THE COMMON LAW AND ECONOMIC GROWTH: HAYEK MIGHT BE RIGHT

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ABSTRACT

Recent finance scholarship finds that countries with legal systems based on the common law have more developed financial markets than civil-law countries. The present paper argues that finance is not the sole, or principal, channel through which legal origin affects growth. Instead, following Hayek, I focus on the common law's association with limited government. I present evidence that common-law countries experienced faster economic growth than civil-law countries during the period 1960–92 and then present instrumental variables results that suggest that the common law produces faster growth through greater security of property and contract rights.

> "[T]he ideal of individual liberty seems to have flourished chiefly among people where, at least for long periods, judge-made law predominated." [FRIEDRICH A. HAYEK, Law, Legislation and Liberty: A New Statement of the Liberal Principles of Justice and Political Economy 94 (1973)]

I. INTRODUCTION

RECENTLY, financial economists have produced evidence that financial markets contribute to economic growth and legal institutions contribute to the growth of financial markets. Robert King and Ross Levine demonstrate that the average rate of increase in per capita gross domestic product (GDP) is greater in countries with more developed financial markets.[1] Rafael La Porta and coauthors show that legal rules protecting creditors and minority shareholders are an important determinant of the cost of external capital.[2] What is also interesting, they find that countries whose legal systems are

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[1] See Robert G. King & Ross Levine, Finance and Growth: Schumpeter Might Be Right, 108 Q. J. Econ. 717 (1993).

[2] See Rafael La Porta *et al.*, Law and Finance, 106 J. Pol. Econ. 1113 (1998); Rafael La Porta *et al.*, Legal Determinants of External Finance, 52 J. Fin. 1131 (1997).

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derived from the common-law tradition provide superior investor protections on average, particularly in comparison to the French civil-law tradition.

Building on these results, Levine, Norman Loayza, and Thorsten Beck treat legal origin as an instrumental variable for financial development.[3] Legal origin is well suited to the purpose. It is largely exogenous, as most countries obtained their legal systems through colonization or conquest. It also correlates strongly with policies (such as creditor and minority shareholder protections) that on the basis of theory and empirical results should lead to greater financial market development. The principal drawback of the analysis is the lack of a theoretical reason to expect legal origin to be especially relevant to investor protection. Indeed, because corporate and bankruptcy law are generally codified in both common- and civil-law countries, differences in those areas should be small compared to differences in other commercial law fields.

The present paper, by contrast, argues that legal origin does not affect economic growth solely, or even principally, through its effect on financial markets. The major families of legal systems were created as a consequence of debates about government structure, not merely about the rules that should govern particular transactions. A country's legal system accordingly reflects, albeit remotely and indirectly, a set of prior choices about the role of the state and the private sector in responding to change.

Friedrich Hayek provides the most prominent discussion in the economics literature of differences between legal families.[4] He argues vigorously that the English legal tradition (the common law) is superior to the French (the civil law), not because of substantive differences in legal rules, but because of differing assumptions about the roles of the individual and the state. In general, Hayek believed that the common law was associated with fewer government restrictions on economic and other liberties. More recently, La Porta and coauthors revived this argument, positing that "[a] civil legal tradition . . . can be taken as a proxy for an intent to build institutions to further the power of the State. . . . A common law tradition . . . can be taken as a proxy for the intent to limit rather than strengthen the State."[5]

These views are correct as a matter of legal history. Although legal systems are most often acquired involuntarily, they were an object of conscious choice in England and France. English common law developed as it did 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. French civil law, by contrast, developed as it

[3] See Ross Levine, Law, Finance, and Economic Growth, 8 J. Fin. Intermediation 8 (1999); Ross Levine, Norman Loayza, & Thorsten Beck, Financial Intermediation and Growth: Causality and Causes, 46 J. Monetary Econ. 31 (2000).

[4] See Friedrich A. Hayek, The Constitution of Liberty (1960); Friedrich A. Hayek, Law, Legislation and Liberty: A New Statement of the Liberal Principles of Justice and Political Economy (1973).

[5] See La Porta *et al.*, The Quality of Government, 15 J. L. Econ. & Org. 222, 232 (1999).

did because the revolutionary generation, and Napoleon after it, wished to use state power to alter property rights and attempted to ensure that judges could 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 a centralized and activist government.[6]

The more complex question is whether these differences in origin and ideology translate into institutional differences that could affect economic outcomes today. We are far removed from seventeenth-century England and eighteenth-century France, and most countries did not choose a legal family. Moreover, civil law has not hindered much of continental Europe from developing highly successful economies, and the common law has not guaranteed economic growth and the security of property rights in every former English colony.

Nevertheless, there is evidence that legal origin explains part of the cross-sectional variation in various measures of government intervention, government size, and public sector efficiency.[7] I attempt to tie that observation in with the law and finance results in two ways. First, I discuss in detail the historical origins of the common and civil law and show that they reflect different views about the relative role of the private sector and the state. Second, I note that there are structural differences between common- and civil-law systems, most notably the greater degree of judicial independence in the former and the lower level of scrutiny of executive action in the latter, that provide governments more scope to alter property and contract rights in civil-law countries. Thus, while the explanation does not turn narrowly on the substance of specific investor protection rules, neither does it rely solely on different "cultural" features of common and civil law.

I then report results of cross-country regression analyses for a large set of nonsocialist countries showing an association between the common law and higher rates of real per capita GDP growth. I eliminate socialist countries from the sample in order to focus specifically on differences between common and civil law. Finally, I test the idea that the institutional features of the common law I have identified are an important avenue through which legal origin affects growth. I use legal origin as an instrument for variables measuring the quality of the judiciary and the security of property and contract rights.

Section II provides theoretical background by drawing a link between the role of the judiciary and economic growth. Section III draws on the history of the common- and civil-law traditions to show that the two differ sharply

[6] See John Henry Merryman, The Civil Law Tradition: An Introduction to the Legal Systems of Western Europe and Latin America 18 (2d ed. 1985) (describing "[g]lorification of the state" as a central element in the civil-law tradition).

[7] See La Porta *et al.*, *supra* note 5.

in attitudes toward the judicial role and notes ongoing institutional effects. Section IV reports the results of cross-country growth regressions. Section V provides additional evidence that the association between the common law and growth is a consequence of greater judicial protection of property and contract rights from executive interference, and Section VI concludes.

II. Theoretical Background

Why should legal origin affect economic growth? One possibility is that the average quality of legal rules varies by origin. The finance literature focuses on the association between the common law and superior rules of investor protection. Nevertheless, it is difficult to make out a strong case for the superiority of the rules produced by the common law or the civil law across the board. Although there are substantive differences, each performs well on the most important measures, providing for enforcement of property and contract rights and requiring compensation for certain wrongful (tortious) acts. The creation of a system of enforceable property rights is one of the most important institutional prerequisites to economic growth.[8] The substantive rules of common and civil law provide redress for private actors' interference in property or contracts. One might therefore think that the results obtained by La Porta and coauthors tell us nothing systematic about legal origin—the common law happened, by chance, to produce good corporate governance rules, and good corporate governance rules are especially important for growth.

