WPS 2585

### POLICY RESEARCH WORKING PAPER

2585

# Law, Politics, and Finance

Thorsten Beck Asli Demirgüç-Kunt Ross Levine A country's legal origin whether British, French, German, or Scandinavianhelps explain the development of its financial institutions today. Legal systems differ in their ability to facilitate private exchanges and to adapt to support new financial and commercial transactions. A country cannot change its legal origin, but it can (with considerable effort) reform its judicial system by emphasizing the rights of outside investors, by providing more certain and efficient contract enforcement, and by creating a legal system that adapts more readily to changing economic conditions.

The World Bank Development Research Group Finance April 2001



### **Summary findings**

Beck, Demirgüç-Kunt, and Levine assess three established theories about the historical determinants of financial development. They also propose an augmented version of one of these theories.

The *law and finance view* stresses that different legal traditions emphasize to differing degrees the rights of individual investors relative to the state, which has important ramifications for financial development.

The dynamic law and finance view augments the law and finance view, stressing that legal traditions also differ in their ability to adapt to changing conditions.

The *politics and finance view* rejects the central role of legal tradition, stressing instead that political factors shape financial development.

The *endowment view* argues that the mortality rates of European settlers as they colonized various parts of the globe influenced the institutions they initially created, which has had enduring effects on institutions today.

When initial conditions produced an unfavorable environment for European settlers, colonialists tended to create institutions designed to extract resources expeditiously, not to foster long-run prosperity.

The authors' empirical results are most consistent with theories that stress the role of legal tradition. The results provide qualified support for the endowment view. The data are least consistent with theories that focus on specific characteristics of the political structure, although politics can obviously affect the financial sector.

In other words, legal origin—whether a country has a British, French, German, or Scandinavian legal heritage—helps explain the development of the country's financial institutions today, even after other factors are controlled for. Countries with a French legal tradition tend to have weaker financial institutions, while those with common law and German civil laws tend to have stronger financial institutions.

This paper—a product of Finance, Development Research Group—is part of a larger effort in the group to understand the link between financial development and economic growth. The study was funded by the Bank's Research Support Budget under the research project "Financial Structure and Economic Development" (RPO 682-41). Copies of this paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Agnes Yaptenco, room MC3-446, telephone 202-473-1823, fax 202-522-1155, email address ayaptenco@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at tbeck@worldbank.org, ademirguckunt@worldbank.org, or rlevine@csom.umn.edu. April 2001. (71 pages)

The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the view of the World Bank, its Executive Directors, or the countries they represent.

## Law, Politics, and Finance

Thorsten Beck, Asli Demirgüç-Kunt and Ross Levine

Keywords: Law, Political Institutions; Financial Development

JEL Classification: G28, G38, H11, O16

Beck and Demirgüç-Kunt: World Bank (<a href="mailto:tbeck@worldbank.org">tbeck@worldbank.org</a> and <a href="mailto:ademirguckunt@worldbank.org">ademirguckunt@worldbank.org</a> respectively); Levine: University of Minnesota (<a href="mailto:rlevine@csom.umn.edu">rlevine@csom.umn.edu</a>). We thank David Arseneau and Tolga Sobaci for excellent research assistance. We thank without implicating Daron Acemoglu, John Boyd, Maria Carkovic, Tim Guinnane, Patrick Honohan, Phil Keefer, Paul Mahoney, Andrei Shleifer, and seminar participants at the Banco Central de Chile, the Carlson School of Management, the World Bank, and UCLA's Anderson School of Management.

#### I. Introduction

A substantial body of work suggests that well-functioning financial intermediaries and markets promote long-run economic growth. Furthermore, research shows that particular legal codes, contract enforcement mechanisms, and information disclosure systems influence financial development and hence economic growth. These conclusions emerge from cross-country comparisons [King and Levine 1993a,b; Levine and Zervos 1998; LaPorta, Lopez-de-Silanes, and Shleifer 2000], firm-level studies [Demirguc-Kunt and Maksimovic 1998, 1999], research based on industry level-data [Rajan and Zingales 1998; Wurgler 2000], time-series research [Neusser and Kugler 1998; Rousseau and Wachtel 1998, 2000], and econometric investigations that use panel techniques [Beck, Levine, and Loayza, 2000]. Thus, a large and diverse empirical literature supports the view that financial systems are instrumental for economic growth.

The view that financial systems exert a first-order impact on economic growth raises a critical question: How did some countries develop well-functioning financial systems, while others did not? Why do some countries have particular laws and enforcement mechanisms that support the operation of free, competitive financial markets, while others do not? This paper uses formal econometrics and historical case-studies to evaluate alternative theories concerning the factors influencing international differences in the development of financial institutions. Moreover, and at a more primitive level, we seek to better understand the historical factors influencing international differences in the ability of private agents to write contracts and make transactions confidently. For simplicity, we use the terms "financial development" and "financial institutions" interchangeably to refer to both particular measures of financial intermediary and stock market development and specific laws, enforcement procedures, and information disclosure systems that shape financial transactions.

This paper assesses three established theories regarding the historical determinants of financial development and also proposes an augmented version of one of these theories. Specifically, we examine the law and finance view, propose and assess an amended version of the law and finance view called the "dynamic" law and finance view, study the politics and finance view, and evaluate the endowment view of financial

development. There are clearly common characteristics among these views. Nevertheless, there are important differences. We highlight the distinctions at the risk of oversimplifying each theory.

The law and finance theory stresses that different legal traditions emphasize -- to differing degrees -the comparative rights of individual investors vis-a-vis the state, with important ramifications for financial development [LaPorta, Lopez-de-Silanes, Shleifer, and Vishny (1997, 1998, 1999, 2000) henceforth LLSV]. The law and finance theory contends that political differences – particularly differences associated with the relative power of the monarch and property holders - shaped the formation of three major legal traditions: the English common law, the French civil law, and the German civil law. According to this view, the English common law evolved to protect private property owners against the crown. This facilitated the ability of private property owners to transact confidently, with positive repercussions on financial development [North and Weingast, 1989]. In contrast, the law and finance view notes that France and Germany did not have powerful Parliaments. Indeed, the codification of the French and German civil codes in the 19<sup>th</sup> century under Napoleon and Bismarck solidified State dominance of the courts. Over time, State dominance produced legal traditions that focus more on the power of the State, more on protecting the politically connected heads of firms, and less on the rights of individual investors [Mahoney, 2000]. According to the law and finance view, these legal traditions spread throughout the world through conquest, colonization, and imitation. Thus, according to the law and finance view, much of the international differences in financial institutions today can be traced back to the prevailing influences of different legal traditions.

The *dynamic law and finance* view accepts the law and finance view, but also incorporates the comparative law literature's emphasis that legal traditions differ in terms of their abilities to adapt to changing conditions [Merryman, 1985; Zweigert and Kotz, 1998]. Differences in adaptability may have major implications for financial development. Legal traditions that adapt quickly to minimize the gap between the needs of the economy and the legal system's capabilities will more effectively foster financial development than more rigid legal traditions. The comparative law literature suggests that the common law is inherently dynamic. As judges respond case-by-case to the changing needs of society, there is a low probability of a large gap forming between the economy's needs and the law. In contrast, the French civil code was born out of the

Revolution and had the utopian goals of creating a perfect, immutable legal code. Thus, in theory, there is a static nature to the French code. In practice, however, France has adapted to practical, commercial realities. In transplanting the formal French code to another country, however, it is critically important whether the country adopts the theoretical – static – version, or France's practical, dynamic version. If a country, for a variety of reasons, obtains the theoretical/static version, then there is a higher probability that large gaps will grow between legal capabilities and commercial needs than if the country adopts the practical/dynamic version of the French legal system. Critically, Germany explicitly rejected the French approach. Building on Savigny's vision of legal science, Germany sought to create a dynamic legal code. Importers of the German code, therefore, will naturally obtain a legal system specifically designed to evolve with changing commercial conditions. Thus, the dynamic law and finance view stresses that common law and German civil law countries will have a higher probability of creating a responsive legal system than a French civil law country.

The *politics and finance* view stresses that political factors influence the development of institutions, including financial institutions, and argues that legal influences are of secondary importance. The politics and finance theory emphasizes that once a group gains power, it will shape policies and institutions to its own advantage [Marx 1872; North 1990; Olson 1993]. Thus, if the elite see themselves as being enriched by free, competitive markets, then they will put pressure on the state to create laws and institutions to stimulate financial development. If – as seems more common historically — the aristocracy feels threatened by competitive financial markets, there will be pressure on the state to restrict private transactions and hence the operation of free markets [Rajan and Zingales, 2000]. A centralized/powerful state will be more responsive to and efficient at implementing the interests of the elite than a decentralized, open, and competitive political system (Finer, 1997). According to this view, differences in state power combined with the interests of the elite to determine financial development in England, France, and Germany. The French aristocracy before the 19<sup>th</sup> century put pressure on the crown to thwart competition. Later, the French Revolution toppled the Monarch but created a powerful, central government that systematically strengthened state power and viewed unconstrained financial markets as a threat. Like France, the unification of Germany under Bismarck also fostered the creation of a powerful central government that cast a wary eye on financial markets. England was different. An influential

Parliament protected the rights of individual investors, so that financial markets flourished. Thus, while the law may play a role, the politics and finance theory emphasizes that centralized/powerful/closed political systems are more likely to impede financial development than diffuse/competitive/open political systems.

The *endowment view* emphasizes the role of initial conditions in shaping financial institutions.

Acemoglu, Johnson, and Robinson (2000, henceforth AJR) note that Europeans found a variety of conditions in the lands that they colonized. In some places, Europeans found it difficult to settle and therefore focused on extracting resources. In other places, Europeans found hospitable conditions. They settled and established institutions to promote long-run prosperity. Thus, the initial endowments of land, climate, and the disease environment profoundly influenced colonization strategies and the types of institutions that colonialists constructed. These initial institutions endure and help explain cross-country differences in institutions today.

To assess the (i) law and finance, (ii) dynamic law and finance, (iii) politics and finance, and (iv) endowment theories of financial development, we use two methods. First, we briefly review the history of European legal and political systems and how these shaped financial development. We focus on the English, French, and German legal traditions because they have had the biggest influence internationally. This review is important because it (a) documents how the formation of legal, political, and colonization strategies influenced financial systems, (b) illustrates the impact of political forces and colonial strategies on property rights, markets, and competition, and (c) emphasizes the evolutionary nature of legal systems and thereby helps distinguish the dynamic law and finance view from the law and finance view.

The second method for evaluating the alternative theories of the development of financial institutions employs cross-country regressions. We examine whether cross-country differences in financial institutions are accounted for by cross-country differences in (1) legal tradition, (2) political structures, and (3) initial endowments. To measure cross-country differences in financial institutions, we use measures of (i) financial intermediary development, (ii) equity market development, (iii) laws governing the rights of equity and debt holders, (iv) property rights protection and contract enforcement, (v) the quality of accounting standards and (vi) the extent of public ownership in banks. We measure these financial institution indicators over the period 1975-95. To measure legal tradition, we use the LLSV (1999) indicators of whether the country has a British, French,

German, or Scandinavian legal tradition, which is based on the origins of each country's Company/Commercial law. To measure initial political structure, we use measures of the competitiveness and openness of the political system and the extent of checks and balances that are computed in 1800 or the first year of independence, which ever comes later. To measure initial endowments, we use the AJR measure of the rate of settler mortality as European settlers arrived in various parts of the globe. We consider the explanatory variables as reasonably exogenous for the period under investigation.

In conducting the cross-country comparisons, we assess the robustness of the results by controlling for other potential influences on the development of financial institutions. Specifically, we include Africa and Latin America dummy variables to see if regional differences dominate the results. Furthermore, we include a measure of trade openness, to assess whether openness influences institutional development and alters the findings. We also test whether the length of time since the country became independent influences the inferences one draws on the competing theories. Moreover, we include measures of the national culture (religious composition and enthnolinguistic diversity) to see whether accounting for cultural differences alters our findings. Also, we include real GDP per capita to test whether the links between financial institutions and legal origin, political structure, and initial endowments are independent of overall economic development. Finally, we also shed light on the transplant view. The transplant view emphasizes the way in which the law was initially transplanted and received [Berkowitz, Pistor, Richard 1999]. The transplant view stresses that countries that adapted the transplanted law to local conditions and/or had a population that was already familiar with the basic legal principles of the transplanted law have a higher probability of constructing a successful legal system than countries that received foreign law under alternative circumstances. Though a subjective, ex post classification, we include the transplant effect indicator to assess robustness.

This paper makes four contributions. First, although others have shown that legal tradition is closely associated with financial development, this paper goes much farther in evaluating the robustness of these results. Moreover, this is the first paper to consider simultaneously the law and finance, politics and finance, and endowment views of financial development. This "horserace" is crucial to drawing accurate inferences about the historical determinants of financial development. Second and similarly, AJR propose the endowment view

of institutional development and show that settler mortality is negatively associated with institutional development today. They do not, however, focus on financial institutions and thus they do not consider the broad range of alternative explanations of financial development that we use in our analysis. Third, while many authors emphasize the importance of the structure of the political system, there is no cross-country evidence that rigorously examines the links between political structure and financial development. This is the first paper that uses two new comprehensive datasets on political structure to assess systematically the relationship between political structure and financial development. Finally, we apply the comparative law literature's emphasis on the evolutionary nature of the law to the study of the historical determinants of financial development. By highlighting the comparative ability of legal systems to adapt to changing conditions, we expand the law and finance view's focus on the distinction between civil and common law systems to also illuminate (a) differences between the German and French civil law systems and (b) differences between the legal systems operating in France and French colonies. This allows us to explain more completely international differences in financial development. Although we do not use cross-country regressions to assess directly the marginal contribution of the dynamic law and finance view, we (1) present regressions that indirectly emphasize the value added of the dynamic law and finance view and (2) use the comparative law literature to highlight the advantages of considering the dynamic nature of legal systems.

Before continuing we want to emphasize that we are not trying to distinguish political from legal influences broadly defined. It is practically impossible to separate legal from political influences. In 1086, William the Conqueror ordered the recording of the ownership of all the land, livestock, ploughs, mills, fishponds, and manpower in England. He undertook this unprecedented task for political reasons: to assess the strength of allies and opponents, and to set taxes. The resultant Doomsday Book – so termed because these property records would stand until the Last Judgment – defined property rights that limited the discretion of future kings to expropriate property from barons and thus had lasting political repercussions. Similarly, Byzantine Emperor Justinian ordered the compilation of the Roman Civil Law about 534 A.D. Although politically motivated, the Justinian texts – when they were discovered five centuries later in an Italian library – arguably ignited and indisputably shaped the formation of the world's most influential legal traditions. More

recently, the "Declaration of Independence" and the "Rights of Man" trumpeted the American and French revolutions. These documents are simultaneously legal and political: they express that men are created equal with certain rights, and that elected representatives should secure these rights. 1 The intellectual foundations of these revolutionary documents find their origins in secular law [Merryman, 1985, p. 15]. Secular law in turn finds its roots perhaps as far back as Plato and Aristotle but certainly as a response to the 11th century Papal Revolution and the intensified development of Canon Law [Berman, 1983, p. 275]. Thus, defined broadly, political and legal influences are inextricably intertwined. Instead, this paper simply observes that political theories emphasize the importance of very particular characteristics of the political structure and de-emphasize the importance of legal influences. We investigate this empirically.

The paper is organized as follows. Section II develops the law and finance and dynamic law and finance theories. Section III presents the politics and finance theories. Section IV discusses the endowment view. Section V presents the data, and the results are given in Section VI. Section VII concludes.

#### II. The Law and Financial Development

This section describes the law and finance and dynamic law and finance views. To do this, we sketch the history of the civil and common law traditions. More specifically, we analyze the genesis, formation, and maturation of the French civil law, the German civil law, and the British Common law and how these different approaches to the law influence the operation of financial institutions today. In using the comparative law literature to describe the evolution of different legal traditions, we naturally emphasize the dynamic, evolutionary nature of legal traditions that forms the basis of the dynamic law and finance view. 2 By making

<sup>&</sup>lt;sup>1</sup> Nevertheless, the United States would have slavery for another century, and France would have Napoleon as emperor

only 15 years after tossing out King Louis XVI in 1789.

Merryman (1985, p. 1) defines a legal system as "... an operating set of legal institutions, procedures, and rules." Merryman (1985, p.2) defines a legal tradition, however, as "...a set of deeply rooted, historically conditioned attitudes about the nature of law, about the role of law in the society and the polity, about the proper organization and operation of a legal system, and about the way law is or should be made, applied, studied, perfected, and taught." Although legal institutions, procedures, and rules reflect the legal tradition, the legal tradition places the legal system into a much broader, cultural context. Critically, legal tradition speaks to the evolution of legal systems.

this amendment to the law and finance view, we are able to explain cross-country differences in financial institutions more fully.

#### A. Legal Traditions

#### 1. Civil law tradition: Historical Background

In the sixth century in Constantinople, Roman emperor Justinian had the Roman law compiled into what is now variously called the *Corpus Juris Civilis*, the Justinian texts, or the Roman civil law.<sup>3, 4</sup> Hayek (1960, p. 166-167) argues that Justinian's code has a very different legal philosophy from that of Roman law. First, while the original Roman law places the law above all individuals and the state, the Justinian code sets the prince above the law. Second, while laws in Rome evolved case-by-case through the opinions of the Jurisconsults, Justinian's texts represented a break; the texts centralized power in the State and initiated an excessive regulation by statute. Justinian forbade – unsuccessfully – commentaries on the *Corpus Juris Civilis* and reference to the primary Roman works used to construct the *Corpus Juris Civilis*, and he burned some of the original Roman documents. "He took the view that what was in his compilation would be adequate for the solution of legal problems without the aid of further interpretations or commentary by legal scholars."

[Merryman, 1985, p.7] Although Justinian conceived of the Roman civil law as indisputable and inert, the Roman civil law continued to evolve even in his day.

After being lost for centuries with the fall of the Roman Empire, the Corpus Juris Civilis were rediscovered at the close of the 11<sup>th</sup> century. Soon, at Bologna and other Italian universities, scholars came to study the Justinian texts. Over the centuries, the Glossators and Commentators produced an immense literature on the Corpus Juris Civilis. This literature and the Justinian text "... became the basis of a common law of Europe, which is actually called the jus commune.... There was a common body of law and writing about law, a

<sup>&</sup>lt;sup>3</sup> Note Roman civil law existed for about 1,000 years before the publication of the Justinian texts. The start of the Roman civil law is frequently dated as 450 B.C. when the XII Tables of Rome were supposedly published. This makes the civil law tradition about 1,500 years older than the common law tradition. The start of the common law tradition is frequently stated as 1066 when the Normans won at Hastings.

<sup>&</sup>lt;sup>4</sup> The English translation of the Justinian texts is 4,503 pages and the texts are composed of four parts: the Code (12 books of ordinances and decisions by Pre-Justinian Roman emperors), the Novels (Justinian's laws), the Institutes (a short textbook), and the Digest (opinions of Roman jurists on legal questions).

common legal language, and a common method of teaching and scholarship." [Merryman, p.9] The structure, terminology, and approach of the Roman civil law heavily influenced legal systems throughout Europe.

As in Justinian's time, the 12<sup>th</sup> century also saw the civil law tradition facing tensions between theoretical perfection and practical realities. Indeed, a defining tenet of the civil law tradition is the notion that codification can produce a rational, comprehensive set of laws. "Justinian's Roman law was considered to be an ideal law, a written embodiment of reason, *ratio scripta*, whose principles ought to govern all legal regulation everywhere..." [Berman, 1983, p. 204]. In theory, the Roman law "... was treated as finished, immutable, to be reinterpreted but not to be changed." [Berman, p. 205]. In practice, however, Europe's legal systems faced changing commercial relationships and were therefore heavily influenced by commercial law (Law Merchant), which was a highly adaptable and semi-private law that affected commercial interactions throughout medieval Europe. In practice, legal systems incorporated Canon and Secular Law. In practice, an essential attribute of Europe's legal tradition is that it is dynamic, unfinished, and changing.

#### 2. French tradition

The Enlightenment's impact on the French Revolution – its emphasis on individualism, rationalism, and nationalism – "found legal expression in the exaltation of the role of the legislature and consequent reduction ... of the law-creating role of the judiciary..." [Berman, p. 32]. Prior to the Revolution judges were part of the aristocratic class and supported the landed aristocracy against other groups. While the Crown at times issued progressive reforms, the courts "...refused to apply the new laws, interpreted them contrary to their intent, or hindered the attempts of officials to administer them." [Merryman, p. 16] It is not surprising then that the French Revolution strove to eliminate the role of the judiciary in making and interpreting laws. The judiciary was to apply the law made by the legislature and not to make law.

