	8.35	8.35	6.5	6.5	6.5

[a] Significant at the 1% level.
[b] Significant at the 5% level.
[c] Significant at the 10% level.

Table VI: Growth and non-financial institutions

	Dependent Variable: Growth of output per worker					
	Panel A: OLS Regressions					
	(1)	(2)	(3)	(4)	(5)	(6)
Case Law	-0.1588					
	[0.3508]					
Tenure Judges		0.3642				
		[0.8805]				
Labor Regulations			2.1833[b]			
			[0.9965]			
Ln(Number of Steps)				-0.0583		
				[0.3744]		
Time to Collect Check					-0.4486[c]	
					[0.2466]	
Debt Enforcement						0.0287[a]
						[0.0059]
LN(Years of Schooling 1960)	0.8599[b]	0.8196[b]	1.6568[a]	1.3028[a]	1.1783[a]	0.4053
	[0.3544]	[0.3597]	[0.3070]	[0.2948]	[0.3014]	[0.2849]
LN(GDP per worker 1960)	-0.8551[b]	-0.8034[b]	-1.2830[a]	-0.9771[a]	-0.9001[a]	-1.5399[a]
	[0.3459]	[0.3675]	[0.2878]	[0.2865]	[0.2834]	[0.2491]
Constant	8.9154[a]	8.0647[b]	10.6115[a]	9.3732[a]	11.0259[a]	14.2569[a]
	[2.8469]	[3.2948]	[2.2794]	[2.7072]	[2.7979]	[2.1272]
Observations	53	53	55	55	63	50
R-squared	15%	15%	31%	25%	25%	51%

	Panel B: IV Regressions					
	(1)	(2)	(3)	(4)	(5)	(6)
Case Law	0.4157					
	[0.4927]					
Tenure Judges		-0.8172				
		[1.4007]				
Labor Regulations			0.4021			
			[1.0016]			
Ln(Number of Steps)				-0.0278		
				[0.3798]		
Time to Collect Check					-0.8623	
					[0.8319]	
Debt Enforcement (Hart)						0.0306[a]
						[0.0094]
LN(Years of Schooling 1960)	0.7066[b]	0.8748[b]	1.3137[a]	1.2506[a]	1.0006[b]	0.3697
	[0.3318]	[0.3594]	[0.2913]	[0.2936]	[0.4210]	[0.3494]
LN(GDP per worker 1960)	-0.6573[c]	-0.8026[b]	-0.9470[a]	-0.8978[a]	-0.7716[b]	-1.6061[a]
	[0.3360]	[0.3455]	[0.3007]	[0.2728]	[0.3111]	[0.2388]
Constant	6.8797[b]	9.0755[a]	8.7628[a]	8.6457[a]	12.2325[a]	14.8343[a]
	[2.8219]	[3.2790]	[2.3056]	[2.5703]	[4.2696]	[1.9941]
Observations	53	53	55	55	63	50
F-Stat for the excluded instruments	8.53	5.33	17.56	30.60	1.53	4.91

[a] Significant at the 1% level.
[b] Significant at the 5% level.
[c] Significant at the 10% level.

