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The Economic Consequences of Legal Origins

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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 address several objections to the empirical claim that legal origins matter. Finally, we assess the implications of this research for economic reform.

1. *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, more importantly, to interpret them in a unified way.

LLSV started from a proposition, standard in corporate law (e.g., Robert 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.[1] From there, LLSV made two contributions. First, they showed that legal rules governing investor protection can be measured and coded for many 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 forty-nine 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,

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[1] This argument followed naturally from the contractual view of the firm (Michael C. Jensen and William H. Meckling 1976, Sanford J. Grossman and Oliver D. Hart 1988, Hart 1995), which sees the protection of the property rights of the financiers as essential to assure the flow of capital to firms. Financial economists have often argued, in contrast, that financial markets are sustained by "market forces" such as competition and reputation (Hayne E. Leland and David H. Pyle 1977, Eugene F. Fama 1980). Comparative research emphasized the role of banks (Franklin Allen and Douglas Gale 2000).

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. LLSV then 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 evidence showed that legal investor protection is a strong predictor of financial development.

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 (Juan C. Botero et al. 2004), incidence of military conscription (Casey B. Mulligan and Shleifer 2005a, 2005b), and government ownership of the media (Djankov et al. 2003a) 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? Why is its influence so pervasive? How can the superior performance of common law in many areas be reconciled with the high costs of litigation, and well-known judicial arbitrariness, in common law countries?

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). In strong form (later to be supplemented by a variety of caveats), we argue that common law stands for the strategy of social control that seeks to support private market outcomes, whereas civil law seeks to replace such outcomes with state-desired allocations. In words of one legal scholar, civil law is "policy implementing," while common law is "dispute resolving" (Mirjan R. Damaška 1986). In words of another, French civil law embraces "socially-conditioned private contracting," in contrast to common law's support for "unconditioned private contracting" (Katharina Pistor 2006). We develop an interpretation of the evidence, which we call the Legal Origins Theory, based on these fundamental differences.

Legal Origin Theory traces the different strategies of common and civil law to different ideas about law and its purpose that England and France developed centuries ago. These broad ideas and strategies were incorporated into specific legal rules, but also into the organization of the legal system, as well as the human capital and beliefs of its participants. When common and civil law were transplanted into much of the world through conquest and colonization, the rules, but also human capital and legal ideologies, were transplanted as well. Despite much local legal evolution, the fundamental strategies and assumptions of each legal system survived and have continued to exert substantial influence on economic outcomes. As the leading comparative legal scholars Konrad Zweigert and Hein Kötz (1998) note, "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). In this paper,

we show how these styles of different legal systems have developed, survived over the years, and continued to have substantial economic consequences. In our conception, legal origins are central to understanding the varieties of capitalism.

The paper is organized as follows. 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, which in turn influence a variety of economic outcomes. In section 4, we outline the Legal Origins Theory, and interpret the findings from that perspective. In sections 5–7, we deal with three lines of criticism of our research, all organized around the idea that legal origin is a proxy for something else. The three alternatives we consider are 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 8 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 overregulated in crucial spheres of economic life, in part because of their legal origin heritage. Legal Origin Theory, and the associated measurement of legal and regulatory institutions, provides some guidance to reforms. Section 9 concludes the paper.

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 meaning and the consequences of legal origins. The last decade has witnessed an explosion of research on corporate governance that uses the investor protection framework. This research has successfully replaced the traditional Berle–Means conception of a public corporation with a much more realistic for most of the world model of family-run firms, pyramidal and group structures, and tremendous conflicts between outside investors and controlling shareholders. This research, however, is not covered in our paper.

2. *Background on Legal Origins*

In their remarkable three-hundred-page survey of human history, The Human Web, John Robert McNeill and William H. 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. Legal scholars believe 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 (Rene David and John Brierley 1985, Thomas Reynolds and Arturo Flores 1989, Mary Ann Glendon, Michael Wallace Gordon, and Christopher Osakwe 1982, 1994, Zweigert and Kötz 1998). "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 Kötz 1998, p. 68).

Most writers identify two main secular legal traditions: common law and civil law, and several subtraditions—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 (Alan Watson 1974). Such transplantation covers specific laws and codes and the more general styles or ideologies of the legal system, as well as individuals with mother-country training, human capital, and legal outlook.

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, political, 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 incomplete. Enough of the basic transplanted elements have remained and persisted (Paul A. 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.[2] 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 1990s, we have 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 the main influence on their new commercial laws. Several countries, such as Cuba, still maintain the socialist legal system, and await liberation and reclassification. These countries typically lack other data, so no socialist legal origin countries appear in the analysis in the present paper.

Figure 1 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" (Paul G. 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 forty-two common law countries.

[2] 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).

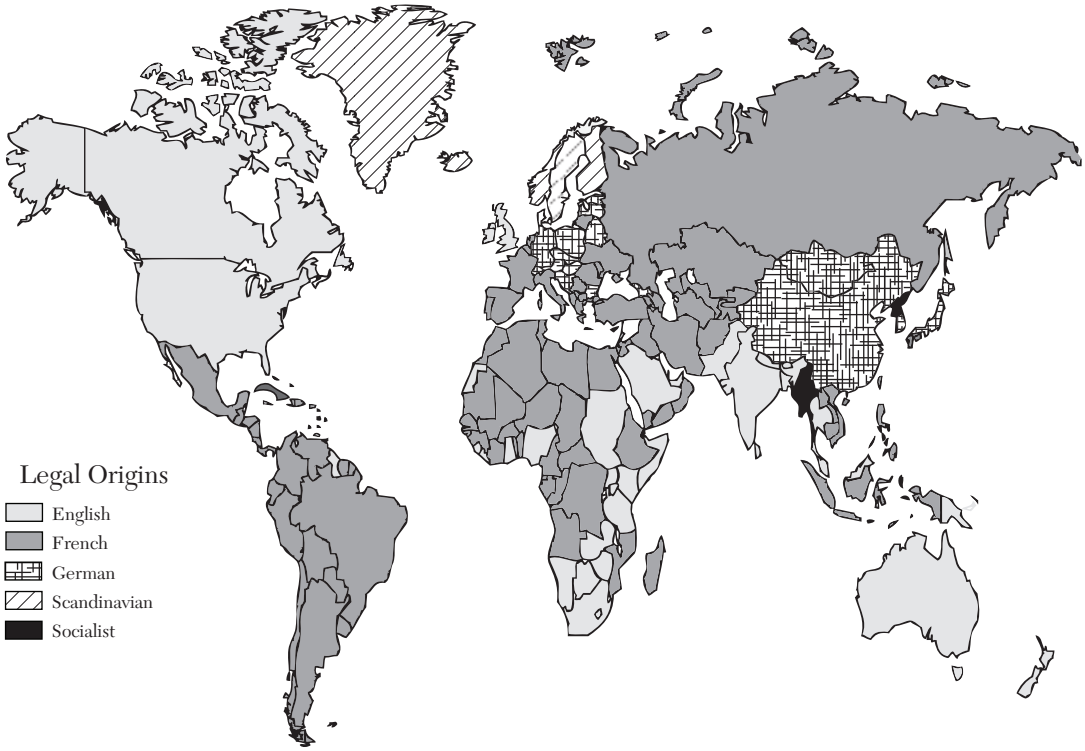

Figure 1. The Distribution of Legal Origin

The civil law tradition is the oldest, the most influential, and the most widely distributed around the world, especially after so many transition economies have 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 (John Henry 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 nineteenth 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 nineteenth century, it was

mainly the French civil law that the lawmakers of the new nations looked to for inspiration. In the nineteenth century, the French civil code was also adopted, with many modifications, by the Russian Empire, and through Russia by 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 eighty-four 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 nineteen 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 Kötz 1998). Most writers describe the Scandinavian laws as distinct from others, and we have kept them as a separate family (with five 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 voluntarily. 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 Spanish and Portuguese codes. In this instance, the exogeneity assumption from the viewpoint of studying economic outcomes is still appropriate. The nineteenth century influence of the French civil law in 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 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 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 each tradition includes 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, some have noted 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. Even when legislation in

common law countries runs ahead of judicial law making, it often must coexist with, and therefore reflects, preexisting common law rules. Indeed, statutes in common law countries are often highly imprecise, with an expectation that courts will spell out the rules as they begin to be applied. Finally, and most crucially, because legal origins shape fundamental approaches to social control of business, even legislation in common law countries expresses 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 reclassification 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.

3. *Basic Facts*

3.1 *The Evidence in Brief*

Figure 2 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 2 immediately suggests several concerns for empirical work. First, in our framework, legal origins influence many spheres of law making and regulation, which makes it dangerous to use them as 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 four comments about the data. First, all the data used in this paper, and a good deal more, are available at http://www.economics.harvard.edu/faculty/shleifer/data.html. 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, 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 et al. 2006) incorporates estimates of time, cost, and resolution of a standardized insolvency case. The data used in each study have their advantages and problems. An important fact, however, is the consistency of results across both data collection procedures and spheres of activity that we document below.