The codifiers of the French code in the first years of the 19<sup>th</sup> century – like Justinian's legal scholars almost 1300 years earlier – sought to unify regional legal systems and also had the utopian goals of establishing

a complete, coherent, unambiguous, and everlasting legal code. The theory is that the legislature drafts laws without gaps, so that judges do not decide cases for which there is not legislative provision. The theory is that the legislature does not draft conflicting laws, so that judges do not make law by choosing among conflicting provisions. The theory is that the code is clear, so that judges do not make law by giving practical meaning to ambiguous statutes. The theory is that the legislature provides comprehensive statutes, so that judges do not make law by applying obscure provisions to cases. Napoleon, like Justinian, sought a code that was so clear, complete, and coherent that future commentaries on it were unnecessary. Indeed, when the first commentary was published on the Code, Napoleon exclaimed, "My Code is lost."

While in theory the French Civil Code had a utopian, static nature, many of the drafters of the Code were experienced practitioners who accurately predicted that judges and other legal scholars would further develop the Code [Merryman, p. 30-1]. The French legal tradition – which in practice embodied the dynamic influences of 2400 years of Roman, Canon, Merchant, and Secular Law – adapted to practical realities. In contrast to theory, the French courts have built an entire body of tort law on the basis of Article 1382 of the Code Napoleon that states that one whose act injures another must compensate that person [Merryman, p. 53]. In contrast to the theory, the French Tribunal of Cassation eventually – perhaps inevitably – not only indicated that particular judicial decisions were wrong, but also explained how to interpret the statute correctly [Merryman, p. 40]. In practice, the French legal tradition adapts and evolves as it confronts practical realities.

The Napoleonic code also helped centralized power in the hands of the State (LLSV, 1998). Although the French Revolution threw out the Monarch, it maintained a powerful, central government. Indeed, with the Napoleonic Code, the State became the source of all law. Thus, codification centralized and expanded the power of the state; it shifted power out of the hands of private property owners and into the hands of the State.

#### 3. The German Civil Code and Comparisons with France

<sup>&</sup>lt;sup>5</sup> Voltaire mocked France's fragmented legal system by writing, "When you travel in this kingdom you change legal systems as often as you change horses." [Quoted from Zweigert and Kotz, 1998, p. 80]

Besides the Enlightenment, the Protestant Reformation had a profound impact on legal philosophy in Germany. "Nature became property. Economic relations became contract. Conscience became will and intent." [Berman, 1997, p. 30] Thus, the secularization of the State sanctified property and contract. By emphasizing rational criticism, one influential product of the Enlightenment was the belief in codification, i.e., the idea that diverse, regionalized legal systems can be replaced by a comprehensive, rational, and unified legal code. Efforts at codification started in the 18<sup>th</sup> century, but a unified legal code for German would have to wait for a unified Germany and a decisive leader. Bismarck unified the country in 1871 and decided to place a high priority on unifying the courts, civil procedure, and bankruptcy law, and then in 1873 a decision was made to codify and unify the whole of private law in Germany.

In contrast to the revolutionary zeal that shaped the Napoleonic Code, the German Civil Code of 1896 was historically oriented, scientific, and explicitly dynamic from its inception. By the time Bismarck ordered the construction of the German Civil Code, many of the weaknesses in French Code were apparent. The German legal scholar Karl von Savigny rejected the approach taken by the French. Savigny argued that the law of a people was a product of the history and culture of that people's development [Merryman, p. 30]. Thus, to properly code German law, it was necessary to thoroughly study the historical development of existing German law, including Roman civil law, old Germanic law, and recent commercial law.<sup>7</sup> Only by systematically assessing the historical context of the German legal system could legal scholars codify the inherent principles and features of the German legal tradition [Merryman, p. 31]. Thus, unlike the French Code, the German Code "was not intended to abolish prior law and substitute a new legal system; on the contrary, the idea was to codify those principles of German law that would emerge from careful historical study of the German legal system."

<sup>&</sup>lt;sup>6</sup> The Bavarian Chancellor V. Kreittmayr assembled the Code Maximilianeu Bavaricus Civilis of 1756. Later Frederick II of Prussia had the General Land Law for the Prussian States assembled in 1794. This heavily influenced the (1) General Code of Austria of 1811, (2) the General German Commercial code of 1861, and (3) the German Civil Code that officially took effect on January 1, 1900. [Zweigert and Kotz, 1998, p.135 – 142]

There was a countervailing force. Some followers of Savigny's Historical School of Law produced the Pandectist School whose main aim was the systematic study of Roman material. By studying Roman law and then using logical, scientific methods, the pandectists felt they could construct a rational legal system. As put by Zweigert and Kotz (1998, p. 140), "A method of legal thinking which put 'conceptual calculus' before the careful observation of social reality could only arise in a legal culture which was dominated by remote and theorizing professors and which lacked an organized and powerful class of practicing lawyers..."

[Merryman, p.31] Whereas the Napoleonic code was designed to be comprehensively immutable, the Bürgerliches Gesetzbuch was designed to be comprehensively dynamic.

In comparing the French and German civil law traditions, four points are worth emphasizing. First, they both codify the law. There is a strong belief that codification can produce a rational and complete set of legal rules. Second, in both France and Germany, the civil code supported the unification of diverse regional laws and the strengthening of a nation. Third, although they both seek to limit the role of judges in making law, the vehemence of distrust of judges was much stronger during the formative stages of the Napoleonic Code than during the construction of the German Civil Code. The German legal tradition sheds a much more favorable light on judges and legal scholars in interpreting the law under changing circumstances. For instance, France technically denies judicial review of legislative actions, while Germany formally recognizes this power and German courts actively exercise it [Glendon, et al., 1982, p.57]. Similarly, in terms of adjudicating disputes involving the government, France's administrative courts are within the executive branch itself, rather than in the judicial branch. In Germany, the judiciary handles these disputes. Fourth, the German legal tradition from its inception explicitly rejected the static ideals of the French code. In creating the German Civil Code, the German view was that lawyers would be needed, that they would engage in interpreting and applying the law, and that the code they prepared should be responsive [Glendon, et al., 1982]. Thus, the German legal tradition was designed to be more malleable — more dynamic — than the French code.

The high courts of France and German also reflect these differences. The Court of Cassation in France was originally viewed as an institution to assist the legislature and not as a part of the court system. It had powers to quash decisions, but not decide cases. The judgments of the Court of Cassation are meant to reflect pure logic; they are not meant to reflect the balancing of conflicts between statutes. Thus, decisions are very short, do not refer to past decisions, and are viewed as impersonal acts of the state. This is different from the Budesgerichtshof in Germany, where it can reverse, remand, modify, or enter final judgment on cases. Moreover, the balancing, exercise of discretion, and decision-making process all tend to be more open in Germany. [See Zweigert and Kotz, 1998, 264 and Glendon, et al., 1982, p. 96-100, 123-133.]

#### 4. The Common Law Tradition

English legal scholars date the origins of English common law as 1066, the Norman Conquest at Hastings. William the Conqueror allocated land to solidify support and prevent barons from challenging his central authority [Glendon, Gordon, and Osakwe, 1982, p. 145]. The Doomsday survey of all property in England in 1068 solidified these property rights and facilitated tax collection. As William centralized power at Westminster, he established a centralized system of royal courts. "Thus started a development in England which in the following centuries led to the centralization of justice and to the unification of English law." [Zweigert and Kotz, 1998, pp. 183] Importantly, the existence of this "common law" of England removed one of the central forces of codification on the continent: the desire to unify the law and the State.

Over the centuries, the English common law evolved based on the resolution of specific disputes and grew increasingly to stress the rights of private property. <sup>10</sup> As noted, landholding rights in England were originally based on William I's feudal system. Over time, however, the courts developed legal rules that treated large estate holders as actual owners with substantial property rights and not as tenants of the king. <sup>11</sup> Thus, through the courts, "... landowners pried their land loose from the feudal system." [Mahoney, 2000, p.6] Indeed, the common law at the dawn of the 17<sup>th</sup> century was principally a law of private property [e.g., Littleton, 1481, and Coke, 1628].

The English Common law assumed its modern form in the tumultuous 16<sup>th</sup> and 17<sup>th</sup> centuries, during the time of the great conflict between Parliament and the English kings who sought an absolute monarchy. The Crown attempted to reassert feudal prerogatives to raise revenues. The kings also sold monopoly rights to cope with budgetary shortfalls. Parliament (composed mostly of landowners and wealthy merchants) along with the courts took the side of the property owners against the Crown. The Crown was unable to reassert feudal privileges. In the conflict over monopolies in 1624, Chief Justice Coke supported the rights of individuals

Some argue, therefore, that the barons of England never obtained the power of those in France and Germany, where their political power frequently exceed that of the Crown [Zweigert and Kotz, 1998, pp. 182-3].

<sup>&</sup>lt;sup>10</sup> Although the Roman civil law influenced legal thinking in England – indeed it was taught at Oxford as early as the 12-century, the influence of Roman law was much less than in France and Germany.

against the arbitrary ability of the Crown to establish monopolies. As he later wrote, "... if a grant be made to any man, to have the sole making of cards, or the sole dealing with any other trade, that grant is against the liberty and freedom of the subject, that before did, or lawfully might have used that trade..." [Quoted from Hayek, 1960, p. 168]. While King James I argued that royal prerogative superceded the common law, the courts asserted that the law is king, *Lex*, *Rex*. 12 The Stuarts were thrown out in 1688.

In comparison to France's legal history, the English Common law has typically been viewed as a source of liberty, so that Common law countries tend to view the judiciary as a powerful defender of individual rights. As noted above, the English courts were a liberalizing force that helped dismantle the feudal system and protected the rights of landowners against the Crown. In contrast, the French Revolution targeted the judicial aristocracy because judges had abused the law to support the *ancien regime*. Thus, progressive reform in France necessitated strict prohibitions on judges making law. France sought legislative supremacy to secure liberty. <sup>13</sup> In contrast, England sought liberty through an independent and influential judiciary.

While legislation is obviously a source of law in common law countries, the common law tradition – in contrast with the French and German civil law traditions — is almost synonymous with judges having broad interpretational powers, with the courts molding and creating law, and with judicial review of executive actions. As noted by Mahoney (2000, p. 15), by the end of the 17<sup>th</sup> century, judges in England reviewed the actions of the executive if there were purported infringements of individual rights. In contrast, France still has a statute that declares, "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." [Quoted from Mahoney, 2000, p.15-16]. This is

As Mahoney (2000, p. 6-7) points out, landowners frequently served as judges. Thus, it is unsurprising that they developed a legal system that treated themselves as private property owners, not tenants, and that emphasized the rights of private property owners, not those of the Crown.

<sup>&</sup>lt;sup>12</sup> Another symbol of the victory of the Common law over the Crown -- and the arbitrary meddling of Parliament -- was judicial independence. During the middle of the 17<sup>th</sup> century, Parliament gave Common law judges greater independence and substantially higher salaries, which also reduced corruption.

<sup>&</sup>lt;sup>13</sup> Hayek (1960) argues that the French philosophy of liberty, which was derived from Hobbes and Rousseau, focuses on the state's liberty to seek collective ends. In contrast, the English view of liberty focuses on the individual's liberty to seek his ends, which derives more directly from Locke and Hume.

<sup>&</sup>lt;sup>14</sup> For a formal model that studies the conditions of when a legal system uses "bright-line-rules" vis-à-vis a legal system that grants greater discretion to judges, see Glaeser and Shleifer (2000).

consistent with the view that common law countries have a greater tendency to limit state power and support the property rights of individuals than civil law countries.

Unlike the French civil law, the English common law tradition is inherently dynamic. The common law evolves as judges decide new cases. The common law is obsessed with facts and deciding concrete cases. Thus, the popular dictum: "The life of the law has not been logic: it has been experience." [Zweigert and Kotz, 1998, pp. 181]. English common law tradition developed the doctrine of *stare decisis*, to decide similar cases similarly. As noted above, judges have played a larger role over time in civil law countries. Nevertheless, in distinguishing the civil and common law traditions, legal scholars identify the degree to which judges continually – and as a matter of general practice – shape the law as a key distinguishing characteristic.

#### 5. The Spread of European Legal Traditions Around the World

The English, French, and German legal traditions spread throughout the world through conquest, colonization, and imitation. Napoleon considered his Code as a greater achievement than all his military victories, remarking that "My true glory is not to have won 40 battles ... Waterloo will erase the memory of so many victories ... But what nothing will destroy, what will live forever, is my Civil Code." He made it a priority to secure the adoption of the Code in all conquered territories, including Italy, Poland, the Low Countries, and the Habsburg Empire. Also, France extended her legal influence to parts of the Near East, Northern and Sub-Saharan Africa, Indochina, Oceania, French Guyana, and the French Caribbean islands during the colonial era. Furthermore, the French Civil Code was a major influence on the Portuguese and Spanish legal systems, which helped spread the French legal tradition to Central and South America. The German Civil Code was not imposed but instead was studied and used by other countries. It has exerted a big influence on Austria and Switzerland, as well as China (and hence Taiwan), Czechoslovakia, Greece, Hungary, and Yugoslavia.

Also, the German Civil Code heavily influenced the Japanese Civil Code, which helped spread the German legal tradition to Korea. The Scandinavian countries developed their Civil Codes in the 17<sup>th</sup> and 18<sup>th</sup> centuries. These countries have remained relatively unaffected by the far-reaching influences of the English, German and French

legal traditions. While the Scandinavian countries did not create a vast empire, England did. The English common law spread through colonization and conquest to all corners of the world.

#### B. Law and Finance View

In drawing the connection between legal origin and financial development, LLSV's (1998) ignited an active literature. They argue that laws, enforcement mechanisms, and legal institutions importantly govern financial interactions. Since contractual arrangements form the basis of financial activities, legal systems that protect investors and enforce contracts are likely to encourage greater financial development than legal systems that do not support the rights of creditors or equity holders or that ineffectively enforce contracts. Thus, laws and enforcement mechanisms directly influence the functioning of financial systems.

LLSV (1998, 1999) emphasize three points. First, in both France and Germany, the civil code supported the unification and strengthening of a nation. LLSV (1999, p. 231-2) state that, "[A] civil legal tradition, then, can be taken as a proxy for an intent to build institutions to further the power of the State...." Thus, the finance and law theory argues that the Civil law tradition tends to centralize and intensify state power and therefore takes a more wary stance toward the development of free financial systems than the English common law.

Second, since well-developed financial systems may interfere with political agendas, powerful governments frequently create laws, policies, and regulations that limit private sector transactions and hence financial development. Thus, the Civil law provides a ready vehicle for powerful government's to limit financial development. In contrast, the English common law has historically stood on the side of private property owners and sometimes against the State. Thus, rather than becoming a tool of the State, the English common law became a powerful counterbalance to the state that has promoted private property rights and hence financial development.

Third, in distinguishing the German and French traditions, LLSV (1999, p. 232) emphasize bureaucratic efficiency. Citing Ertman (1997) and Finer (1997), LLSV note that the German system is more efficient than France's because Germany (as well as Scandinavia) built a professional bureaucracy based on the military and a professional civil service, while France's developed a patrimonial bureaucracy with strong links to political

elites. For this reason, LLSV (1998) argue that German civil law countries will tend to have better property rights -- and hence better developed financial systems -- than those with French civil law systems.

#### C. Dynamic Law and Finance View

The dynamic law and finance view emphasizes that a crucial distinguishing characteristic of legal traditions is their ability to adapt to changing conditions. To the extent that a legal system responds slowly, large gaps will grow between the commercial and financial arrangements sought by society and the ability of the legal system to support those requirements effectively. Thus, more responsive legal systems will be correspondingly more efficient at supporting financial institutions than more rigid systems.<sup>15</sup> <sup>16</sup>

In terms of explaining the current level of development of financial institutions, the dynamic law and finance view ranks legal traditions. The common law is inherently dynamic as it responds case-by-case to the changing needs of society. This tends to limit the opportunities for large gaps to grow between the demands of society and the law. Since laws must evolve efficiently to support financial development, the dynamic law and finance view predicts that the common law is particularly effective in supporting financial institutions.

Moreover, the inherently dynamic nature of the common law implies that countries that received the common law have received a legal tradition that will more naturally adapt to different socioeconomic conditions and more readily evolve with changing commercial requirements than countries with the French civil law. <sup>17</sup>

<sup>15</sup> Indeed, there may exist "legal development traps." Initially rigid legal systems may lack the credibility, skills, and flexibility to respond effectively to changing conditions. As a consequence, the legislature will have a tendency to write highly specific – "bright line laws" – to limit the role of the courts. "Ex ante, there may in fact be little choice. Once this pattern of lawmaking has been established, however, it is hard to change." [Pistor, Keinan, Kleinheisterkamp, and West, 2000, p. 62) Thus, courts will not be challenged to develop legal procedures and methods to deal with emerging conditions. This may perpetuate the inefficient use of bright line rules and produce a legal development trap. See Glaeser and Shleifer (2000) for a model of the evolution of bright line rules under different legal origins.

<sup>&</sup>lt;sup>16</sup> Pistor, Keinan, Kleinheisterkamp, and West (2000) show that the critical distinguishing characteristic of corporate law across countries is the evolution of corporate law. A century ago, countries had similar laws, but they have followed very different paths. Also, see Keinan's (2000) study on the evolution of secured transactions.

<sup>&</sup>lt;sup>17</sup> England did not try to replace Islamic, Hindu, or unwritten African law and the flexibility of the Common law eased its transfer. For instance, the English courts in India were instructed to apply Islamic or Hindu law depending on the faith of the parties in cases of inheritance, marriage, caste, etc. In Africa, judges were to apply the English law only to the extent that local circumstances permitted and matters were to be decided by equity and good conscience as rendered necessary by local circumstances [Zweigert and Kotz, 1998, p. 225-9]. While somewhat chaotic, this arguably set the stage for the evolution of an independent, dynamic common law in the post-colonial era. In contrast, the French strove to incorporate

France and French civil law countries are different from common law countries in their abilities to adapt and evolve. To the extent that the French civil code is associated with the rigid, utopian approach of the French Revolution, there is a high probability that the law will adapt slowly to changing socioeconomic needs. This will have negative implications for the ability of private agents to contract and transact confidently and hence limit financial development. In practice, France adapted to practical realities and its legal system evolved accordingly. Thus, there may not exist huge differences between England and France in the ability of their legal systems to support financial transactions today.

In transplanting the Napoleonic Code to other countries, the dynamic law and finance view argues that it is critically important whether the country adopts the theoretical/static version or the practical/dynamic version. If the country adopts the theoretical /static version, then there is a higher probability of suffering with an underdeveloped financial system than if the country adopts the practical/dynamic version. The dynamic law and finance view is silent about the particular country characteristics that determine whether a French civil law country develops the dynamic or static version. Berkowitz, Pistor, and Richard (1999) emphasize the difficulties in transplanting one country's legal system to another country. Instead, the dynamic law and finance view emphasizes that the French legal tradition was created in the hopes of being a perfect, immutable legal system. Thus, there is an innately static character to the Code. In developing a more malleable, practical version, France is the exception, rather than the rule. In a cross-section of French colonies, therefore, there is a high probability that some of these countries adopted the theoretical/static version. Thus, the dynamic law and finance view predicts that even though there might not exist much of a difference between France and England, there will be big differences in financial development between English common law countries and French civil law countries.

...

the Code Civil even though there were – and remain – serious conflicts between the Code and local and Islamic laws [Zweigert and Kotz, 1998, p. 109-113].

In reviewing recent World Bank discussions of Francophone Africa, one frequently encounters the lament that the laws and legal texts date back to the colonial period; there have been few changes and existing codes do not even reflect changes in France's laws over the last forty years.

<sup>&</sup>lt;sup>19</sup> Indeed, some even argue that the Napoleonic code facilitated the degradation of property rights in Africa. Ayittey (1992) argues that it is only in the post-colonial eras with the French Civil Code that African states have had the power to expropriate property. In contrast, pre-colonial African leaders did not have the power to arbitrarily expropriate property.

