

## **The Regulation of Labor**

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### **Abstract**

We investigate the regulation of labor markets through employment laws, collective bargaining laws, and social security laws in 85 countries. We find that richer countries regulate labor less than poorer countries do, although they have more generous social security systems. Our measures of the political power of the left are associated with more stringent labor regulations and more generous social security systems, although the former result is not robust. Finally, socialist and French legal origin countries have sharply higher levels of labor regulation than do common law countries. These results are difficult to reconcile with straightforward versions of efficiency and political power theories of institutional choice, but are broadly consistent with legal theories, according to which countries have pervasive regulatory styles inherited from the transplantation of legal systems.

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## **I. Introduction.**

Every country in the world has established a complex system of laws and institutions intended to protect the interests of workers and to guarantee a minimum standard of living to its population. In most countries, this system encompasses three bodies of law: employment law, industrial and collective relations law, and social security law. Employment laws govern the individual employment contract. Industrial and collective relations laws regulate the bargaining, adoption, and enforcement of collective agreements, the organization of trade unions, and the industrial action by workers and employers. Social security laws govern the social response to needs and conditions that have a significant impact on the quality of life, such as old age, disability, death, unemployment, and maternity.

In this paper, we examine these laws in 85 countries through the lens of three major theories of institutional choice: the efficiency theory, the political power theory, and the legal theory. The *efficiency* theory holds that institutions adjust to serve the needs of a given society most efficiently. In particular, each society will choose a system of social control of business that optimally combines market forces, dispute resolution in court, government regulation, and corrective taxes and subsidies. Under the *political power* theory, institutions are shaped by those in power to benefit themselves at the expense of those out of power. Both voting and interest group politics allow the winners to benefit at the expense of the losers, with checks and balances on the government limiting the extent of redistribution. Finally, under the *legal* theory, a country's approach to regulation is shaped by its legal tradition. Common and civil law countries utilize very different strategies for dealing with market failures: the former relying on contract and private litigation, the latter on direct supervision of markets by the government.

Under this theory, the historical origin of a country's laws shapes its regulation of labor and other markets.<sup>2</sup>

Our focus on labor laws might be particularly helpful in distinguishing the political power theory from the legal theory. Roe (2000) and Pagano and Volpin (2000) have recently argued that the political power of labor has been central to legal and regulatory design of the 20<sup>th</sup> century (Roe 2000, Pagano and Volpin 2000). Using data on OECD countries, these authors challenge the observation of La Porta et al. (1997, 1998) that the differences in financial development among common and civil law countries are best understood in terms of legal theories. Roe (2000) in particular argues that civil law is simply a proxy for social democracy. An analysis of labor laws gives these political theories their best shot, for two reasons. First, we expect leftist governments to focus on labor regulations as a top priority for benefitting their supporters. Second, because labor laws are relatively recent, we would not necessarily expect a profound influence of the commercial legal tradition on their structure.

To assess these theories, we collect data on employment laws, collective bargaining laws, and social security laws as of 1997 for the Djankov et al. (2002) sample of 85 countries, and code these data to come up with a variety of measures of worker protection. We combine these data with already existing (and some newly collected) information on economic development, leftist orientation of governments, union power, political and economic constraints on government action, and legal origins to examine the determinants of the regulation of labor. We also examine data on the unofficial economy, unemployment, and labor force participation to

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<sup>2</sup>In footnotes, we also consider the cultural theory, under which regulations are shaped by a country's cultural history, such as the dominance of particular religious groups. The data do not support this theory, so we keep their discussion to a minimum.

consider the consequences of the regulation of labor.

The available research on labor regulations is more extensive than that on most other laws. The Organization of Economic Cooperation and Development has sponsored the creation of a database of labor regulations in member countries (Nicoletti, Scarpetta, and Boylaud 1999; Nicoletti and Pryor 2001). The World Bank has assembled a data base of International Labor Office certifications for 119 countries, which provide a partial view of the labor laws as well (Forteza and Rama 2000). Heckman and Pages-Serra (2000) collect and examine an extensive data set of job security regulation for Latin American and Caribbean countries. Mulligan and Sala-i-Martin (2000) assemble and analyze data on social security systems. What distinguishes our data from the previous efforts is a combination of a significant coverage of countries and a comprehensive approach to labor market regulations.<sup>3</sup>

In the next section, we briefly describe some of the principal theories of the determinants of labor regulations and develop our hypotheses. In section 3, we describe the data. In section 4, we present the data on the regulation of labor, and describe some of its basic regularities. In section 5 and 6, we present the tests of alternative theories. Section 7 concludes.

## **II. Hypotheses.**

### *Efficiency*

Demsetz (1967) and North (1981) propose that the choice of institutions is dictated primarily by efficiency considerations. In their original form, these theories hold that there are

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<sup>3</sup>There is also an extensive literature on the consequences of regulation of labor, including Besley and Burgess (2002), Fonseca, Lopez-Garcia, and Pissarides (2000), Pissarides (2001), Heckman and Pages-Serra (2000), and Ichniowski, Freeman, and Lauer (1989), among others.

fixed costs of setting up institutions, and that it becomes socially efficient to set them up only when the benefits cover the costs. More recently, research on efficient institutional choice has focused on the idea that different institutional arrangements, ranging from reliance on unbridled market forces, to contract and private litigation, to government regulation, to subsidies and social insurance, represent alternative modes of dealing with torts and market failures, which may be appropriate in different circumstances.<sup>4</sup> For example, different combinations of these strategies may be efficient in developed than in developing countries.