Fourth, over the years, various writers have criticized both the conceptual foundations of LLSV variables such as shareholder rights indices (John C. Coffee 1999) and the particular values we have assigned to these variables, in part because of conceptual ambiguity (Holger Spamann 2006b).

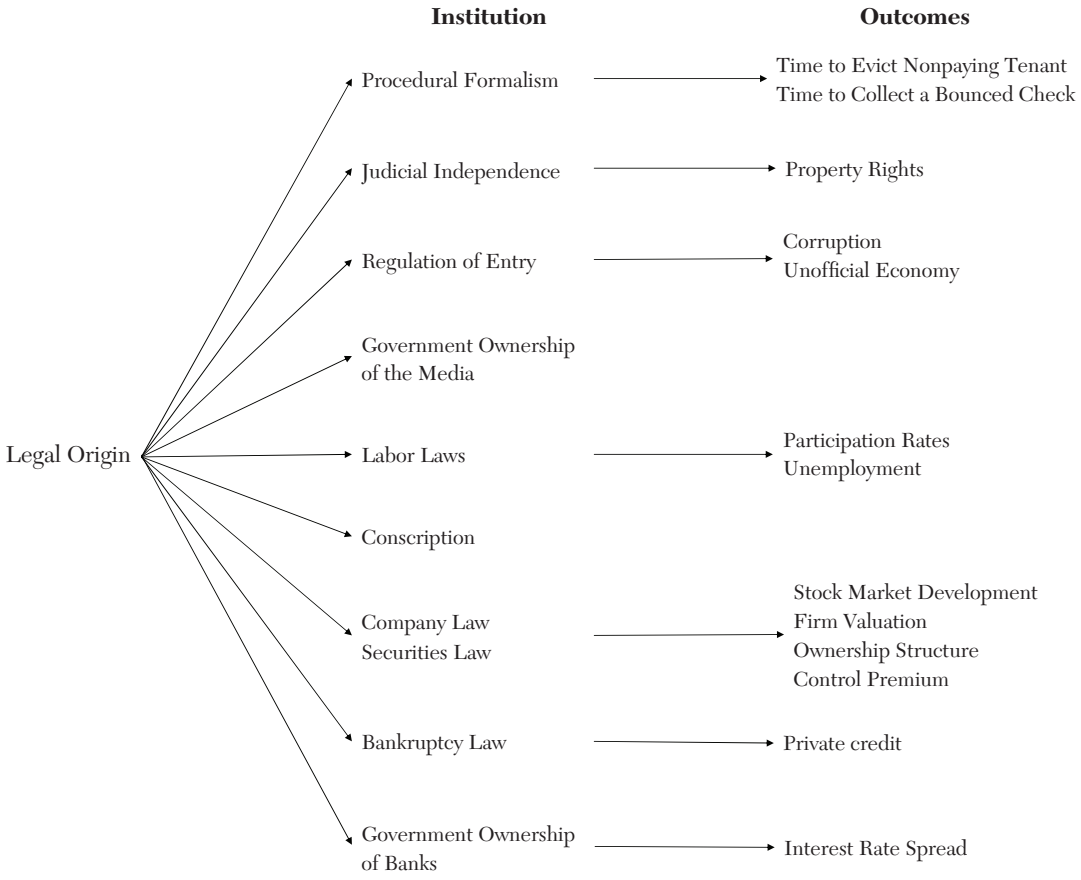

Figure 2. Legal Origin, Institutions, and Outcomes

We have corrected our mistakes and have also moved on to conceptually less ambiguous measures (Djankov et al. 2008). These improvements have strengthened the original results. The findings we discuss below use the most recent data.

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 have followed a similar pattern, shown in figure 2. 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 antidirector 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 Alexander Dyck and Luigi 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 Daniel Wolfenzon 2002). [3]

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 et al. (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 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 two in Australia and Canada to twenty-one 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, 2005b) 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 nonpaying 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 et al. (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 1–3 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 previously, we do not recom-

[3] 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.

mend such specifications since legal origins influence a broad range of rules and regulations and we cannot guarantee that the relevant ones are not omitted in the first stage.

Begin with table 1. Higher income per capita is associated with better shareholder and creditor protection, more efficient debt enforcement, 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 0.1 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 (which ranges between 0 and 100 percent). 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, and a higher private-credit-to-GDP ratio.[4] 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 percent, 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 15 percentage points (the mean premium is 11 percent). 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 mean spread is 20).[5]

Table 2 presents the results on 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). Relative to common law countries, French legal origin countries have more entry and labor regulation, higher state ownership of the media, and heavier reliance on conscription.[6] The coefficients imply that, compared to common

[4] Recent research has looked at additional outcome variables as well as measures of credit market regulation. Benjamin C. Esty and William L. Megginson (2003) find that creditor protection shapes foreign bank lending, while Steven Ongena and David C. Smith (2000) show it influences the number of banking relationships. Jun Qian and Philip E. Strahan (2007) find that better creditor protection lowers interest rates that lenders charge. Pablo Casas-Arce and Albert Saiz (2007) find that costly enforcement of rental contracts hampers the development of the rental housing market in a cross-section of countries. Krishnamurthy Subramanian, Frederick Tung, and Xue Wang (2007) find that stronger creditor rights mitigate the effect of managerial self-dealing on project finance. James R. Barth, Gerard Caprio, and Ross Levine (2004) introduce measures of banking regulation and show that they vary systematically by legal origin.

[5] Paola Sapienza (2004) shows that government-owned banks in Italy lend to big enterprises rather than small ones. I. Serdar Dinc (2005) finds that government-owned banks sharply increase lending in election years. Asim Ijaz Khwaja and Atif Mian (2005) present 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.

[6] In a similar spirit, Avi Ben-Bassat and Momi Dahan (2008) 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.

TABLE 1
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%

Notes: [a] Significant at the 1 percent level.
[b] Significant at the 5 percent level.
[c] Significant at the 10 percent level.

TABLE 2
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]	0.7219[a]
	(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%

Notes: [a] Significant at the 1 percent level.
[b] Significant at the 5 percent level.
[c] Significant at the 10 percent level.

law, French legal origin is associated with an increase of 0.69 in the (log) number of steps to open a new business (which ranges from 0.69 to 3.0), a rise of 0.26 in the index of labor regulation (which ranges from 0.15 to 0.83), a 0.21 rise in government ownership of the media (which ranges from 0 to 1), and a 0.55 increase in conscription (which ranges 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

TABLE 3
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] (0.1841)	–0.2375[a] (0.0620)	–0.6733[a] (0.0951)
German Legal Origin	0.9917[a] (0.2013)	–0.4627[a] (0.1459)	–0.2874 (0.2156)
Scandinavian Legal Origin	0.7623[a] (0.2966)	–0.0636 (0.0470)	0.0460 (0.0727)
Ln (GDP per capita)	–0.2610[a] (0.0707)	0.0412 (0.0295)	–0.0004 (0.0337)
Constant	5.0505[a] (0.6103)	0.6514[a] (0.2500)	0.9578[a] (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] (0.0519)	–0.5099[a] (0.0966)		
Tenure of judges			1.2066[a] (0.2547)	
Case law				0.5596[a] (0.2035)
Ln (GDP per capita)	0.0402 (0.0546)	1.0544[a] (0.1410)	0.8673[a] (0.0818)	0.8767[a] (0.0886)
Constant	3.7354 (0.5251)	–1.7313 (1.5253)	–5.6499[a] (0.7439)	–5.0485[a] (0.8288)
Observations	109	52	64	64
R-squared	12%	74%	69%	67%

Notes: [a] Significant at the 1 percent level.
[b] Significant at the 5 percent level.
[c] Significant at the 10 percent level.

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 3 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 constitu-

tional acceptance of case law.[7] 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 67 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 0.8 point rise in the property rights index. Finally, a two standard deviation increase in case law is associated with an improvement of 0.6 points in the property rights index, which ranges from 1 to 5.

3.2 *Initial Criticisms*

So, what do we learn from these tables? The economic consequences of legal origins are pervasive. Compared to 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.

To us, the most important aspect of these results is how pervasive is the influence of legal origins. Many objections have been raised with respect to individual pieces of this evidence. We address later the most far-reaching criticism, 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.

We focus on objections to the law and finance evidence. 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. Moreover, this criticism in no way rejects the significance of legal origins in shaping outcomes; it speaks only to the difficulty of identifying the channel.