Some scholars argue that the common law's adversarial adjudication process tends to result in the survival of efficient and the demise of inefficient rules.[9] The unspoken implication is that statutory law is generally less efficient than judge-made law. More recently, however, these claims have come under sustained attack. Legislatures have incentives to create efficient and not merely redistributive rules.[10] Courts, moreover, can and do promote wealth-destroying, rent-seeking litigation, a fact that prompts Gordon Tullock to argue in favor of civil-law codification.[11]

Another possibility is that the average quality of rules is similar, but the common law provides greater stability and predictability. The common-law tradition includes two features—respect for precedent and the power of an appellate court to reverse the legal conclusions of a lower court—that should

[8] See Douglass Cecil North, Structure and Change in Economic History (1981).

[9] See, for example, Richard A. Posner, Economic Analysis of Law 399–427 (2d ed. 1977); George L. Priest & Benjamin Klein, The Selection of Disputes for Litigation, 13 J. Legal Stud. 1 (1984); George L. Priest, The Common Law Process and the Selection of Efficient Rules, 6 J. Legal Stud. 65 (1977); Paul H. Rubin, Why Is the Common Law Efficient? 6 J. Legal Stud. 51 (1977).

[10] See Jürgen G. Backhaus, Efficient Statute Law, in 2 The New Palgrave Dictionary of Economics and the Law (Peter Newman ed. 1997).

[11] See Gordon Tullock, The Case against the Common Law (1997).

result in more predictable outcomes.[12] These features are nominally lacking in the civil law. Only the code itself—not prior judicial decisions or the pronouncement of a superior tribunal—counts as binding law in the civil-law tradition. Legislatures, unlike common-law courts, are not bound by precedent. The differences are not, however, as sharp in practice as in theory. Civil-law courts in fact consult precedents and the decisions of higher courts.

A final possibility is that the economic significance of the distinction between the common and civil law derives principally from their distinct ideological and constitutional content, not in their substantive rules. As I show below, the common law is historically connected to strong protection for property rights against state action, whereas the civil law is connected to a strong and less constrained central government. The distinction not only is ideological, however, but leads to an important structural difference—the role of the judiciary. In the common-law system, the judge is an independent policy maker occupying a high-status office, whereas in the civil-law system, the judge is a (relatively) low-status civil servant without independent authority to create legal rules.

This difference in the judicial role fragments power more in a common-law system than in a civil-law system. A recent literature focuses on self-enforcing limits on governmental power as a critical feature of a stable and prosperous state.[13] One important form of self-enforcing limitations consists of the fragmentation of governmental power. Fragmentation limits the ability of government actors to grant, and therefore of interest groups to obtain, rents because it is more difficult to coordinate the decisions and actions of multiple government actors.[14] Federalism, or the vertical dispersion of governmental authority among different levels, is an example. Another is the horizontal separation of legislative, executive, and judicial powers. Recent theoretical and empirical scholarship shows that the horizontal dispersion of power produces less redistribution.[15] The fundamental structural distinction between the common law and civil law lies in the judiciary's greater power to act as a check on executive and legislative action in a common-law system. Thus, although both the common and civil law provide strong protections for property and contract rights against other private actors, those rights may be more secure against the government itself in a common-law system.

[12] See Henry G. Manne, The Judiciary and Free Markets, 21 Harv. J. L. & Pub. Pol. 11 (1997).

[13] See, for example, Barry R. Weingast, The Political Foundations of Democracy and the Rule of Law, 91 Am. Pol. Sci. Rev. 245 (1997); Barry R. Weingast, The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development, 11 J. L. Econ. & Org. 1 (1995); Barry R. Weingast, Constitutions as Governance Structures: The Political Foundations of Secure Markets, 149 J. Inst. & Theoretical Econ. 286 (1993).

[14] See Weingast, Constitutions as Governance Structures, *supra* note 13; Thorsten Persson, Gerard Roland, & Guido Tabellini, Comparative Politics and Public Finance, 108 J. Pol. Econ. 1121 (2000).

[15] See Persson, Roland, & Tabellini, *supra* note 14.

III. Ideological and Constitutional Distinctions

A. *Individual versus Collective Liberty*

The substantive rules of most common-law and civil-law jurisdictions evolved from a combination of Roman law concepts and local practices and share many substantive traits. The common law and civil law also played important roles in the creation of the modern English and French constitutional arrangements. Those roles were sharply divergent, however, and as a consequence each system has an ideological content distinct from the substance of particular legal rules.

England's constitutional structure, including the role of the judiciary, took its modern shape as a result of conflicts between Parliament and the Crown in the seventeenth century. During that period, the common law became strongly associated with the idea of economic freedom and, more generally, the subject's liberty from arbitrary action by the Crown. While that association came about partly by chance—because judges opposed the Crown and sided with Parliament—it had substantial consequences for the future role of the judiciary.

Over the course of several centuries, England's large landowners pried their land loose from the feudal system and became in practice owners rather than tenants of the king. Because landowners served as local justices of the peace and the landowning nobility as judges of last resort, the judges unsurprisingly developed legal rules that treated them as owners with substantial rights. The common law they created was principally a law of property. Thus the first of Sir Edward Coke's *Institutes of the Laws of England* is an extensive treatise on the law of real property, structured as a commentary on Littleton's earlier treatise that itself is devoted entirely to property law.[16] William Blackstone describes the Court of Common Pleas, which resolved disputes between subjects, as "the grand tribunal for disputes of property."[17]

During the seventeenth century, however, the Stuart kings attempted to reassert feudal prerogatives as a means of raising revenue.[18] The Crown responded to a budgetary crisis by coercing merchants to grant it loans, using claims of feudal rights to appropriate land and goods, and selling monopoly rights. Disputes over the security of property and executive intervention in

[16] See Sir Edward Coke, The First Part of the Institutes of the Laws of England (1979) (1628). See also Thomas Littleton, Tenures in English (1903) (1481).

[17] See William Blackstone, 1 Commentaries on the Laws of England 22 (1765). David Hume sounds a similar note when he defines a judge as one "who in all disputed cases can fix by his opinion the possession or property of any thing." See David Hume, A Treatise of Human Nature 60 (1969).

[18] See Douglass C. North & Barry R. Weingast, Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England, 49 J. Econ. Hist. 803 (1989).

the economy played a central role in both the English Civil War and the Glorious Revolution.

Indeed, as Richard Pipes argues, the equation of good government with secure property rights reached a high-water mark in English seventeenth-century political thought.[19] Commentators such as James Harrington, Henry Neville, and John Locke described the foremost function of government as the protection of property.[20] They also championed the concept of the rule of law as a superior organizational principle to royal absolutism.