Here we consider two versions of this argument. The first focuses on the distinction between regulation and social insurance. Social insurance may be the relatively more efficient way of dealing with market failures in countries with a lower social marginal cost of tax revenues, which presumably are the richer countries (Brennan and Buchanan 1980, Becker and Mulligan 2000). Thus poor countries must regulate to protect workers from being fired or mistreated by employers, whereas rich countries provide unemployment insurance, sick leave, early retirement and so on because they can more cheaply raise taxes to finance such operations (Blanchard 2002). A similar argument would maintain that rich countries can better rely on courts and contracts to address potential market failures, including those in the labor market, and so do not need as much regulation as do poor countries, where contracts cannot be enforced.

The second version of the efficiency argument predicts exactly the opposite. It holds that the principal cost of regulation, relative to other forms of social control of business, is its potential for abuse of regulated firms by the government and its officials. Thus labor regulations

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<sup>4</sup>See Glaeser and Shleifer (2002, 2003), Glaeser, Scheinkman and Shleifer (2003), and Djankov et al. (2003)

can be used to force firms to hire and keep excess labor, to empower unions friendly with the government, etc. According to this argument, the rich and better governed countries have a comparative advantage at regulation relative to other forms of social control of business because their governments are less likely to abuse power. This view with respect to regulation in general is advocated by Djankov et al. (2003).

The basic thrust of efficiency theories is that countries at different levels of economic development should have different regulatory structures. The variation in patterns of regulation can also suggest which efficiency forces, if any, shape the regulation of labor. We note, however, that labor markets are not an ideal testing ground for efficiency theories, because the basic assumption of market failure is not nearly as convincing in those markets as in some others, and because there is no compelling argument that labor laws evolved toward efficiency through a long period of testing and social negotiation.

### *Political Power*

According to political power theories, institutions are designed not to pursue efficiency, but to transfer resources from those out of political power to those in power, as well as to entrench those in political power at the helm (Marx 1872, Olson 1993, Finer 1997). According to this view, institutions are not only generally inefficient, but are in fact designed to be so by political leaders to help themselves and their favored groups.

Political power theories come in at least two varieties. The first holds that the principal mode of political decision making is elections, and therefore the parties that win elections get to shape laws and institutions. The second variety, which applies to both democracies and

dictatorships, holds that policies and institutions are shaped by the influence of interest groups (Olson 1965, Becker 1983).

Political power theories are by far the most standard explanation of the choice of labor regulations. In the electoral version, they hold that regulations protecting workers (or at least employed workers) are introduced by socialist, social-democratic, or more generally leftist governments to benefit their political constituencies (Esping-Andersen 1999, Hicks 1999). In the interest group version, these theories hold that labor regulations are a response to the pressure from trade unions, and therefore should be more extensive when the unions are more powerful, regardless of which government is in charge.

Political theories also hold that the ability of those in power to use regulations to benefit themselves is limited by checks and balances on the government, which can come either from politics (Buchanan and Tullock 1962) or from markets. Dictatorships are less constrained than democratically elected governments, and therefore will have more redistributive laws and institutions. Constitutions, legislative constraints, and other forms of checks and balances are all conducive to fewer regulations. This theory found some empirical support in our previous work on the regulation of entry (Djankov et al. 2002). Likewise, economies open to trade may be less likely to introduce expensive regulations, because competition makes it less lucrative for governments to raise firms' regulatory costs (Ades and DiTella 1999, Rajan and Zingales 2003).

### *Legal Theory*

Legal theory has received considerable attention in the discussions of institutional evolution in the last several years. Two very distinct legal traditions evolved in Western Europe

between the 12<sup>th</sup> and the 19<sup>th</sup> centuries: common law and civil law. Common law emerged in England and is characterized most clearly by the importance of decision making by juries, independent judges, and the emphasis on judicial discretion as opposed to codes. From England, common law was transplanted to its colonies, including Ireland, U.S., Canada, Australia, New Zealand, India, Pakistan, Singapore, Hong Kong, Malaysia and other countries in South and East Asia, East Africa and the Caribbean.

Civil law evolved from Roman law in Western Europe through the middle ages, and was incorporated into civil codes in France and in Germany the 19<sup>th</sup> century. Civil law is characterized by state-employed judges, the relative unimportance of juries, a greater role of both substantive and procedural codes, and relatively less judicial discretion. Through Napoleonic conquest French civil law was transplanted throughout Western Europe, including Spain, Portugal, Italy, Belgium, and Holland, and subsequently to the colonies in North and West Africa, all of Latin America, and some parts of Asia.

The German code became accepted in Germanic Western Europe, but also was transplanted to Japan and from there to China, Korea, and Taiwan. We also note the predominance of socialist law in countries that came under the influence of U.S.S.R., and of an indigenous Scandinavian legal tradition in Sweden, Norway, Denmark, Iceland and Finland.

Legal theories hold that social control of business is shaped by the legal origin of a country's laws. Specifically, common law countries tend to rely more on markets and contracts, and civil law countries on regulation. Compared to other theories, legal theories have the advantage that, because legal systems were transplanted largely through conquest and colonization, one can argue that the legal influence on institutions is exogenous to a country.

Legal theories have been tested in other areas of law. Compared to civil law and particularly French civil law countries, common law countries have better legal protection of shareholders and creditors (La Porta et al. 1997, 1998), lighter regulation of entry (Djankov et al. 2002), less formalized legal procedures for resolving disputes (Djankov et al. 2003), and securities laws more focused on private contracting than regulation (La Porta et al. 2002).