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. Michael Greenstone, Paul Oyer, and Annette Vissing-Jørgensen (2006) examine the effects of the 1964 Securities Act Amendments, which increased the disclosure requirements for U.S. over-the-counter firms. They find that firms subject to the new disclosure requirements had a statistically significant abnormal excess return of about 10 percent over the year and a half

[7] Daniel Berkowitz and Karen B. Clay (2005, 2006, 2007) exploit the fact that ten U.S. 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.

that the law was debated and passed relative to a comparison group of unaffected NYSE/AMEX firms. Brian J. Bushee and Christian Leuz (2005) obtain similar findings using a regulatory change in the U.S. over-the-counter markets. Nadia 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. Tatiana 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 twelve transition economies, Rainer F. H. Haselmann, Pistor, and Vikrant Vig (2006) report that lending volume responds positively to improvements in creditor rights. Sujata Visaria (2006) estimates the impact of introducing specialized tribunals in India aimed at accelerating banks' recovery of nonperforming loans. She finds that the establishment of tribunals reduces delinquency in loan repayment by between 3 and 10 percentage points. Aldo Musacchio (2008) finds that the development of bond markets in Brazil is correlated with changes in creditors' rights. Mario Gamboa-Cavazos and Frank 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 for identifying the channels of influence. 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 3 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, Mehnaz Safavian and Siddharth Sharma (2007) show that creditor rights benefit debt markets if the country has a good enough court system, but not if it does not. Tullio Jappelli, Marco Pagano, and Magda Bianco (2005) find that credit is less widely available in Italian regions with longer trials and larger backlogs of pending trials.[8] Djankov et al. (2006) combine the rules and their actual enforcement into an integrated measure of debt enforcement efficiency. This measure (see table 1 above) is highly predictive

[8] Matthieu Chemin (2007a, 2007b) shows that reforms of the judiciary improved firms' access to finance and performance in India and Pakistan, respectively.

of debt market development. The available evidence suggests that both good rules and their enforcement matter, and that the combination of the two is generally most effective.

Another relevant distinction is between legal rules and their interpretation. One view is that the actual legal rules, which might have come from legislation, from appellate decisions, or from legislation codifying previous appellate decisions, 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 (Djankov et al. 2008).

Other writers emphasize the flexibility of judicial decision making under common law. 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 (Nicola Gennaioli 2007). Josh Lerner and Antoinette Schoar (2005) and Nittai K. Bergman and Daniel Nicolaievsky (2007) present some evidence in support of this view. Craig G. Doidge, Andrew Karolyi, and René M. Stulz (2007) and Reena Aggarwal et al. (2008) also find that national legal rules protecting investors improve the ability of firms to develop company-specific corporate governance mechanisms. In the context of labor markets, Beth Ahlering and Simon 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 (2006) presents a legal and historical account of the greater contractual flexibility in common law, the reason being that contractual freedom is unencumbered by social conditionality.[9]

A second version of the flexibility thesis stresses 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 the smell-test of common law. Simon 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 "judicial flexibility" theories. As we argue in section 4, both interpretations are also consistent with the fundamental differences between common and civil law.

3.3 *Recent Findings on Resource Allocation*

Recent years have seen an explosion of research on the consequences of legal rules and regulations, many of which are related to legal origins, for resource allocation. We briefly review this evidence before turning to the interpretation.

Perhaps the largest body of work concerns the effect of financial development on resource allocation. Many of these papers use LLSV indicators of investor protection, as well as legal origins as instruments for financial development. The central paper here is Raghuram Rajan and Zingales (1998), who find that, in financially developed countries, sectors which for technological reasons depend more on external finance grow faster. In a similar spirit, Jeffrey Wurgler (2000) finds that financially developed

[9] Naomi R. Lamoreaux and Jean-Laurent Rosenthal (2005) dispute the flexibility hypothesis by pointing to the broader range of legally acceptable forms of business organization in France than in the United States in the nineteenth century.

countries exhibit a higher responsiveness of investment to growth opportunities.[10]

Several studies use the data from Botero et al. (2004) to examine the effects of labor regulation on resource allocation. Ricardo J. Caballero et al. (2004) find that, in countries with strong rule of law, higher job security is associated with slower adjustment to shocks and lower productivity growth. Gaëlle Pierre and Stefano Scarpetta (2007) show that employment regulations lead to substitution from permanent to temporary employment. John Haltiwanger, Scarpetta, and Helena Schweiger (2006) and Alejandro Micco and Carmen Pagés (2006) find that legal employment protections reduce labor turnover. Alejandro Cuñat and Marc J. Melitz (2006) find that countries with light labor market regulations specialize in volatile industries. Francine Lafontaine and Jagadeesh Sivadasan (2007) study one firm operating in forty-three countries, and find that employment protections lead to labor misallocation, delayed entry, and operation of fewer outlets.

Entry regulations, another sphere influenced by legal origins, also affect resource allocation. Fisman and Virginia Sarria-Allende (2004) find that entry regulations distort industry structure and promote concentration. Leora Klapper, Laeven, and Rajan (2006) and Djankov et al. (2007b) show that such regulations stifle entry. Ciccone and Papaioannou (2006c) report that countries with lower entry regulations see more entry in industries that experience expanding global demand and technology shifts.

Two other papers use our variables to examine the effects of contract enforcement on the structure of production. Nathan Nunn (2007) finds that countries with good contract enforcement specialize in the production of goods for which relationship-specific investments are more important. Pol Antras, Mihir A. Desai, and C. Fritz Foley (2007) find that weak investor protections limit the scale of multinational 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 international trade. Jose Ernesto López-Córdova (2007) finds that exporting firms grow 4 percentage points faster after trade liberalization in countries with less burdensome labor regulations. Using cross-country data, Caroline Freund and Bineswaree Bolaky (2007) show that trade openness has a positive impact on per capita income only in countries with low regulation of entry. Norman Loayza, Linda Kaltani, and Roberto Chang (2005) present a similar finding for labor market regulation. Elhanan Helpman, Melitz, and Yona Rubinstein (2008) find that the probability that two countries trade is smaller when the cost of entry regulation is high in both countries.

All this evidence suggests that, through their effect on finance, labor markets, and competition, legal origins indeed influence resource allocation. This raises the question of whether one can take the next step and connect legal origins to aggregate economic growth. This, however, has proved to be difficult, as we explain next.

Mahoney (2001) shows that, in the recent period, common law countries have grown faster than French legal origin countries. Mahoney is indeed correct: 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, there are similar differences in the growth rates of GDP per worker, capital stock per worker, and productivity.

[10] Other papers in this area include Stijn Claessens and Luc Laeven (2003), Matías Braun (2003), Raymond Fisman and Inessa Love (2004), Thorsten Beck, Asli Demirguc-Kunt, and Levine (2005), Enrico C. Perotti and Paolo F. Volpin (2004), Antonio Ciccone and Elias Papaioannou (2006a, 2006b), Alain De Serres et al. (2006), and Geert Bekaert et al. (2007).

These results, however, are not particularly robust. The growth effects of legal origins become 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, Jacek Rostowski and Bogdan 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. This is a very original theory, and we hope it is developed.

The most obvious potential channel of influence of legal origins on growth is financial development, since legal origins have such strong effects on finance. Using legal origins as instruments, Beck, Levine, and Loayza (2000) and Levine, Loayza, and Beck (2000) find that private debt market development is a statistically significant and quantitatively important predictor of growth. Again, however, one needs to be careful, both because (as we argued above) the exclusion restriction is unlikely to be satisfied and because the results are often sensitive to the inclusion of other variables, such as alternative measures of human capital.

In sum, there is by now a great deal of evidence that legal origins influence legal rules and regulations, which in turn have substantial impact on important economic outcomes—from financial development, to unemployment, to investment and entry, to the size of unofficial economy, to international trade. Much of this evidence suggests that common law is associated with better economic outcomes than French civil law. The evidence also shows that legal origins influence patterns of growth within industries, but it is less clear that legal origins predict aggregate growth. The last finding resonates with the obvious observation made by LLSV (1998) that countries like France and Belgium achieved high living standards despite their legal origin. One possible explanation of the aggregate growth evidence is that civil law countries have found compensating mechanisms to overcome the baggage of their legal tradition in the long run. Another possibility is that the last forty years have been unrepresentative and that, in the long run, there are periods that advantage civil law regimes (such as state-led growth). We do not know which of these, or some other explanation, is correct.[11]

All this evidence leaves us with a major question: why do legal origins matter, and why do they matter in such a pervasive way for both rules and economics outcomes? 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? We attempt to answer this question in the next section.

4. *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 Friedrich A. 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 (see Glaeser

[11] We note, however, that the evidence on the relationship between institutions and aggregate growth more generally, which seemed substantial a few years ago, has been crumbling (see Edward L. Glaeser et al. 2004).

and Shleifer 2002, Djankov et al. 2003a, and Mulligan and Shleifer 2005b). In this section, we begin with the alternative historical explanations and then try to revise, synthesize, and advance previous theoretical accounts into the Legal Origins Theory.[12]

4.1 *Revolutionary Explanations*

The standard explanation of the differences between common law and French civil law in particular, and to a lesser extent German law, focuses on seventeenth–nineteenth century developments (Merryman 1969, Zweigert and Kötz 1998, Daniel Klerman and Mahoney 2007). 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 2006). 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 eighteenth 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 Charles M. de Secondat 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).