According to the dynamic law and finance view, Germany and German civil law countries fall closer to common law countries than to countries that adopted the Napoleonic code. From its inception, Germany rejected the Revolutionary philosophy that shaped the French civil code. Germany explicitly saw its Code as being dynamic. Adopters of the German Code, however, received a legal system specifically designed to change with evolving commercial conditions. Thus, the German civil law countries will have a higher probability of creating a responsive legal system that supports financial markets than the cross-section of French civil law countries, some of which adopted the theoretical/static French code. <sup>21</sup>

#### III. Political Structure and Financial Development

The politics and finance view of financial development predicts that political factors dominate legal factors in determining financial development [North 1990; Olson 1993]. The political theories of North (1990) and Olson (1993) "...state, roughly, that institutions and policies are shaped by those in power to stay in power and amass resources." [LLSV, 1999, p.227] In applying this to financial institutions, Rajan and Zingales (1999, 2000) argue that the elite/powerful may or may not favor financial development. If self-made merchants form

<sup>&</sup>lt;sup>20</sup> Specifically, Harold J. Berman documents the impact of financial and commercial demands on, first, the customary law of merchants and, then much later, the formal scholarly Roman civil law taught in German universities during the 16<sup>th</sup> and 17<sup>th</sup> centuries. Professor Berman details numerous examples in Contract and Property Law where the Merchant Law evolved to support a wide range of new contractual obligations, to support leases, annuities, rents, and to undue feudal relationships and provide the foundations for private holdings in Germany. Only much later were these practical economic and social realities incorporated into the formal/scholarly Roman civil law taught in the universities. Thus, there was a two-step process: first from commercial and financial needs to Merchant Law (which governed commercial transactions when the formal legal system was lacking) and then to the formal legal system. Interestingly, the English common law also evolved during this period to support new financial instruments and the commercialization of land. However, in England the practical law is the Common law, so that unlike Germany, new laws to support changing commercial and financial needs were directly incorporated into the formal Common law. Some of this discussion is in Berman (1997), but most of it is in drafts of two new chapters that Professor Berman is planning on adding to a second edition of Law and Revolution: A History of the Western Legal Tradition that he was kind enough to share with us.

<sup>&</sup>lt;sup>21</sup> There are other key differences, particularly in terms of differences between the German and French legal approaches to debt. The German civil code places greater emphasis on the explicit "expression" of the contract, which implies great emphasis on the rights of creditors relative to debtors. The French code places comparatively greater weight on "intent," which implies greater emphasis on the interests of debtors relative to creditors in France. For instance, article 1162 of the French Code state that "In cases of doubt, one should construe the contract against the creditor and in favor of the debtor." [Quoted from Zweigert and Kotz, 1998, p. 402] Alternatively, some might argue that the success of German civil law countries stems from another reason. Countries chose to follow the German civil code; it was not imposed through conquest or colonization.

the ruling elite, then this augurs well for arrangements that support financial development. If the landed aristocracy forms the elite, this suggests a less favorable climate for autonomous financial markets that compete with existing interests. Moreover, Rajan and Zingales (2000) accurately stress that a time-invariant factor, such as legal origin, will not explain important *changes* in financial development.

The politics and finance view emphasizes that centralized/powerful governments tend to be incompatible with financial development, especially in conjunction with an elite threatened by financial development. The proper functioning of financial institutions and markets requires limitations on government discretion, which might be incompatible with the ambitions of a centralized and powerful state. Similarly, a powerful, centralized government cannot credibly commit to not expropriate and default on claims, which is a key component of well functioning financial markets. A decentralized political system, on the other hand, may offer a more conducive environment for financial development. Similarly, in some political environments, special interest groups may coerce governments to capture rents at the expense of others [Becker 1983]. Thus, governments that reflect the interests of powerful special interests may be less likely to support financial market development than countries with less potent special interests. Similarly, voting systems that permit narrow interests to exert a disproportional impact on legislators will hinder the enactment of laws and regulations that foster competition and financial development when financial development threatens these narrow interest groups. In sum, the politics and finance view suggests that centralized, closed political systems that face little competition, and political structures without many checks on ruling party discretion will tend to have more poorly developed financial systems than those countries with more decentralized, open, competitive governments that face checks on legislative and executive power.

Rajan and Zingales (1999) view the legal system – the investor protection laws and enforcement capabilities – and the financial system as a direct consequence of these political forces. Most early European financial centers, such as Venice and Hamburg, were small, nominally independent political entities with checks and balances on the power of government and relatively broad political participation. London began to rise as a financial center in the 17<sup>th</sup> century when a strong Parliament checked the power of the crown. Furthermore, the politics and finance view stresses that decentralized political systems resist the tendency of centralized system to

control markets and thwart competition. The European countries repressed market forces as response to the Great Depression, whereas similar attempts in the U.K and the U.S. failed. Finally, electoral systems that favor narrow interest groups, are less inclined to financial reform programs, as the example of Japan in the 1990s shows [Rosenbluth and Thies, 2000]. The electoral reform of 1994 eliminated multi-member districts – where legislators could appeal to special interest groups – in favor of single-seat districts, where candidates have to obtain a plurality of votes. It was only after this electoral reform that the Japanese government forced banks to bear a large burden for the restructuring of the Jusen, banks' investment vehicles in the mortgage lending markets, and imposed stricter regulatory norms.

One could argue that politics is inseparably intertwined with the evolution of the legal tradition. Indeed, since culture and historical developments have welded together political and legal forces, we do not seek to untangle the broad influences of politics and law on financial development. We do, however, focus on some of the sharper hypotheses that emerge from the political economy literature.

The political structure variable we use captures the influences of (1) the competitiveness of the political system, (2) the extent of checks and balances in the political process, and (3) the importance of special interests groups in the decision making process. As noted, the literature suggests that political competition, by weakening status quo interests of those in power, will tend to foster the evolution of arrangements that support financial development. More competition among competing interest groups, legislative oversight of the regulatory process and greater governmental transparency might increase the likelihood that the institutional environment will foster financial development. Checks and balances are also advanced as an important indicator. More checks and balances in the political process involve a larger number of political players, representing a wider array of political and economic interests. This makes policy changes more credible and sustainable with positive ramifications for market development. The larger the influence of special interest groups on the legislative process and the executive's decisions, finally, the lower is the predicted level of financial development. We recognize that these variables may be endogenously determined with financial development. This should bias the results toward finding a positive link between political structure and financial development. Nevertheless, we want to assess whether these popular political structure variables are

able to account for cross-country differences in financial development after controlling for legal origin.

Furthermore, we control at least partly for this potential endogeneity of political structure by using indicators of the initial political structure in 1800 or the year of independence, whatever comes later.<sup>22</sup>

#### IV. Endowment Effect

AJR (2000) argue that the degree to which Europeans could settle in a land influenced the choice of colonization strategy with long-lasting implications on institutions and economic development. We call their approach the endowment view because it focuses on the initial "endowments" of land, climate, and disease environment faced by colonialists. Engerman and Sokoloff (1997) also examine the impact of initial endowments on the formation of institutions that influence economic development. Here, however, we describe and examine the endowment view as explained by AJR because of data availability.

AJR's (2000) endowment view is based on three building blocks. First, influential historians argue that different types of colonization strategies created different types of institutions (see the citations in AJR 2000). At the one extreme, there were "settler colonies," where Europeans settled and attempted to replicate the life of the home country. For example, in the United States, Australia, and New Zealand, settlers established institutions designed to enforce the rule of law, secure property rights and assure long-run prosperity. In areas where there were many settlers, European powers created institutions to promote economic welfare. At the other extreme, there were "extractive states." The main purpose of extractive states was to extract as much from the colony as possible at the lowest cost. In extractive states, colonialists had little interest in establishing institutions to protect private property and check the power of the state. Indeed, colonialists established authoritarian, absolutist regimes that facilitated the extraction of resources. While useful for efficient extraction, the types of institutions created in extractive states were detrimental to long-run economic development.

<sup>&</sup>lt;sup>22</sup> The politics and finance view also stresses that the political structure of a country might also influence financial structure. Centralized governments might favor a bank-based system if it offers more opportunities to control the direction of credit flows than a market-based system. For instance, the militaristic Japanese government of the 1930s suppressed bond and stock markets and forced small banks to merge with larger banks in an effort to direct credit to the military industry. We examined this prediction and found no link between political structure and measures of financial structure.

Second, the feasibility of settlement materially influenced the colonization strategy. In areas where the "disease environment" was favorable to European settlers, there was a much higher probability that Europeans would establish "settler colonies" and therefore create institutions to promote long-run economic development. For instance, AJR note that the Pilgrims decided to settle in the American colonies instead of Guyana because of the much higher mortality rates in Guyana. Thus, in places favorable to Europeans, they settled, established "Neo-Europes," and constructed institutions to foster long-run economic development. In contrast, places with unfavorable disease environments did not attract as many settlers. Extractive states were more likely to form in these colonies. It is valuable to note that mortality rates were startlingly high in some places. In the first year of the Sierra Leone Company, 72 percent of the Europeans died. In the 1805 Mungo park expedition in Gambia and Niger, all of the Europeans died before completing the trip. Curtin (1964, 1998) documents that the European press, especially the British and French newspapers, published colonial mortality rates widely. Thus, potential settlers had generally good information in making decisions. Thus, the initial "disease endowment" helped determine whether the colony was more likely to become a "settler colony" or an "extractive state."

The third building block of the endowment view enunciated by AJR is that early institutions persist to today [Engerman and Sokoloff 1997; Engerman, Mariscal, and Sokoloff 1998; Young 1994]. Many argue that the initial institutions that gave a high priority to the rule of law, private property, and contract enforcement in Australia, Canada, New Zealand, and the United States persist today. AJR note an important reason why institutions tend to persist even after the European colonialists are removed. Once authoritarian institutions are efficiently extracting resources from the bulk of society in a colony, the post-independent rulers may tend to use these institutions to their own advantage and profit. This was the case in Sierra Leone, Senegal, and Congo as noted by AJR. Latin America is similar. While Mexicans gained independence from European colonialists, the elite that assumed power took advantage of the existing institutions to extract resources, rather than creating institutions to protect private property, contracts, and foster broad-based economic development. Thus, the initial institutions created by European colonialists tend to be very durable.

Before continuing, it is important to recognize that Engerman and Sokoloff (1997) rigorously examine how the natural endowments of the "new world" influenced the development of institutions. They find that

agriculture in southern North America and most of South America enjoys economies of scale and therefore tends to promote large plantations. Thus, they show that colonialists in these areas developed long-lasting institutions to protect the few landowners against the many peasants. In contrast, northern North America's agricultural landscape promoted smaller farms, so that more egalitarian institutions emerged and persist. Our primary reason for focusing on the AJR approach is that they have assembled data for a broad cross-section of countries.

#### V. Data<sup>23</sup>

#### A. Financial development and specific laws

We use measures of financial development over the 1975-95 period. The recent literature has developed a wide array of indicators that proxy for the size and activity of financial institutions and markets. This section presents our indicators of financial intermediary and stock market development. Critically, we also examine indicators of the specific laws governing the legal protection of shareholders and creditors, the efficiency of contract enforcement, and the level of accounting standards.

Our preferred measure of financial intermediary development is PRIVATE CREDIT, which equals the value of credits by financial intermediaries to the private sector divided by GDP. PRIVATE CREDIT is a comparatively comprehensive measure of credit issuing intermediaries since it includes the credits of both deposit money and non-deposit money banks. Furthermore, it excludes credit to the public sector and cross claims of one group of intermediaries on another. It thus captures fairly well the amount of savings that is channeled through financial intermediaries to private borrowers.

To test the robustness of our results, we use LIQUID LIABILITIES, which equals liquid liabilities of the financial system (currency plus demand and interest-bearing liabilities of banks and nonbank financial intermediaries) divided by GDP. This is a typical measure of "financial depth" and thus of the overall size of the financial intermediary sector [King and Levine 1993a].

<sup>&</sup>lt;sup>23</sup> See Data Annex for details.

TURNOVER is our primary measure of stock market development. It is defined as total shares traded on the stock market exchange divided by the total market capitalization. It measures stock market trading relative to the size of the market.

To test the robustness of our results, we will use alternative measures of stock market development.

MARKET CAPITALIZATION, the value of listed shares divided by GDP, is a measure of the size of stock markets relative to the economy.

Finally, we use a measure of the public ownership of banks, which directly reflects the state's role in directing the financial system. PUBLIC OWNERSHIP is the percentage of assets of the 10 largest banks in each country owned by the government as share of the total assets of these banks. This measure is from LaPorta, Lopez-de-Silanes and Shleifer's (2000) insightful examination of state ownership of banks. A higher share of government ownership in the banking sector allows the government to finance politically beneficial projects and control the economy wide resource allocation.

Next we turn to four indicators of the legal and regulatory environment in which financial intermediaries and markets function. Creditor and shareholder rights, the enforcement of contracts, protection of property rights and the accounting standards have been shown to be important determinants of financial development in the recent literature [Levine, 1999); Levine, Loayza and Beck, 2000].

OUTSIDER RIGHTS is an index of the degree to which the legal codes of the country protect the claims of secured creditors and minority shareholders. It is defined as the sum of CREDITOR, an index of the rights of secured creditors in the case of reorganization or liquidation of a company, and ANTI-DIRECTOR, an index of the degree to which the legal codes of the country protect minority shareholder rights. OUTSIDER RIGHTS ranges from zero to 10, with higher values indicating a better protection of the rights of outside investors. These data are from LLSV (1997) and are available for 49 countries. See, Black (2001) for a detailed analysis of the legal and institutional prerequisites for well-functioning securities markets.

ACCOUNTING is a measure of accounting standards, obtained from the Center for International Financial Analysis and Research (CIFAR). This index, reaching from a maximum of 90 to a minimum of 0, measures the comprehensiveness of companies' balance sheets and income statements.

ENFORCE is an indicator of the effectiveness of the legal system in enforcing contracts and is the average of two indicators obtained from LLSV (1998) – Rule of Law and Conrisk. Rule of Law is an assessment of the law and order tradition of the country that ranges from 10, strong law and order, to 1, weak law and order. This measure was constructed by International Country Risk Guide (ICRG) and is an average over the period 1982-1995. CONRISK, also from LLSV (1998), is an assessment of the risk that a government will – and therefore can – modify a contract after it has been signed. Specifically, "modification" means repudiation, postponement, or reducing the government's financial obligation. CONRISK ranges from 10, low risk of contract modification, to 1, high risk of contract modification. This measure was constructed by ICRG and is an average over the period 1982-1995.

PROPERTY RIGHTS is an index of the degree to which the legal system protects private property. The maximum value is five, while one indicates the weakest property rights protection (LLSV, 1999).

Table 1 presents descriptive statistics and correlations for the financial development indicators, with data averaged over 1975-95. Most indicators of financial development are highly correlated with each other. Public ownership of banks is negatively associated with overall financial development. Protection of outsider rights is highly correlated with the development of stock markets. Finally, good accounting standards and an effective legal system are positively linked with both financial intermediary and stock market development.

#### B. Legal origin

In terms of measuring legal origin, we use the measures compiled by LLSV (1998) and extended by LLSV (1999). They identify from which legal origin country – England, France, Germany, or Scandinavia – each country adopted its Company or Commercial Law. We ignore socialist law since we do not have comparable information on financial development for these countries. Thus, we use dummy variables in our analyses below. British legal origin takes on the value one if the country adopted its Company/Commercial law from England and zero otherwise. French legal origin takes on the value one if the country obtained its Company/Commercial laws from France and zero otherwise. We follow a similar pattern for German legal origin, while Scandinavian legal origin is captured in the constant.

#### C. Political structure

To test the hypothesis that the structure of the political environment influences financial development, we use a wide range of measures of the initial and current structure of the political system. Current political structure variables are from the Database of Political Institutions (DPI) and cover the period 1975-1995 (Beck, Clarke, Groff, Keefer, and Walsh, 2000). Initial political structure variables are from the Polity III dataset (Gurr, Jaggers and Moore, 1990). The initial political structure variables begin in 1800 or the first year of independence, whichever comes later. To control for potential endogeneity of the political system, we focus our attention on the initial political structure variables. We, however, get very similar results using current political structure indicators (see Appendix, which is available on request).

We construct a summary indicator of initial political structure. Specifically, we construct a principal component indicator based on four individual indicators of initial political structure: (1) Executive Competition is the extent to which executives are chosen through competitive elections, ranging from zero to three, and with higher values indicating a higher degree of competitiveness; (2) Executive Openness indicates the degree to which there are opportunities, in principle, for non-elites to attain executive offices, ranging form zero to four, and higher values indicating more opportunities; (3) Nonelite indicates the extent to which non-elites are able to access institutional structures for political expression, ranging from zero to five, with higher values indicating a higher degree of competitiveness and inclusion; and (4) Autocracy which is an indicator of the general closeness of political institutions, ranging from zero to ten, with higher values indicating a more closed political system.

Political theories suggest that Autocracy should be negatively correlated with financial development and the other three indicators positively correlated. Thus, in constructing the principal component index, we put a negative weight on Autocracy since the politics and finance theory outline above predicts that Autocracy is negatively correlated with financial development. The politics and finance view predicts that this index will be positively correlated with financial development. Note, we have computed all of the results using the individual indicators of initial (and current) political structure instead of the principal components summary indicator and obtain similar results. These results are in the Appendix.

#### D. Endowment

To test the endowment view, we use the AJR measure of settler mortality, which they construct from research conducted by Curtin (1989, 1998) and Gutierrez (1996). Curtin (1989) focuses on the mortality and disease rates of European soldiers in colonies during the early nineteenth century. The raw data come from British, French, and United States governments during the period 1817-1848. The standard measure was annualized deaths per thousand soldiers with each death replaced with a new soldier. Curtin (1998) adds similar data on soldier mortality during the second half of the nineteenth century. Finally, Gutierrez (1996) uses Vatican records to construct estimates of the mortality rates of bishops in Latin America from 1604 to 1876. Since some of these data overlap with Curtin's separate estimates, AJR confirms the compatibility of the two data series before constructing an overall measure of settler mortality for a large group of countries.

#### E. Conditioning Information

AFRICA and LATIN AMERICA represent dummy variables for countries in sub-Saharan Africa and Latin America respectively. Thus, Africa equals 1 if the country is in sub-Saharan and Africa and 0 otherwise. Latin America equals 1 if the country is in Latin America or the Caribbean and 0 otherwise. We test the robustness of alternative views using these regional variables because cross-country comparisons frequently find that countries in sub-Saharan Africa and Latin America behave differently for unexplained reasons.

TRADE equals the ratio of exports plus imports to Gross Domestic Product (GDP). We include this because open countries may face greater competition and therefore foster improvements in institutions, including financial institutions.

INDEPENDENCE equals the fraction of years since 1776 that the country has been independent. We include this since independent countries may more effectively shape institutions, policies, and regulations to promote economic success than colonies.

CATHOLIC, MUSLIM, and OTHER religions equal the fraction of the population for each country that is Catholic, Muslim, or of another religion. We capture the protestant share of the population in the constant.

We include this as a general indicator of culture. Banfield (1958), Weber (1958), Putnam (1993), and Landes

(1998) argue that some societies form beliefs that are conducive to economic progress while others do not. Putnam (1993, p. 107), for instance, contends that historically the Catholic Church tended to foster "vertical bonds of authority" rather than "horizontal bonds of fellowship." A lack of trust harms collective actions, the provision of public goods, and economic growth. Similarly, Landes (1998) argues that Catholic and Muslim countries have developed cultures of xenophobia and closed-mindedness. Such cultural factors restrict the flow of ideas and retard the formation of growth enhancing institutions [see the discussion in LSSV (1999, p. 229)]. Furthermore, Landes (1998) argues that Catholic and Muslim countries tend to develop powerful church/state bonds to keep new ideas in check and to maintain control. Thus, cultural factors – such as religion – may impede the development of institutions, including financial institutions.

ETHNOLINGUISTIC FRACTIONALIZATION measures the probability that two randomly selected individuals from a country are from different ethnolinguistic groups. We include this variable to assess whether the links between the development of financial institutions and the legal origin, political structure, and settler mortality are robust to controlling for ethnic diversity. LSSV (1999, p. 231) argue that "...political theories predict that, as ethnic heterogeneity increases, governments become more interventionist and less efficient, and the quality of public goods falls." Several recent studies have shown that in highly ethnically diverse economies, the group that comes to power tends to implement policies that: (a) expropriate as many resources as possible from the ethnic losers, (b) restrict the rights of other groups, and (c) prohibit the growth of industries or sectors that may weaken the power of the ruling group [Alesina, Easterly, and Baqir (1999) and Easterly and Levine (1997)]. When this view is applied to the financial sector, the implications are clear: greater ethnic diversity implies the adoption of policies and institutions that are focused on maintaining power and control and not toward creating an open and competitive financial system.