The general differences between common and civil law may prevail in the regulation of labor as well. Specifically, common law countries may adhere to the general principle that private contracts, and their enforcement through private litigation, are the best way of “regulating” the labor market. In contrast, civil law countries may emphasize public regulation. The principal prediction of the legal theory, then, is that civil law countries and socialist law countries should regulate labor markets more extensively than do the common law countries. The legal theory would also predict that common law countries should have a less generous social security system, because they are more likely to rely on markets to provide insurance. Perhaps most importantly, the legal theory predicts that patterns of regulation of different activities are correlated across countries. These predictions are tested below.

Legal theories have been challenged by advocates of political power theories, such as Roe (2000) and Pagano and Volpin (2000), who argue that at least in Western Europe, the civil law tradition has often coincided with the political predisposition to regulate, usually coming from the left. By combining extensive data on political orientation and legal origins for a sample of 85 countries, we attempt to distinguish the pure political power from the pure legal origin theory.

### III. Measures of Labor Regulation

We construct a new data set describing the legal protection of workers in 85 countries in 1997. We gather data on the three components of the legal framework for worker protection: (i) employment laws; (ii) industrial (collective) relations laws, and (iii) social security laws.

To identify issues subject to statutory regulation in the area of employment and industrial relations laws, we use the OECD Jobs Study (1994) and the International Encyclopaedia for Labor Law and Industrial Relations. For social security laws, we follow the de-commodification index of Esping-Andersen (1999), regarded as a leading empirical comparison of social security systems among developed countries (Hicks, 1999, p. 249). We also rely on several cross-country secondary sources, including the International Encyclopaedia for Labour Law and Industrial Relations, the ILO's Conditions of Work Digest (1994, 1995), and the U.S. Social Security Administration's *Social Security Programs Throughout the World*.

To ensure comparability and consistency across countries, we consider a "standardized" male worker with the following characteristics: (i) he is a non-executive full-time employee working in the same firm for 20 years;<sup>5</sup> (ii) his salary plus benefits equal the country's GNP per worker during the entire period of employment; (iii) he has a non-working wife and two children, and the family has always resided in the country's most populous city; (iv) he is a lawful citizen who belongs to the same race and religion as the majority of the country's population; (v) he is not a member of the labor union (unless membership is mandatory). For

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<sup>5</sup>We have redone the analysis for a worker with only three years of employment. The results were not significantly different.

social security, we also assume that the worker retires at the normal retirement age as defined by the country's laws; sickness lasts for 2 months, and the unemployment spell lasts for one year. We also assume a “standardized” employer with the following characteristics: (i) it is a local company, wholly owned by nationals, with the country’s most populous city being both its legal domicile and its main place of business; (ii) it operates in the manufacturing sector; (iii) it has 201 workers; (iv) it abides by every law and regulation, but does not grant workers more prerogatives than are legally mandated. Also, (i) when both a standard duration and a possible extended period of time are provided by law, we choose the standard period; (ii) we use 30-day months and assumed 22 working days per month and 5 working days per week; (iii) when we find complementary coverage mechanisms, all applicable mechanisms are taken into account.<sup>6</sup>

### *Employment laws*

Employment laws govern the individual employment relation, including the formation of the individual labor contract, the mandatory minimum terms and conditions of such contract, and the termination of the contractual relation. Accordingly, we divide the field into three broad areas: (i) alternative employment contracts, (ii) conditions of employment, and (iii) job security. Each of these areas is covered by several variables, which we aggregate into a sub-index. We

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<sup>6</sup>These assumptions are key to ensuring comparability across countries, but they are not responsible for the results of the paper. In the vast majority of countries, most employment provisions uniformly apply to every kind of worker in every kind of company in every industry. Labor laws are national in most countries, but some — especially common law — countries have adopted different laws for different industries. Civil law countries tend to have national labor codes with standard provisions applicable to the vast majority of the workforce, but sometimes provide exceptions for certain workers or industries. In general, variation in the overall level of labor protection are by far larger across countries than across industries within a country.

normalize each of the sub-indices so that each area is equally-weighted, and then create an aggregate index of employment laws. We follow the same procedure for industrial relations and social security laws. Table I contains detailed definitions of all the variables used in the paper.

The effectiveness of the protection granted by the statutory regulation of the employment contract depends on the restrictions placed on alternative employment contracts. If the regulation of alternative contracts is relatively more flexible than that of regular contracts, the former will be used to by-pass standard labor provisions. The three main alternatives to the standard employment contract are part-time, fixed-term, and family members' contracts. Workers hired under such contracts are typically paid lower benefits and are subject to less onerous termination rules. Our indicators in the alternative employment contracts sub-index cover both the permissibility and the characteristics of these contracts.

The second broad area covers the terms and conditions of the employment contract. In many countries, the conditions of employment are defined by the constitution, the labor code or other statutory provisions as a matter of public policy (they may not be opted out of, except to afford greater protection to the employee). In other countries, substantial aspects of the employment relation are left to the individual agreement between the parties. The legal provisions on conditions of employment cover three areas: (i) flexibility on working time requirements; (ii) mandatory payment for non-working days (including paid annual leave, holidays, and maternity leave); and (iii) minimum wage legislation.

The third broad area is job security, or legal protection against dismissal, which encompasses: (i) grounds for dismissal; (ii) procedures for dismissal; (iii) notice period; (iv) severance payment; and (v) the constitutional principles covering protection against dismissal.