Hayek (1960) traces the differences between common and civil law to distinct conceptions of freedom. He distinguishes two views of freedom 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). To Hayek, the differences in legal systems reflect these profound differences in philosophies of freedom.

[12] Legal Origins Theory is 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 nonmarket relationships to coordinate their endeavors with other actors to construct their core competencies" (Peter A. Hall and David Soskice 2001, p. 8). As Pistor (2006) 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 capitalisms has long looked for an objective measure of different types; perhaps it should have looked no further than legal origins.

To implement his 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, rendering 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 (Isser 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" (Stuart Woolf 1992, p. 95).

Merryman (1969) 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 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" (p. 30).

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. Luca 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 nonexistent, and judges retained their bureaucratic status. Merryman (1996) 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" (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 (John P. 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.

The historical analysis has three key implications for the economic consequences of legal origins. First, the built-in judicial independence of common law, particularly in the cases of administrative acts affecting individuals, suggests that common law is likely to be more respectful of private property and contract than civil law.

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 (2006) describes French legal origin as embracing socially conditioned private contracting, in contrast to common law's support for unconditioned private contracting. Damaska (1986) calls civil law "policy-implementing," and common law "dispute resolving."

Third, 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 (Richard Posner 1973, Paul H. Rubin 1977, George L. Priest 1977, Giacomo A. M. Ponzetto and Patricio A. Fernandez forthcoming), 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 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. For example, Gennaioli and Shleifer (2007) argue in the spirit of Benjamin N. Cardozo (1921) and Julius Stone (1985) that the central strategy of judicial law making is distinguishing cases from precedents, which has an unintended benefit that the 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.

The theoretical research on the adaptability of common law has received some empirical support in the work of Beck, Demirguc-Kunt, and Levine (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. On the other hand, a recent study of the evolution of legal doctrine governing construction disputes in the United States over the period of 1970–2005 finds little evidence either that legal rules converge over time, or that they move toward efficient solutions (Anthony Niblett, Posner, and Shleifer 2008).

4.2 *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 (Gino Gorla and Luigi Moccia 1981). However, the explicit reliance on precedent as a source of law (and the term precedent itself) is only a seventeenth and eighteenth century development in England (Harold J. 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 predate the revolutions. The English judges fought the royal prerogative, used juries to try criminal cases, and pressed the

argument that the King (James) was not above the law early in the seventeenth 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.

Several distinguished legal historians, including Dawson (1960) and Berman (1983), trace the divergence between French and English law to a much earlier period, namely the twelfth and thirteenth centuries. 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 twelfth 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 sixteenth 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 seventeenth century insistence that the king is not above the law is neither a continental nor a postrevolutionary 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 twelfth and thirteenth 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 seventeenth and eighteenth centuries as reinforcing the structures that evolved over the previous centuries.

Regardless of whether the revolutionary or the medieval story is correct, they have 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, carry through the process of transplantation, and appear in the differences among legal families.

4.3 *Legal Origins Theory*

Legal Origins Theory has three basic ingredients. First, regardless or whether the

medieval or the revolutionary narrative is the correct one, by the eighteenth or nineteenth centuries England and Continental Europe, particularly France, have developed very different styles of social control of business, and institutions supporting these styles. Second, 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.

Djankov et al. (2003a) propose a particular way of thinking about the alternative legal styles. 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 an inherent trade-off in addressing these twin problems: as the state becomes more assertive 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 hysteresis? What is it that the British brought on the boats that was so different from what the French or the Spaniards brought, and that had such persistent consequences? They key point is that transplantation involves not just specific legal rules (many of which actually change later) but also legal institutions (or which judicial independence might be the most important), human capital of the participants in the legal system, and crucially the strategy of the law for dealing with new problems. Successive generations of judges, lawyers, and politicians all learn the same broad ideas of how the law and the state should work. The legal system supplies the fundamental tools for addressing social concerns and it is that system, as defined by Zweigert and Kötz, with its codes, distinctive institutions, modes of thought and even ideologies, that is very slow to change.

The fact that legal system is slow to change does not mean that specific legal rules and regulations never change. As we discuss below, governments in both common and civil law countries entered many new spheres of social control in the twentieth century, but typically in ways consistent with their legal traditions. In some more stable areas of law, such as legal procedure, there is sometimes a great deal of rigidity even in the specific rules. Aron Balas et al. (2008) compute the index of the formalism of legal procedure, considered in table 3, for twenty common law and twenty civil law countries over the period 1950–2000. Consistent with Djankov et al. (2003b), they find that formalism is higher in common than in civil law countries in 2000, but also in 1950. Perhaps more surprisingly, formalism is extraordinarily stable. Among common law countries, the average of the ratio of 2000 to 1950 procedural formalism is 0.90; among civil law countries, the average of this ratio is 1.10. The data reflects significant persistence of the differences among legal origins, with no evidence of convergence.

The reader might wonder at this point whether Legal Origin Theory simply identifies legal families with different "ideologies"

or "cultures." To the extent that ideologies or cultures refer to the beliefs about how the law should deal with social problems, Legal Origin Theory clearly accepts the view that ideologies and cultures are crucial for the persistent influence of legal families. But the central point is that the reason for persistence is that the beliefs and ideologies become incorporated in legal rules, institutions, and education and, as such, are transmitted from one generation to the next. It is this incorporation of beliefs and ideologies into the legal and political infrastructure that enables legal origins to have such persistent consequences for rules, regulations, and economic outcomes.

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 twentieth century. According to Randall K. Morck and Lloyd Steier (2005), "the responses of the Dutch, Italian, Japanese, and Swedish governments to the financial crisis of the 1920s and 1930s were to substitute various mechanisms of state-controlled capital allocation for their stock markets" (p. 39). "A similar succession of financial manias, panics, and crises in Britain, Canada, and the United States ultimately strengthened shareholder rights" (p. 39). The United States responded to the Great Depression by introducing securities regulation and deposit insurance. These strategies intended to rehabilitate and support markets, not to replace them. Even Roosevelt's most radical aspirations fell short of nationalization. This contrast between the replacement of markets by state solutions in civil law countries and the rehabilitation of markets in common law countries appears quite pervasive.

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 nineteenth 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 twentieth century; they were introduced as a response to perceived social needs. Yet, as the evidence in section 3 shows, 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.[13] Indeed, all countries efficiently resort to the quintessentially civil law solution of planning in time of war and add good dollops of state intervention and control in response to major threats to order, such as terrorism. Glaeser and Shleifer (2003) interpret the early twentieth century rise of the regulatory state in the United States as an efficient response to the subversion of the justice system by large corporations.

Legal Origin Theory also 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. 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, based on either philosophical outlook 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 et al. 2006). Third, additional 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. As we show in section 8, an understanding of regulatory inefficiencies afforded by the Legal Origins Theory can form the basis of reform.

To reiterate, no country exhibits a system of social control that is an ideal type; all countries mix the two approaches. Common law countries are quite capable of civil law solutions, and vice versa. Nonetheless, the empirical prediction of the Legal Origin Theory is that the differences between 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. Perhaps because the legal system is such a difficult-to-change element of social order, supported by legal institutions, human capital, and expectations, legal origins survive both time and transplantation. This, we submit, is what gives them explanatory power.

4.4 *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 3, 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,

[13] Critically 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.

Demirguc-Kunt, and Levine (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 and labor regulation to recruitment of armies. We also see that civil law countries exhibit heavier government ownership of both the media and banks.

The theory is also 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 ones is consistent with the principal historical narrative of the greater security of private property and better contract enforcement under common law. Moreover, as noted by Beck, Demirguc-Kunt, and Levine (2003), financial markets may be an area where the adaptability of judge-made rules, as exemplified by the American Delaware courts, is especially beneficial.

Mark J. Roe (2006) points out that many of the legal rules protecting investors in common law countries are statutory rather than judge-made, so in many crucial respects regulation rather than judge-made law is responsible for investor protection. Securities laws in general, and disclosure rules in particular, which La Porta et al. (2006) show to provide some of the most effective investor protections, are entirely statutory. Howell Jackson and Roe (2007) further argue that the budgets and staffing levels of securities regulators, which are higher in common law countries, predict financial development. Is this evidence consistent with Legal Origins Theory?

The answer, we believe, is yes. Common law countries succeed in finance because their regulatory strategies seek to sustain markets rather than replace them. Returning to the examples of 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 and enforces such protection, and makes it easier for investors to seek legal remedies to rectify the wrongs even when doing so relies on public action, allows more extensive financial contracting. The form 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 evidence.

5. *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 three factors we consider are culture, history, and politics. We stress from the outset that it is not our position, nor our objective in these sections, to show that culture, history, or politics are unimportant for legal and regulatory rules. All of them are clearly important, and there is a great deal of evidence confirming their roles (see, e.g., Luigi Guiso, Sapienza, and Zingales 2004, 2006 on the role of culture). Our point is rather to establish, as clearly as possible, a much more modest yet central to the Legal Origins Theory proposition that legal origins are not proxies for something else.