Table VII: Creditor rights, Culture, and Legal Origin

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Dependent Variable: Creditor's rights in 2002										
% catholic	-0.2561										
	[0.2283]										
Power Distance Index		0.0013									
		[0.0096]									
Individualism			-0.0073								
			[0.0079]								
Uncertainty Avoidance Index				-0.0100							
				[0.0062]							
Masculinity					-0.0198[c]						
					[0.0099]						
% agree child obedience is important						-0.4113					
						[0.7531]					
% agree child independence is important							1.3655[b]				
							[0.6010]				
% agree parents must do their best for children								-0.5432			
								[0.9007]			
% agree that parents must be respected regardless									-1.3109		
									[0.8417]		
% agree family life is very important										0.0726	
										[1.2854]	
% agree strangers can generally be trusted											0.6841
											[0.8051]
French Legal Origin	-0.7585[a]	-0.8578[b]	-0.9374[a]	-0.4519	-1.0133[a]	-0.8542[b]	-0.7470[b]	-0.8351[b]	-0.7563[b]	-0.7979[b]	-0.8246[b]
	[0.2383]	[0.3431]	[0.3417]	[0.3917]	[0.3669]	[0.3361]	[0.3447]	[0.3519]	[0.3468]	[0.3534]	[0.3302]
German Legal Origin	-0.1320	-0.5119	-0.5528	-0.2347	-0.2764	-0.2798	-0.327	-0.2318	-0.1893	-0.1542	-0.2004
	[0.2603]	[0.4472]	[0.4197]	[0.4485]	[0.4253]	[0.3913]	[0.3470]	[0.3816]	[0.3519]	[0.3960]	[0.3623]
Scandinavian Legal Origin	-1.0091[b]	-0.8831	-0.9013	-0.9597[c]	-1.7406[b]	-0.7378	-0.9349[c]	-0.6631	-1.0181[b]	-0.6091	-0.8950
	[0.4804]	[0.5768]	[0.5625]	[0.5382]	[0.6865]	[0.5724]	[0.5316]	[0.5773]	[0.4938]	[0.5908]	[0.6500]
Log(GDP per capita in 2002)	0.2415[a]	0.2573	0.3920c	0.277	0.248	-0.0823	-0.0991	-0.0835	-0.1771	-0.0685	-0.0780
	[0.0893]	[0.2349]	[0.1956]	[0.1856]	[0.1887]	[0.1249]	[0.1214]	[0.1225]	[0.1409]	[0.1246]	[0.1190]
Constant	0.2311[a]	0.0177	-0.7691	0.3359	1.2775	3.3971[a]	2.6663[b]	3.6212[a]	5.0362[a]	2.9833[c]	2.9900[a]
	[0.0882]	[2.4440]	[1.6375]	[1.5286]	[1.7662]	[1.2091]	[1.1083]	[1.2349]	[1.6400]	[1.5731]	[1.0425]
Observations	131	52	52	52	52	73	73	71	73	72	73
R-squared	21%	15%	16%	17%	20%	14%	19%	14%	17%	13%	15%

[a] Significant at the 1% level.
[b] Significant at the 5% level.
[c] Significant at the 10% level.

Table VIII: Legal Origin and Politics

Panel A: Legal origin and proportional voting

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
	Anti-Self-Dealing	Disclosure in Prospectus	Creditor Rights	Debt Enforcement	Govt Ownership Banks	Ln(Steps)	Labor laws	Media ownership	Draft	Judicial Formalism	Tenure Judges	Case Law
French Legal Origin	-0.3081[a]	-0.2396[a]	-0.8224[a]	-15.0560[a]	0.2821[a]	0.6588[a]	0.2500a	0.2589[a]	0.5324[a]	1.4287[a]	-0.1812[a]	-0.6951[a]
	[0.0508]	[0.0567]	[0.2496]	[4.7212]	[0.0887]	[0.1007]	[0.0401]	[0.0828]	[0.0877]	[0.1830]	[0.0597]	[0.0997]
German Legal Origin	-0.3651[a]	-0.1817[b]	-0.172	-12.8704[b]	0.2876[b]	0.4641[a]	0.2278[a]	0.1731[c]	0.7956[a]	0.8703[a]	-0.3070[b]	-0.1534
	[0.0610]	[0.0734]	[0.2874]	[5.0798]	[0.1168]	[0.1397]	[0.0564]	[0.0883]	[0.0977]	[0.2225]	[0.1215]	[0.2094]
Scandinavian Legal Origin	-0.3569[a]	-0.1247[b]	-0.9121[c]	4.9701	0.2038	-0.2948c	0.3786[a]	0.3036[a]	0.6663[a]	0.4976	0.0041	-0.0195
	[0.0686]	[0.0578]	[0.5194]	[5.4404]	[0.1744]	[0.1535]	[0.0555]	[0.0791]	[0.2185]	[0.3415]	[0.0534]	[0.1147]
Proportion Voting	-0.0113	-0.0808[a]	0.0285	-2.9350[c]	0.0498	0.0567	0.0049	-0.0970[a]	0.0144	0.1591[b]	-0.0100	0.0577
	[0.0197]	[0.0212]	[0.0924]	[1.4869]	[0.0307]	[0.0354]	[0.0168]	[0.0289]	[0.0318]	[0.0732]	[0.0227]	[0.0466]
Ln(GDP per capita)	0.0794[a]	0.0662[b]	0.1720[c]	21.8143[a]	-0.1866[a]	-0.2134[a]	-0.0067	-0.1406[a]	-0.0303	-0.2953[a]	0.0121	-0.0420
	[0.0259]	[0.0283]	[0.0979]	[2.7143]	[0.0423]	[0.0392]	[0.0176]	[0.0316]	[0.0347]	[0.0686]	[0.0230]	[0.0354]
Constant	-0.0418	0.2453	0.7988	-135.4145[a]	1.6261[a]	3.5430[a]	0.3580[b]	1.4214a	0.4013	5.1870[a]	0.9051[a]	1.2672[a]
	[0.2349]	[0.2771]	[0.8054]	[27.1079]	[0.3200]	[0.3158]	[0.1597]	[0.3014]	[0.2901]	[0.5966]	[0.1897]	[0.2854]
Observations	68	48	116	77	70	80	79	87	132	93	60	60
R-squared	0.47	0.59	0.16	0.66	0.38	0.63	0.4	0.45	0.33	0.52	0.19	0.45