The rules on grounds for dismissal range from ‘contract at will,’ where the employment relation may be terminated by either party at any time and with no limitations other than those contained in the agreement, to allowing the termination of employment contracts only under a very narrow list of ‘fair’ causes, which may not be contracted around by the parties, to refusing to consider dismissal on economic necessity (redundancy) as a fair cause for firing employees. The procedures for dismissal restrict the employer’s freedom to dismiss by requiring mandatory notification or even the approval from unions, workers councils, the public employment service, a labor inspector or a judge. Some countries also require rehabilitative measures (retraining and allocation of another job within the enterprise) prior to the dismissal, and establish priority rules for dismissal or re-employment of redundant workers. Job security regulations also cover the timing and cost of dismissal. Some countries have mandated a lengthy advance notice for termination, while others leave this issue to the individual employment contract. Similarly, the termination of the employment agreement sometimes carries no payment at all or a payment in lieu of notice.<sup>7</sup>

### *Industrial relations laws*

Industrial relations laws aim at collectively protecting workers from employers.<sup>8</sup> They

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<sup>7</sup>In many countries severance payments are viewed as an alternative to unemployment insurance. In others, severance payments are considered remedies (indemnities) for unfair dismissals, so they coexist with unemployment insurance. In still others, neither severance payments nor unemployment insurance is mandated, although most countries have both.

<sup>8</sup> Some provisions aim to protect workers from other workers. For instance, “right-to-work” laws in the U.S. protect workers from unions by prohibiting the exclusive hiring of union labor. Such cases are rare and the bulk of industrial relations provisions directly protect workers from employers.

govern the balance of power between labor unions and other forms of organized work, and employers and associations of employers. We aggregate industrial relations laws into three sub-indices: (i) collective bargaining; (ii) workers' participation in the company's management; and (iii) collective disputes (strikes and lockouts), and then aggregate those into an index.

Collective bargaining covers several areas. First, some countries require employers to bargain with workers, while others allow them to by-pass bargaining and resolve the issues through collective dispute mechanisms. Second, in some countries collective agreements are extended to third parties as a matter of public policy at the national or sectoral levels, whereas in others they only extend to non-signatory workers at the plant level, or only bind the parties to the agreement. Third, the laws of some countries include rules allowing for the exclusive hiring of union labor in certain industries or factories (closed shops).

The second sub-index captures worker participation in management, which may take the form of mandatory appointment of workers to the board of directors (the German model of co-determination), or workers councils (the Swedish model). Most countries do not provide a mechanism for worker participation. These two variables (and the presence of worker participation in the constitution) form the sub-index of worker participation in management.

The third sub-index covers the regulation of collective disputes. This area covers: (i) legal strikes; (ii) procedural restrictions to strikes; (iii) employer defenses; (iv) compulsory arbitration; and (v) the constitutional protection of the right to strike. A few nations have a straight prohibition of strikes; others limit the types of lawful strikes. For example, solidarity strikes (to support the claims of workers other than the striking workers), wildcat strikes (not authorized by the labor union), political strikes, and sit-ins are often prohibited. Procedural

restrictions on the right to strike include majority voting, advance notice requirements, prohibitions on strikes while a collective agreement is in force, and the obligation to go through conciliation procedures before the strike may take place. Employer defenses may include bans on employers' strikes (lock-outs) and on employers' retribution against strikers, such as the termination of employment of striking workers and the hiring of replacement labor during a lawful strike. Finally, in many countries, one (normally the employer) or both of the parties may be subject to arbitration against their will.

### *Social Security laws*

The risks covered by social security systems vary across countries. There are twelve potentially independent types of programs: old age; disability; survivor's; sickness; healthcare; employment-related temporary injury; employment-related permanent injury; employment related survivor's; maternity; unemployment; family benefits; and child benefits. The bulk of social security expenditure across countries addresses old-age pensions, sickness and healthcare coverage, and unemployment. For this reason, and following the design of the de-commodification index of Esping-Andersen<sup>9</sup>, our variables cover the risks of: 1) old age, death and disability, with an emphasis on old-age; 2) sickness and healthcare, with an emphasis on sickness; and 3) unemployment. We code five variables for each one of these three risks. The first is always a dummy measuring whether the laws of the country provide for a mandatory and

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<sup>9</sup> Esping-Andersen used the share of the relevant population covered as a weight for the variables in his index for 18 developed countries. This information is not available for a large sample of countries, so we present the un-weighted data. The correlation between the Esping-Andersen index and our index of social security laws for the 18 countries in his sample is 0.xx.

comprehensive social security system to cover the particular risk. This enables us to exclude non-comparable mechanisms.

For the sub-index of old age, disability and death, the other four indicators are created as follows. First, the generosity of pension protection is calculated as the difference between the legal retirement age and the worker's life expectancy. The second indicator is the required time of contributions to access a pension. We measure the number of months of contribution or of covered employment required by law to qualify for a standard pension. The third indicator is the percentage of the worker's monthly salary deducted by law to cover old-age, disability, and death benefits. Our last indicator of the level of protection of the pension system is the "replacement rate," calculated as the percentage of the pre-retirement salary covered by the standard old-age cash-benefit pension.<sup>10</sup> The other two sub-indices cover sickness and health, and unemployment. These use the same kinds of variables as the old-age sub-index, with only minor modifications.

### *Independent Variables*

We assemble data on a number of potential determinants of labor regulations, as well as some labor market outcomes. To proxy for the level of development, we use the (logarithm of) per capita income in 1997 – the same year as when the regulations are measured.