We begin with culture, which has been considered as a potential explanation of the

evidence on legal origins. Stulz and Rohan 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. Amir N. Licht, Chanan Goldschmidt, and Shalom H. Schwartz (2005) present a more sweeping case, using psychological measures of cultural attitudes to predict legal rules. So are legal origins merely proxies for cultural variables?

Table 4 shows the facts. First, religion is not nearly as important a determinant of creditor rights as legal origin (see Djankov et al. 2007). Second, most indices of cultural attitudes do not 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.

Cultural variables, then, do not make much of a dent in the explanatory power of legal origins. We note, however, that the notions of culture we consider focus on religion and broad social attitudes. One can alternatively include in culture beliefs about the law, regulation, and the role of the state. This theory of culture is of course broadly consistent with our views.

6. *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 Martin Hellwig (2000), Rajan and Zingales (2003), Pagano and Volpin (2005, 2006), Perotti and Ernst-Ludwig Von Thadden (2006), and Roe (2000, 2006), and even a recent survey by Stephen Haber and Perotti (2007). Although the papers 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 twentieth 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 regulation 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 twentieth century, in which the response to crisis is variously characterized by the rise of proportional representation (Alberto Alesina and Glaeser 2004, Torsten Persson and Guido 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 protection indeed have weak protection of labor

TABLE 4
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] [0.2383]	–0.8578[b] [0.3431]	–0.9374[a] [0.3417]	–0.4519 [0.3917]	–1.0133[a] [0.3669]	–0.8542[b] [0.3361]	–0.7470[b] [0.3447]	–0.8351[b] [0.3519]	–0.7563[b] [0.3468]	–0.7979[b] [0.3534]	–0.8246[b] [0.3302]
German Legal Origin	–0.1320 [0.2603]	–0.5119 [0.4472]	–0.5528 [0.4197]	–0.2347 [0.4485]	–0.2764 [0.4253]	–0.2798 [0.3913]	–0.3270 [0.3470]	–0.2318 [0.3816]	–0.1893 [0.3519]	–0.1542 [0.3960]	–0.2004 [0.3623]
Scandinavian Legal Origin	–1.0091[b] [0.4804]	–0.8831 [0.5768]	–0.9013 [0.5625]	–0.9597[c] [0.5382]	–1.7406[b] [0.6865]	–0.7378 [0.5724]	–0.9349[c] [0.5316]	–0.6631 [0.5773]	–1.0181[b] [0.4938]	–0.6091 [0.5908]	–0.8950 [0.6500]
Log(GDP per capita in 2002)	0.2415[a] [0.0893]	0.2573 [0.2349]	0.3920[c] [0.1956]	0.2770 [0.1856]	0.2480 [0.1887]	–0.0823 [0.1249]	–0.0991 [0.1214]	–0.0835 [0.1225]	–0.1771 [0.1409]	–0.0685 [0.1246]	–0.0780 [0.1190]
Constant	0.2311[a] [0.0882]	0.0177 [2.4440]	–0.7691 [1.6375]	0.3359 [1.5286]	1.2775 [1.7662]	3.3971[a] [1.2091]	2.6663[b] [1.1083]	3.6212[a] [1.2349]	5.0362[a] [1.6400]	2.9833[c] [1.5731]	2.9900[a] [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%

Notes: [a] Significant at the 1 percent level.
[b] Significant at the 5 percent level.
[c] Significant at the 10 percent level.

and low regulation of entry. The suggestion of this research is that legal origin enters the various regressions summarized in section 3 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 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 regressions. Third, we test an implication of the available political models, namely that the formation of laws is a consequence of democratic politics.[14] 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 norms and 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 5 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 twentieth 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 eighty-five countries, is the share of years between 1928–95 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 5 cover the whole sample and are not confined to Western Europe or the OECD.

For all three variables, the results in table 5 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 true 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.

We next ask whether legal origins only have an effect in democracies, which would be the case if they were proxies for the political sentiment of the majority. In this scenario, legal origins would not predict legal rules in autocracies. In contrast, under Legal Origins Theory, they should predict legal rules in autocracies as well. In table 6, we focus on autocracies (countries with a positive autocracy score from Adam Przeworski et al. 2000). 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 nondemocratic government as well. We see this evidence as a direct rejection of the hypothesis that legal origins are proxies for the political sentiment of the democratic majority. Political theories can perhaps be adjusted to incorporate autocracies but the data suggest that

[14] Haber and Perotti (2007) write: "Recent explanations suggest that *a democratic majority* in countries hit by a major redistribution of wealth may shift in favor of low minority investor protection and less corporate restructuring and competition to protect established labor rents" (p. 4).

TABLE 5
LEGAL ORIGIN AND POLITICS

Panel A: Legal Origin and Proportional Representation

	(1) Anti-Self-Dealing	(2) Disclosure in Prospectus	(3) Creditor Rights	(4) Debt Enforcement	(5) Govt Ownership Banks	(6) Ln(Steps)	(7) Labor laws	(8) Media ownership	(9) Draft	(10) Judicial Formalism	(11) Judicial Independence	(12) Tenure Judges	(13) Case Law
French Legal Origin	−0.2976[a]	−0.2439[a]	−1.0218[b]	−12.4951[c]	0.3155[b]	0.8880[a]	0.2373[a]	0.0555	0.4590[a]	1.3404[a]	−0.4281[a]	−0.1939[b]	−0.8993[a]
	[0.0711]	[0.0632]	[0.4142]	[7.0568]	[0.1257]	[0.1548]	[0.0582]	[0.0818]	[0.1587]	[0.3077]	[0.0606]	[0.0856]	[0.0800]
German Legal Origin	−0.3827[a]	−0.2140[b]	−0.1538	−4.8148	0.2281[c]	0.8272[a]	0.1190	0.0583	0.6707[a]	0.9227[a]	−0.2729[a]	−0.3367[a]	−0.1527
	[0.0698]	[0.0835]	[0.5264]	[8.0829]	[0.1234]	[0.1594]	[0.0847]	[0.0584]	[0.2336]	[0.2388]	[0.0665]	[0.1130]	[0.1801]
Scandinavian Legal Origin	−0.3096[a]	−0.1431[b]	−0.8423	10.4188	0.2448	−0.0602	0.3010[a]	0.1534[c]	0.6385[b]	0.7470[c]	−0.0431	−0.0798	0.0314
	[0.0782]	[0.0644]	[0.6446]	[6.4080]	[0.1935]	[0.1854]	[0.0629]	[0.0817]	[0.2718]	[0.4158]	[0.0459]	[0.0726]	[0.0911]
Proportional Representation	−0.0259	−0.0678[b]	0.0286	−6.0155[a]	0.0362	0.0153	0.0394[c]	−0.0640[c]	0.0334	0.0706	0.0303	0.0352	0.0206
	[0.0301]	[0.0258]	[0.1666]	[2.1895]	[0.0420]	[0.0591]	[0.0224]	[0.0332]	[0.0607]	[0.1242]	[0.0268]	[0.0338]	[0.0498]
Ln(GDP per capita)	0.0432	0.0477	0.0321	21.9633[a]	−0.1590[b]	−0.2857[a]	0.0166	−0.1381[a]	−0.0560	−0.4443[a]	−0.0301	0.0113	−0.1145
	[0.0437]	[0.0432]	[0.2280]	[4.2290]	[0.0661]	[0.0691]	[0.0254]	[0.0418]	[0.0685]	[0.1248]	[0.0388]	[0.0377]	[0.0766]
Constant	0.3283	0.4163	2.1746	−133.1648[a]	1.3978[b]	4.1702[a]	0.0967	1.4464[a]	0.6356	6.7233[a]	1.2535[a]	0.8605[b]	2.0535[a]
	[0.4268]	[0.4453]	[2.0961]	[42.1285]	[0.5318]	[0.6242]	[0.2423]	[0.4384]	[0.6184]	[1.1629]	[0.3476]	[0.3489]	[0.7073]
Observations	39	34	45	41	45	38	38	38	53	49	35	35	35
R-squared	0.51	0.62	0.18	0.69	0.4	0.78	0.63	0.48	0.3	0.5	0.63	0.32	0.71

Panel B: Legal Origin and Power of the Left

	(1) Anti-Self-Dealing	(2) Disclosure in Prospectus	(3) Creditor Rights	(4) Debt Enforcement	(5) Govt Ownership Banks	(6) Ln(Steps)	(7) Labor Laws	(8) Media Ownership	(9) Draft	(10) Judicial Formalism	(11) Tenure Judges	(12) Case Law
French Legal Origin	−0.3356[a]	−0.3318[a]	−0.9337[a]	−18.2437[a]	0.3432[a]	0.7018[a]	0.2606[a]	0.0699	0.6459[a]	1.6322[a]	−0.2234[a]	−0.6417[a]
	[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	0.7322[a]	1.0687[a]	−0.4615[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	0.7661[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	0.2905[a]	0.1608	0.3011[b]	−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]	−0.1333[a]	−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]	1.1123[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) Anti-Self-Dealing	(2) Disclosure in Prospectus	(3) Creditor Rights	(4) Debt Enforcement	(5) Govt Ownership Banks	(6) Ln(Steps)	(7) Labor Laws	(8) Media Ownership	(9) Draft	(10) Judicial Formalism	(11) Tenure Judges	(12) 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

Notes: [a] Significant at the 1 percent level. [b] Significant at the 5 percent level. [c] Significant at the 10 percent level.