Panel B: Legal origin and power of the left

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
	Anti-Self-Dealing	Disclosure in Prospectus	Creditor Rights	Debt Enforcement	Govt Ownership Banks	Ln(Steps)	Labor laws	Media ownership	Draft	Judicial Formalism	Tenure Judges	Case Law
French Legal Origin	-0.3356[a]	-0.3318[a]	-0.9337a	-18.2437[a]	0.3432a	0.7018a	0.2606a	0.0699	0.6459a	1.6322[a]	-0.2234a	-0.6417a
	[0.0478]	[0.0581]	[0.2932]	[5.7738]	[0.0737]	[0.0907]	[0.0357]	[0.0737]	[0.1041]	[0.2033]	[0.0705]	[0.1148]
German Legal Origin	-0.3255[a]	-0.2395[b]	-0.2227	-12.9735[b]	0.3417[a]	0.5590[a]	0.2058[a]	0.0357	1.6322[a]	1.0687[a]	1.6322[a]	-0.2718
	[0.0753]	[0.0967]	[0.3249]	[5.4856]	[0.0870]	[0.1226]	[0.0496]	[0.0877]	[0.1165]	[0.2227]	[0.1461]	[0.2264]
Scandinavian Legal Origin	-0.2935[a]	-0.2763[a]	-0.7540	0.7023	0.0062	-0.1003	0.3365[a]	0.0189	1.6322[a]	0.5668[b]	0.0694	0.1708
	[0.0605]	[0.0659]	[0.5658]	[5.5078]	[0.1179]	[0.1552]	[0.0529]	[0.0680]	[0.1358]	[0.2564]	[0.0501]	[0.1127]
Left Power	-0.1518[b]	-0.0248	-0.3157	-2.7732	0.3668[a]	-0.1782	0.1212[b]	0.0787	1.6322[a]	0.1608	1.6322[a]	-0.2380
	[0.0727]	[0.0966]	[0.3662]	[7.9727]	[0.1127]	[0.1302]	[0.0598]	[0.1091]	[0.1454]	[0.2493]	[0.1259]	[0.2236]
Ln(GDP per capita)	0.0665[b]	0.0596b	0.0752	20.7717[a]	-0.1333a	-0.2244[a]	0.0104	-0.1058[a]	-0.0058	-0.2133[b]	0.0051	-0.0397
	[0.0274]	[0.0284]	[0.1302]	[3.0620]	[0.0336]	[0.0417]	[0.0173]	[0.0330]	[0.0425]	[0.0813]	[0.0275]	[0.0537]
Constant	0.1488	0.2419	1.9708	-127.0101[a]	1.1137[a]	3.7683[a]	0.1487	1.6322[a]	0.0687	1.6322[a]	1.6322[a]	1.6322[a]
	[0.2701]	[0.2802]	[1.2386]	[31.9668]	[0.2521]	[0.3815]	[0.1674]	[0.3470]	[0.3970]	[0.7284]	[0.2402]	[0.5728]
Observations	68	49	85	65	60	86	85	71	83	79	54	54
R-squared	0.5	0.45	0.17	0.64	0.49	0.62	0.45	0.23	0.49	0.51	0.35	0.4