In the dispute between property owners and the Crown, the common-law courts and Parliament took the side of economic freedom and opposed the Crown. For example, in the *Case of Monopolies*, the Court of King's Bench decided that the king's sale of monopoly rights violated the common law.[21] This decision and others challenging the king's right to alter property rights drew the courts, led by Chief Justice Coke, into confrontation with James I, who insisted that the unconstrained royal power trumped the common law. Coke's insistence that the common law bound even the king led James I to dismiss him and like-minded judges. Thus Coke, his successor Matthew Hale, and other common-law judges came to stand for the protection of the rule of law and economic rights against royal power.

Unable to control the ordinary courts, the Stuarts brought politically sensitive cases in a separate body of prerogative courts, such as the Star Chamber, that were under the Crown's direct control and could be counted on to uphold royal authority. After Parliament prevailed in the Civil War, it abolished the prerogative courts. It also rewarded common-law judges with tenure during good behavior and a salary sufficient to make the potential loss of office a substantial disincentive to corruption.[22]

The French experience was very different. Judges were villains, not heroes, in French constitutional development. While security of economic rights was the motivating force in the development of English common law, security of executive power from judicial interference was the motivating force in the post-Revolution legal developments that culminated in the *Code Napoleon*.

The highest courts in pre-Revolutionary France, the *parlements*, were very different from the common-law courts in England. They were part court, part legislature, and part administrative agency. They decided cases, promulgated

[19] See Richard Pipes, Property and Freedom 30–38 (1999).

[20] See James Harrington, The Commonwealth of Oceana (1992) (1656); Henry Neville, Plato Redivivus (1681); John Locke, Two Treatises of Government (1988) (1690).

[21] See Darcy v. Allen (The Case of Monopolies), 11 Co. Rep. 84b, 77 Eng. Rep. 1260 (1603). Coke did not publish the case report until 1615, and he may have embellished it to make a stronger statement against royal power than he had in fact done in 1603. See Jacob Corre, The Argument, Decision and Reports of *Darcy v. Allen,* 45 Emory L. Rev. 1261 (1996). This would not be surprising, as Coke's resistance to James I grew during the 1610s.

[22] See Christopher Hill, The Century of Revolution, 1603–1714 (2d ed. 1980).

regulations, and had partial veto power over royal legislation. As a practical matter, judicial offices were salable and inheritable. The purchase of a judgeship or other royal office automatically conveyed noble status and qualified the purchaser and his descendants for entry into the *parlements*.[23] The return on the investment was straightforward; in addition to obtaining prestige and various exemptions from taxation that accompanied noble status, judges enforced the rigidly controlled system of guilds and monopolies that characterized Bourbon France.[24]

Like the Stuarts in seventeenth-century England, the Bourbons faced a fiscal crisis in eighteenth-century France. Having sold monopoly rights over nearly every trade possible and raised taxes on the peasantry to levels that could not easily be sustained, continuance of royal consumption and war making required new sources of revenue. Louis XV's and Louis XVI's ministers attempted to address the situation by increasing the role of royal administrators, the *intendents*, in the profitable business of enforcing guild and monopoly rights at the expense of the *parlements*. This was partly successful, judging from the fact that the prices of judicial offices declined on average throughout most of the century.[25] The Crown also attempted to increase the tax base by eliminating some aristocratic privileges. The *parlements*, not surprisingly, strongly resisted these strategies, and the resulting conflict between king and *parlements* helped ignite the Revolution.

A central goal of post-Revolution legal reform, then, was to prevent a return of "government by judges."[26] A law of 1790 forbade the judiciary to review any act of the executive.[27] The *parlements* themselves were shortly thereafter abolished and replaced with courts of drastically reduced authority. The Civil Code was accordingly much more than a simplification and codification of legal rules. As the code's principal drafter explained, it was also the expression of an "overriding desire to sacrifice all rights to political ends and no longer consider anything but the mysterious and variable interests of the State."[28] This assertion of the primacy of politics over law later dovetailed nicely with Napoleon's goal of centralizing power in the executive.

The English experience was that dispersion of authority to judges helped to secure desirable political and economic outcomes. The French experience

[23] See Bailey Stone, The French Parlements and the Crisis of the Old Regime (1986).

[24] See Robert B. Ekelund, Jr., & Robert D. Tollison, Politicized Economies: Monarchy, Monopoly, and Mercantilism (Texas A&M Econ. Ser. 14, 1997).

[25] See Stone, *supra* note 23, at 56–58.

[26] See Merryman, *supra* note 6, at 28–29.

[27] See L. Neville Brown, John S. Bell, & Jean-Michel Galabert, French Administrative Law 46 (5th ed. 1998).

[28] See Discours préliminaire prononcé par Portalis, le 24 thermidor an 8, lors de la présentation du projet arrêté par las commission du gouvernement, in P. A. Fenet, Recueil Complet des Travaux Preparatoires du Code Civil 465 (1968) (1827): "le désir exalté de sacrificier violemment tous les droits à un but politique, et de ne plus admettre d'autre considération que celle d'un mystérieux et variable intérêt d'état." I thank John Portman for the translation in the text.

was just the opposite. The authority of the *parlements* stalled needed reforms in *ancien régime* taxation, and the lesson drawn was that economic and political progress required the centralization of power. The civil law and common law, then, are closely connected to the more centralizing tendency of French political thought and the decentralized, individualistic tradition of English political thought, respectively. Hayek argued that English and French concepts of law stemmed from English and French models of liberty, the first (derived from Locke and Hume) emphasizing the individual's freedom to pursue individual ends and the second (derived from Hobbes and Rousseau) emphasizing the government's freedom to pursue collective ends.[29]

In this, Hayek echoed many nineteenth- and early twentieth-century writers. Francis Lieber argued that "Gallican liberty is sought in the *government*, and according to an Anglican point of view, it is looked for in a wrong place, where it cannot be found. Necessary consequences of the Gallican view are, that the French look for the highest degree of political civilization in *organization*, that is, in the highest degree of interference by public power. The question whether this interference be despotism or liberty is decided solely by the fact *who* interferes, and for the benefit of which class the interference takes place, while according to the Anglican view this interference would always be either absolutism or aristocracy."[30]

More recently, Pipes described the French eighteenth century as a period of intellectual "assault" on property.[31] A part of the French intellectual heritage is a concept of law that is more congenial to economic intervention and redistribution as acts of the "general will."

B. Structural Consequences

The common law and civil law continue to reflect their intellectual heritage and, as a consequence, legal origin is relevant both to the ideological background and the structural design of government. At an ideological or cultural level, the civil-law tradition assumes a larger role for the state, defers more to bureaucratic decisions, and elevates collective over individual rights. It casts the judiciary into an explicitly subordinate role. In the common-law tradition, by contrast, judicial independence is viewed as essential to the protection of individual liberty.[32] These ideological distinctions may be particularly important given the prevalence of lawyers in government in many countries.

At a structural level, the two systems' different attitudes about the judicial

[29] See Hayek, *supra* note 4, at 54–70.

[30] Francis Lieber, Anglican and Gallican Liberty, in 2 Miscellaneous Writings 369, 382–83 (Daniel Coit Gilman ed. 1881) (emphasis in original). The essay was originally published in 1848.