We also assess whether controlling for the "transplant effect" alters our conclusions on the law and finance and endowment views. The transplant view argues that legal origin is not important per se. Rather, the transplant view argues that it is the way in which a country receives its legal system that is important and not the particular legal system that it is receiving. If a country received its legal system directly from an origin country and/or if the country is very receptive to the legal system, this promises more success than if the country both

received the legal system indirectly and was unreceptive to the legal system. According to this view, "receptive" means the country adapted the transplanted law to local conditions and or the country was already familiar with the basic legal principles of the transplanted law.<sup>24</sup> Berkowitz, Pistor, and Richard (1999) classify countries in terms of whether a country is an origin country, whether a country received its legal system directly from an origin country, and whether the country received the law in a receptive manner (or was generally unreceptive to the law). Thus, TRANSPLANT equals 0 if the country is an origin country, obtained its law directly, or obtained its law in a receptive manner and 1 otherwise.

Finally, we control for the average level of Gross Domestic Product (GDP) per capita in the 1975-95 period to assess whether the law and finance, dynamic law and finance, endowment, and politics variables explain financial development beyond their influence on economic development. We recognize that there are endogeneity problems. Thus, we check our results by using instrumental variables (IV) to extract the exogenous component of GDP per capita. We draw the same conclusions from the IV regressions as from the ordinary least squares regressions reported below. We provide a summary of the IV regressions in the appendix, including the instruments and tests of the overidentifying restrictions.

Table 2 presents summary statistics. A few points are worth emphasizing. First, Settler mortality is much higher in Africa than in the rest of the world, while there is not a strong link between the legal origin variables and the sub-Saharan Africa dummy variable. Second, trade openness is strongly negatively correlated with French legal origin countries and strongly positively correlated with British legal origin countries. Third, INDEPENDENCE is negatively and significantly associated with the British dummy variable and Settler Mortality, but significantly positively correlated with German legal origin. Fourth, French legal origin countries tend to be Catholic, while British legal origin countries do not. Fifth, ethnic diversity is much higher in British legal origin countries with high initial Settler Mortality, while ethnic diversity is much lower in

<sup>&</sup>lt;sup>24</sup> The transplant view is a kindred spirit of the dynamic law and finance view. Both clearly reflect the comparative law literature's emphasis that a crucial distinguishing characteristic of legal systems is the process of lawmaking, the ability of legal systems to adapt to new environments and to evolve efficiently to support emerging commercial and financial arrangements. The transplant view looks to how legal systems were transplanted from one country to another and undertakes a rich study of individual country circumstances. The transplant view de-emphasizes legal origins and

German legal origin countries. Sixth, those countries that have received their laws in a generally unreceptive manner, as captured by the transplant effect, tend to be those countries with high settler mortality rates. Finally, French legal origin countries and countries with high settler mortality rates tend to have centralized political structure. These correlations suggest that it is important to control for other alternative influences when assessing any particular theory of the development of financial institutions.

#### VI. Results

#### A. Legal Origin and Finance

The regressions in Table 3 suggest that the legal origin variables explain a significant amount of the cross-country variation in financial institutions, even after controlling for the logarithm of real per capita GDP. The legal origin variables are significantly different from zero in 15 out of the 18 regressions at the 5 percent significance level (Table 3a). German legal origin countries tend to have higher levels of financial intermediary development and stronger contract enforcement than British or French legal origin countries. British legal origin countries tend to have stronger protection of outsider rights (the rights of shareholders and creditors) and better accounting standards than French and German legal origin countries. French legal origin countries tend to have the lowest levels of the financial institution indicators and significantly lower levels of private property rights protection than British and German legal origin countries.

The data continue to indicate an important role for legal origin in explaining the development of financial institutions after including dummy variables for sub-Saharan Africa and Latin America. While there is generally a negative relationship between the development of financial institutions and both the sub-Saharan Africa and Latin America dummy variables, these regional dummy variables do not alter the findings on the law and finance view significantly. The legal origin variables are significantly different from zero in 15 out of 18 regressions in Table 3b at the five- percent significance level. German legal origin countries tend to have higher levels of financial intermediary development, contract enforcement, and property rights protection.

British legal origin countries have the strongest outsider rights and accounting standards on average. Again, French legal origin countries tend to have the lowest levels of financial institutional development.

The data continue to suggest a strong link between financial institution development and legal origin when controlling for trade openness and the fraction of independent years since 1776. Table 3c presents 18 regressions of various combinations of the logarithm of real per capita GDP, trade openness, and INDEPENDENCE as control variables. In 16 out of 18 regressions, we reject the hypothesis that the legal origin variables enter with zero coefficients at the five- percent significance level. Moreover, we find the same pattern of results concerning the British, French, and German legal origin countries. While trade openness and INDEPENDENCE sometimes enter significantly and with the anticipated sign, there is not a robust link between financial institutional development and either trade or INDEPENDENCE.

Table 3d includes religious and ethnic fractionalization variables in the regressions. Even after controlling for religious composition, ethnic diversity, and the level of economic development, the legal origin variables are significantly correlated with property rights protection, contract enforcement, the protection of outside investors, and PRIVATE CREDIT. Including the religious variables, however, weakens the relationships between legal origin and (i) LIQUID LIABILITIES, (ii) MARKET CAPITALIZATION, (iii) TURNOVER, and (iv) ACCOUNTING. This seems to be primarily due to the close correlation between Catholic religion and French legal origin (as noted earlier) since the religious variables generally enter insignificantly and of the opposite sign than that predicted by some theories. Ethnic fractionalization does not enter significantly in most of the regressions.

Controlling for the transplant effect does not alter the strong relationship between legal origin and financial institutional development. Although the transplant data substantially reduces the sample (sometimes by more than 50 percent) and even after controlling for the level of economic development, legal origin remains strongly linked with financial development. As Table 3e demonstrates, legal origin enters significantly in 13 out of the 18 regressions at the 5 percent significance level and in 15 out of 18 at the 10 percent level. Differences in legal origin importantly explain cross-country variation in financial intermediary development, stock market development, the legal protection of outside investors, and accounting standards.

Furthermore, we do not find much empirical support for the transplant effect. The transplant indicator enters in only 8 out of the 18 financial institution regressions significantly. When controlling for the overall level of economic development, the transplant effect is *not* significantly related to financial intermediary development, stock market liquidity, the protection of outsider rights, contract enforcement, accounting standards, or property rights protection. The transplant indicator does not enjoy an independent link with the development of financial institutions beyond its association with economic development. <sup>25</sup>

### B. Indirect Evidence for the Dynamic Law and Finance View

Thus far, we have not distinguished between the law and finance and the dynamic law and finance views because the legal origin dummy variables proxy for both. Now, we examine the relationship between legal origin and the development of financial institutions after controlling for the full array of initial and current political structure indicators listed above. Differences in legal origin significantly explain financial intermediary development, stock market development, the legal rights of outside investors, accounting standards, contract enforcement efficiency, and the protection of property rights after controlling for overall economic development and the battery of measures of the initial political environment (Table 3f). Also, controlling for current political structure does not change these findings (Table 3g). In turn, the political structure variables rarely enter the regressions significantly. Thus, the strong link between legal origin and measures of the development of financial institutions is robust to indicators of political structure.

These results provide indirect support for the dynamic law and finance view. The law and finance view argues that the civil law tradition is intimately linked with the creation of centralized, powerful, closed political systems that tend to limit the development of free, competitive markets. The observation that legal origin explains financial development when controlling for the centralization, power, and openness of the political system suggests that legal origin captures something else besides the centralization, power, and openness of the State. The dynamic law and finance view argues that this "something else" is the degree to which the legal system evolves: legal traditions differ in terms of their ability to evolve to support changing commercial and

<sup>&</sup>lt;sup>25</sup> As noted above, we verify the regression results with GDP per capita using instrumental variables for GDP per capita and

financial arrangements. We call this indirect cross-country evidence in support of the dynamic law and finance view because we do not have a direct measure of legal system adaptability.

In sum, cross-country differences in legal origin help explain cross-country differences in the development of financial institutions. We find that German legal origin countries tend to have higher levels of financial intermediary development, contract enforcement, and property rights protection. On average, British legal origin countries have the strongest laws in terms of protecting the rights of outside investors and they also have the strongest accounting standards. French legal origin countries tend to have the lowest levels of development of financial institutions. We find that these findings hold – with the specific exceptions noted above – even after controlling for the level of economic development, regional dummy variables, trade openness, the fraction of years the country has been independent since 1776, ethnic diversity, religious composition, the transplant effect, and many measures of initial and current political structure. The main contributions of this section are (1) in assessing the robustness of the law and finance view to alterations in the conditioning information set and (2) in showing that there is a strong link between legal origin and financial development after controlling for the degree to which the government is centralized, closed, and uncompetitive. This provides suggestive, indirect evidence that the dynamic law and finance view adds explanatory power to the law and finance view.

### C. Endowment View

Data on settler mortality is limited and only exists for countries with British and French legal origins. Thus, we have less than 30 observations on market capitalization, turnover, outsider rights, and accounting standards. While we provide the results on these financial institution indicators in the tables, we focus our discussion on the four financial institution variables with more information: PRIVATE CREDIT, LIQUID LIABILITIES, ENFORCE, and PROPERTY RIGHTS with more than 50 observations.

The Table 4a regressions suggest that settler mortality explains a significant amount of the cross-country variation in financial institutions when we do not control for GDP per capita. Settler mortality is significantly

correlated with all four of the financial institution variables with more than 50 observations. In countries that had higher levels of settler mortality when colonialists arrived, we observe lower levels of financial institution development today. But, in a reoccurring pattern, the link between settler mortality and ENFORCE and PROPERTY RIGHTS weakens after controlling for the level of economic development.

When not controlling for GDP per capita, the data continue to indicate a very important role for settler mortality in explaining the development of financial institutions after including dummy variables for sub-Saharan Africa and Latin America (Table 4b). While there is generally a negative relationship between the development of financial institutions and both the sub-Saharan Africa and Latin America dummy variables, these regional dummy variables do not alter the findings on the endowment view. Settler mortality is negatively and significantly associated with PRIVATE CREDIT, LIQUID LIABILITIES, and ENFORCE at the 5 percent significance level and enters with a P-value of 0.051 in the PROPERTY RIGHTS regression. Again the data suggest that higher levels of settler mortality hurt financial institution development today.

Some of these relationships between settler mortality and the development of financial institutions become insignificant after controlling for the overall economic development. Since the logarithm of real GDP per capita enters significantly, these findings are consistent with the view that settler mortality is associated broadly with economic and financial development but not independently with the development of specific features of the legal system. As noted earlier, we confirm these findings when using instrumental variables to extract the exogenous component of GDP per capita. Settler mortality frequently does not explain financial development beyond its influence on GDP capita.

Table 4c shows that settler mortality is robustly linked with the development of financial institutions after controlling for trade openness and the fraction of years the country has been independent since 1776.

Higher levels of initial settler mortality are negatively associated with financial institutions today. We continue to find a strong, negative relationship between settler mortality and the development of financial institutions after controlling for religious composition and ethnic fractionalization variables. Table 4d reports these results. While the religious and ethnic diversity variables sometimes enter significantly, including these variables in the regressions does not alter the findings on settler mortality. We obtain the same pattern of results when

controlling for economic development as above: settler mortality loses its strong independent link with financial development when controlling for GDP per capita.

It is not practical to control for the transplant effect in assessing the endowment view. The resultant sample never includes more than 23 observations. For completeness, Table 4e presents these regressions. Even with this small sample, we get the same pattern of results.

In sum, cross-country differences in the mortality rate of European settlers as they landed in various corners of the world help explain cross-country differences in the development of financial institutions today when we do not control for the level of GDP per capita. The findings are consistent with the arguments advanced by AJR: initial settler mortality influenced the creation of initial institutions and these initial institutions have had long-lasting implications for the development of future institutions. These findings hold after controlling for regional dummy variables, trade openness, the fraction of years the country has been independent since 1776, ethnic diversity, religious composition, and the transplant effect. The link between settler mortality and contract enforcement and the protection of property rights weakens, however, when controlling for the current level of economic development. Thus, the data are consistent with the view that settler mortality influences a broad range of institutions associated with economic development, but mortality is not narrowly and particularly linked with the development of financial institutions.

### D. Politics and Finance View

The data suggest that there is a weak, fragile link between initial political structure and current levels of financial development (Table 5). Initial political structure is positively correlated with financial development in only 2 of the 18 regressions at the 5 percent level. The number of significant coefficients drops to one if we control for the level of economic development. The R<sup>2</sup> indicates that the political structure variable explains very little of the cross-country variation that exists in development of financial institutions.

When using alternative conditioning information sets, the regressions continue to illustrate the absence of a strong relationship between political structure and financial development. We find the same pattern of results when including dummy variables for sub-Saharan Africa and Latin America (Table 5b), after controlling

for trade openness and years of independence since 1776 (Table 5c), while controlling for religious composition and ethnic fractionalization (Tables 5d), and after controlling for the transplant effect (Table 5e). Also, we find a very fragile link between the individual political structure components and financial development (Table 5f). This holds for both initial and contemporaneous measures of political structure (see Appendix).

#### E. Finance, Law, and Endowments

When we include both legal origin and settler mortality together in the financial development regressions, the results are consistent with theories that stress the role of legal traditions. The sample is much smaller and contains less variability than in the tests of the law and finance view above because settler mortality data is available for a limited number of countries and it is only available for British and French legal origin countries. Only the PRIVATE CREDIT, LIQUID LIABILITIES, ENFORCE, and PROPERTY RIGHTS regressions contain more than 50 observations in Table 6, and we only discuss these in text. The results show that French legal origin countries have significantly lower values of PRIVATE CREDIT, ENFORCE, and PROPERTY RIGHTS than British legal origin countries. These results hold when controlling for real GDP per capita and settler mortality.

Thus, the data are consistent with the law and finance view: countries with a British common law tradition tend to protect private property more rigorously, enforce contracts more efficiently, and have better developed financial intermediaries than French civil law countries. We also included the political structure indicators simultaneously in these regressions. The political structure indicators never entered any of the financial development regressions significantly. Moreover, as noted above, the legal origin variables continue to explain cross-country variation in financial institutional development when controlling for an array of

<sup>&</sup>lt;sup>26</sup> In Pistor et. al.'s (2000) study of the historical evolution of corporate law, they argue that changes in the political environment did not substantively alter corporate law in Germany, France, and England. In Germany, revision occurred in 1937 and 1965. "While the 1937 law includes language reflecting the national-socialist ideology, the principles of the law were not altered fundamentally either in 1937 or in 1965." (p.56) Similarly, France enacted its first comprehensive corporate law in 1867 during the reign of Napoleon III. Yet, when the law was amended 100 years later during a very different political climate, "... it was not substantially revised." (p.57) Finally, even as England's Labour governments during the post-World War II era sought far-reaching nationalization, England did not dramatically alter its corporate law. As Pistor, et. al. (2000) argue, "... the same approach to corporate lawmaking survives different political regimes." (p. 58)

political structure indicators. Thus, the data suggest that differences in legal heritage are important in explaining cross-country differences in the development of financial institutions.

In terms of settler mortality, the results are generally consistent with the endowment view, but the relationship between settler mortality and financial development weakens when controlling for GDP per capita. Settler mortality is significantly and negatively associated with PRIVATE CREDIT and LIQUID LIABILITIES even after controlling for overall economic development and legal origin. Settler mortality is also negatively and significantly linked with ENFORCE and PROPERTY RIGHTS when controlling for legal origin. <sup>27</sup> Consistent with results reported above, however, settler mortality does not remain significantly linked with PROPERTY RIGHTS and ENFORCE when controlling for economic development (the logarithm of current real per capital GDP). Thus, the data are consistent with the view that settler mortality is closely associated with a range of factors associated with overall economic development but less specifically linked with financial institutions than the legal origin variables.

<sup>&</sup>lt;sup>27</sup> Controlling for political structure does not alter these findings on settler mortality but reduces the sample even further.

### VII. Conclusions

This paper assessed four theories regarding the historical determinants of financial development. The law and finance view emphasizes that different legal traditions protect the rights of outside investors to differing degrees. According to this view a large part of the cross-country differences in financial development can be traced back to different legal traditions and their protection of outsider rights. The dynamic law and finance view augments the law and finance view by noting that legal traditions differ in terms of their ability to adapt to changing conditions. Those legal traditions that are able to adapt can better foster financial development than more rigid legal traditions. The politics and finance view de-emphasizes the role of legal traditions and instead emphasizes that political factors shape financial development. Finally, the endowment view stresses that the rate of settler mortality importantly influenced the types of institutions that colonialists established and these initial institutions endured with last implications on economic development. Thus, when initial conditions produced an unfavorable environment for European settlers, colonialists tended to create institutions designed to extract resources expeditiously and not to foster long-run prosperity.

Our findings are consistent with the law and finance and dynamic law and finance views. Differences in legal origin – whether a country has a British, French, German, or Scandinavian legal heritage – help explain the development of financial institutions today even after controlling for the level of economic development, regional dummy variables, religious composition, ethnic diversity, openness to international trade, the fraction of years the country has been independent since 1776, the transplant effect, initial endowments, and the political environment. Compared to the other legal families, countries with a French legal tradition tend to have weak financial institutions. They have less transparent corporate financial statements, poorer property rights protection, weaker protection of the rights of shareholders and debt holders, and lower levels of stock market and bank development. Common law and German civil laws have comparatively strong financial institutions. Specifically, common law systems tend to have particularly strong accounting systems, strong protection of the rights of outside investors, and large equity markets. In comparison, German civil law systems tend to have stronger protection of private property, effective contract enforcement, and well-developed banks.

This paper also argues that the dynamic law and finance view makes a worthwhile amendment to the law and finance view. The law and finance view stresses that the civil law tradition tends to support the creation of a powerful State and this powerful State then tends to protect society's elite from competition by limiting free financial development. Nevertheless, we find that the legal origin variables remain significantly correlated with financial development even after controlling for the openness and competitiveness of the political system. Thus, there is an independent link between legal origin and financial institutions beyond proxies for political power. This finding is consistent with the dynamic law and finance's emphasis that the adaptability and flexibility of legal systems importantly influences financial development.

Furthermore, the dynamic law and finance view helps reconcile the comparative success of German legal origin countries relative to French legal origin countries by noting that German legal scholars explicitly sought to make their legal system more adaptable than the French system. Also, the dynamic law and finance view helps explain why France has been more successful than many French legal origin countries in creating a vibrant financial system by noting that France itself has created a more dynamic, adaptive legal system than that originally envisioned during the formation of the Napoleonic civil code.

The data also provide qualified support for the application of AJR's endowment view to financial institutions. Countries with high levels of settler mortality during the earlier stages of colonization tend to have substantially lower levels of financial institution development today. These results hold even after controlling for regional dummy variables, religious composition, ethnic diversity, openness to international trade, the fraction of years the country has been independent since 1776, political structure, and legal origin. The link between settler mortality and financial development weakens substantially, however, when controlling for GDP per capita. Settler mortality is closely linked with GDP per capita, which confirms and extends AJR's findings. But, settler mortality does not enjoy a strong, independent link with financial development beyond its links with overall economic development.

Finally, political structure variables do not explain much of the cross-country variation in measures of bank development, financial development or laws that protect outsider rights. As emphasized in the introduction, this does not imply that politics is unimportant for the development of financial institutions.

Indeed, the law and finance and endowment views focus heavily on political forces. Furthermore, Rajan and Zingales (2000) show that there are important cases when major changes in interest group power alter the political landscape and hence national approaches to financial development. This paper's findings simply indicate that when we examine the most extensive array of measures that have been constructed for the structure of the political environment, these proxies are not particularly useful in explaining cross-country differences in financial institutions today.

Besides these specific findings, this paper also sheds light on a fundamental element of economics: exchange. Economies differ substantially in terms of the ability of private agents to write contracts and make transactions confidently. This paper argues that legal systems differ in terms of their abilities to facilitate private exchanges and in terms of their ability to adapt to support new financial and commercial transactions.

The results hold strategic messages for policymakers. While a country cannot change its legal origin, it can – albeit with considerable effort – reform its judicial system by emphasizing the rights of outside investors, by making contract enforcement more efficient and certain, and by creating a legal system that more effectively evolves to support changing economic conditions.