Panel C: Legal origin and union density

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
	Anti-Self-Dealing	Disclosure in Prospectus	Creditor Rights	Debt Enforcement	Govt Ownership Banks	Ln(Steps)	Labor laws	Media ownership	Draft	Judicial Formalism	Tenure Judges	Case Law
French Legal Origin	-0.3652[a]	-0.3417[a]	-1.1527[a]	-14.1876[b]	0.3340[a]	0.6856[a]	0.2306[a]	0.0527	0.6006[a]	1.5479[a]	-0.1952[a]	-0.5835[a]
	[0.0491]	[0.0558]	[0.3483]	[5.8526]	[0.0851]	[0.1018]	[0.0395]	[0.0751]	[0.1226]	[0.2280]	[0.0644]	[0.1220]
German Legal Origin	-0.3465[a]	-0.2336[a]	-0.4663	-9.8379[c]	0.3237[a]	0.5845[a]	0.1891[a]	0.0795	0.7490[a]	1.1105[a]	-0.4707[a]	-0.2458
	[0.0720]	[0.0836]	[0.3824]	[5.3885]	[0.1069]	[0.1160]	[0.0473]	[0.0975]	[0.1311]	[0.2358]	[0.1511]	[0.2198]
Scandinavian Legal Origin	-0.2261[a]	-0.1017	-1.1557	6.7209	0.0200	-0.2346	0.3363[a]	0.0438	0.8458[a]	0.9283[b]	0.0865	0.4935[b]
	[0.0813]	[0.1063]	[0.7030]	[7.2616]	[0.1813]	[0.1845]	[0.0633]	[0.0945]	[0.1745]	[0.3883]	[0.1882]	[0.2430]
Union Density	-0.2786[b]	-0.3567[c]	0.3122	-13.8014	0.2637	0.1718	0.0751	0.0371	0.0579	-0.4384	-0.3235	-0.7425[c]
	[0.1100]	[0.1789]	[0.7056]	[9.9588]	[0.2666]	[0.2108]	[0.0888]	[0.1274]	[0.1993]	[0.5227]	[0.3683]	[0.3918]
Ln(GDP per capita)	0.0926[a]	0.0810[a]	0.0877	25.2792[a]	-0.1830[a]	-0.2432[a]	-0.0107	-0.1139[a]	-0.0623	-0.3230[a]	0.0912[c]	0.0175
	[0.0272]	[0.0264]	[0.1528]	[3.3672]	[0.0420]	[0.0356]	[0.0208]	[0.0405]	[0.0547]	[0.0886]	[0.0527]	[0.0459]
Constant	-0.0729	0.1247	1.7383	-170.3391[a]	1.5766[a]	3.8136[a]	0.3932[b]	1.0863[b]	0.7448	5.6368[a]	0.2690	0.9510[b]
	[0.2576]	[0.2366]	[1.3894]	[33.9071]	[0.3010]	[0.2857]	[0.1956]	[0.4153]	[0.4974]	[0.7204]	[0.4138]	[0.4098]
Observations	64	49	70	58	58	71	70	61	68	69	51	51
R-squared	0.56	0.5	0.19	0.69	0.41	0.66	0.4	0.19	0.41	0.51	0.33	0.41

[a] Significant at the 1% level.
[b] Significant at the 5% level.
[c] Significant at the 10% level.

Table IX: Legal origin in countries with autocratic governments

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
	Anti-Self-Dealing	Disclosure in Prospectus	Creditor Rights	Debt Enforcement	Govt Ownership Banks	Ln(Steps)	Labor laws	Media ownership	Draft	Judicial Formalism	Tenure Judges	Case Law
French Legal Origin	-0.3421[a]	-0.3642[a]	-1.1816[a]	-14.3174[b]	0.2822[b]	0.4438[a]	0.2040[a]	0.3632[a]	0.5135[a]	1.5754[a]	-0.2245[a]	-0.5494[a]
	[0.0792]	[0.0858]	[0.2685]	[6.6720]	[0.1172]	[0.0925]	[0.0464]	[0.1157]	[0.1041]	[0.2511]	[0.0781]	[0.1481]
German Legal Origin	-0.2508	-0.1145c	-0.7960b	-3.4763	0.3852b	0.0936	0.1333b	0.2438	0.8059a	0.6624c	-0.7610a	-0.4503
	[0.1487]	[0.0639]	[0.3729]	[7.9660]	[0.1514]	[0.1618]	[0.0559]	[0.1711]	[0.1045]	[0.3676]	[0.1834]	[0.3774]
Ln(GDP per capita)	0.1074[b]	0.0907[b]	0.2571[b]	21.8679[a]	-0.1259[c]	-0.1023[b]	0.0011	-0.2153[a]	0.0185	-0.1181	0.0116	0.0288
	[0.0445]	[0.0401]	[0.0989]	[4.3514]	[0.0657]	[0.0392]	[0.0257]	[0.0435]	[0.0522]	[0.1121]	[0.0371]	[0.0695]
Constant	-0.2647	-0.0156	0.3189	-141.9287[a]	1.2749[a]	2.8843[a]	0.3142	1.8839[a]	0.0311	3.9626[a]	0.9107[a]	0.7015
	[0.3658]	[0.3398]	[0.8444]	[39.5086]	[0.4261]	[0.3254]	[0.2157]	[0.3860]	[0.3999]	[0.8497]	[0.2851]	[0.5060]
Observations	37	26	78	39	47	47	46	52	84	51	38	38
R-squared	0.36	0.46	0.22	0.51	0.18	0.32	0.28	0.36	0.27	0.46	0.3	0.26

[a] Significant at the 1% level.
[b] Significant at the 5% level.
[c] Significant at the 10% level.