TABLE 6
LEGAL ORIGIN IN COUNTRIES WITH AUTOCRATIC GOVERNMENTS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	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	−0.1145[c]	−0.7960[b]	−3.4763	0.3852[b]	0.0936	0.1333[b]	0.2438	0.8059[a]	0.6624[c]	−0.7610[a]	−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

Notes: [a] Significant at the 1 percent level.
[b] Significant at the 5 percent level.
[c] Significant at the 10 percent level.

legal origins are quite distinct from political sentiment.

None of this is to say that politics is unimportant for either legal rules or economic outcomes. Indeed, political change may provide the impetus for countries to revise their laws and regulations. But the thrust of Legal Origins Theory is that, even in response to political demands, countries will design reforms consistently with their legal traditions. Legal origins are not proxies for leftist politics.

7. *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 twentieth century phenomenon. According to the critics, if one looks at historical data, particularly from the early twentieth century, the correlation does not exist. Because legal traditions predate the twentieth 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.

First, Rajan and Zingales (2003) 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 percent, compared to 66 percent for the ten French civil law countries.

Second, several writers maintain that shareholder protection in Britain at the beginning of the twentieth 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 (Brian R. Cheffins 2001, Julian Franks, Colin Mayer, and Stefano Rossi 2005).

Third, the historical critique holds that the correlation between common law and financial development emerges over the twentieth

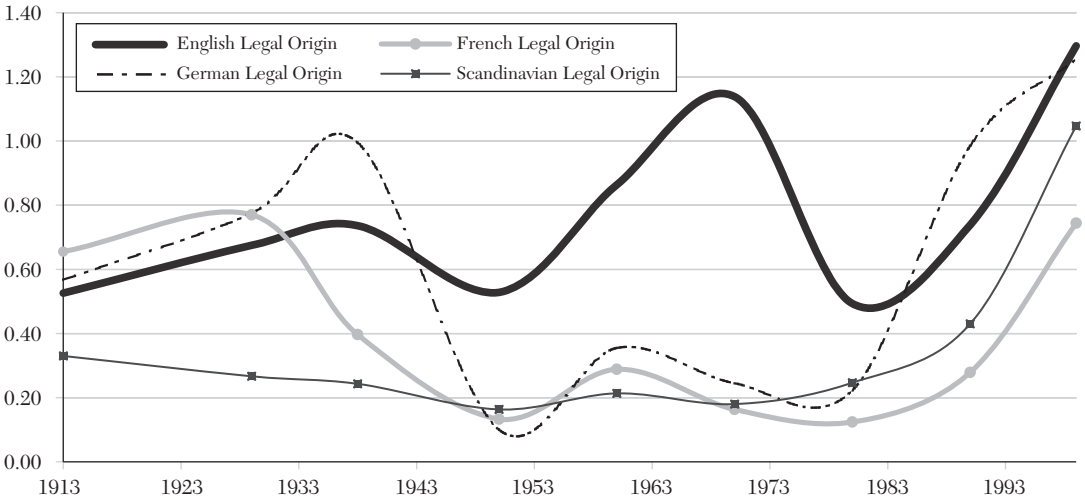

Figure 3. Stock Market Capitalization over GDP (Based on Rajan and Zingales 2003)

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 percent and 74 percent by 1999. They call this the Great Reversal (see figure 3).

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. 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.

7.1 *Stock Markets at the Start of the Twentieth Century*

Rajan and Zingales (2003) present data on stock market development for six common law and eighteen civil law countries (ten 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 (the variable used by LLSV 1997, 1998), reproduced in table 7 and illustrated in figure 3, is the starting point of most historical critiques of LLSV, as well as of political accounts of finance in the twentieth 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 twentieth century is especially difficult for two reasons. First, many—perhaps even most—securities that traded on stock

TABLE 7
Stock Market Capitalization over GDP

Country	Legal Origin	1913	1929	1938	1950	1960	1970	1980	1990	1999
Australia	English	0.39	0.50	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	0.20	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	0.70
Sweden	Scandinavian	0.47	0.41	0.30	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

Source: Rajan and Zingales (2003).

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 United States (see Mira Wilkins and Harm 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 percent. We have looked at this observation and discovered that, if one excludes bonds and only looks at stocks, the actual ratio falls to 33 percent. 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 U.S. 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 capitalization 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 percent to 47 percent, 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 percent. It appears from Robert L. Tignor (1984) that this ratio, like that 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 percent) 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 percent. A more recent estimate by Antoine Bozio (2002) puts this number at 54 percent. Richard Sylla (2006) criticizes Rajan and Zingales for presenting too low a number of 39 percent for the United States and proposes the alternative 95 percent from Raymond W. 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 nonrandomly as two obviously bizarre observations. A more systematic treatment of the data would reveal overestimates in common law, and not just civil law, countries. Some such errors are inevitable, and 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 Ranald 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 4, 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 8.[15] The first point that emerges from the table is that, consistent with Charles P. Kindleberger's (1984) assessment of Paris as a financial backwater, Britain is ahead of France as far back as the middle of the nineteenth century and perhaps even earlier. So, interestingly, is the United States. Goldsmith's sample allows also for a more general comparison of common and civil law countries in 1913. If we pull in the U.S. observation from 1912, Goldsmith only has four common law countries and seven 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 percent, the French legal origin average based only on France and Belgium is 77 percent, and the overall civil law average is 69 percent.

[15] Goldsmith's (1985) 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" (p. 337).

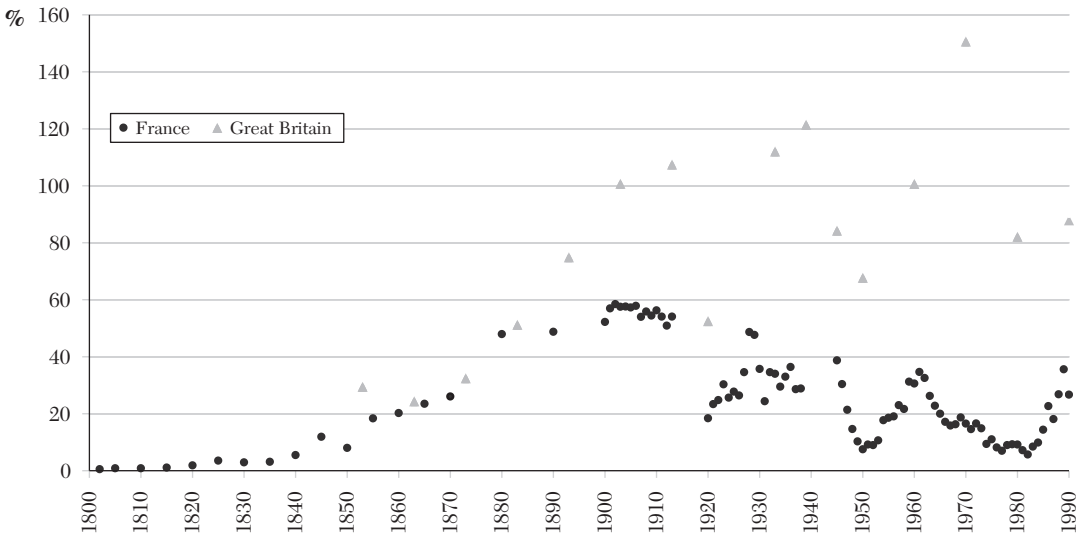

Figure 4. Stock Market Capitalization over GDP, France and Great Britain (Bozio 2002, Michie 1999)

Goldsmith's data have many problems of their own and we have not examined them closely. But they confirm independently the point that the relative financial underdevelopment of common law countries at the start of the twentieth century is a myth.

We conclude that common law countries appear to be more financially developed than civil law ones at the start of the twentieth century and, in particular, Britain is ahead of France. Over the course of the twentieth century, the differences widen, a divergence that needs to be explained. But the puzzle is divergence, not reversal.

7.2 *Britain at the Start of the Twentieth Century*

A small but lively historical literature argues that Britain had a well developed stock market at the beginning of the twentieth century, with beginnings of ownership dispersion, but that this had nothing to do with the law (Cheffins 2001, Franks, Mayer, and Rossi 2005). Looking both at the LLSV indices of shareholder protection and at legal rulings, this research sees the rights of minority shareholders in the United Kingdom 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, Laurence Gower 1954, Sylla and George 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 twentieth 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 precedents and experience in dealing with fraud.