[31] See Pipes, *supra* note 19, at 39–44.

[32] Note that George III's undermining of the independence of colonial judges was one of the grievances listed in the Declaration of Independence.

role have produced distinct institutional arrangements, including a difference in the authority of judges to review executive action. A central feature of the civil law is a sharp distinction between "private" law (the law that governs relations between citizens) and "public" law (the law that governs relations between the citizen and the state). The ways in which private and public rights are protected differ both procedurally and substantively, and in general, public law in a civil-law system puts light restraints on public officials compared to a common-law system.[33]

Procedurally, the ordinary courts in a civil-law jurisdiction typically have no authority to review government action. In France, the relevant statute remains unchanged from 1790: "It shall be a criminal offence for the judges of the ordinary courts to interfere in any manner whatsoever with the operation of the administration, nor shall they call administrators to account before them in respect of the exercise of their official functions."[34] France eventually developed a system of specialized administrative courts authorized to review administrative decisions. These courts, however, are under the direct supervision of the executive. Its judges are trained at the administrative schools alongside the future civil servants whose decisions they will oversee.[35]

Substantive administrative law in a civil-law system insists that the courts intrude as little as possible in the administration's pursuit of the public interest.[36] The strong emphasis on property and contract that characterizes private law gives way in public law to a concern for preserving the government's freedom to pursue collective ends.[37]

Under the common law, by contrast, there is no sharp distinction between private and public law. As described by the United Kingdom's highest court, the House of Lords, the same principles apply to deprivations of property by private and public actors.[38] The same judges who enforce private rights, moreover, review administrative action. Although some common-law jurisdictions (such as the United States) have administrative courts, their decisions are subject to review by the ordinary courts.

Long after the English and French revolutions, commentators have described these differences in judicial review of administrative action as a proxy for restrictions on the executive's freedom of action. A recent comparative law text argues that the common law's hostility to specialized courts stems

[33] See René David & John E. C. Brierley, Major Legal Systems in the World Today: An Introduction to the Comparative Study of Law (3d ed. 1985).

[34] Loi des 16–24.8.1790, Article 13, quoted in Brown, Bell, & Galabert, *supra* note 27, at 46.

[35] See Charles Szladits, The Civil Law System, in 2 International Encyclopedia of Comparative Law 15, 41 (René David ed. 1974).

[36] See Brown, Bell, & Galabert, *supra* note 27, at 176.

[37] See Szladits, *supra* note 35, at 48–49.

[38] See Davy v. Spelthorne Borough Council, [1983] 3 All Eng. Rep. 278, 285 (opinion of Lord Wilberforce).

from the controversy over prerogative courts in the seventeenth century.[39] A. V. Dicey notoriously argued that France did not possess the "rule of law" because ordinary courts are not permitted to review administrative action, touching off a debate among comparative law scholars that continues to the present day.[40]

C. The Problem of Germany and Scandinavia

German and Scandinavian civil law are distinct traditions that developed separately from French civil law. This complicates the task of drawing general distinctions between common- and civil-law systems. On several dimensions, German and Scandinavian civil law can be grouped together with French civil law without difficulty. All rely on legislative rather than judge-made rules, and in all the judiciary occupies a lower status than in a common-law system. Both the French and German civil codes are associated with the development of a powerful central government.

There are also important differences. Codification was not part of a general upheaval, but rather a gradual process, in the various German states and in Scandinavia from the time of rediscovery of Roman law in the Middle Ages. More important, the development of separate administrative courts in Germany did not, as in France, stem from a fear of judicial interference with the bureaucracy—rather, Germany's administrative court system proceeded from a desire to subject administrators to external control.[41] In order to prevent executive or legislative interference, Germany's constitution provides for the independence of judges, who cannot be reassigned without their consent.[42] For these reasons, Hayek found the German civil-law system more conducive to individual liberty than its French counterpart.[43] Much of the prior law and finance literature treats German and Scandinavian civil law as separate categories.[44]

Drawing a sharp distinction between the civil-law subfamilies, however, might appear to a skeptical observer to be post hoc rationalization. The handful of countries outside western Europe that have adopted German civil law include Japan and South Korea, which have had extremely successful

[39] See Peter de Cruz, Comparative Law in a Changing World (2d ed. 1999).

[40] See A. V. Dicey, Lectures Introductory to the Study of the Law of the Constitution 178–79 (1886); Brown, Bell, & Galabert, *supra* note 27, at 4–5.

[41] See Thorsten Beck, Asli Demirgüç-Kunt, & Ross Levine, Law, Politics and Finance 13–14 (unpublished manuscript 2001) (available at http://www.csom.umn.edu/wwwpages/faculty/rlevine); Szladits, *supra* note 35, at 35.

[42] Grundgesetz, Article 97.

[43] See Hayek, *supra* note 4, at 193–204.

[44] See, for example, La Porta *et al.*, Law and Finance, *supra* note 2; La Porta *et al.*, Legal Determinants of External Finance, *supra* note 2.

economies in the postwar period.[45] Most of the remaining German, and all Scandinavian, civil-law countries are in economically advanced western Europe. In order to avoid this concern, I treat all civil-law countries as a single category except as otherwise noted. Any bias, then, would be in the direction of making the civil law look better.

IV. Law and Growth: Cross-Country Evidence

In the tradition of cross-country growth studies, I examine differences in average annual growth in real per capita GDP. The sample consists of 102 countries (see Appendix A) covered by the Penn World Tables, Mark 5.6.[46] Growth rates are averaged over the period 1960–92, and I eliminate any country for which real per capita GDP data are missing for more than 3 years of that period. Following the prior literature, I take the description of legal systems from Thomas Reynolds and Arturo Flores.[47] For all but a handful of countries, assignment to a legal family is straightforward.[48] There are a few countries in east Asia and Africa that have had both English and French influence. However, for several of these, the Privy Council in England remains the highest court of appeal. Given my focus on the common law as a constitutional arrangement, I assign these to the common-law family.[49] I eliminate only Cameroon from the sample on the basis that French and English influences are too mixed to make a choice. I also exclude some Middle Eastern countries whose legal systems are almost entirely based on Islamic law (such as Saudi Arabia and Oman) and a few countries whose legal systems have been largely free of European influence (such as Ethiopia and Iceland). Finally, all socialist countries are eliminated in order to focus strictly on differences between the common and civil law.

I test the effect of the common law using ordinary least squares regressions with the average annual rate of real per capita GDP growth (GROW) as the dependent variable (see Appendix B). The independent variable of interest is a dummy (COMMONLAW) that takes on the value one for common-law countries and zero otherwise. I begin with a "base" regression that includes

[45] There have been some much less successful adopters, such as Russia and much of eastern Europe, but these countries are socialist during my sample period and therefore excluded from the sample.

[46] For a description of the Penn World Tables, see Robert Summers & Alan Heston, The Penn World Tables (Mark 5): An Expanded Set of International Comparisons, 1950–1988, 106 Q. J. Econ. 327 (1991).