Table X: Stock Market Capitalization over GDP (Rajan and Zingales)

Country	Legal Origin	1913	1929	1938	1950	1960	1970	1980	1990	1999
Australia	English	0.39	0.5	0.91	0.75	0.94	0.76	0.38	0.37	1.13
Canada	English	0.74		1.00	0.57	1.59	1.75	0.46	1.22	1.22
India	English	0.02	0.07	0.07	0.07	0.07	0.06	0.05	0.16	0.46
South Africa	English				0.68	0.91	1.97	1.23	1.33	1.20
United Kingdom	English	1.09	1.38	1.14	0.77	1.06	1.63	0.38	0.81	2.25
United States	English	0.39	0.75	0.56	0.33	0.61	0.66	0.46	0.54	1.52
Avg Common Law		**0.53**	**0.68**	**0.74**	**0.53**	**0.86**	**1.14**	**0.49**	**0.74**	**1.30**
Argentina	French	0.17				0.05	0.03	0.11		0.15
Belgium	French	0.99	1.31			0.32	0.23	0.09	0.31	0.82
Brazil	French	0.25						0.05	0.08	0.45
Chile	French	0.17				0.12	0.00	0.34	0.50	1.05
Cuba	French	2.19								
Egypt, Arab Rep.	French	1.09				0.16		0.01	0.06	0.29
France	French	0.78		0.19	0.08	0.28	0.16	0.09	0.24	1.17
Italy	French	0.17	0.23	0.26	0.07	0.42	0.14	0.07	0.13	0.68
Netherlands	French	0.56		0.74	0.25	0.67	0.42	0.19	0.50	2.03
Russian Federation	French	0.18								0.11
Spain	French							0.17	0.41	0.69
Avg French Law		**0.66**	**0.77**	**0.40**	**0.13**	**0.29**	**0.16**	**0.12**	**0.28**	**0.74**
Austria	German	0.76					0.09	0.03	0.17	0.17
Germany	German	0.44	0.35	0.18	0.15	0.35	0.16	0.09	0.2	0.67
Japan	German	0.49	1.20	1.81	0.05	0.36	0.23	0.33	1.64	0.95
Switzerland	German	0.58					0.50	0.44	1.93	3.23
Avg German Law		**0.57**	**0.78**	**1.00**	**0.10**	**0.36**	**0.25**	**0.22**	**0.99**	**1.26**
Denmark	Scandinavian	0.36	0.17	0.25	0.10	0.14	0.17	0.09	0.67	0.67
Norway	Scandinavian	0.16	0.22	0.18	0.21	0.26	0.23	0.54	0.23	0.7
Sweden	Scandinavian	0.47	0.41	0.3	0.18	0.24	0.14	0.11	0.39	1.77
Avg Scandinavian Law		**0.33**	**0.27**	**0.24**	**0.16**	**0.21**	**0.18**	**0.25**	**0.43**	**1.05**

Table XI: Stock market capitalization over GDP (Goldsmith 1985)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
		French Legal Origin			German Legal Origin			Scandinavian Legal Origin			English Legal Origin						
Year	Belgium	France	Italy	Mexico	Japan	Germany	Switzerland	Denmark	Norway	Sweden	Australia	Canada	Great Britain	India	Israel	South Africa	USA
1805																	7
1815																	
1830													14				
1850	69	12				6											23
1860														1			
1861			11														
1875	64					17								2			
1880		38					80	63	14								54
1881			7														
1885					4												
1895	58		11			26							156	3			
1899									26								
1900					32		82	74									71
1912																	95
1913	**88**	**65**			**41**	**37**	**123**	**88**	**40**				**121**	**5**		**130**	
1914			6														
1927													154				
1929	69	23	3			29	137	126						9		85	193
1930				25	75				46								
1937													182				
1938			2			17	149	66								139	
1939	33								28					14			105
1940				47	118												
1947											61						
1948	32			44			107	39					110				
1950		25				13								12			58
1951			19												5.67		
1953									11								
1955					24							59				113	
1956											47						
1957													51				
1960		111		37		31	137	37						14			
1962															5.59		
1963			57							43							
1965	24			30	46		116	33	9		48	46	83		6.30	108	124
1966																	
1969										33							
1970					29									15			
1972		63				27			7								
1973	20		28	25			92	30		26	44	36	65			85	83
1975														12			
1976	17	39													0.5		
1977			10		39	24					21		76				
1978				53			102	27	5	21		41				37	57