This small literature is at a standstill, with some writers arguing the British shareholder

TABLE 8
STOCK MARKET CAPITALIZATION OVER GDP

	(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

Source: Goldsmith (1985).

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 United States (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 twentieth century, parallel to the growth of its markets. Explaining this parallel growth is a challenge to the Legal Origins Theory.

7.3 *World War II Destruction*

Roe (2006) claims that poor economic performance, particularly associated with the destruction of capital stocks in World War II, 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—as proxied by the percentage of widely held medium-sized firms—on Angus Maddison's (2003) estimates of GDP growth between 1913 and 1945 in a sample of twenty-four mostly developed countries. Figure 5 illustrates the strong positive relationship between ownership dispersion and 1913–45 GDP growth (see left graph). Countries with worse economic growth have higher ownership concentration.[16] However, these results fall apart if we use a broader sample of countries, if we use alternative measures of financial development, or if we look at other predictions of Roe's theory.

Begin with ownership. An alternative measure of ownership dispersion—the percentage not owned by the three largest shareholders—is available for thirty-four of the countries with GDP growth data. When we use the larger sample, the correlation reported by Roe disappears, as illustrated in figure 5 (right graph). This may not be surprising: many developing countries stayed out of World War II, yet remained financially underdeveloped. Continue with alternative measures of financial development. The pairwise correlations between GDP growth 1913–45 and stock market capitalization, block premium, listed firms per capita, initial public offerings to GDP, and private credit are either insignificant or have the wrong sign for both the twenty-four and thirty-four observation samples. Finally, consider Roe's other prediction that World War II devastation leads to pro-labor laws. This only is true in univariate regressions using the sample of twenty-four observations as illustrated in figure 6 (left panel), but not when controlling for common law (right panel). This is also not true in univariate regressions using the sample of thirty-four observations, as illustrated in figure 7. The data are inconsistent with the theory that World War II destruction explains LLSV evidence.

7.4 *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 twentieth century, the historical research yields two important findings that require an explanation. First, as shown by Rajan and Zingales (2003) and in figure 3, common law countries appear to have moved sharply ahead of civil law ones in financial development over the course of the twentieth century. Second, investor protection improved sharply in the common law countries over the same time period (Coffee 1999, Cheffins 2001, Franks, Mayer, and Rossi 2005). We suggest that Legal Origins Theory naturally accounts for these findings.

The twentieth century represented a period of explosive growth of the world econ-

[16] Legal origin continues to have a large and statistically significant effect on ownership concentration after controlling for 1913–45 GDP growth. In contrast, growth is not significant when controlling for French legal origin (although it is significant when controlling for common law).

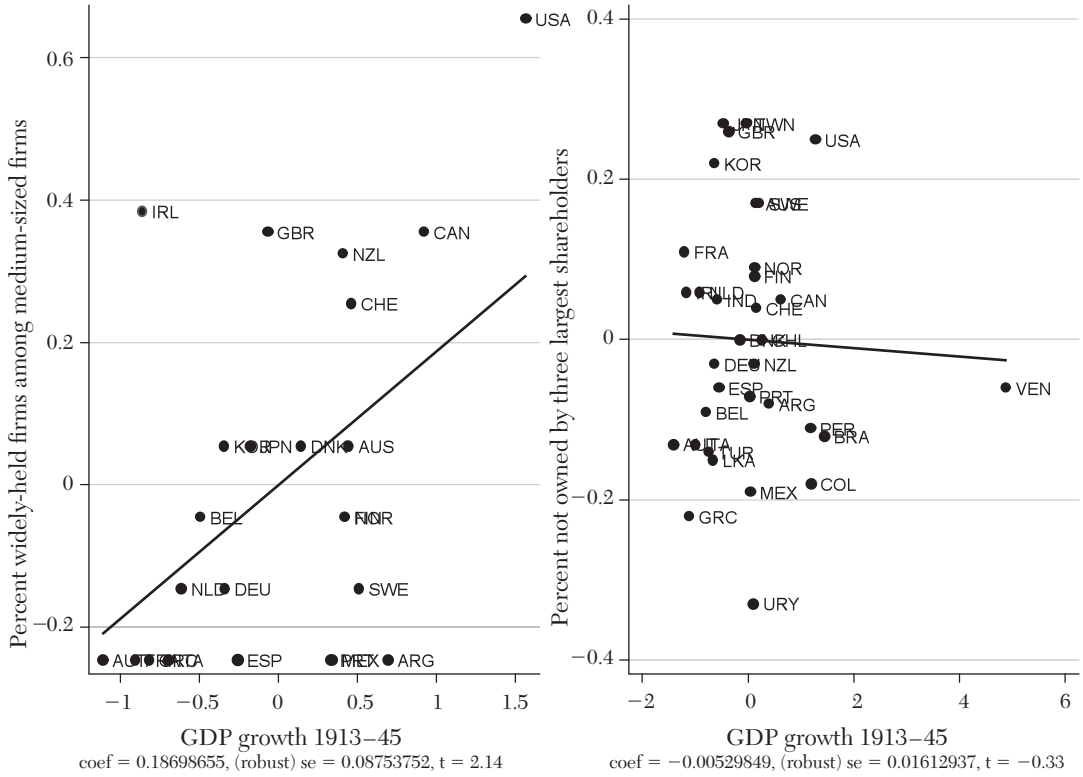

Figure 5. Ownership Concentration and GDP Growth, 1913–45

omy, 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 United States and the United Kingdom, in contrast, relied more heavily on market-supporting regulations, such as securities laws, deposit insurance, and court-led improvements in the corporate law. These differences were not absolute, with 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

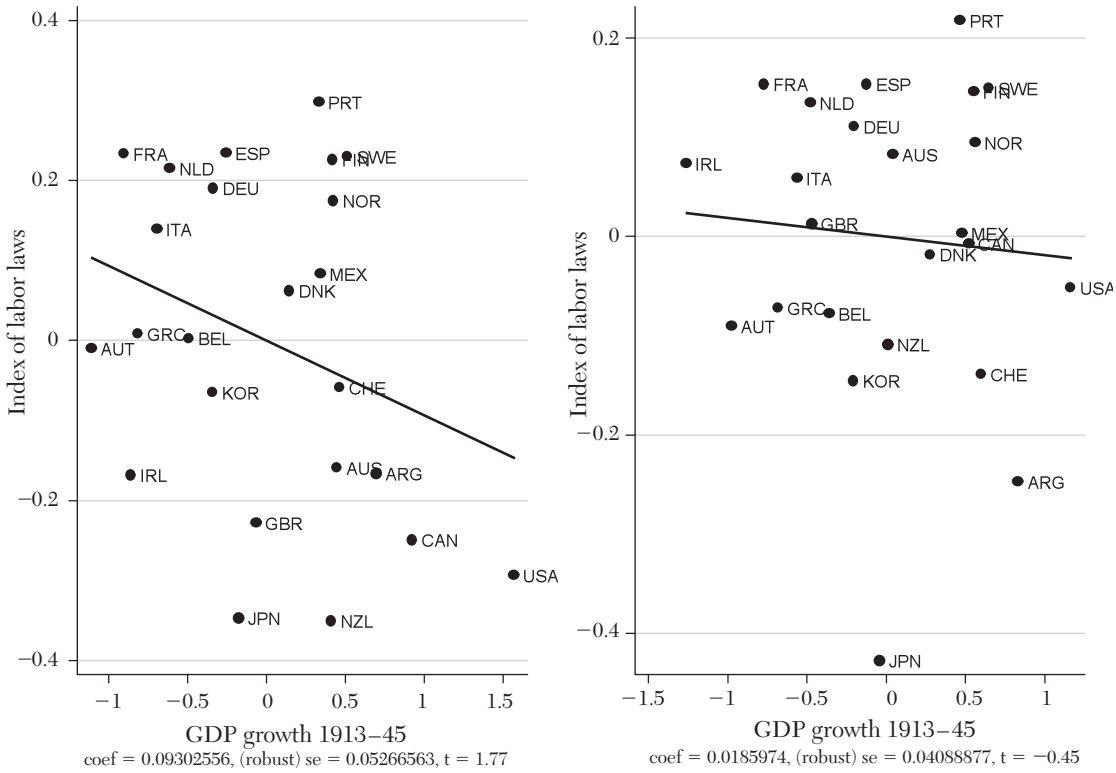

Figure 6. Labor Laws and GDP Growth, 1913–45
(*sample of 24 observations*)

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 system, whether in the form of judicial decisions, regulations, or market adaptations worked better than the policy-implementing solutions of the civil law system. As a consequence of their twentieth century legal and regulatory evolution, common law countries ended up with sharply better investor protection. Their financial markets ran away from the civil law ones, as we see in the data. Looking back over the course of the twentieth century, we see the basic differences in the legal traditions and regulatory strategies playing out in how both the laws and the markets evolve.