[47] See Thomas H. Reynolds & Arturo A. Flores, Foreign Law: Current Sources of Codes and Basic Legislation in Jurisdictions of the World (1989).

[48] See de Cruz, *supra* note 39, at 34–36.

[49] This results in one difference between my assignments and that of some of the law and finance literature. I include Mauritius, a Commonwealth country that recognizes the jurisdiction of the Judicial Committee of the Privy Council, in the common-law category, whereas some studies assign it to the civil-law category.

TABLE 1

DESCRIPTIVE STATISTICS, COMMON- AND CIVIL-LAW COUNTRIES

A. FULL SAMPLE (n = 102)				
Variable	Mean	Standard Deviation	Minimum	Maximum
GROW	2.06	1.71	−2.00	7.03
PCG60	2421.98	2309.97	313.00	9895.00
PRI60	.75	.34	.05	1.44
GPO	2.11	1.00	.17	4.08
INV	16.34	7.94	1.40	34.43
B. COMMON-LAW COUNTRIES (n = 38)				
Variable	Mean	Standard Deviation	Minimum	Maximum
GROW	2.44	1.81	−.83	6.67
PCG60	2274.89	2504.96	313.00	9895.00
PRI60	.72	.33	.09	1.26
GPO	2.18	.96	.17	3.71
INV	15.83	7.66	1.47	31.18
C. CIVIL-LAW COUNTRIES (n = 64)				
Variable	Mean	Standard Deviation	Minimum	Maximum
GROW	1.83	1.61	−2.00	7.03
PCG60	2509.31	2201.92	367.00	9409.00
PRI60	.76	.35	.05	1.44
GPO	2.07	1.03	.24	4.08
INV	16.64	8.14	1.40	34.43

NOTE.—The variables are the average annual rate of real per capita GDP growth (GROW), the initial real per capita GDP (PCG60), the initial rate of enrollment in primary education (PRI60), the average annual rate of population growth during the sample period (GPO), and the average investment share of GDP over the sample period (INV).

prevalent conditioning variables from the cross-country growth literature.[50] The variables are initial real per capita GDP (PCG60), the initial rate of enrollment in primary education (PRI60), the average annual rate of population growth during the sample period (GPO), and the average investment share of GDP over the sample period (INV). Table 1 provides descriptive statistics for each variable in the base regression for the full sample and the common- and civil-law subsamples.

The first column of Table 2 reports results for the base regression (Model 1). All of the conditioning variables enter with the signs we would predict from theory and prior empirical studies. Initial per capita GDP and the rate of population growth are both negatively related to growth, and initial enrollment in primary education and average investment share of GDP are

[50] See Ross Levine & David Renelt, A Sensitivity Analysis of Cross-Country Growth Regressions, 82 Am. Econ. Rev. 942 (1992), for a survey. Xavier Sala-i-Martin argues that a less restrictive test finds a larger set of robust variables. See Xavier X. Sala-i-Martin, I Just Ran Two Million Regressions, 87 Am. Econ. Rev. Papers & Proc. 178 (1997). I use some of these additional variables in robustness checks described below.

TABLE 2

COMMON LAW AND GROWTH, 1960–92

Variable	Model 1	Model 2
COMMONLAW	.714**	.768**
	(.261)	(.258)
PCG60	−.0004**	−.0005**
	(.000)	(.000)
PRI60	1.790**	1.546**
	(.531)	(.527)
GPO	−.300*	−.092
	(.145)	(.134)
INV	.121**	.113**
	(.028)	(.029)
ETHNIC		−1.405**
		(.504)
SEC60		.719
		(.944)
INFLATION		−.002+
		(.001)
EXPORT		1.074+
		(.599)
R^2	.54	.59
N	102	97

NOTE.—The dependent variable for all regressions is GROW. For variable definitions, see Appendix B. White-corrected standard errors are in parentheses.

+ Significant at the 10 percent level.

* Significant at the 5 percent level.

** Significant at the 1 percent level.

positively related to growth. The coefficient on the common-law dummy variable is both economically and statistically significant. Controlling for the other variables, the common-law countries grew, on average, .71 percent per year faster than the civil-law countries ($p = .007$).

I also estimate an extended model that includes other variables that have been found to be significantly related to growth but that should not be related to legal origin. The additional variables are the initial rate of secondary school enrollment (SEC60), William Easterly and Levine's ethnoliguistic fractionalization index (ETHNIC),[51] the average annual rate of change in the GDP deflator (INFLATION), and the average export share of GDP over the sample period (EXPORT).

Results for the extended model are reported as Model 2 in Table 2. Each of the new variables enters with the expected sign. The estimated coefficient on the common-law dummy is little changed from Model 1 and remains significant at the 1 percent level. As found in other studies, initial per capita

[51] See William Easterly & Ross Levine, Africa's Growth Tragedy: Policies and Ethnic Divisions, 112 Q. J. Econ. 1203 (1997).

TABLE 3

SENSITIVITY: REGION AND RELIGION

Variable	Model 3	Model 4
COMMONLAW	.561*	.557*
	(.266)	(.241)
PCG60	−.0005**	−.0004**
	(.000)	(.000)
PRI60	1.967**	2.064**
	(.617)	(.680)
GPO	−.155	−.234
	(.141)	(.145)
INV	.086**	.085**
	(.029)	(.028)
AFRICA	−1.293**	
	(.375)	
LATINAM	−1.321**	
	(.352)	
PROTESTANT		−.197*
		(.099)
CATHOLIC		−.0001
		(.004)
MUSLIM		1.432**
		(.448)
CONFUCIAN		7.646**
		(1.42)
BUDDHIST		1.289+
		(.759)
R^2	.64	.70

NOTE.—The dependent variable for all regressions is GROW. For variable definitions, see Appendix B. White-corrected standard errors are in parentheses.

+ Significant at the 10 percent level.

* Significant at the 5 percent level.

** Significant at the 1 percent level.

GDP and the investment share of GDP are the most robust predictors. The common-law dummy, however, performs quite well.

Table 3 reports the results of regressions that attempt to meet two possible objections to the analysis thus far. Sub-Saharan Africa and Latin America were notably poor performers during the period of interest. Latin America consists almost entirely of civil-law countries. Any omitted variable causing low growth in Latin America could, therefore, lead to a mistaken conclusion that the civil law is to blame. Africa is unusual on many accounts during the period of interest.[52] I accordingly estimate the base regression after adding in dummy variables for sub-Saharan Africa and Latin America. The results are reported as Model 3 in Table 3. The common-law dummy is still associated with higher growth, although the magnitude is lower and the significance level is 5 percent.