### References

- Acemoglu, Daron; Johnson, Simon; Robinson, James A. "The Colonial Origins of Comparative Development: An Empirical Investigation", NBER Working Paper # 7771, 2000.
- Acemoglu, Daron and Robinson, James A. "Political Origins of Poverty and Prosperity," MIT Working Paper, 2000.
- Alesina, Alberto, Reza Baqir and William Easterly, "Public Goods and Ethic Divisions," Quarterly Journal of Economics, 114 (November 1999): 1243-1284.
- Ayittey, George B.N., 1992, Africa Betrayed. New York: St. Martins Press.
- Banfield, Edward. The Moral Basis of a Backward Society, 1958, New York: Free Press.
- Barth, James R.; Caprio, Gerard Jr.; Levine, Ross. "Bank Regulation and Supervision: What Works" University of Minnesota (Carlson School of Management), Department of Finance, mimeo, 2001a.
- Barth, James R.; Caprio, Gerard Jr.; Levine, Ross. "The Regulation and Supervision of Banks Around the World: A new Database," University of Minnesota (Carlson School of Management), Department of Finance, mimeo, 2001b.
- Beck, Thorsten; Clarke, George; Groff, Alberto; Keefer, Phil; Walsh, Patrick. "New Tools and New Tests in Comparative Political Economy: The Database of Political Institutions", World Bank Policy Research Working Paper 2283, 2000.
- Beck, Thorsten; Demirgüç-Kunt, Asli; Levine, Ross. "A New Database on Financial Development and Structure", World Bank Economic Review, 2000, forthcoming.
- Beck, Thorsten and Ross Levine. "New Firm Formation and Industry Growth: Does Having a Market- or Bank-Based System Matter? University of Minnesota, mimeo, 2001.
- Beck, Thorsten; Levine, Ross; Loayza, Norman. "Finance and the Sources of Growth," <u>Journal of Financial Economics</u>, 2000, 58(1).
- Becker, Gary. "A Theory of Competition among Pressure Groups for Political Influence", Quarterly Journal of Economics, 1993, 98, 371-400.
- Berkowitz, Daniel; Pistor, Katharina; Richard, Jean-Francois. "Economic Development, Legality, and the Transplant Effect", University of Pittsburgh mimeo, 1999.
- Berman, H. J., <u>Law and Revolution</u>: The Formation of the Western Legal Tradition (Harvard University Press, Cambridge, MA) 1997.
- Black, Bernard S. "The Legal and Institutional Preconditions for Strong Securities Markets," <u>UCLA Law Review 1</u>, 2001, forthcoming.
- Coke, Edward. The First Part of the Institutes of the Laws of England. New York, NY: Garland Publishing, Inc, 1628 [1979 version].
- Curtin, Philip D. The Image of Africa, (University of Wisconsin Press, Madison) 1964.

- Curtin, Philip D. <u>Death by Migration: Europe's Encounter with the Tropical World in the Nineteenth Century</u>, (New York, NY: Cambridge University Press), 1989.
- Curtin, Philip D. <u>Disease and Empire: The Health of European Troops in the Conquest of Africa</u>, (New York, NY: Cambridge University Press), 1998.
- Demirgüç-Kunt, Asli and Maksimovic, Vojislav. "Law, Finance, and Firm Growth," <u>Journal of Finance</u>, December 1998, <u>53(6)</u>, pp.2107-2137.
- Demirgüç-Kunt, Asli and Maksimovic, Vojislav. "Institutions, Financial Markets, and Firm Debt Maturity," Journal of Financial Economics, 1999, 54, pp.295-336.
- Easterly, William and Ross Levine, "Africa's Growth Tragedy: Policies and Ethnic Divisions," Quarterly <u>Journal of Economics</u>, 1997, 112, 1203-1250.
- Engerman, Stanley and Sokoloff, Kenneth. "Factor Endowments, Institutions, and Differential Paths of Growth among New World Economies," in S.H. Haber ed. *How Latin America Fell Behind*, Stanford University Press, Stanford CA 1997, 260-304.
- Engerman, Stanley; Mariscal, Elisa; and Sokoloff, Kenneth. "Schooling, Suffrage, and the Persistence of Inequality in the Americas, 1800-1945, Unpublished manuscript, Department of Economics, UCLA.
- Ertman, Thomas. Birth of the Leviathan. Cambridge, UK: Cambridge University Press, 1997.
- Finer, Samuel. The History of Government. Vol. I-III, Cambridge, UK: Cambridge University Press, 1997.
- Glaeser, Edward and Andrei Shleifer. "Legal Origins," Harvard University, Department of Economics, mimeo, 2000.
- Glendon, M. A.; M. W. Gordon and C. Osakwe. <u>Comparative Legal Tradition in a Nutshell.</u> St. Paul, MN: West Publishing Co., 1982.
- Guinnane, Timothy. "The Development of Germany's Banking System, 1800-1914," mimeo, Yale University, November 2000.
- Gurr, Ted Robert, Jaggers, Keith, and Moore, Will H. "The Transformation of the Western State: The Growth of Democracy, Autocracy, and State Power Since 1800", <u>Studies in Comparative International Development</u>, 1990, <u>25</u>, 73-108.
- Gutierrez, Hector. "La Mortalite des Eveques Latino-Americains aux XVIIe et XVII Siecles," <u>Annales de Demographie Historique</u>, 29-39, 1996
- Hayek, Friedrich. The Constitution of Liberty. Chicago, IL: The University of Chicago Press, 1960.
- Keinan, Yoram. "The Evolution of Secured Transactions," mimeo, University of Michigan Law School, 2000.
- King, Robert G. and Levine, Ross. "Finance and Growth: Schumpeter Might Be Right", Quarterly Journal of Economics, 1993a, 108, 717-38.
- King, Robert G. and Levine, Ross. "Finance, Entrepreneurship, and Growth: Theory and Evidence", Journal of

- Monetary Economics, 1993b, 32, 513-42.
- Landes, David. The Wealth and Poverty of Nations, 1998, New York, NY: W.W. Norton
- La Porta, Rafael; Lopez-de-Silanes, Florencio; and Shleifer, Andrei. "Government Ownership of Commercial Banks", NBER Working Paper 7620, March 2000.
- La Porta, Rafael; Lopez-de-Silanes, Florencio; Shleifer, Andrei; and Vishny, Robert W. "Investor Protection and Corporate Governance," <u>Journal of Financial Economics</u>, 2000.
- La Porta, Rafael; Lopez-de-Silanes, Florencio; Shleifer, Andrei; and Vishny, Robert W. "The Quality of Government," <u>Journal of Law, Economics, and Organization</u>, 1999, 15(1), pp. 222-279.
- La Porta, Rafael; Lopez-de-Silanes, Florencio; Shleifer, Andrei; and Vishny, Robert W. "Law and Finance," Journal of Political Economy, 1998, 106(6), pp. 1113-1155
- La Porta, Rafael; Lopez-de-Silanes, Florencio; Shleifer, Andrei; and Vishny, Robert W. "Legal Determinants of External Finance," <u>Journal of Finance</u>, July 1997, <u>52</u>(3), pp. 1131-1150.
- Levine, Ross. "The Legal Environment, Banks, and Long-Run Economic Growth," <u>Journal of Money, Credit, and Banking</u>, August 1998, <u>30</u> (pt.2), 596-620.
- Levine, Ross. "Law, Finance, and Economic Growth", <u>Journal of Financial Intermediation</u>, 1999, <u>8</u>(1/2), pp. 36-67.
- Levine, Ross. "Napoleon, Bourses, and Growth: With A Focus on Latin America," in <u>Market Augmenting</u>
  <u>Government</u>, Eds. Omar Azfar and Charles Cadwell. Ann Arbor, MI: University of Michigan Press, 2001, forthcoming.
- Levine, Ross; Loayza, Norman; Beck, Thorsten. "Financial Intermediation and Growth: Causality and Causes," Journal of Monetary Economics, 2000.
- Levine, Ross and Zervos, Sara. "Stock Markets, Banks, and Economic Growth," <u>American Economic Review</u>, June 1998, <u>88</u>(3), 537-558.
- Littleton, Thomas. <u>Littleton's Tenures in English</u>. Eugene Wambaugh, ed. Washington, D.C. John Bryne & Co., (1481) [1903 version].
- Marx, Karl. Das Kapital. London: Lawrence and Wishart, 1974[1872 version].
- Mahoney, Paul. "The Common Law and Economic Growth: Hayek Might be Right," Working Paper, University of Virginia School of Law, 2000.
- Merryman, John Henry. <u>The Civil Law Tradition</u>: An Introduction to the Legal Systems of Western Europe and Latin America, Stanford, CA Stanford University Press, 1985.
- Neusser, Klaus and Kugler, Maurice. "Manufacturing Growth and Financial Development: Evidence from OECD Countries," Review of Economics and Statistics, November 1998, 80, 636-46.
- North, Douglass. <u>Institutions, Institutional Change, and Economic Performance</u>, Cambridge, UK: Cambridge University Press, 1990.

- North, Douglass and Barry R. Weingast. "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England, <u>Journal of Economic History</u>, 1988, 64, 803-832.
- Olson, Mancur. "Dictatorship, Democracy, and Development," <u>American Political Science Review</u>, 87, 567-576.
- Pistor, Katharina; Yoram Keinan; Jan Kleinheisterkamp, and Mark D. West. "The Evolution of Corporate Law," mimeo, Harvard University (Kennedy School of Government), 2000.
- Priest, George L. "The Common Law Process and the Selection of Efficient Rules," <u>Journal of Legal Studies</u>, 1977, 6, p.65-?
- Putnam, Robert. Making Democracy Work: Civic Traditions in Modern Italy, 1993, Princeton, N.J.: Princeton University Press.
- Rajan, Raghuram G. and Zingales, Luigi. "Financial Dependence and Growth," <u>American Economic Review</u> 88, 559-587.
- Rajan, Raghuram G. and Zingales, Luigi. "The Politics of Financial Development", mimeo 1999.
- Rajan, Raghuram G. and Zingales, Luigi. "The Great Reversals: The Politics of Financial Development in the 20<sup>th</sup> Century", mimeo 2000.
- Rosenbluth, Frances and Thies, Michael F. "The Electoral Foundations of Japan's Banking Regulation", Yale University mimeo 2000.
- Rosenthal, Jean-Laurent. "How The French Revolution Reshaped Financial Markets" UCLA mimeo, 2000.
- Rousseau, Peter L. and Wachtel, Paul. "Financial Intermediation and Economic Performance: Historical Evidence from Five Industrial Countries," <u>Journal of Money, Credit, and Banking</u>, November 1998, 30(4), 657-78.
- Rousseau, Peter L. and Wachtel, Paul. "Equity Markets and Growth: Cross-Country Evidence on Timing and Outcomes, 1980-1995, <u>Journal of Banking and Finance</u>, 2000, forthcoming.
- Rubin, Paul H. "Why is the Common Law Efficient," Journal of Legal Studies, 1977, 6, p. 51-?
- Weber, Max. The Protestant Ethic and the Spirit of Capitalism, 1958, New York: Charles Scribner's Sons
- Wurgler, Jeffrey. "Financial Markets and the Allocation of Capital," Journal of Financial Economics, 2000.
- Young, Crawford. The African Colonial State in Comparative Perspective, Yale University Press, New Haven CT, 1994.
- Zweigert, Konrad and Hein Kotz. <u>Introduction to Comparative Law</u>, Oxford University Press, New York, NY, 1998.

### Data Appendix:

Variable name	Description and source	Number of Observations
Financial sector development:		
Private credit	A broad measure of financial development, specifically a measure of savings channeled through financial intermediaries to borrowers. Calculated as the value of credits by financial intermediaries to the private sector divided by GDP. Source: Financial structures database. <sup>1</sup>	113
Liquid liabilities	Measures the overall size of the financial intermediary sector. Calculated as currency plus demand and interest-bearing liabilities of bank and nonbank financial intermediaries divided by GDP. Source: Financial structures database	108 e. <sup>1</sup>
Market capitalization	A measure of stock market development. Calculated as the value of shares listed on the stock exchange divided by GDP. <i>Source: Financial structures database.</i> <sup>1</sup>	51
Turnover	A measure of the liquidity of the market relative to it's size. Calculated as the ratio of total shares traded on the stock market exchange to GDP divided by market capitalization (defined above). Source: Financial structures database	51 9 <sup>1</sup>
Outsider rights	An index of the degree to which legal codes of the country protect participants in financial markets. Constructed as the sum of Creditor (degree of protection of claims of secured creditors in the case of reorganization or liquidation of a company) and Anti-director (degree of protection of monetary shareholder rights). Ranges from 0-10. Source: La Porta, Lopez-de-Silanes, Schleifer, and Vishny (1998).	45
Enforce	An indicator of the effectiveness of the legal system in enforcing contracts. Calculated as the average of variables Conrisk (assessment or the risk that a government will/can modify a contract after it has been signed) and Rule of Law (assessment of the law and order tradition of the country). Ranges from 1-10. Source: La Porta, Lopez-de-Silanes, Schleifer, and Vishny (1998) and Levine, Loayza, and Beck (2000).	104
Accounting	A measure of accounting standards, specifically the comprehensiveness of companies balance sheets and income statements. Ranges from 0-90. Source: Center for International Financial Analysis and Research (CIFAR) and La Porta, Lopez-de-Silanes, Schleifer, and Vishny (1998).	39
Property rights	An index of the degree to which government protects and enforces laws that protect private property. Ranges from 1-5. Source: La Porta, Lopez-de-Silanes Schleifer and Vishny (1999).	97 s,
Public Ownership	Percentage of assets of the 10 largest banks in each country owned by the government as share of the total assets of these banks. Source: La Porta, Lopez-de-Silanes, Schleifer, and Vishny (2000).	78
Legal origin data:		
British	Indicator for English common law tradition. Source: La Porta, Lopez-de-Silanes, Schleifer and Vishny (1999).	138
French	Indicator for French civil law tradition. Source: La Porta, Lopez-de-Silanes, Schleifer and Vishny (1999).	138
German	Indicator for German civil law tradition. Source: La Porta, Lopez-de-Silanes, Schleifer and Vishny (1999).	138

## Data Appendix (continued):

Variable name	Description and source	Number of Observations
Initial political structure data:		
Autocracy	A measure of the general closedness of political institutions ranging from 0 (open) to 10 (closed). Source: Polity III.	122
Executive Comp.	Measures extent to which executives are chosen through competitive elections. Ranges from 0 (non-competitive) to 3 (competitive). Source: Polity III.	122
Executive Open.	Measures the opportunity for non-elites to attain executive office. Ranges from 0 (closed) to 4 (open). Source: Polity III.	122
Nonelite	Measures the extent to which non-elites are able to access institutional structures for political structures. Ranges from 0 (closed) to 5 (open). Source: Polity III.	122
Principal component	A linear combination of two measures of the degree of competitiveness in the initial political structure (autocracy and exec. comp.) and two measures of open ness of the initial political structure (exec. open. and nonelite). Weights for linear combination calculated using principal components factor analysis. Source: Internally constructed using data from Polity III.	
Current political structure data	:	
Legislative Comp.	Index measures the number of parties competing in the last legislative election ranging from 1 (non-competitive) to 7 (competitive). Source: Beck, Clarke, Groff, Keefer, and Walsh (2000).	138
Executive Comp.	Index measures the number of parties competing in the last executive election ranging from 1 (non-competitive) to 7 (competitive). Source: Beck, Clarke, Groff, Keefer, and Walsh (2000).	138
Cohesion	Measures party dispersion within the government. Source: Beck, Clarke, Groff, Keefer, and Walsh (2000).	138
Checks	A measure of political cohesion that takes into account the effectiveness of electoral checks on government decision makers or electoral rules that influence party control over members. Source: Beck, Clarke, Groff, Keefer, and Walsh (2000).	· 138
Special	An indicator variable that equals one if either the chief executive, the largest government party or any other parties in the governing coalition represent a special interest group. Source: Beck, Clarke, Groff, Keefer, and Walsh (2000).	138
Narrow	A measure of centralization. Calculated as the log of average number of representatives elected by each electoral district in a country.  Source: Beck, Clarke, Groff, Keefer, and Walsh (2000).	118
Principal component	A linear combination of two measures of the degree of competitiveness in the current political structure (legis. comp. and checks) and two measures of openr of the current political structure (special and narrow). Weights for linear combination calculated using principal components factor analysis. Source: Internally constructed using data from Beck, Clarke, Groff, Keefer, and Walsh (2000).	118 ness
Regional data:	·	
Africa Latin	Indicator for sub-Sahara African country. Source: Easterly and Levine (1997) Indicator for Latin American country. Source: Easterly and Levine (1997)	149 149

# Data Appendix (continued):

Variable name	Description and source	Number of Observations
Openness and Independence	data:	
Openness	Calculated as exports plus imports divided by GDP. Source: La Porta, Lopez-de-Silanes, Schleifer, and Vishny (2000).	122
Independence	Calculated as the percentage of years since 1776 that a country has been independent. Source: Easterly and Levine (1997)	139
Culture data:		
Catholic	Percentage of population that follows Catholic religion. Ranges from 0-100. Source: Easterly and Levine (1997).	104
Muslim	Percentage of population that follows Muslim religion. Ranges from 0-100. Source: Easterly and Levine (1997).	104
Other religion	Percentage of population that follows religion other than Catholic, Muslim, or Protestant. Ranges from 0-100. Source: Easterly and Levine (1997).	104
Ethnolinguistic Fract.	Probability that two randomly selected individuals in a country will speak the same language. Source: Easterly and Levine (1997).	101
Transplant data:		
Transplant effect	Calculated as sum of indicator variables for receptive-indirect transplants, unreceptive direct transplants, and unreceptive indirect transplants. Source: Berkowitz, Pistor, and Richard (1999).	48
Initial environment data:		
Settler mortality	Log of rate of settler mortality. Source: Acemoglu, Johnson, and Robinson (2000).	78
Economic development data:		
Log GDP per capita	Log of GDP per capita expressed in current US dollars for period 1975-1995. Source: World Development Indicators.	133

<sup>&</sup>lt;sup>1</sup> Data are available on the internet at http://www.worldbank.org/research/projects/finstructure

Table 1a: Summary statistics for indicators of financial development

	Private credit	Liquid liabilities	Market capitalization	Turnover	Outsider rights	Enforce	Accounting	Property Rights	Public Ownership
Mean	0.37	0.45	0.30	0.33	5.31	5.85	60.90	3.58	43.34
Median	0.27	0.39	0.17	0.24	5.00	5.21	64.00	3.00	38.07
Standard Deviation	0.31	0.28	0.38	0.39	1.93	2.24	13.64	1.09	30.27
Maximum	1,63	1.58	2.14	2.12	9.00	10.00	83.00	5.00	100.00
Minimum	0.02	0.07	0.01	0.01	1.00	2.27	24.00	1.00	0.00
Observations	113	108	51	51	45	104	39	97	78

Variable definitions are given in the data appendix.

Table 1b: Correlation of indicators of financial development

	Private credit	Liquid liabilities	Market capitalization	Turnover	Outsider rights	Enforce	Accounting	Property Rights	Public Ownership
Private credit			•						,
Liquid liabilities	0.758***	·	•			•		•	
Market capitalization	0.334**	0.545***	•		•	•			•
Turnover	0.521***	0.453***	0.075		•				
Outsider rights	-0.031	0.038	0.436***	-0.154				•	
Enforce	0.750***	0.573***	0.379***	0.328**	-0.140				
Accounting	0.535***	0.276	0.581***	0.219	0.288*	0.578***			
Property Rights	0.630***	0.464***	0.347**	0.359**	-0.026	0.802***	0.528***		
Public Ownership	-0.509***	-0.295**	-0.562***	-0.004	-0.093	-0.388***	-0.598***	-0.508***	•

<sup>\*, \*\*,</sup> and \*\*\* denote significance at the 10%, 5%, and 1% level respectively. Variable definitions are given in the data appendix.

Table 2a: Summary statistics for explanatory variables

	British legal origin	French legal origin	German legal origin	Settler mortality	Africa	Latin America	Trade	Independence	Catholic religion	Muslim religion	Other religion	Ethnolinguistic fractionalization	Transplant Effect	Princ. Comp. CPS	Princ. Comp. IPS
Mean	0.38	0.54	0.04	4.66	0.31	0.22	117.30	0.34	37.54	18.35	28.27	0.33	0.60	0.00	0.00
Median	0.00	1.00	0.00	4.44	0.00	0.00	94,41	0.11	26.10	0.90	18.00	0.23	1.00	-0.11	-0.41
Standard Deviation	0.49	0.50	0.21	1.23	0.47	0.42	120.07	0.37	37.37	32.15	28.23	0.30	0.49	1.26	1.58
Maximum	1.00	1.00	1.00	7.99	1.00	1.00	999.69	1.00	97.30	99.40	98.50	0.89	1.00	3.54	2.53
Minimum	0.00	0.00	0.00	2.15	0.00	0.00	19.41	0.00	0.00	0.00	0.40	0.00	0.00	-2.37	-2.65
Observations	137	137	137	78	147	147	122	139	104	104	104	101	48	118	139

Variable definitions are given in the data appendix.