8. *A Blueprint for Policy Reform*

Legal Origins Theory points to three important ways in which prevailing legal and regulatory rules might be inefficient. First, to the extent that a country has a particular legal or regulatory style shaped by its legal tradition, it might apply the tools characteristic of that style to areas of regulation where they are inappropriate. A good example of this that we already mentioned is the reliance on frequent interlocutory appeals in civil law bankruptcy procedures. Such appeals are central to the civil procedure of civil law countries, yet result in massive destruction of value in bankruptcy (Djankov et al. 2006, Gamboa-Cavazos and Schneider 2007). Second, a country that introduces legal and regulatory

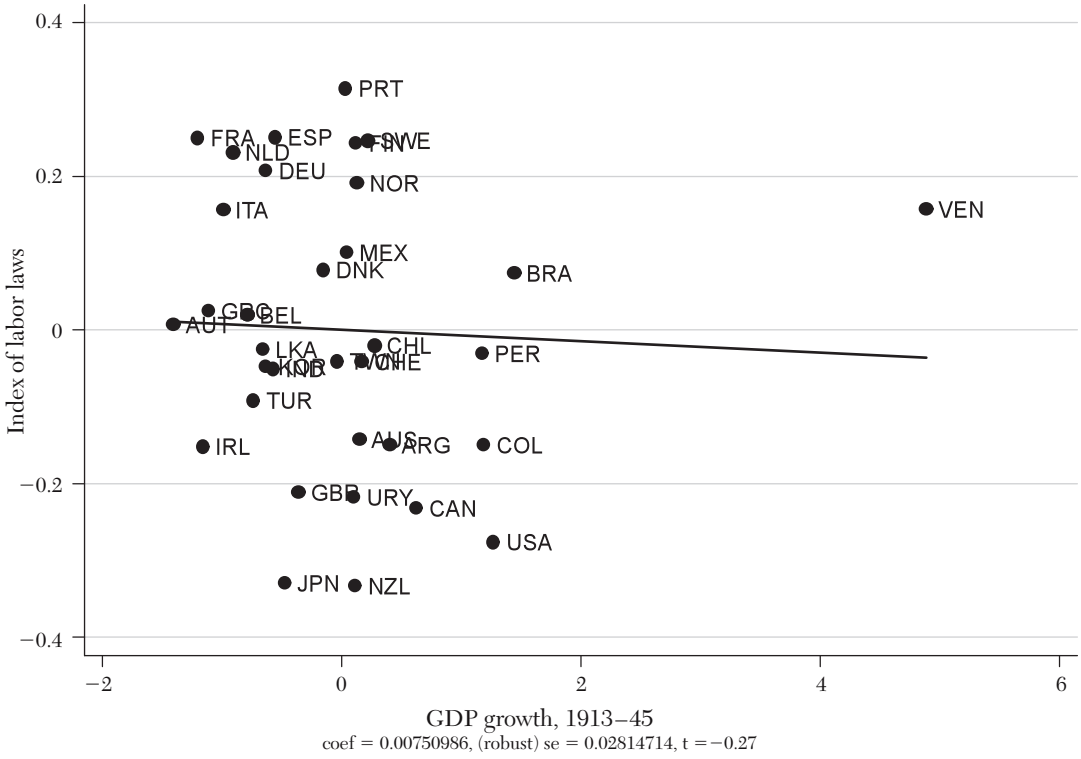

Figure 7. Labor Laws and GDP Growth, 1913–45
(sample of 34 observations)

rules in a situation of extreme disorder may fail to dismantle them when the situation returns to normal. Heavy government ownership of banks, which might have a purpose at the time of extreme financial underdevelopment, becomes a burden under normal circumstances (La Porta et al. 2002). Third, transplantation of legal and regulatory rules might itself become an important source of inefficiency, as rules suitable for developed economies become a source of massive delay and corruption in the developing countries that copy them (Pistor et al. 2003a, 2003b, Spamann 2006a).

The inefficiency of the prevailing legal and regulatory rules points to a blueprint for reforms. Such reforms would focus on the design of what Djankov et al. (2003a) called "appropriate institutions," those that seek to achieve the optimal trade-off between dictatorship and disorder in ways compatible with each country's level of economic development and legal tradition. In many instances, the direction of such reforms is simply less government intervention. Neither underdevelopment nor the legal tradition justifies heavy regulation of entry, so the reduction in those barriers is uncontroversial from the efficiency perspective. Likewise, aspects of the formalism of bankruptcy procedures, which probably are the heritage of civil law, appear detrimental to efficiency at all levels of economic development and could be reduced without impinging the foundations of legal order. In other instances, the best solutions might differ across legal systems. For example, while common law countries depend on investor protection to support their debt markets, many civil law countries have successfully relied on information

sharing institutions, such as credit bureaus, for the same purpose (Djankov et al. 2007). Finally, in situations of extreme disorder, such as participation or recovery from war, even more aggressive government interventions might be appropriate.

The crucial requirement of reform is the availability of objective data on legal and regulatory rules, preferably in a comparative form so that the consequences of particular rules can be evaluated. Perhaps the most useful contribution of our research has been to establish the possibility of collecting such data in a broad range of areas. More recently, the data collection project has made substantial strides through a World Bank Doing Business initiative, 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 this 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 pace of legal and regulatory reform stimulated by the evidence is quickening. Perhaps the greatest progress has been made in the reductions of entry regulations. According to the 2006 Doing Business report, fifty-five countries undertook reforms in 2005 and 2006 that lowered administrative costs of starting a business and obtaining a license. Evgeny Yakovlev and Ekaterina Zhuravskaya (2008) for the case of Russia and David S. Kaplan, Eduardo Piedra, and Enrique Seira (2007) for the case of Mexico find that reductions in entry regulations increase new business start-ups.

The picture is more mixed for labor markets. OECD (2006) reports that labor markets were liberalized in OECD countries in the last fifteen years, although most reforms pertained to temporary rather than permanent employment. Deakin, Priya P. Lele, and Mathias M. Siems (2007) actually find some divergence in labor laws between common law and civil law countries since 1970, with the U.K. deregulating and France doing the opposite. James J. Heckman and Pagés (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 European Union. 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-Cavazos and Schneider 2007).

The use of our indicators of laws and regulations, with their clear correlations with legal origins, for policy analysis has stimulated two objections. Some accuse us of claiming that legal origin is destiny, so any reform of investor protection or of other regulations short of wholesale replacement of the legal system is futile. This is not what Legal Origin Theory says. The theory indeed holds that some aspects of the legal tradition are so hard-wired that changing them would be extremely costly and that reforms must be sensitive to legal traditions. Nonetheless, many legal and regulatory rules, such as entry regulations, disclosure requirements, or some procedural rules in litigation, can be reformed without disturbing the fundamentals of the legal tradition.

Some critics also 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 subindices 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 will be futile. As Berkowitz, Pistor, and Jean-Francois Richard (2003) and Paolo Mauro, Nathan Sussman, and Yishay Yafeh (2006) find, reforms are more likely to succeed when people they affect choose to accept them.

We definitely agree with this point 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 is essential. 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 change. If labor courts rule for employees regardless of what the law says, labor market reformers should take note. 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 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 closer to where the problem actually lies. In either case, the measured rules provide highly relevant data.

Although the evidence on reforms is just beginning to come in and much of it is unfortunately confined to the developed world, many 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.

9. *Conclusion*

Since their publication a decade ago, the two LLSV articles have taken some bumps. We now use different measures of shareholder protection and are skeptical about the use of instrumental variables. Our interpretation of the meaning of legal origins has evolved considerably over time. But the bumps 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 legal and regulatory framework of the society, as well as for economic outcomes. The range of empirically documented legal, economic, and social spheres where legal origins have consequences has expanded over the past decade.

At the end of our overview, 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 the styles of legal traditions—the policy-implementing focus of civil law versus the market-supporting 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. From our perspective, the crucial open questions deal with the evolution of legal systems: How do they deal with crises? How do they enter new spheres of regulation? How do they approach reforms? We have offered many illustrations from the historical record, but a comprehensive account of legal and regulatory evolution under common and civil law does not exist.

Such an account might clarify an issue that has generated tremendous heat, and not much light, throughout this research, namely the circumstances under which each legal tradition "works better." Legal Origins Theory does not point to the overall superiority of common law; to the contrary, it points to the superiority of civil law and reg-

ulatory solutions when the problem of disorder is sufficiently (but not too) severe. 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).

A deeper understanding of the dynamics of legal traditions may also inform the crucial question of whether the differences between common and civil law will 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 United States. 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 state mandates to solve social problems, such as the thirty-five hour workweek in France, is huge.

All this, of course, leaves open the question of which legal rules and regulations the countries are likely to move toward, even if they do not converge. So, in conclusion, we 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 that the common law approach to social control of economic life performs better than the civil law approach. When markets do 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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