[52] See *id.*

One might also wonder whether common-law versus civil-law origin, for part of the world, is merely a proxy for Protestant versus Catholic religious heritage. The package of endowments received by many former colonies includes, along with the common or civil law, the English, French, Spanish, or Portuguese language and Protestantism or Catholicism. Max Weber famously argued that Protestant (particularly Calvinist) doctrine encouraged vigorous worldly pursuits as a means of demonstrating one's faith and thereby unleashed a "heroic age" of capitalism.[53] I therefore estimate the base regression together with a set of religion variables previously used by Robert Barro.[54] These variables measure the percentage of the population that practices some form of Protestantism, Roman Catholicism, Islam, Buddhism, or Confucianism.[55] The results are reported as model 4 in Table 3. Estimated coefficients on all religion variables other than the percentage of Catholics are significant, and those on the Confucianism, Buddhism, and Islam variables are large. The estimated coefficient and significance level for the common-law dummy, however, are almost unchanged from model 3.

The variables I have used to this point are drawn principally from Levine and David Renelt's study of variables whose estimated coefficients are highly robust to different specifications of the growth equation.[56] In regressions not reported here, I added to the base regression groups of variables from Xavier Sala-i-Martin's 1997 survey of empirical growth research.[57] Using a less restrictive approach than Levine and Renelt, Sala-i-Martin found 22 variables from the prior literature that are robust. In addition to those already reported herein, these include equipment investment,[58] the number of years an economy was open between 1950 and 1992,[59] the capital city's distance from the equator,[60] the average number of revolutions and coups per unit time,[61] the fraction of GDP in mining,[62] and several policy-related variables. Although

[53] See Max Weber, The Protestant Ethic and the Spirit of Capitalism (1958).

[54] See Robert J. Barro, Determinants of Economic Growth: A Cross-Country Empirical Study (1997). I obtained the data from Sala-i-Martin's Web page (http://www.columbia.edu/~xs23/data.htm).

[55] These are the only religion variables that are robustly associated with growth. See Sala-i-Martin, *supra* note 50, at 181.

[56] See Levine & Renelt, *supra* note 50.

[57] See *id.*

[58] See J. Bradford De Long & Lawrence H. Summers, Equipment Investment and Economic Growth, 106 Q. J. Econ. 445 (1991).

[59] See Jeffrey Sachs & Andrew Warner, Economic Reform and the Process of Global Integration: Comments and Discussion, 1995 Brookings Papers Econ. Activity 1.

[60] See Robert J. Barro & Jong-Wha Lee, International Comparisons of Educational Attainment, 32 J. Monetary Econ. 363 (1993).

[61] See Robert J. Barro, Economic Growth in a Cross-Section of Countries, 106 Q. J. Econ. 407 (1991).

[62] See Robert E. Hall & Charles I. Jones, Why Do Some Countries Produce So Much More Output per Worker than Others? 114 Q. J. Econ. 83 (1999).

I did not use every possible specification, I employed each of the additional "robust" Sala-i-Martin variables in small groups in additional regressions and found that the estimated coefficient on the common-law dummy remains in the range of .5–.7 and is statistically significant in all specifications. The estimated coefficient becomes unstable when using large numbers of variables and regional dummies. However, the coefficients on all of the variables (including the investment variable) are unstable in these specifications.

As discussed above, the German and Scandinavian civil-law families can be viewed as distinct from the French law tradition. There are not enough German and Scandinavian civil-law countries to include separate dummies for each and expect significant results. I did, however, estimate all of the regressions using a dummy for French civil law in place of the common-law dummy, in effect grouping German and Scandinavian origin countries with the common-law countries. The absolute values of the coefficients were slightly higher on average compared to those in the regressions estimated with a common-law dummy. The result, although far from conclusive, is consistent with the notion that German and Scandinavian law fit somewhere between French law and common law.

V. Testing the Intervention Hypothesis

The results so far confirm directly what Levine finds using legal origin as an instrument for financial market development.[63] The existing literature focuses on variation in minority shareholder and creditor rights and their effects on financial markets as the causal link between legal origin and growth.

I suggest a different and broader link from legal origin to more dispersed governmental power and from there to superior protections for property and contract rights. I therefore examine measures of judicial power, security of property rights, and contract enforcement and use legal origin as an instrument for those variables.

The economic growth literature provides measures, albeit imperfect, for each of these phenomena. Paolo Mauro uses Business International Corporation's (BIC's) index of judicial quality, a survey-based assessment of the "efficiency and integrity" of the judiciary.[64] I expect judges in common-law countries, who occupy a higher-prestige office (and therefore have more to lose) relative to their civil-law counterparts, and who have more authority to redress adverse actions by other governmental actors, to score more highly on this index. Kim Holmes and coauthors develop an index of the security of property rights.[65] Christopher Clague and coauthors define "contract in-

[63] See Levine, *supra* note 3.

[64] See Paolo Mauro, Corruption and Growth, 110 Q. J. Econ. 681 (1995).

[65] See 1997 Index of Economic Freedom (Kim R. Holmes, Bryan T. Johnson, & Melanie Kirkpatrick eds. 1997).

tensive money" (CIM) as the ratio of broad money (M2) minus currency to M2 and argue that CIM is a measure of the extent to which contracts are enforced.[66] They reason that CIM, unlike currency, represents a contract right, such as the right of the payee of a check to obtain money from the drawee bank. Second, although currency is well suited to simultaneous exchange, long-term contracting more frequently relies on CIM. The use of CIM in preference to currency, therefore, reflects confidence in the system of contract enforcement.

For the sake of completeness, I examine other measures of state intervention in the economy. Mauro uses BIC's "red-tape" index that assesses the prevalence of bureaucratic obstacles to business activity.[67] Stephan Knack and Philip Keefer use the International Country Risk Guide's "rule of law" index that assesses adherence to legal procedures and "expropriation risk" index that assesses the risk of confiscation or nationalization of business assets.[68] In addition to the property rights measure, Holmes and coauthors provide a "business regulation" index that seeks to capture the extent of regulatory burdens on business activity.[69] Barro employs an index of civil liberties that assesses rights of speech and assembly and personal autonomy in matters such as religion, education, and physical movement.[70] James Gwartney and coauthors derive several measures of government involvement in the economy, including government consumption as a percentage of GDP, an index of the importance of state-owned enterprises in the national economy, government transfers and subsidies as a percentage of GDP, and top marginal tax rates.[71]

Each of these measures has some drawbacks. Many are survey based and accordingly subjective. Because the surveys are in all cases compiled by Anglophone firms or researchers, the compilers could be biased in favor of more familiar legal arrangements. The CIM ratio is a helpful addition because it is an objective measure, but it may reflect phenomena other than contract

[66] See Christopher Clague *et al.*, Contract-Intensive Money: Contract Enforcement, Property Rights, and Economic Performance, 4 J. Econ. Growth 187 (1999).

[67] See Mauro, *supra* note 64.

[68] See Stephan Knack & Philip Keefer, Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures, 7 Econ. & Pol. 207 (1995); see also Levine, *supra* note 3. The rule-of-law measure might seem to be at least as relevant as the property and contract enforcement measures. However, the rule-of-law assessment is problematic because, following the dominant intellectual trend in legal theory, the compilers focus only on whether the government acts with a high degree of procedural regularity. Thus the former Soviet Union and its client states, for example, score relatively high on this measure. Hayek frequently criticized legal positivists for their insistence that "legality" consists only in adherence to appropriate procedures, as opposed to respect for individual rights.