To measure government orientation, we expand the World Bank data base, which records the fraction of years between 1975 and 1995 that a chief executive and the legislature in each

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<sup>10</sup>Countries vary in the type of pension system they have, including lump-sum systems, private systems, and systems that provide fixed benefits to everyone. Table I describes the details of how the calculations are made depending on the type of the pension system.

country was rightist, leftist, or centrist. To check robustness, we have also assembled a similar database starting in 1928 (on the theory that many labor laws were adopted before 1975), but the results were substantially weaker and are not presented here. We present results for three variables measuring leftist government (these variables yield the strongest results): chief executive of left or center orientation, legislature of left or center orientation, chief executive AND legislature of left or center orientation. We rely on union density and the percentage of the labor force covered by collective agreements as proxies for the influence of labor interest groups.

To measure political constraints, we take from Djankov et al. (2002) constraints on executive power, effectiveness of legislature, and autocracy. To measure economic constraints, we take from Frankel and Romer (1999) actual trade openness in 1985, geographic openness, and factor accumulation openness. To test legal theories, we use legal origin of commercial laws from La Porta et al. (1999), which classifies close to 200 countries. Labor market outcomes include the size of the unofficial economy, unemployment, and labor force participation.

#### **IV. A Look at the Data.**

Table 2 presents the sub-indices and indices of employment protection and industrial relation laws for each country in the sample. Countries are ordered by per capita income in 1997 and divided into the poorest quartile, the next 50 percent, and the richest quartile. We also compare the means and the medians of the various sub-indices and indices across income groups. Recall that all variables are coded so higher values mean more protection/regulation.

A comparison of New Zealand and Portugal, two countries of roughly similar incomes

close to the top of the middle group, illustrates our indices. In the area of employment laws, fixed term contracts can be entered in New Zealand for any reason, and there is no maximum duration period provided by law. In Portugal, such contracts are allowed only for specific situations (such as substitution for another worker or seasonal activity) and are temporary in nature. The Portuguese Constitution regulates working times and leaves, remuneration, and working conditions, matters that in New Zealand are normally regulated by collective bargaining and individual employment contracts. Premium for overtime work in Portugal ranges from 50% to 75%, there are restrictions on night work, and there are 24 days of paid annual leave. New Zealand mandates no premium for overtime work, there are no restrictions on night work, and paid annual leave is 15 days. New Zealand allows “contracts at will,” which can be terminated with notice by either party without cause. Portugal has a public policy list of fair grounds for termination and stringent procedural limitations on dismissal, such as mandatory notification of the government and priority rules for re-employment of redundant workers. In New Zealand, “reasonable notice” is required to dismiss a worker, in Portugal the length of such notice is mandated by law. The employment laws index in Portugal is 2.29 (one of the highest in the world); in New Zealand it is 1.03 (one of the lowest in the world).

In the area of industrial relations laws, the Portuguese Constitution includes the rights to engage in collective bargaining and collective disputes, the right to form trade unions, and the rights of such unions to participate in the management of individual companies and in greater political issues and bodies. Employer defenses against strikes are prohibited by the Constitution. Employers have a legal duty to bargain with unions, collective agreements are extended to third parties by law, workers councils are mandatory, and employer lockouts are prohibited. In New

Zealand, none of these issues are covered in the Constitution, and most are not even regulated by law. Employers have no legal obligation to bargain with unions, collective agreements are not extended, labor participation in management is not mandatory, and employer lockouts are allowed. Portugal's collective relations laws index is 2.26, compared to 0.43 for New Zealand.

Finally, although social security is regulated by the Constitution in Portugal but not in New Zealand, both countries have similar – and generous – social security systems, with Portugal having a score of 2.21 and New Zealand 2.15. As we show below, New Zealand and Portugal are quite representative of some broader patterns in the data.

As Table 2 shows, most countries restrict alternative employment contracts, conditions of employment, and job security. There is no evidence of any difference in regulation between the poorest and the middle income countries, but there is clear evidence that the richest countries, if anything, protect employment *less*. This is true for all three sub-indices, and the overall employment protection index.

With respect to industrial relations laws, collective bargaining mandates are extremely common, but appear to be more so in middle income countries than in either the poorest or the richest countries. Worker participation in management is uncommon everywhere. The regulation of collective disputes is similar across income groups. For the overall index of regulation of industrial relations, collective bargaining mandates dominate, and show the greatest empowerment of collective bargaining in the middle income countries.

Table 3 focuses on social security protections. Here the results are clear: richer countries have more extensive social security protection in all areas, including old age, disability and death, sickness, and unemployment. Indeed, few poor nations have social security programs

for sickness (54%) and unemployment (27%) as compared to the almost 100% availability of these programs in the richest countries.

The basic summary of the data thus far is that poor countries appear to regulate, and rich countries to provide social insurance. The correlations in Table 4 confirm these observations. These results are consistent with the version of the efficiency theory of institutions which holds that, as countries develop, social insurance becomes a relatively more efficient way to deal with labor market failures than regulation. At the same time, Table 4 shows that, looking across countries, the correlation between our index of employment laws and that of social security laws is 0.0526, which argues against the view that regulation and social insurance are substitutes. We return to efficiency after examining other theories of regulation of labor.

## **V. Testing the theories.**

In Table 5, we examine the relationship between the protection of workers and legal origin, holding income constant. We present the results for all three areas of law. Note first that the results confirm our earlier observation that employment protection laws are generally weaker in richer countries, regulation of industrial relations does not monotonically depend on income, and social security protections increase significantly with income. The results further show that, relative to common law countries, socialist and French legal origin countries have sharply higher employment protection (which is similar among the latter two groups). German legal origin countries have somewhat higher employment protection than do the common law countries (but not in the area of restricting employment contracts), while Scandinavian countries are about the same as the common law countries. The magnitude of the difference between

common law and French civil law countries (holding GNP per capita constant) is large: it is 1.5 times the difference between the richest and the poorest countries.