Table 2b: Correlation of explanatory variables

	British legal origin	French legal origin	German legal origin	Settler mortality	Africa	Latin America	Trade	Independence	Catholic religion	Muslim religion	Other religion	Ethnolinguistic fractionalization	Transplant effect	Princ. Comp. CPS	Princ. Comp IPS
British legal origin	,				•										
	-0.848***	•	•	•	•	•	•	•	•	•	•	•	•	•	•
rench legal origin			•	•	•	•		•	•	•		•	•		•
Serman legal origin	-0.167*	-0.232***		•	-	•	•	•		•	•	•	•	•	•
Settler mortality	-0.219*	0.219*	N/A		•	•		•					•	•	•
Africa	0.038	0.075	-0.149°	0.609***	•	•		•	•	•		•	•		•
atin America	-0.101	0.181**	-0.109	-0.144	-0.363***	•			•						
rade	0.226**	-0.199**	-0.040	-0.221*	-0.178**	0.114							-		
ndependence	-0.343***	0.154*	0.348***	-0.320***	-0.443***	0.178**	-0.210**								
Catholic religion	-0.451***	0.540***	-0.005	-0.048	-0.176*	0.533***	-0.086	0.388***							
Auslim religion	0.012	0.105	-0.134	0.217*	0.080	-0.308***	-0.070	-0.319***	-0.497***						
Other religion	0.501***	-0.470***	0.113	-0.123	0.146	-0.274***	0.081	-0.122	-0.533***	-0.217**					
thnolinguistic frac.	0.282***	-0.096	-0.201**	0.330***	0.560***	-0.264***	-0.104	-0.432***	-0.221**	0.201**	0.146				
ransplant effect	-0.024	0.370***	-0.209	0.594***	0.244*	0.389***	-0.028	-0.278*	0.054	0.348**	0.085	0.380***			
Princ, Comp. CPS	0.269***	-0.455***	0.223**	-0.502***	-0.451***	0.002	0.151	0.331***	0.012	-0.359***	0.119	-0.242**	-0.654***	•	•
Princ. Comp. IPS	0.470***	-0.425***	-0.019	-0.236**	0.178**	-0.102	0.153	-0.412***	-0.194*	-0.132	0.231**	0.251**	-0.125	0.319***	•

<sup>\*, \*\*,</sup> and \*\*\* denote significance at the 10%, 5%, and 1% level respectively. Variable definitions are given in the data appendix.

Table 3a: Law and Finance

	Log(real per capita GDP)	British legal origin	French legal origin	German legal origin	F-Test for legal origin	R²	Observations
Private Credit		-0.317 <sup>G</sup>	-0.366 <sup>G</sup>	0.413 <sup>B,F</sup>	10.240	0.350	113
		0.014	0.004	0.042	0.000		
	0.141	0.031 <sup>G</sup>	-0.016 <sup>G</sup>	0.497 <sup>B,F</sup>	4.760	0.666	113
	0.000	0.810	0.902	0.008	0.004		
Liquid Liabilities		-0.025 <sup>G</sup>	-0.065 <sup>G</sup>	0.509 <sup>B,F</sup>	3.930	0.208	108
•		0.640	0.237	0.004	0.011		
	0.116	0.262 <sup>G</sup>	0.222 <sup>G</sup>	0.579 <sup>B,F</sup>	5.510	0.468	108
	0.000	0.000	0.001	0.000	0.002		
Market Capitalization		0.188	0.014	0.148	1.790	0.049	51
•		0.059	0.886	0.153	0.163		
	0.146	0.468	0.260	0.234	4.760	0.238	51
	0.008	0.002	0.133	0.035	0.006		
Turnover		-0.007 <sup>G</sup>	-0.052 <sup>G</sup>	0.797 <sup>B,F</sup>	3.280	0.478	51
		0.918	-0.052	0.007	0.029	••	•
	0.027	0.045 <sup>G</sup>	-0.007 <sup>G</sup>	0.813 <sup>B,F</sup>	2.980	0.484	51
	0.314	0.538	0.917	0.007	0.041	0.101	0,
Outsider rights		2.000 <sup>F,G</sup>	-0.947 <sup>B</sup>	0.400 <sup>B</sup>	13.180	0.498	45
<b>33</b>		0.000	0.078	0.512	0.000		
	-0.370	1.334 <sup>F,G</sup>	-1.564 <sup>B</sup>	-0.638 <sup>B</sup>	12.440	0.546	45
	0.033	0.032	0.001	0.307	0.000		
Enforce		-3.915 <sup>G</sup>	-4.495 <sup>G</sup>	-0.627 <sup>B,F</sup>	145.060	0.312	104
		0.000	0.000	0.141	0.000	0.072	,,,,
	1.203	-0.902 <sup>G</sup>	-1.398 <sup>G</sup>	0.094 <sup>B,F</sup>	7.700	0.765	99
	0.000	0.003	0.000	0.644	0.000		
Accounting standards		-4.333 <sup>F,G</sup>	-22.833 <sup>B,G</sup>	-9.600 <sup>8,F</sup>	9.860	0.478	39
3		0.347	0.000	0.028	0.000		
	5.031	2.341 <sup>F,G</sup>	-15.22 <sup>B,G</sup>	-6.362 <sup>B,F</sup>	12.590	0.610	39
	0.002	0.631	0.003	0.165	0.000		
Property rights		-1.116 <sup>F,G</sup>	-1.613 <sup>B,G</sup>	0.200 <sup>8,F</sup>	71,490	0.227	96
· · · · · · · · · · · · · · · · · · ·		0.000	-1.613	0.277	0.000		
	0.526	0.157 <sup>F</sup>	-0.422 <sup>B,G</sup>	0.436 <sup>F</sup>	7.300	0.591	96
	0.000	0.533	0.093	0.081	0.000	<del>-</del>	
Public Ownership		-5.761	9.769	-3.231	1.420	0.058	78
•		0.642	0.371	0.828	0.243		
	-12.032	-27.747	-15.445	-10.447	2.500	0.272	75
	0.000	0.024	0.206	0.466	0.067		

Superscripts B, F, and G denote that the coefficient estimate is significantly different from the British, French, or German coefficient. estimate, respectively, at the 95% confidence level. P-values are in italics. Variable definitions are given in the data appendix.

Table 3b: Law, Finance, and Regional Dummies

	Log(real per capita GDP)	British legal origin	French legal origin	German legal origin	F-Test for legal origin	Africa Dummy	Latin Dummy	R²	Observations
Private Credit		-0.195 <sup>G</sup>	-0.215 <sup>G</sup>	0.413 <sup>B,F</sup>	5.140	-0.284	-0.166	0.490	113
		0.143	0.107	0.044	0.002	0.000	0.002		
	0.134	0.053 <sup>G</sup>	0.026 <sup>G</sup>	0.493 <sup>8,F</sup>	3.520	-0.056	-0.111	0.684	113
	0.000	0.695	0.847	0.009	0.018	0.181	0.003		
Liquid Liabilities		0.117 <sup>G</sup>	0.126 <sup>G</sup>	0.509 <sup>B,F</sup>	3.750	-0.350	-0.230	0.460	108
		0.052	0.052	0.004	0.013	0.000	0.000		
	0.084	0.275	0.274	0.560	8.860	-0.202	-0.192	0.551	108
	0.000	0.000	0.000	0.001	0.000	0.000	0.000		
Market Capitalization		0.218	0.084	0.148	2.110	-0.047	-0.196	0.084	51
		0.032	0.541	0.162	0.112	0.855	0.107		
	0.150	0.471	0.313	0.236	4.800	0.121	-0.151	0.269	51
	0.007	0.002	0.120	0.037	0.006	0.579	0.152		
Turnover		0.042 <sup>G</sup>	-0.024 <sup>G</sup>	0.797 <sup>B,F</sup>	3.020	-0.257	-0.048	0.508	51
		0.530	0.653	0.008	0.040	0.000	0.489		
	0.012	0.062 <sup>G</sup>	-0.005 <sup>G</sup>	0.805 <sup>B,F</sup>	3.070	-0.244	-0.045	0.509	51
	0.679	0.384	0.938	0.008	0.038	0.000	0.533		
Outsider rights		1.923 <sup>F,G</sup>	-1.000 <sup>8</sup>	-0.400 <sup>B</sup>	8.090	0.327	0.125	0.501	45
		0.002	0.092	0.523	0.000	0.518	0.877		
	-0.398	1.351 <sup>F,G</sup>	-1.571 <sup>B</sup>	-0.656 <sup>B</sup>	9.120	-0.288	-0.096	0.547	45
	0.054	0.038	0.014	0.310	0.000	0.680	0.905		
Enforce		-2.750 <sup>G</sup>	-3.326 <sup>G</sup>	-0.627 <sup>B,F</sup>	24.410	-2.247	-1.497	0.485	103
		0.000	0.000	0.145	0.000	0.000	0.002		
	1.217	-0.713 <sup>G</sup>	-0.933 <sup>G</sup>	0.103 <sup>8,F</sup>	4.030	-0.080	-1.063	0.800	99
	0.000	0.009	0.002	0.614	0.010	0.812	0.000		
Account	_	-3.300 <sup>F,G</sup>	-18.900 <sup>B</sup>	-9.600 <sup>B</sup>	5.080	-6.200	-8.850	0.536	39
		0.492	0.005	0.032	0.005	0.206	0.139		
	4.648	1.673 <sup>F,G</sup>	-13.175 <sup>8</sup>	-6.608 <sup>8</sup>	6.100	0.964	-5.902	0.632	39
	0.022	0.741	0.015	0.164	0.002	0.800	0.349		
Property Rights		-0.637 <sup>F,G</sup>	-1,173 <sup>B,G</sup>	0.200 <sup>B,F</sup>	16.470	-1.127	-0.482	0.398	96
· · · b = · · · · · · · · · · · · · · ·	•	0.021	0.000	0.282	0.000	0.000	0.063		
	0.477	0.176 <sup>F</sup>	-0.376 <sup>B,G</sup>	0.414 <sup>F</sup>		-0.286	-0.245	0.601	96
	0.000	0.488	0.163	0.089	0.002	0.221	0.246		
Public Ownership		-5.740	10.944	-3.231	1.170	0.467	-2.858	0.059	78
	•	0.657	0.366	0.830	0.329	0.973	0.725		
	-15.232	-27.766	-15.520	-12.365		-25.756	-11.088	0.329	75
	0.000	0.027	0.221	0.394	0.092	0.013	0.196		

Superscripts B, F, and G denote that the coefficient estimate is significantly different from the British, French, or German coefficient estimate, respectively, at the 95% confidence level. P-values are in italics. Variable definitions are given in the data appendix.

Table 3c: Law, Finance, Openness, and Independence

	Log(real per capita GDP)	British legal origin	French legal origin	German legal origin	F-Test for legal origin	Trade Openness	Years since Independence	R²	Observation
Private Credit		-0.225 <sup>G</sup>	-0.322 <sup>G</sup>	0.228 <sup>B,F</sup>	5.650	0.001	0.297	0.442	100
		0.084	0.009	0.315	0.001	0.017	0.001		
	0.143	0.081	0.014 <sup>G</sup>	0.391 <sup>F</sup>	2.810	0.000	0.072	0.670	100
	0.000	0.546	0.914	0.062	0.044	0.700	0.248		
Liquid Liabilities		-0.018	-0.056	0.373	1.380	0.001	0.087	0.250	95
		0.744	0.263	0.119	0.254	0.049	0.194		
	0.117	0.237	0.219	0.505	4.530	0.000	-0.091	0.436	95
	0.000	0.001	0.010	0.025	0.005	0.421	0.237		
Market Capitalization		0.218 <sup>F</sup>	-0.034 <sup>B</sup>	0.053	2.790	0.001	0.148	0.465	46
•		0.012	0.394	0.709	0.053	0.000	0.076		
	0.078	0.320 <sup>F</sup>	0.102 <sup>8</sup>	0.146	3.640	0.001	-0.025	0.512	46
	0.006	0.002	0.131	0.335	0.021	0.000	0.808		
Turnover		0.056	-0.035 <sup>G</sup>	0.275 <sup>F</sup>	2.970	0.000	0.255	0.445	46
		0.538	0.664	0.048	0.043	0.220	0.001		
	-0.021	0.028	-0.072 <sup>G</sup>	0.250 <sup>f</sup>	2.970	0.000	0.300	0.452	46
	0.542	0.755	0.496	0.087	0.044	0.118	0.018	*****	
Outsider rights		1.679 <sup>F</sup>	-0.709 <sup>8</sup>	0.357	4.650	0.001	-1.004	0.510	41
		0.018	0.221	0.608		0.554	0.218		
	-0.335	1.266 <sup>F</sup>	-1.325 <sup>B</sup>	-0.069		0.002		0.532	41
	0.209	0.062	0.064	0.932		0.092	0.851	0.552	71
Enforce		-3.264 <sup>F</sup>	-4.296 <sup>B,G</sup>	-1.790 <sup>F</sup>	28.360	0.004	2.592	0.521	96
0.00	•	0.000	0.000	0.025		0.000	0.000	0,021	00
	1.128	-0.917 <sup>F</sup>	-1.629 <sup>B,G</sup>	-0.336 <sup>F</sup>		0.000		0.766	92
	0.000	0.005	0.000	0.327		0.732	0.354	0.700	<b></b>
Account		-3.082 <sup>F</sup>	-23.670 <sup>8,G</sup>	-12.628 <sup>F</sup>	7.020	0.022	7.866	0.541	35
, 10000111	•	0.549	0.001	0.042		0.015	0.361	0.041	00
	5.313	2.813 <sup>F</sup>	-14.367 <sup>B,G</sup>	-6,447 <sup>F</sup>		0.007		0.630	35
	0.000	0.584	0.031	0.298		0.314	0.772	0.000	33
Property Rights		-0.876 <sup>F,G</sup>	-1.551 <sup>B,G</sup>	-0.239 <sup>8,F</sup>	21.440	0.003	1.192	0.485	86
	•	0.025	0.000	0.539		0.000	0.000	5. 100	
	0.417	-0.028 <sup>F</sup>	-0.630 <sup>B,G</sup>	0.274 <sup>F</sup>		0.001	0.452	0.627	86
	0.000	0.930	0.051	0.417		0.010	0.123	0.027	-
Public Ownership		-10.750	7.305	0.032	1.320	-0.085	-23.758	0.172	65
· · · · · · · · · · · · · · · · · · ·		0.312	0.400	0.998		0.110	0.031		
	-13.529	-33.225	-22.803	-17.485		-0.024		0.335	63
	0.000	0.010	0.129	0.315	0.052	0.533	0.846		

Superscripts B, F, and G denote that the coefficient estimate is significantly different from the British, French, or German coefficient estimate, respectively, at the 95% confidence level. P-values are in italics. Variable definitions are given in the data appendix.

Table 3d: Law, Finance, and Culture

	Log(real per capita GDP)	F-Test for legal origin	Catholic Religion	Muslim Religion	Other Religion	F-Test for religion	Ethnolinguistic Fractionalization	R²	Observations
Private Credit	,	3.900	-0.001	-0.002	0.000	0.900	-0.246	0.411	94
		0.012	0.637	0.441	0.869	0.447	0.009		
	0.157	2.900	-0.001	0.001	0.001	1.380	-0.024	0.680	94
	0.000	0.040	0.718	0.756	0.741	0.255	0.727		
Liquid Liabilities		1.690	0.000	0.001	0.001	0.480	-0.293	0.271	89
		0.175	0.990	0.688	0.554	0.699	0.001		
	0.138	1.690	0.001	0.003	0.003	4.360	-0.119	0.546	89
	0.000	0.176	0.635	0.027	0.155	0.007	0.110		
Market		1.390	-0.001	-0.003	-0.001	0.620	0.076	0.072	50
Capitalization		0.258	0.725	0.374	0.676	0.603	0.720		
	0.215	1.840	0.002	0.004	0.002	0.750	0.404	0.307	50
	0.009	0.156	0.730	0.432	0.536	0.526	0.088		
Turnover		1.920	-0.003	-0.003	-0.002	0.470	0.032	0.413	50
		0.141	0.437	0.332	0.556	0.705	0.841		
	0.050	1.840	-0.002	-0.001	-0.001	0.150	0.107	0.434	50
	0.141	0.155	0.547	0.634	0.705	0.927	0.526		
Outsider rights		6.570	-0.003	0.017	0.009	2.530		0.584	44
		0.001	0.844	0.131	0.424	0.073	0.440		
	-0.195	6.190	-0.007	0.011	0.004	1.300	0.118	0.590	44
	0.459	0.002	0.615	0.421	0.748	0.291	0.922		
Enforce		4.730	-0.005	-0.019	-0.007	2.880	-2.461	0.438	89
		0.004	0.762	0.207	0.660	0.041	0.001		
	1.333 0.000	3.560 0.018	0.005 <i>0.658</i>	0.006 <i>0.551</i>	0.005 0.621	0.150 <i>0.927</i>	0.225 <i>0.663</i>	0.770	89
	0.000								
Account	•	2.700	-0.045	-0.175	-0.057	0.720	3.779	0.526	38
	7.004	0.063	0.770	0.276	0.590	0.550	0.678	0.005	20
	7.834	1.690	0.095	0.059	0.115	0.740	23.047	0.695	38
	0.000	0.192	0.462	0.651	0.240	0.539	0.021		
Property Rights		20.010	-0.001	-0.003	-0.002	0.160	-0.967	0.316	93
	0.543	0.000	0.908	0.724	0.732	0.923	0.005	0.630	02
	0.547 0.000	5.420 <i>0.002</i>	0.003 <i>0.642</i>	0.007 <i>0.223</i>	0.003 0.609	0.860 <i>0.467</i>	-0.102 <i>0.735</i>	0.636	93
	0.000								
Public Ownership		2.580 0.062	0.678 0.019	0.878 0.002	0.618 0.034	4.020 0.012	-1.996 0.895	0.194	65
	-14.610	1.750	0.019	0.002	0.034	0.012	-34.158	0.376	65
	0.000	0.168	0.409	0.200	0.223	0.390	-34.156 0.007	0.376	69

Table 3e: Law, Finance, and the Transplant Effect

	Log (Real GDP per Capita)	British Legal Origin	French Legal Origin	German Legal Origin	F-Test for legal origin	Transplant Effect	R <sup>2</sup>	Observations
Private Credit		0.006 <sup>G</sup>	-0.041 <sup>G</sup>	0.452 <sup>B,F</sup>	3.93	-0.355	0.527	47
		0.971	0.805	0.027		0.001		
	0.182	0.114 <sup>G</sup>	-0.034 <sup>G</sup>	0.435 <sup>B,F</sup>	4.08	0.017	0.641	47
	0.000	0.439	0.083	0.030	0.0126	0.895		
Liquid Liabilities		0.133 <sup>G</sup>	0.111 <sup>G</sup>	0.526 <sup>B,F</sup>	5.08	-0.183	0.374	44
·		0.012	0.138	0.003		0.025		
	0.121	0.206	0.115 <sup>G</sup>	0.514 <sup>F</sup>	7.000	0.067	0.450	44
	0.011	0.001	0.119	0.005	0.0007	0.637		
Market Capitalization	•	0.270 <sup>F</sup>	-0.030 <sup>8</sup>	0.162	4.220	-0.042	0.236	45
		0.001	0.717	0.158	0.011	0.634		
	0.209	0.385 <sup>F</sup>	-0.018 <sup>B</sup>	0.146	7.200	0.374	0.465	45
	0.002	0.000	0.806	0.191	0.001	0.028		
Turnover		0.013 <sup>G</sup>	-0.051 <sup>G</sup>	0.787 <sup>B,F</sup>	2.880	0.030	0.473	45
	•	0.895	0.637	0.007		0.804		
	0.083	0.058 <sup>G</sup>	-0.047 <sup>G</sup>	0.781 <sup>B,F</sup>	3.23	0.195	0.492	45
	0.120	0.483	0.661	0.007	0.033	0.319		
Outsider rights		1.375 <sup>F,G</sup>	-1.787 <sup>B</sup>	-0.825 <sup>E</sup>	16.28	1.063	0.557	45
		0.017	0.002	0.212		0.012		
	-0.114	1.308 <sup>F,G</sup>	-1.790 <sup>B</sup>	-0.804 <sup>E</sup>	14.93	0.826	0.558	45
	0.693	0.031	0.003	0.232	0.000	0.238		
Enforce		-1.011 <sup>G</sup>				-3.170	0.677	48
		0.012	0.066	0.276		0.000		
	1.294		-0.661 <sup>G</sup>			-0.526	0.838	48
	0.000	0.459	0.038	0.218	0.087	0.316		
Account	,	0.258 <sup>F,G</sup>				-9.182	0.565	39
		0.956	0.003	0.216	_	0.002		
	4.825					-0.586	0.610	39
	0.108	0.632	0.005	0.180	0.000	0.916		
Property Rights		-0.054	-0.164 <sup>G</sup>			-0.983	0.491	46
		0.847	0.603	0.131	-	0.000		
	0.417					-0.109	0.605	5 46
	0.000	0.521	0.579	0.115	0.075	0.724		
Public Ownership		-14.754				25.342	0.22	2 48
		0.213	0.613			0.004		
	-13.013					-1.240	0.321	48
	0.031	0.062	0.587	0.851	0.110	0.931		

Superscripts B, F, and G denote that the coefficient estimate is significantly different from the British, French, or German coefficient estimate, respectively, at the 95% confidence level. P-values are in italics. Variable definitions are given in the data appendix.