[69] See 1997 Index of Economic Freedom, *supra* note 65.

[70] See Barro, *supra* note 54, at 55–58. The data come from Raymond D. Gastil, Freedom in the World (various years).

[71] See James D. Gwartney, Robert Lawson, & Walter Block, Economic Freedom of the World, 1975–1995 (1996).

TABLE 4

PARTIAL CORRELATIONS WITH COMMON LAW

Variable	Partial Correlation Coefficient	*p*-Value
JUDIC	.296	.021
PROP	.218	.044
CIM	.303	.003
REDTAPE	.168	.196
RULELAW	.164	.124
EXPROP	.078	.604
CIVLIB	−.267	.007
BUSREG	.181	.096
MARG	−.124	.314
GOVCONS	.125	.264
SOE	−.104	.358
TRANSUB	−.107	.361

NOTE.—All partial correlations control for starting real per capita GDP (PCG60 or PCG80, depending on the period for which the relevant variable is measured). The variable CIVLIB is defined so that a lower score implies more civil liberties. All other survey-based measures (JUDIC, PROP, REDTAPE, RULELAW, EXPROP, and BUSREG) are defined so that a higher score is better. For variable definitions, see Appendix B.

enforcement. The judicial quality, red-tape, rule-of-law, and expropriation risk measures were compiled for use by foreign businesses and are therefore concerned principally with the government's treatment of foreign firms rather than domestic firms and citizens. The measures of government size are noisy measures of intervention because governments can choose to engage in commercial activities directly or to heavily regulate the private sector. Either may have a retarding effect on growth, but the former would tend to produce larger measures of government spending and employment.

It is also obvious by inspection that rich countries score better than poor ones, on average, on each of these measures. I therefore begin by examining the partial correlations between each of these measures and the common-law dummy, controlling for starting real per capita GDP. These partial correlations are reported in Table 4. As predicted, there are statistically significant partial correlations between the common law and the judicial quality, property rights, and contract rights (CIM) measures. The common law's partial correlation with the civil liberties measure is also large and significant. The common-law countries perform better (that is, the sign of the correlation coefficient is consistent with less intervention) for each measure except government consumption. Using multivariate analysis, La Porta and coauthors find a strong association between common-law origin and less interventionist government using several of these measures.[72]

On the basis of these results, I use legal origin as an instrumental variable for judicial quality, the security of property rights, and contract enforcement.

[72] See La Porta *et al.*, *supra* note 5, at 246–50.

TABLE 5

COMMON LAW AND GROWTH: INSTRUMENTAL VARIABLES

A. SIMPLE CONDITIONING SET						
Variable	Estimated Coefficient	(White-Corrected) Standard Error	*P*-Value	*N*	*J*-Statistic	*P*-Value, OIR
JUDIC	.430	.128	.001	60	.032	.381
PROP	1.798	.372	.000	85	.004	.848
CIM	.116	.039	.004	91	.036	.193
B. EXTENDED CONDITIONING SET						
Variable	Estimated Coefficient	(White-Corrected) Standard Error	*P*-Value	*N*	*J*-Statistic	*P*-Value, OIR
JUDIC	.270	.273	.328	60	.069	.127
PROP	1.756	.621	.006	85	.005	.807
CIM	.093	.031	.004	91	.019	.410

NOTE.—OIR = overidentifying restrictions. The dependent variable for all regressions is GROW. The simple conditioning set includes PCG60, PRI60, and ETHNIC. The extended conditioning set includes, in addition, GPO and INV. The instruments are COM, FRCIV, and GERCIV. For variable definitions, see Appendix B.

I compute generalized method of moments (GMM) estimates for three regression equations using the BIC judicial quality index (JUDIC), the Holmes et al. property rights index (PROP), and the CIM ratio (CIM) of Clague and coauthors as endogenous variables. In order to have sufficient degrees of freedom to test for overidentifying restrictions, I use dummy variables for common law, French civil law, and German civil law as instruments (Scandinavian civil law is the omitted category).

I first estimate the GMM coefficients using a simple set of additional conditioning information consisting of initial per capita GDP, primary school enrollment, and ethnic fractionalization.[73] I then reestimate with an extended conditioning set that includes population growth and average investment. In each case, after computing the GMM estimates, I test for overidentifying restrictions by using a Lagrange multiplier test. As a check, I also estimate the same regressions using two-stage least squares and obtain consistent results.

Table 5 reports results for the instrumental variables regressions. Using the simple conditioning set, the judicial quality, property rights, and contract enforcement variables each enters significantly at the 1 percent level. With the extended conditioning set, the estimated coefficient on the judicial quality index loses significance (when estimated using two-stage least squares, it is significant at the 10 percent level). The coefficients on the other two variables

[73] The procedure tracks Levine, *supra* note 3, at 26–31.

are slightly reduced and remain significant at the 1 percent level. The weaker results in the extended regression may reflect the fact that judicial quality (in particular), property rights, and contract enforcement may affect growth in part directly and in part indirectly through investment. The investment variable is highly correlated with each of the three endogenous variables.

Looking at the Lagrange multiplier test for overidentifying restrictions, in no case can we reject the hypothesis that legal origin affects growth solely through its effect on the endogenous variables (in other words, that the legal origin variables are uncorrelated with the error term). Levine reaches a similar conclusion with respect to a set of endogenous variables that measure financial development.[74] The inability to reject the null hypothesis in any of these cases suggests that the overidentifying restrictions test has low power with the sample sizes typical in cross-country growth studies. More important, the results support the hypothesis that legal origin affects growth through channels other than finance.

The data, then, are consistent with the notion that the common law produces improvements in property rights and contract enforcement that in turn speed economic growth. The instrumental variables results also suggest that the strong association between secure property and contract rights and growth is causal, and not simply a consequence of simultaneity.

VI. Conclusion

Common and civil lawyers have long debated the relative merits of the two legal traditions. These discussions, like the law and finance literature, focus on differences in substantive rules. An alternative view, associated most notably with Hayek, focuses on legal tradition as a reflection of different philosophies of government. The common law and civil law, in this view, proceed from different views about the relative role of collective and individual action. These associations have to do with possibly chance connections between the judiciary and specific political problems of seventeenth-century England and eighteenth-century France, but once established, they have had continuing effects on institutional arrangements. Judges are invested with greater prestige and insulated more from political influence in common-law systems. Administrative bodies are insulated more from judicial influence in civil-law systems. These differences result in stricter protection for property and contract rights against government action in the common-law tradition.

This paper's results suggest that the association between common law and growth is not an artifact of different rules of investor protection. Rather, it stems from a more fundamental divergence between the security of property and contract rights in the two systems.

[74] See *id.* at 29–31.