In the area of industrial relations, we see a somewhat different pattern. As with worker protection, socialist and French legal origin countries have sharply higher worker protection through industrial relations laws than do the common law countries. But here, although the evidence for the sub-indices is weak, there is also evidence that German and Scandinavian law countries have more protective collective relations laws than do the common law countries.

In the area of social security, there is clear evidence of more generous regulation in the socialist legal origin countries than in the common law countries (except in the area of old age benefits). Next to the socialist countries, the Scandinavian countries have the most generous social security systems relative to the common law countries. The difference between French civil law and common law countries is less pronounced, and is the highest for sickness and health benefits. There is no statistically significant difference between German legal origin and common law countries in the generosity of social security schemes.

Table 5 delivers a preliminary message. In the protection of workers through employment and industrial relations laws, we see a repetition of a now well-documented result that civil law countries, and especially French civil law countries, regulate markets more heavily than do the common law countries (see, e.g., La Porta et al. 1999, Djankov et al. 2002). In the area of social security, however, what seems to be important is not the difference between French and English law, but rather the level of development, as well as the Scandinavian effect.

Table 6 examines the effect of left political power on the protection of workers. First, countries with longer histories of leftist or centrist governments between 1975 and 1995 have

heavier regulation of labor markets, as measured by either employment or industrial relations laws. In addition, on any measure of leftist/centrist government, countries with a longer history of such government have more generous social security laws.<sup>11</sup> Second, a higher percentage of the labor force covered by collective agreements is associated with more protective employment and industrial relations laws, though not with more generous social security systems. On the other hand, union density does not influence labor laws significantly. The bottom line of Table 6 is that the measures of leftism are associated with heavier labor regulation, though the effects are smaller than those of legal origin.

As a final step of this initial look at the data, Table 7 presents the results of a horse race between legal origins and measures of leftist government. We run these regressions without socialist countries, since law and politics are nearly perfectly correlated among those countries. Except for social security laws, where there is marginal evidence of greater generosity in more leftist countries, the effect of our political variables on labor laws disappears. On the other hand, the effects of legal origins remain highly statistically significant, and the coefficients hardly move. We conclude that the effects of legal origin on the regulation of labor are much larger and more pronounced than those of politics.<sup>12</sup>

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<sup>11</sup>These results also hold, although at lower level of statistical significance, if we use the pure leftist government variables. In addition, as a robustness check, we rerun these results using a new data set on political coloration of governments starting in 1928. For these longer horizon variables, there is no evidence that the fraction of years that the leftist (or leftist/centrist) executives, or legislatures, or both, spent in office has influenced the structure of employment and collective relations laws. All measures of leftist power continue to be associated with more generous social security regimes, a fact that undermines the claim that we have a poor measure of leftist power.

<sup>12</sup>We also considered the effects of the religious composition of the population in 1900 -- our proxy for culture -- on contemporary labor laws. There are a few statistically significant

Several new findings emerge from this section. First, socialist and French legal origin countries are more interventionist in their employment protection and industrial relations laws than are common law countries. Second, leftist government and higher union influence are associated with heavier regulation of labor markets, although these results are not consistent across specifications and do not survive the inclusion of legal origin in the regression. The evidence so far provides strong support for legal theories, is consistent with a particular version of the efficiency theory, and does not lend much support for the political theory. Moreover, the results (including the correlations) reject the view that legal origin and leftism are the same thing.

## **VI. Further tests.**

In this section, we examine four additional pieces of evidence bearing on alternative theories. Since the political theory, namely that regulation comes from the power of the left, has fared poorly in the previous section, here we consider two ways to revive it. First, we ask whether political and economic constraints on government reduce the regulation of labor, as political theory would predict. Second, we ask whether politics matters for regulation *within* legal origin, which is in some sense a hybrid legal/political hypothesis. In addition, we present some evidence bearing on the strong prediction of the legal theory, namely that countries have regulatory styles, and that therefore there should be a strong correlation across countries of the extent of regulation of *different* activities. Finally, we return to the efficiency hypothesis and

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coefficients indicating that catholic countries have more protective labor laws, but the evidence is weak, and does not survive a horse race with legal origin.

other theories by examining some of the consequences of labor regulation.

### *Constraints on Government*

Under the political theory, a more constrained executive would pursue less aggressively policies favoring his supporters at the expense of others, such as the regulation of labor.

Constraints can come from politics itself: autocrats are less constrained than elected officials, effective legislatures can restrain the sovereign, constitutions may include checks and balances (Brennan and Buchanan 1980, Henisz 2000, La Porta et al. 2002). Alternatively, constraints can come from markets, and in particular, openness to trade raises the cost of labor market intervention and thus may reduce it (Ades and DiTella 1999, Rajan and Zingales 2003).<sup>13</sup> The prediction of the political theory is that such constraints would be associated with lower levels of government regulation of labor, other things equal.

Table 8 presents the correlations between our six measures of economic and political constraints and other determinants of the regulation of labor. The three measures of political constraints are strongly correlated with each other, as well as with the level of per capita income. This fact presents a problem for testing political constraints theories (here and elsewhere), since the measures of political constraints may just reflect some other country characteristic associated with development. The three measures of trade openness are also highly correlated with each other, but only factor accumulation openness is highly correlated with income. On the other hand, except for the fact that governments in socialist countries face few economic and political

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<sup>13</sup>Openness to trade may be endogenous, but we follow Frankel and Romer (1999) in also using a measure of “natural openness,” which is determined by a country’s geography.

constraints, the constraint variables are not strongly correlated with legal origins.