Table 3f: Law, Components of Initial Political Structure, and Finance

	F-test for legal origin	Autocracy	Exec. Comp.	Exec. Open	Nonelite	Principal Comp.	R²	Observations
Private Credit	10.521	0.011					0.370	103
	0.000 9.864	0.147	0.017				0.359	103
	0.000		0.516					
	10.707 0.000			-0.021 0.232	•		0.366	103
	10.111			0.202	0.010		0.359	103
	0.000 10.546		•		0.593	-0.010	0.359	103
	0.000					0.588		
Liquid Liabilities	5.151 0.002	0.011 <i>0.116</i>		•			0.290	98
	4.462	0.110	0.005				0.272	98
	0.006 4.943	•	0.847	-0.030			0.295	98
	0.003			0.083				
	4.737 0.004				-0.003 <i>0.874</i>		0.272	98
	5.356	:			0.014	-0.018	0.281	98
Market	0.002 1.485	0.001			,	0.194	0.049	51
Capitalization	0.231	0.922					0.043	31
	1.347		0.022				0.050	51
	0.271 0.867		0.613	0.017			0.052	51
	0.465 1.404		•	0.541	0.006		0.049	51
	0.254				0.821		0.049	יכ
	1.094 0.361					0.009 0.702	0.050	51
Tumover	3.267	-0.002				0.702	0.478	51
	0.030 3.106	0.901	0.017				0.470	£4
	0.039		-0.017 <i>0.785</i>				0.479	51
	3.278			0.005 0.892			0.478	51
	0.039 3.518			0.092	0.025		0.486	51
	0.022	-			0.496	0.007	0.479	51
	3.20 <b>8</b> 0.032	:		:		0.852	0.415	31
Outsider Rights	10.846	0.131 <i>0.0</i> 98					0.543	45
	0.000 11.596	0.098	-0.418				0.530	45
	0.000 9.443		0.110	-0.016	-		0.498	45
	0.000			0.936			0.450	70
	12.755 0.000			•	-0.149 0.306		0.510	45
	10.655	:			0.300	-0.232	0.526	45
Enforce	0.000 97.008	0.07B				0.148	0.324	101
Linoica	0.000	0.111					0.024	101
	137.667 0.000		-0.054 0.774				0.314	101
	68.096		0.774	-0.235		:	0.333	101
	0.000 76.165			0.075	0.251		0.336	101
	0.000			:	0.039			
	132.505 0.000			•	•	-0.079 0.498	0.315	101
Accounting	9.160					0.430	0.483	39
standards	0.000 6.918	0.510	2.082		-	•	0.493	39
	0.001		0.233					
	9.441 0.000			1.503 0.240			0.500	39
	9.572				0.782		0.483	39
	0.000 8.836				0.469	1.165	0.494	39
	0.000					0.216		
Property Rights	43.957 0.000						0.238	92
	64.698	٠.	-0.024				0.227	92
	0.000 45.127		0.830	-0.103			0.242	92
	0.000			0.182				
	47.165 0.000		•		0.083 0.212	•	0.236	92
	58.116			:		-0.044	0.229	92
Public	0.000 1.541					0.529	0.062	77
ownership	0.211	0.700						
	0.614 0.608		-2.685 0.524				0.066	77
	1.607			0.759		i i	0.062	77
	0.195 1.304			0.714	-1.304		0.064	77
	0.280		:		0.607			
	1.203					-0.310	0.061	77

Table 3g: Law, Current Political Structure, and Finance

	F-test for	Legis.	Exec.					Principal		
	legal origin	Comp.	Comp.	Cohesion	Checks	Special	Narrow	Comp.	$\mathbb{R}^2$	Obs.
Private Credit	8.213	0.060							0.465	113
	0.000	0.000		•			•			
	7.503		0.064					•	0.487	113
	0.000		0.000							
	9.569			0.143					0.415	113
	0.000			0.002						
	9.424				0.071				0.427	113
	0.000				0.001					
	9.055					0.057			0.354	113
	0.000					0.462				
	8.916						0.021		0.357	99
	0.000						0.352			
	5.746							0.099	0.470	99
	0.001	•	•	•		•		0.000		
iquid Liabilities	3.394	0.054							0.321	108
	0.021	0.000								
	3.352		0.053					-	0.322	108
	0.022		0.000					-		
	5.772	-		0.138					0.280	108
	0.001			0.001					•	
	3.883				0.069				0.298	108
	0.011				0.000					
	3.706				•	0.185			0.259	108
	0.014	•				0.010				
	3.144						0.034		0.184	95
	0.029						0.173			
	3.091							0.099	0.318	95
	0.031	•	•		•	•		0.000		
farket	2.119	0.037						•	0.064	51
apitalization	0.111	0.342								
	2.178		0.038						0.069	51
	0.103		0.292							
	2.035			0.025					0.050	51
	0.122			0.676						
	2.273				0.038	-			0.066	51
	0.093				0.268					
	2.287					0.189			0.078	51
	0.091					0.333				
	1.866						0.057		0.081	48
	0.150						0.323			,-
	2.103							0.051	0.072	48
	0.114		-	-	-			0.364		,-

Table 3g (continued): Law, Current Political Structure, and Finance

		political st					-			
	F-test for legal origin	Legis. Comp.	Exec. Comp.	Cohesion	Checks_	Special	Narrow	Principal Comp.	R²	Obs.
_										
Tumover	3.141	-0.015			*		•	•	0.481	51
	0.034	0.773						•		
	2.932		-0.009			-			0.479	51
	0.043		0.823					•		
	3.827			0.082					0.494	51
	0.016			0.377				•		
	3.343				0.057	-			0.518	51
	0.027				0.156					
	3.774					0.233			0.521	51
	0.167					0.113				
	2.690						0.012		0.400	48
	0.058						0.736			
	3.101							0.097	0.515	48
	0.036							0.018		
		•	•	•	-		•			
Outsider Rights	13.652	-0.371							0.553	45
January , angula	0.000	0.039		•	·	•	,	•	0.000	
	14.775	0.000	-0.395	•	•	•	•	•	0.570	45
	0.000	•	0.008	•	•			•	0.010	
	13.620	•	0.000	-0.633	•	•	•	-	0.541	45
	0.000	•	•	0.046	•	•	•	-	0.541	70
	19.274	•	•	0.046	0.400	•	•	•	0.595	45
		•	•		-0.426	•	•	•	0.595	45
	0.000		•	•	0.000	0.507	•	-	0.507	40
	13.208	•			•	-0.507	•	•	0.507	45
	0.000		•	•	•	0.336				40
	11.707	•	•	٠	•	-	0.097	-	0.483355	42
	0.000	•	•	•		-	0.570	:		
	20.054						-	-0.726	0.631	42
	0.000			•			•	0.000		
Enforce	39.824	0.662							0.541	104
	0.000	0.000			•	-	•			
	32.534	2.000	0.652		•	•	•	•	0.559	104
	0.000	•	0.000	•	•	•	•	•	0.000	
	11.653	•	0.000	1.483	•	•	•	•	0.437	104
	0.000	•	•	0.000	•	•	•	•	0.401	10
	17.827		•	0.000	0.743	•	•	•	0.467	10-
	0.000	•	•	•	0.000	•		•	0.407	104
			•		0.000	0.070	•	-	0.312	104
	64.804	•	•	•	•	0.078	•	•	0.312	104
	0.000		•	•	•	0.887		•	0.000	
	87.440		•	-	•		-0.001	•	0.306	93
	0.000	•				•	0.997			
	10.803	•						1.038	0.556	93
	0.000		-					0.000		

Table 3g (continued): Law, Current Political Structure, and Finance

	F-test for	Legis.	Exec.					Principal	-2	
	legal origin	Comp.	Comp.	Cohesion	Checks	Special	Narrow	Comp.	R <sup>2</sup>	Obs.
Accounting	9.825	2.064							0.513	39
standards	0.000	0.053	•	•	•	•	•	•	0.010	•
	9.619	0.000	2.005	•	•	•	•	•	0.503	39
	0.000	•	0.125	•	•	•	•	•	0.505	39
	3.211	•	0.725	2.354	•	•	•	•	0.490	39
	0.001	•	•	0.350	•		•	•	0.450	39
		•	•	0.350	4 705	•	•	•	0.545	20
	8.903	•	•	•	1.765	•		•	0.515	39
	0.000	•	•	•	0.064		•	•		
	9.980	•	•			5.884		-	0.500	39
	0.000	•				0.141		•		
	9.937						-2.301		0.520	36
	0.000			•			0.030			
	8.566							2.946	0.527	36
	0.003							0.047		
Property Rights	33.853	0.176							0.294	96
	0.000	0.021								
	28,949	_	0.022	_	_			-	0.347	96
	0.000		0.001	_	_	_	_			
	18.238			0.461					0.280	96
	0.000	•	•	0.005	•	-		•	0.200	•
	18.086	•	•	0.000	0.190	•		•	0.268	96
	0.000	•	•	•	0.015	•		•	0.200	<b>30</b>
	59.156	•	•	•	0.070	0.127		•	0.229	96
	0.000	•	•	•	•	0.694	•	•	0.223	30
	53.542	•	•	•	•	0.094	-0.083	•	0.245	87
		•	•	•	•	•		•	0.243	01
	0.000	•		•	•	•	0.391		0.050	
	10.817	•	•	•	•	•	•	0.325	0.350	87
	0.000	•	•	•	•	•	•	0.000		
Public	1.251	-2.629							0.082	78
ownership	0.298	0.196								
	0.977		-3.188						0.094	78
	0.408		0.100							
	1.310			-2.681					0.060	78
	0.278			0.625						
	1.020		-		-2.820			-	0.072	78
	0.389	•	•	•	0.210	•	•	•		. •
	1.531	•	•	•	0.2.0	10.203	•	•	0.075	78
	0.214	•	•	•	•	0.270	•	•	5.570	,0
	2.191	•	•	•	•	0.270	-0.151	•	0.076	68
	0.098	•	•		•	•	0.151	•	0.070	90
	0.866	•	•	•	•	•	0.300	F 004	0.100	68
		•	•	•	•	•	•	-5.091	0.106	68
	0.463	•	•	•	•	•	•	0.136		

Table 4a: Initial Environment and Finance

	Log (Real GDP per Capita)	Settler mortality	R²	Observations
Private Credit	•	-0.112	0.372	68
		0.000		
	0.106	-0.048	0.591	68
	0.000	0.006		
Liquid Liabilities		-0.118	0.383	65
	•	0.000		
	0.050	-0.088	0.429	65
	0.002	0.000		
Market Capitalization		-0.171	0.344	26
	•	0.008		
	0.058	-0.137	0.371	26
	0.187	0.052		
Turnover		-0.055	0.165	26
	•	0.001		
	0.029	-0.038	0.197	26
	0.399	0.150		
Outsider rights		-0.266	0.025	22
		0.415		
	-0.898	-0.894	0.198	22
	0.035	0.184		
Enforce		-0.688	0.251	65
		0.000		
	0.995	-0.085	0.566	63
	0.000	0.517		
Accounting standards		-6.749	0.267	18
	•	0.144		
	4.576	-3.984	0.319	18
	0.284	0.477		
Property rights		-0.404	0.241	60
,		0.000		
	0.513	-0.053	0.457	59
	0.000	0.646		
Public Ownership		9.614	0.107	40
•		0.045		
	-18:993	-3.670	0.440	39
	0.000	0.373		

Table 4b: Initial Environment, Finance, and Regional Dummies

Private Credit	0.124 0.000	-0.101 <i>0.001</i>	-0.067			
		0.001	-0.007	-0.094	0.398	68
		0.007	0.397	0.134		
	വ വവ	-0.042	-0.010	-0.135	0.668	68
	0.000	0.055	0.856	0.003		
Liquid Liabilities		-0.085	-0.158	-0.158	0.450	65
•		0.003	0.027	0.023		
	0.060	-0.057	-0.129	-0.176	0.511	65
	0.005	0.028	0.032	0.009		
Market Capitalization		-0.249	0.611	0.000	0.590	26
	•	0.000	0.000	0.999		
	0.042	-0.214	0.559	-0.043	0.602	26
	0.419	0.000	0.000	0.707		
Turnover		-0.041	-0.120	0.008	0.213	26
	•	0.058	0.164	0.921	5.2.5	
	0.042	-0.006	-0.171	-0.034	0.265	26
	0.236	0.782	0.001	0.629	V.=-VV	
Outsider rights		-0.085	0.576	-2.705	0.491	22
		0.657	0.357	0.004		
	-0.572	-0.540	0.758	-2.351	0.555	22
	0.057	0.046	0.192	0.010		
Enforce		-0.580	-0.636	-0.885	0.284	64
		0.006	0.303	0.096		-
	1.119	-0.093	0.008	-1.124	0.665	63
	0.000	0.561	0.987	0.001		
Account		-6.610	13.540	-10.691	0.504	18
, 1000 2000		0.123	0.399	0.317		
	5.601	-3.032	13.299	-11.868	0.581	18
	0.135	0.263	0.299	0.207		
Property Rights		-0.278	-0.524	-0.272	0.261	60
, , , , , , , , , , , , , , , , , , ,		0.051	0.142	0.328		
	0.551	0.083	-0.523	-0.507	0.496	59
	0.000	0.497	0.069	0.017		-
Public Ownership		17.650	-41.261	-17.229	0.241	40
		0.001	0.010	0.112		
	-19.258	1.113	-28.880	-1.904	0.526	39
	0.000	0.785	0.013	0.821		

Table 4c: Initial Environment, Finance, Openness, and Independence

	Log(real per capita GDP)	Settler mortality	Trade Openness	Years since Independence	R <sup>2</sup>	Observations
Private Credit		-0.102	0.000	0.014	0.443	68
		0.000	0.017	0.872		
	0.103	-0.054	0.000	-0.064	0.604	68
	0.000	0.006	0.685	0.296		
iquid Liabilities		-0.127	0.000	-0.213	0.573	65
	-	0.000	0.091	0.003		
	0.040	-0.109	0.000	-0.240	0.597	65
	0.038	0.000	0.278	0.001		
Market Capitalization	•	-0.144	0.001	-0.045	0.619	26
		0.015	0.000	0.744		
	0.035	-0.130	0.001	-0.115	0.625	26
	0.417	0.044	0.000	0.495		
Turnover		-0.042	0.000	0.172	0.259	26
		0.019	0.359	0.160		
	0.000	-0.042	0.000	0.172	0.259	26
	0.998	0.089	0. <b>286</b>	0.168		
Outsider rights		-0.400	0.000	-4.583	0.512	22
		0.124	0.813	0.002		
	-0.206	-0.514	0.000	-4.155	0.517	22
	0.648	0.156	0.853	0.018		
Enforce		-0.585	0.003	0.314	0.305	64
		0.005	0.000	0.645		
	1.022	-0.124	0.000	-0.549	0.575	63
	0.000	0.397	0.806	0.305		
Account		-6.126	0.015	-15.523	0.417	18
		0.087	0.212	0.264		
	9.119	-1.193	-0.005	-30.039	0.560	18
	0.025	0.679	0.557	0.015		
Property Rights		-0.305	0.002	0.276	0.330	59
		0.012	0.000	0.503		
	0.487	-0.073	0.001	-0.288	0.484	59
	0.000	0.525	0.133	0.457		
Public Ownership		7.561	-0.058	-7.466	0.156	39
		0.131	0.169	0.646		
	-22.100	-4.483	0.008	22.950	0.486	39
	0.000	0.235	0.773	0.086		

Table 4d: Initial Environment, Finance, and Culture

	Log(real per capita GDP)	Settler mortality	Catholic Religion	Muslim Religion	Other Religion	F-Test for religion	Ethnolinguistic Fractionalization	R²	Observations
Private Credit		-0.106	-0.003	-0.003	-0.001	2.450	-0.052	0.454	60
		0.000	0.156	0.189	0.614	0.074	0.458		
	0.127	-0.039	-0.001	0.000	0.001	5.070	-0.014	0.662	60
	0.000	0.051	0.504	0.745	0.548	0.004	0.818		
Liquid Liabilities		-0.116	-0.001	0.000	0.001	1.530	-0.059	0.447	57
		0.000	0.337	0.966	0.743	0.218	0.428		
	0.071	-0.078	0.000	0.002	0.002	3.660	-0.058	0.505	57
	0.004	0.004	0.914	0.256	0.216	0.018	0.377		
Market Capitalization		-0.177	-0.003	-0.004	-0.001	1,440	0.399	0.545	26
•		0.002	0.366	0.311	0.875	0.262	0.083		
	0.107	-0.128	-0.001	0.000	0.002	0.940	0.405	0.595	26
	0.262	0.049	0.754	0.987	0.791	0.439	0.116		
Turnover		-0.063	0.002	0.000	0.001	1.750	0.108	0.275	26
		0.003	0.354	0.868	0.652	0.190	0.402		
	0.022	-0.053	0.002	0.001	0.002	0.670	0.109	0.284	26
	0.634	0.116	0.259	0.628	0.485	0.581	0.383		
Outsider rights		-0.414	-0.017	0.014	0.009	5.260	2.574	0.635	22
		0.038	0.376	0.297	0.569	0.010	0.027		
	-0.057	-0.435	-0.019	0.011	0.006	3.310	2.480	0.635	22
	0.855	0.072	0.412	0.554	0.757	0.049	0.055		
Enforce		-0.607	-0.025	-0.025	-0.010	2.470	-0.512	0.332	57
	•	0.004	0.098	0.078	0.618	0.072	0.509		
	1.233	0.008	-0.005	0.005	0.016	4.420	0.165	0.653	57
	0.000	0.961	0.695	0.689	0.314	0.008	0.768		
Account		-4.724	-0.285	-0.368	-0.182		19.592	0.572	18
		0.306	0.237	0.224	0.535	0.616	0.340		
	10.060	-1.096	0.032	0.008	0.167	0.320	33.187	0.711	18
	0.009	0.757	0.870	0.972	0.397	0.811	0.076		
Property Rights	•	-0.365	-0.012	-0.006	-0.005	2.520	-0.386	0.302	60
		0.001	0.096	0.411	0.562	0.067	0.367		
	0.636	-0.012	-0.003	0.008	0.005	4.790	-0.070	0.571	59
	0.000	0.911	0.665	0.176	0.456	0.005	0.843		
Public Ownership		5.117	1.050	1.204	1.225	3,400	-15.018	0.328	38
		0.364	0.006	0.003	0.014	0.030	0.471		
	-20.680	-2.105	0.287	0.284	0.437	0.810		0.579	38
	0.000	0.639	0.362	0.395	0.194	0.497	0.009		

Table 4e: Initial Environment, Finance, and the Transplant Effect

	Log (Real GDP per Capita)	Settler mortality	Transplant Effect	R²	Observations
Private Credit		-0.122	-0.267	0.551	23
		0.047	0.207		
	0.094	-0.088	-0.114	0.615	23
	0.061	0.102	0.593		
Liquid Liabilities		-0.113	0.004	0.339	21
·	•	0.116	0.979		
	0.022	-0.105	0.040	0.345	21
	0.699	0.118	0.852		
Market Capitalization		-0.234	0.252	0.387	21
	•	0.090	0.341	0.00.	
	0.128	-0.192	0.460	0.460	21
	0.109	0.148	0.143	200	
Turnover	•	-0.037	-0.037	0.105	21
	•	0.168	0.703	000	
	0.030	-0.027	0.011	0.125	21
	0.606	0.453	0.930	511.25	
Outsider rights		-0.393	0.647	0.035	22
3		0.444	0.556		<del></del>
	-1.128	-0.817	-1.222	0.223	22
•	0.055	0.217	0.492		
Enforce		-0.660	-2.815	0.720	23
	•	0.005	0.000	0	
	0.806	-0.362	-1.515	0.826	23
	0.007	0.014	0.033	5155	
Account		-4.194	-12.85	0.34	18
	•	0.421	0.191		, -
	2.165	-3.477	-9.878	0.348	18
	0.681	0.522	0.441		
Property Rights		-0.242	-1.122	0.554	22
1	•	0.091	0.004		
	0.291	-0.134	-0.654	0.625	22
	0.104	0.292	0.169		_
Public Ownership		5.905	34.446	0.366	23
- · · · · · · · · · · · · · · · · · · ·		0.354	0.040		
	-14.092	0.696	11.714	0.503	23
	0.025	0.910	0.470		<del>-</del>