APPENDIX A

Sample of Countries

I. Common-Law Countries

Australia, Bangladesh, Barbados, Botswana, Canada, Cyprus, Gambia, Ghana, Hong Kong, India, Ireland, Israel, Jamaica, Kenya, Lesotho, Liberia, Malawi, Malaysia, Malta, Mauritius, Nepal, New Zealand, Nigeria, Pakistan, Papua New Guinea, Sierra Leone, Singapore, South Africa, Sri Lanka, Swaziland, Tanzania, Thailand, Trinidad and Tobago, Uganda, United Kingdom, United States, Zambia, Zimbabwe

II. Civil-Law Countries

Algeria, Argentina, Austria, Belgium, Benin, Bolivia, Brazil, Burkina Faso, Burundi, Central African Republic, Chad, Chile, Colombia, Congo, Costa Rica, Côte d'Ivoire, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Finland, France, Gabon, Germany, Greece, Guatemala, Guinea-Bissau, Haiti, Honduras, Indonesia, Iran, Iraq, Italy, Japan, Jordan, Luxembourg, Madagascar, Mali, Mauritania, Mexico, Morocco, Netherlands, Nicaragua, Niger, Norway, Panama, Paraguay, Peru, Philippines, Portugal, Rwanda, Senegal, South Korea, Spain, Suriname, Sweden, Switzerland, Syria, Togo, Tunisia, Turkey, Uruguay, Venezuela

APPENDIX B

Variable Definition and Sources

AFRICA: Dummy for Sub-Saharan African countries (Oxford Atlas of the World (2d ed. 1994))

BUDDHIST: Buddhists as percent of population (Xavier X. Sala-i-Martin, I Just Ran Two Million Regressions, 87 Am. Econ. Rev. Papers & Proc. 178 (1997); data obtained from http://www.columbia.edu/~xs23/data.htm)

BUSREG: Business regulation index (Kim Holmes, Bryan Johnson, & Melanie Kirkpatrick, 1997 Index of Economic Freedom (1997))

CATHOLIC: Roman Catholics as percent of population (Xavier X. Sala-i-Martin, I Just Ran Two Million Regressions, 87 Am. Econ. Rev. Papers & Proc. 178 (1997); data obtained from http://www.columbia.edu/~xs23/data.htm)

CIM: Average ratio of broad money (M2) less currency to M2, 1969–90 (Christopher Clague *et al.*, Contract-Intensive Money: Contract Enforcement, Property Rights, and Economic Performance, 4 J. Econ. Growth 187 (1999))

CIVLIB: Index of civil liberties (Raymond D. Gastil, Freedom in the World (various years))

COMMONLAW: Dummy for common-law origin (Thomas H. Reynolds & Arturo A. Flores, Foreign Law: Current Sources of Codes and Basic Legislation in Jurisdictions of the World (1989))

CONFUCIAN: Adherents to Confucianism as percent of population (Xavier X. Sala-i-Martin, I Just Ran Two Million Regressions, 87 Am. Econ. Rev. Papers & Proc. 178 (1997); data obtained from http://www.columbia.edu/~xs23/data.htm)

ETHNIC: Ethnolinguistic fractionalization (William Easterly & Ross Levine, Africa's Growth Tragedy: Policies and Ethnic Divisions, 112 Q. J. Econ. 1203 (1997))

EXPORT: Average export share of GDP, 1960–89 (Ross Levine & David Renelt, A Sensitivity Analysis of Cross-Country Growth Regressions, 82 Am. Econ. Rev. 942 (1992); data obtained from Ross Levine)

EXPROP: Expropriation risk index (International Country Risk Guides (various years))

FRCIV: Dummy for French civil-law origin (Thomas H. Reynolds & Arturo A. Flores, Foreign Law: Current Sources of Codes and Basic Legislation in Jurisdictions of the World (1989))

GERCIV: Dummy for German civil-law origin (Thomas H. Reynolds & Arturo A. Flores, Foreign Law: Current Sources of Codes and Basic Legislation in Jurisdictions of the World (1989))

GOVCONS: Government consumption as percent of GDP (James Gwartney, Robert Lawson, & Walter Block, Economic Freedom of the World, 1975–1995 (1996))

GPO: Average annual population growth, 1960–89 (Ross Levine & David Renelt, A Sensitivity Analysis of Cross-Country Growth Regressions, 82 Am. Econ. Rev. 942 (1992); data obtained from Ross Levine)

GROW: Average annual growth in real per capita GDP, 1960–92 (Penn World Tables, Mark 5.6)

INFLATION: Average rate of change of GDP deflator, 1960–89 (Ross Levine & David Renelt, A Sensitivity Analysis of Cross-Country Growth Regressions, 82 Am. Econ. Rev. 942 (1992); data obtained from Ross Levine)

INV: Average investment share of GDP, 1960–92 (Penn World Tables, Mark 5.6)

JUDIC: Judicial quality index (Paolo Mauro, Corruption and Growth, 110 Q. J. Econ. 681 (1995))

LATINAM: Dummy for Latin American countries (Oxford Atlas of the World (2d ed. 1994))

MARG: Scaled measure of top marginal tax rates (James Gwartney, Robert Lawson, & Walter Block, Economic Freedom of the World, 1975–1995 (1996))

MUSLIM: Muslims as percent of population (Xavier X. Sala-i-Martin, I Just Ran Two Million Regressions, 87 Am. Econ. Rev. Papers & Proc. 178 (1997); data obtained from http://www.columbia.edu/~xs23/data.htm)

PCG60: Real per capita gross domestic product, 1960 (Penn World Tables, Mark 5.6)

PCG80: Real per capita gross domestic product, 1980 (Penn World Tables, Mark 5.6)

PROP: Property rights index (Kim Holmes, Bryan Johnson, & Melanie Kirkpatrick, 1997 Index of Economic Freedom (1997))

PROTESTANT: Protestants as percent of population (Xavier X. Sala-i-Martin, I Just Ran Two Million Regressions, 87 Am. Econ. Rev. Papers & Proc. 178 (1997); data obtained from http://www.columbia.edu/~xs23/data.htm)

PRI60: Gross enrollment rate in primary education, 1960 (Ross Levine & David Renelt, A Sensitivity Analysis of Cross-Country Growth Regressions, 82 Am. Econ. Rev. 942 (1992); data obtained from Ross Levine)

REDTAPE: Bureaucratic delay index (Paolo Mauro, Corruption and Growth, 110 Q. J. Econ. 681 (1995))

RULELAW: Index of law and order (International Country Risk Guides (various years))

SEC60: Gross enrollment rate in secondary education, 1960 (Ross Levine & David Renelt, A Sensitivity Analysis of Cross-Country Growth Regressions, 82 Am. Econ. Rev. 942 (1992); data obtained from Ross Levine)

SOE: Index of importance of state-owned enterprises (James Gwartney, Robert Lawson, & Walter Block, Economic Freedom of the World, 1975–1995 (1996))

TRANSUB: Government transfers and subsidies as percent of GDP (James Gwartney, Robert Lawson, & Walter Block, Economic Freedom of the World, 1975–1995 (1996))