Table 9 examines the effect of constraints on government on regulation. The table shows that more constrained governments have lighter regulation of labor markets in both the employment protection and industrial relations areas. The results hold as well if we exclude socialist countries. Basically, every measure of constraints except factor accumulation openness works. The constraints variables also eliminate the negative effect of development on employment regulation. Put differently, that effect might have come from the fact that richer countries have more constrained governments. With respect to social security, the evidence is less consistent, but again shows that more constrained governments have smaller systems.

In Table 10, we restrict the sample to non-socialist countries, and check whether these effects of political and economic constraints remain significant once we control for legal origin. The results for political constraints disappear, those for openness become weaker. Legal origin remains by far the more important determinant of the patterns of labor market regulation.

### *Regulation Within Legal Origin*

One final attempt to save the political theory is to combine it with the legal theory. The legal theory holds that civil law countries, particularly the French civil law countries, specialize in regulation as a means of social control of business, whereas the common law countries specialize in contracts and markets. Because of transplantation, these patterns of institutional specialization are largely exogenous. One could further argue that, because of such specialization, French civil law countries are more likely to respond to the increased political demand for regulation by having more of it than do the common law countries, since the

marginal social cost of providing such regulation is lower. Put differently, civil law provides a ready tool box for regulation, whereas common law is not nearly as user-friendly because of its emphasis on contracts. This logic predicts that there should be a stronger positive association between leftism and regulation in French civil law than in common law countries.

Table 11 and Figures 1 and 2 present some evidence bearing on this hypothesis. The results show that, indeed, within French civil law countries, but not within common law countries, leftism is associated with more protective employment and industrial relations laws. The difference in slope coefficients on our measures of leftism between common and French civil law countries is typically statistically significant. This result still puts the legal theory center stage, and surely does not support the view that legal origin is a proxy for social democracy. On the other hand, the result points to a possible reconciliation of legal and political theories, namely that within the institutional technologies dictated by legal systems, politics indeed plays a role in regulatory choice.

### *Regulation Across Activities*

One of the strongest implications of the legal hypothesis is that societies have regulatory styles shaped in part by their legal systems, and that therefore societies that regulate one activity are also expected to regulate others, which might be totally unrelated. With respect to this prediction, note that we have already established in earlier work that French civil law countries regulate entry of new firms, dispute resolution in courts, and other activities more heavily than do common law countries (La Porta et al. 1999, Djankov et al. 2002, 2003). The findings of this paper are broadly consistent with this research.

Table 12 presents the correlations between our new measures of regulation of labor markets and the measures of regulation of entry from Djankov et al. (2002) and measures of legal formalism from Djankov et al. (2003). The data reveal striking evidence that all these aspects of regulation go together, even though the methodologies of data collection differ tremendously across the three studies. The correlation between the employment law index and the judicial formalism index is 0.47 for one case, and 0.58 for the other. The correlation between the employment law index and the logarithm of the number of steps required to start a business is 0.61. These correlations fall by about 0.05 if we exclude socialist countries, but remain highly statistically significant. Regulatory style is pervasive across activities -- a striking confirmation of the legal theory.

Combined with the previous findings of the interaction between legal origin and politics, these results suggest that countries have regulatory styles, shaped primarily by transplantation of legal systems. Politics plays a role within the general regulatory framework presented by these styles, but it is neither as important as the styles themselves, nor is a proxy for them.

### *Outcomes*

Finally, we return to the question of whether heavier regulation of labor in poorer countries is evidence of efficient institutional choice. We look at several potential consequences of labor regulation, namely the size of and the employment in the unofficial economy, unemployment (in 1997 and the 1990-1997) average, and average labor force participation between 1990 and 1994 of all workers, males, and females. All of these variables have related measurement problems, particularly for the developing countries, where some employment is

informal and is not recorded in official statistics. Still, by looking at the various dimensions of the data, we hope to get a general picture.

The picture in Table 13 is indeed consistent across specifications: countries with heavier regulation of labor have higher unofficial economies, higher unemployment, and lower labor force participation. An increase of the employment laws index by 1 point (from New Zealand to Spain) raises the share of the unofficial economy in GDP by 7.25 percentage points, the share of unofficial employment by 13.35 percentage points, and unemployment in 1997 by 3.55 percentage points. This change also reduces the estimated labor force participation rate of men and women by between 3 and 4 percentage points. The results are weaker for industrial relations laws, and are generally insignificant for social security laws, although they generally point in the same direction. When we instrument for the labor law indices with legal origins and GDP, as we do in Table 14, the results on the unofficial economy become weaker and insignificant, while those on unemployment and labor force participation become stronger and more significant. With all the due caveats on measurement problems, this evidence presents a consistent picture of adverse consequences of government regulation of labor, especially regulation of employment.

Although these results do not unambiguously show that the regulation of labor is excessive, since one could always argue that the social ills would be even graver absent regulation, they certainly do not indicate any benefits. Moreover, the results using instrumental variables suggest that the exogenous component of labor regulation, derived from legal transplantation, is at least in part responsible for the adverse outcomes of regulation. This evidence is thus supportive of the legal theory, and inconsistent with the efficiency hypothesis.