Table 5a: Initial political structure and Finance

	Log (Real GDP per Capita)	PC for Initial Political Structure	R²	Observations
Private Credit		-0.006	0.001	103
		0.789		
	0.165	-0.002	0.548	103
	0.000	0.888		•
Liquid Liabilities		-0.011	0.001	98
		0.557		
	0.118	-0.009	0.403	98
	0.000	0.590		
Market Capitalization		0.034	0.024	51
		0.149		
	0.113	0.042	0.166	51
	0.005	0.065		
Turnover	•	0.007	0.001	51
	· ·	0.830	0.00	<u>.</u>
	0.079	0.013	0.067	51
	0.035	0.694		
Outsider rights	•	0.289	0.068	45
, and the second		0.066		
	-0.408	0.274	0.141	45
	0.058	0.075		
Enforce		-0.012	0.000	101
	•	0.942		
	1.351	-0.033	0.752	96
	0.000	0.649		
Accounting standards		2.761	0.133	39
-		0.022		
	6.627	2.878	0.421	39
	0.000	0.007		
Property rights		0.029	0.002	92
		0.696		
	0.562	0.054	0.534	92
	0.000	0.274		
Public Ownership		-2.179	0.013	77
•		0.318		• •
	-10.557	-1.739	0.216	74
	0.000	0.374		

Table 5b: Initial political structure, Finance, and Regional Dummies

	Log (Real GDP per Capita)	PC for Initial Political Structure	Africa dummy	Latin dummy	R <sup>2</sup>	Observations
Private Credit		0.003	-0.397	-0.314	0.330	103
		0.879	0.000	0.000		
	0.148		-0.081	0.174	0.587	103
	0.000	0.770	0.087	0.000		
Liquid Liabilities		-0.004	-0.367	-0.304	0.408	98
		0.812	0.000	0.000		
	0.078	-0.007	-0.197	-0.227	0.510	98
	0.000	0.631	0.000	0.000		
Market Capitalization		0.035	-0.025	-0.222	0.077	51
· ·		0.125	0.922	0.006		
	0.115	0.040	0.143	-0.155	0.207	51
	0.005	0.081	0.543	0.020		
Turnover		0.015	-0.380	-0.196	0.095	51
		0.636	0.000	0.044		
	0.054	0.017	-0.301	-0.165	0.122	51
	0.153	0.588	0.000	0.078		
Outsider rights		0.177	1.661	-1.107	0.185	45
_		0.261	0.002	0.135		
	-0.428	0.176	0.875	-1.471	0.248	45
	0.098	0.259	0.285	0.061		
Enforce		-0.001	-2.848	-2.339	0.353	100
		0.995	0.000	0.000		
	1.330	-0.080	-0.035	-1.207	0.801	96
	0.000	0.226	0.923	0.000		
Account		2.300	-3.628	-17.227	0.393	39
		0.055	0.488	0.000		
	5.574	2.334	5.828	-11.850	0.552	39
	0.006	0.028	0.177	0.019		
Property Rights		0.065	-1.364	-0.907	0.306	92
. , 5		0.319	0.000	0.000		
	0.493	0.053	-0.338	-0.448	0.559	92
	0.000	0.293	0.169	0.036		
Public Ownership		-2.033	-1.550	4.030	0.017	77
•		0.377	0.900	0.572		
	-13.720	-1.287	-27.784	-7.860	0.275	74
	0.000	0.523	0.004	0.299		

Table 5c: Initial political structure, Finance, Openness, and Independence

	Log(real per capita GDP)	PC for Initial Political Structure	Trade Openness	Years since Independence	R²	Observations
Private Credit		0.016	0.001	0.421	0.342	91
		0.453	0.000	0.000		
	0.151	-0.014	0.000	0.067	0.627	91
	0.000	0.381	0.019	0.309		
Liquid Liabilities		-0.013	0.001	0.187	0.260	86
		0.499	0.000	0.010		
	0.101	-0.033	0.001	-0.047	0.458	86
	0.000	0.083	0.001	0.524		
Market Capitalization		0.039	0.001	0.118	0.375	46
		0.062	0.000	0.179		
	0.058	0.030	0.001	-0.032	0.408	46
	0.038	0.150	0.000	0.780		
Turnover		0.023	0.000	0.334	0.294	46
		0.217	0.085	0.000		
	-0.011	0.024	0.000	0.364	0.297	46
	0.758	0.249	0.129	0.020		
Outsider rights		-0.058	0.002	-2.611	0.267	41
		0.696	0.100	0.001		
	-0.026	-0.052	0.002	-2.540	0.267	41
	0.915	0.752	0.055	0.004		
Enforce			0.008	3.231	0.320	93
		0.162	0.000	0.000		
	1.341	-0.053	0.001	-0.199	0.746	89
	0.000	0.575	0.559	0.702		
Account		3.668	0.035	9.563	0.230	35
		0.087	0.012	0.380		
	7.555	2.454	0.010	-6.688	0.479	35
	0.000	0.154	0.309	0.475		
Property Rights		0.168	0.004	1.537	0.329	82
÷		0.027	0.002	0.000		
	0.498		0.001	0.251	0.563	82
	0.000	0.337	0.030	0.468		
Public Ownership		-3.882	-0.090	-24.669	0.141	65
•		0.114	0.071	0.028		
	-10.657	-0.612	-0.040	3.375	0.262	63
	0.005	0.791	0.302	0.807		

Table 5d: Initial political structure, Finance, and Culture

Private Credit  0.180 0.000 Liquid Liabilities  0.142 0.000  Market Capitalization  0.216 0.005  Turnover  0.086 0.110  Outsider rights  -0.037 0.897  Enforce  1.441 0.000  Account  7.891 0.000  Property Rights		Religion	Religion	Religion	F-Test for religion	Ethnoling. Frac.	R <sup>2</sup>	Observations
0.000 Liquid Liabilities  0.142 0.000  Market Capitalization  0.216 0.005  Turnover  0.088 0.110  Outsider rights  -0.037 0.897  Enforce  1.441 0.000  Account  7.891 0.000  Property Rights	-0.008	-0.004	-0.004	-0.001	3.670	-0.376	0.216	90
0.000 Liquid Liabilities  0.142 0.000  Market Capitalization  0.216 0.005  Turnover  0.088 0.110  Outsider rights  -0.037 0.897  Enforce  1.441 0.000  Account  7.891 0.000  Property Rights	0.757	0.014	0.010	0.557	0.015	0.000		
Display	-0.013	-0.001	0.001	0.002	2.280	-0.046	0.591	90
0.142 0.000  Market Capitalization  0.216 0.005  Turnover  0.088 0.110  Outsider rights  -0.037 0.897  Enforce  1.441 0.000  Account  7.891 0.000  Property Rights	0.484	0.536	0.605	0.342	0.086	0.533		
0.000 Market Capitalization  0.216 0.005  Turnover  0.086 0.110  Outsider rights  -0.037 0.897  Enforce  1.441 0.000  Account  7.891 0.000  Property Rights	-0.005	-0.001	0.000	0.002	1.510	-0.380	0.193	85
0.000 Market Capitalization  0.216 0.005  Turnover  0.086 0.110  Outsider rights  -0.037 0.897  Enforce  1.441 0.000  Account  7.891 0.000  Property Rights	0.806	0.386	0.750	0.236	0.217	0.000		
0.216 0.005  Turnover  0.088 0.110  Outsider rights  -0.037 0.897  Enforce  1.441 0.000  Account  7.891 0.000  Property Rights	-0.007	0.002	0.004	0.004	6.690	-0.147	0.550	85
0.216 0.005  Turnover  0.086 0.110  Outsider rights  -0.037 0.897  Enforce  1.441 0.000  Account  7.891 0.000  Property Rights	0.667	0.061	0.000	0.003	0.000	0.037		
0.005 Turnover  0.088 0.110 Outsider rights  -0.037 0.897 Enforce  1.441 0.000 Account  7.891 0.000 Property Rights	0.024	0.000	-0.002	0.001	0.790	0.089	0.050	50
0.005 Turnover  0.088 0.110 Outsider rights  -0.037 0.897 Enforce  1.441 0.000 Account  7.891 0.000 Property Rights	0.297	0.887	0.354	0.690	0.508	0.706		
0.088 0.110 Outsider rights -0.037 0.897 Enforce 1.441 0.000 Account 7.891 0.000 Property Rights	0.037	0.003	0.005	0.004	1.750	0.427	0.294	50
0.088 0.110 Outsider rights -0.037 0.897 Enforce 1.441 0.000 Account 7.891 0.000 Property Rights	0.083	0.326	0.100	0.061	0.172	0.098		
0.110 Outsider rights -0.037 0.897 Enforce 1.441 0.000 Account 7.891 0.000 Property Rights	0.018	-0.001	-0.002	0.000	0.960	-0.160	0.070	50
0.110 Outsider rights -0.037 0.897 Enforce 1.441 0.000 Account 7.891 0.000 Property Rights	0.587	0.394	0.224	0.997	0.419	0.250		
Outsider rights -0.037 0.897 Enforce 1.441 0.000 Account 7.891 0.000 Property Rights	0.024	0.000	0.001	0.001	0.430	-0.021	0.139	50
-0.037 0.897 Enforce 1.441 0.000 Account 7.891 0.000 Property Rights	0.489	0.863	0.614	0.404	0.731	0.898		
-0.037 0.897 Enforce 1.441 0.000 Account 7.891 0.000 Property Rights	0.113	-0.017	0.009	0.010	3.830	1.997	0.428	44
0.897 Enforce  1.441 0.000 Account  7.891 0.000 Property Rights	0.402	0.042	0.415	0.301	0.017	0.038		•
1.441 0.000 Account 7.891 0.000 Property Rights		-0.017	0.008	0.010	3.740	1.894	0.428	44
1.441 0.000 Account 7.891 0.000 Property Rights	0.428	0.064	0.547	0.402	0.019	0.139		
1.441 0.000 Account 7.891 0.000 Property Rights	-0.031	-0.033	-0.044	-0.025	15.120	-2.934	0.371	86
0.000 Account 7.891 0.000 Property Rights 0.579	0.816	0.000	0.000	0.001	0.000	0.000		
Account 7.891 0.000 Property Rights 0.579	-0.085	-0.012	-0.008	-0.005	3.290	0.483	0.780	86
7.891 0.000 Property Rights	0.250	0.004	0.126	0.313	0.025	0.348		
0.000 Property Rights 0.579	1.566	-0.255	-0.335	-0.116	7.920	8.890	0.472	38
0.000 Property Rights 0.579	0.120	0.000	0.009	0.054	0.000	0.256		
Property Rights	0.973	-0.126	-0.119	-0.005	3.470	25.532	0.664	38
0.579	0.282	0.017	0.193	0.931	0.028	0.002		
0.579	0.027	-0.013	-0.013	-0.007	5.810	-1.202	0.213	89
	0.697	0.000	0.003	0.049	0.001	0.001		
0.000		-0.004	0.002	0.002	2.580	-0.061	0.607	89
	0.741	0.147	0.685	0.516	0.059	0.848		
Dublia Oumanabia	0.040	0.405	0.400	0.000	0.500	0 474	0.400	C.E
Public Ownership	0.346	0.165	0.406	0.086	2.530	-8.471	0.126	65
-15.645	0.880	0.249	0.018	0.669	0.066	0.581	0.247	es.
-15.645 0.000		-0.147 <i>0.348</i>	-0.070 <i>0.717</i>	-0.157 <i>0.423</i>	0.480 <i>0.695</i>	-43.461 <i>0.001</i>	0.347	65

Table 5e: Initial political structure, Finance, and the Transplant effect

	Log (Real GDP per Capita)	PC for Initial Political Structure	Transplant Effect	R²	Observations
Private Credit		-0.014	-0.438	0.350	47
		0.626	0.000		
	0.184		-0.051	0.478	47
	0.000	0.813	0.715		
Liquid Liabilities		-0.024	-0.225	0.149	44
		0.395	0.016		
	0.117	-0.011	0.023	0.229	44
	0.026	0.704	0.882		
Market Capitalization		0.047	-0.060	0.098	45
•		0.082	0.482		
	0.164		0.278	0.251	45
	0.019	0.025	0.162		
Turnover		0.012	-0.101	0.020	45
		0.698	0.371		
	0.133	0.026	0.174	0.073	45
	0.142	0.446	0.465		
Outsider rights		0.317	0.679	0.098	45
		0.056	0.260		
	-0.611		-0.636	0.149	45
	0.158	0.186	0.596		
Enforce		-0.204	-3.561	0.660	48
		0.082	0.000		
	1.235		-0.961	0.821	48
	0.000	0.427	0.087		
Account		2.205	-13.849	0.388	39
		0.043	0.000		
	4.673	2.635	-5.196	0.432	39
	0.139	0.028	0.439		
Property Rights		-0.026	-1.133	0.454	46
		0.583	0.000		
	0.365		-0.359	0.549	46
	0.003	0.767	0.264		
Public Ownership		-0.813	23.573	0.189	48
		. 0.711	0.002		
	-9.572		3.420	0.250	48
	0.008	0.363	0.809		

Table 5f: Initial Political Structure Components and Finance

		Public ownership					Property Rights					Accounting					Enlorce						Outsider Rights					Turnover					Market Capitalization					•	Liquid Liabilities					Private Credit		
		0.229 0.824			.,.	0.645	0.016				. 6	-0.989					0.068	) } 				0.257	-0.075				. 0.002	0.003					-0.011 <i>0.286</i>					0.189	0.012					0.013 <i>0.194</i>	Autocracy	
,	0.085	5 751			0.245	0.126					5.840					0.136 0.521					0.029	0.579				. 8	0.001					0.063 0.187					0.566	2				. !	0.025 0.404		Comp.	Executive
	-0.725 0.739			0.329	0.084				. 8	2.868				. :	0.271						٠					0.017				. !	0.040					0.192	3					-0.024			Open	Executive
-2.235 0.362			0.046	0.143				0.242	1.527				. !	0.312					0.819	0.042					0.026					0.023					0.003 0.862					0.497	0.017				Nonelite	
-2.179 0.318			0.029 0.696					2.761																															0.789						Comp.	Principal
0.010	0.001	0.001	0.002	0.035	0.012	0.015	0.003	0.133	0.025	0.107	0.214	0.072	0.000	0.039	0.029	0.004	0.011	0.000		0.001	0.111	0.111	0.020	0.001	0.009	0.004	0.000	0.001	0.024	0.007	0.025	0.030	0.011	0.005	0.003	0.02	3 8	3	0.023	0.001	0.006	0.012	0.007	0.021	72	١,
77	77	3 3	8	8	8	8	92	39	39	39	39	39	101	101	<b>10</b>	101	101	ŧ	à i	<b>&amp;</b>	<b>5</b>	<b>\$</b>	45	51	51	51	51	5	51	53	51	51	51	98	8	8	8 8	3	88	103	103	103	103	103	Observations	

Table 6: Finance, Law, and Initial Environment

	Log(real per capita GDP)	French legal origin	Settler mortality	R <sup>2</sup>	Observations
Private Credit		-0.090	-0.104	0.412	68
	•	0.038	0.000		
	0.103	-0.075	-0.043	0.618	68
	0.000	0.022	0.011		
Liquid Liabilities		-0.060	-0.113	0.400	65
	•	0.208	0.000		
	0.048	-0.053	-0.085	0.442	65
	0.004	0.252	0.001		
Market Capitalization		-0.206	-0.139	0.419	26
•	•	0.033	0.005		
	0.072	-0.227	-0.094	0.442	26
	0.142	0.012	0.069		
Turnover		0.039	-0.061	0.177	26
	•	0.548	0.000		
	0.027	0.031	-0.044	0.205	26
	0.428	0.613	0.049		
Outsider rights		-2.772	0.132	0.451	22
	•	0.001	0.491		
	-0.703	-2.564	-0.390	0.556	22
	0.009	0.001	0.031		
Enforce		-0.866	-0.623	0.31	65
		0.030	0.000		
	1.010	-0.875	-0.014	0.629	63
	0.000	0.004	0.924		
Account		-23.330	-3.026	0.718	18
	•	0.000	0.000		
	4.231	-23.140	-0.499	0.762	18
	0.047	0.000	0.691		
Property Rights		-0.546	-0.331	0.292	59
		0.022	0.001		
	0.521	-0.571	0.003	0.539	59
	0.000	0.002	0.974		
Public Ownership		1.976	9.289	0:108	40
		0.861	0.068		
	-19.542	6.346	-5.072	0.449	39
	0.000	0.365	0.208		

P-values are in italics. Variable definitions are given in the data appendix.

### Policy Research Working Paper Series

	Title	Author	Date	Contact for paper
WPS2566	Convexity and Sheepskin Effects in the Human Capital Earnings Function: Recent Evidence for Filipino Men	Norbert R. Schady	March 2001	T. Gomez 32127
WPS2567	Policy Reform, Economic Growth, and the Digital Divide: An Econometric Analysis	Susmita Dasgupta Somik Lall David Wheeler	March 2001	Y. d'Souza 31449
WPS2568	Ownership Structure and the Temptation to Loot: Evidence from Privatized Firms in the Czech Republic	Robert Cull Jana Matesova Mary Shirley	March 2001	Z. Kranzer 38526
WPS2569	From Users to Custodians: Changing Relations between People and the State in Forest Management in Tanzar	Liz Alden Wily Peter A. Dewees nia	March 2001	M. Yue 34102
WPS2570	Asymmetries in Union Relative Wage Effects in Ghanaian Manufacturing: An Analysis Applying Quantile Regressions	Niels-Hugo Blunch Dorte Verner	March 2001	M. Clarke 31752
WPS2571	Stock Market Responses to Bank Restructuring Policies during the East Asian Crisis	Daniela Klingebiel Randy Kroszner Luc Laeven Pieter van Oijen	March 2001	R. Vo 33722
WPS2572	Nonfarm Income, Inequality, and Poverty in Rural Egypt and Jordan	Richard H. Adams, Jr.	March 2001	N. Obias 31986
WPS2573	The Gender Implications of Public Sector Downsizing: The Reform Program of Vietnam	Martin Rama	March 2001	H. Sladovich 37698
WPS2574	How Adverse Selection Affects the Health Insurance Market	Paolo Belli	March 2001	H. Sladovich 37698
WPS2575	The Quality of Bureaucracy and Capital Account Policies	Chong-En Bai Shang-Jin Wei	March 2001	H. Sladovich 37698
WPS2576	Trade Policy, Standards, and Development in Central America	Gary Clyde Hufbauer Barbara Kotschwar John S. Wilson	March 2001	L. Tabada 36896

### Policy Research Working Paper Series

	Title	Author	Date	Contact for paper
WPS2577	Developing Rainfall-Based Index Insurance in Morocco	Jerry Skees Stephanie Gober Panos Varangis Rodney Lester Vijay Kalavakonda	April 2001	P. Kokila 33716
WPS2578	How Accession to the European Union Has Affected External Trade and Foreign Direct Investment in Central European Economies	Bartlomiej Kaminski	April 2001	L. Tabada 36896
WPS2579	Public Health and Education Spending in Ghana in 1992–98: Issues of Equity and Efficiency	Sudharshan Canagarajah Xiao Ye	April 2001	M. Clarke 31752
WPS2580	On "Indirect" Trade-Related Research and Development Spillovers	Olivier Lumenga-Neso Marcelo Olarreaga Maurice Schiff	April 2001	L. Tabada 36896
WPS2581	Securities Clearance and Settlement Systems: A Guide to Best Practices	Mario Guadamillas Robert Keppler	April 2001	H. Issa 30154
WPS2582	Development Financing during a Crisis: Securitization of Future Receivables	Suhas Ketkar Dilip Ratha	April 2001	S. Crow 30763
WPS2583	How the Location of Roads and Protected Areas Affects Deforestation in North Thailand	Maureen Cropper Jyotsna Puri Charles Griffiths	April 2001	V. Soukhanov 35721
WPS2584	Structural Adjustment and Forest Resources: The Impact of World Bank Operations	Kiran D. Pandey David Wheeler	April 2001	Y. D"Souza 31449