## **VII. Conclusion.**

This paper concludes our trio of studies of government regulation of different activities. We have looked at the regulation of entry by new firms, the regulation of judicial procedures, and now the regulation of labor markets. Based on our earlier work and the work of others, we organized the many theories of government regulation into three groups. Efficiency theories hold that regulations in each country adjust to most efficiently address the problems of market failure in that country. Political theories hold that regulations are used by the political leaders of each country to benefit themselves and their allies. Legal theories hold that the patterns of government regulation are shaped by each country's legal tradition, which is to a significant extent determined by transplantation of a few legal systems. We then examined the regulation of labor markets in 85 countries through the lens of these theories.

The evidence is generally inconsistent with the efficiency theory, since we have shown, contrary to the more natural prediction of this theory, that poor countries regulate labor markets more than rich countries do, and that moreover such regulation has adverse consequences for unemployment, labor force participation, and economic activity staying official. The evidence is also inconsistent with the basic version of the political theory, according to which heavier regulation of labor is merely a reflection of the political power of the left, through either elected office or labor unions. Although our measures of the power of the left, as well as our measures of political and economic constraints on government, influence the patterns of regulation of labor, these effects disappear once we control for the basic regulatory style determined by the legal tradition. Finally, the evidence is broadly consistent with the legal theory, according to which patterns of regulation across countries are shaped largely by their legal structure, which

arrived to most countries through transplantation of legal systems.

These results do not mean that efficiency forces in regulation are unimportant, and indeed our focus on labor markets and on a large sample of developing countries, which inherited their regulatory styles, predisposes our findings against supporting the efficiency hypothesis. These findings also do not mean that politics is unimportant, except to the extent that they reject the position that civil law is nothing but a reflection of “social democracy”. Indeed, we present some evidence that politics do influence the intensity of labor market regulation in French civil law countries, where the basic regulatory style is vulnerable to political pressures. But here politics has a second order effect on the structure of regulation. The first order determinant of the style of regulation of labor is the historical origin of a country’s commercial laws.

This finding is broadly consistent with our earlier results on the regulation of entry and on the formalism of judicial procedures, which also revealed the significance of legal origins. A striking result in this paper is the high correlation among our measures of regulation of different activities across countries: countries that regulate entry also regulate labor markets and judicial proceedings. The bottom line of this research is the centrality of institutional transplantation: countries have regulatory styles that are pervasive across different activities and shaped by the origin of their laws.

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**Table I**  
**Description of the variables**

The table describes the variables in the paper. Unless otherwise specified, the sources for the variables are the laws of each country.

Variable	Description
<i>Employment laws</i>	
<i>Alternative employment contracts</i>	
Part-time employment is prohibited	We define a ' <i>part-time worker</i> ' as any employee working 20 hours per week. It includes people working 4 hours per day 5 days per week, and people working full time two and a half days per week. The second case is frequently known as ' <i>temporary worker</i> '. This variable equals one if part-time employment is prohibited by the labor laws. Equals zero if part-time work is expressly allowed or if labor laws are silent thereon.
Part-time workers are not exempt from mandatory benefits of full-time workers	Equals one if a part-time worker working half the time of a full-time worker enjoys at least half of the benefits enjoyed by the full-time worker. Equals zero if part-time workers are not entitled to: (i) at least half of the maximum hours of work, leaves, and overtime premiums; (ii) social security coverage (pensions, health, unemployment); or (iii) if there are entitlement thresholds of more than half the legally mandated regular workweek for premiums, leaves, or social security coverage. In countries where there are minimum-earnings thresholds to obtain benefits (rather than time-based thresholds), the analysis is done considering a salary equal to half of the country's GNP per worker.
It is not easier or less costly to terminate part-time workers than full-time workers	Equals one if part-time workers working half time enjoy at least half of the legal rights to advance notice and separation fees for the termination of the employment contract of full time workers. Equals zero otherwise.
Part-time contracts	Measures the protection of part-time workers in the labor law as the normalized sum of the above three variables.
Fixed-term contracts are only allowed for fixed-term tasks	The term ' <i>fixed-term contract</i> ' refers to workers employed for fixed periods of weeks, months or years. In many countries a person working for two or three days per week is considered a fixed-term rather than a part-time worker. This variable equals one if fixed-term contracts are allowed only: (i) for jobs that are temporary by nature; (ii) temporary vacancies to replace a permanent worker in maternity or sickness leave; (iii) for training contracts; (iv) for seasonal work, or (v) if the law expressly states that the will of the parties involved in the contract is not a good enough reason for entering into a fixed-term contract. Equals zero otherwise.
Maximum duration of fixed-term contracts.	Measures the maximum cumulative duration of fixed-term contracts, normalized from 0 to 1, where higher values mean lower allowed duration of fixed-term contracts (higher protection). If there is no legally mandated ceiling or if fixed-term contracts may be renewed without limit, the variable equals zero. The highest observation in our sample was 96 months and the lowest observation was 0 months.
Fixed-term contracts	Measures the protection of workers through the limits in the use of fixed-term contracts. This variable is computed as the normalized sum of the above two variables.
Family members are not exempt from any aspect of the labor law	Equals one if family members enjoy the protection of the labor law, or if the labor law is silent regarding family members. Equals zero if family members are not entitled to maximum hours of work, leaves, overtime premiums, advance notice and severance payment for termination of the employment contract, social security coverage, or non-salary benefits. This variable was coded without regard to our assumption on firm size.
Subindex: Alternative employment contracts	Measures whether the law allows alternatives to the standard employment contract, which entail lower protection to the worker. This index is computed as the normalized sum from 0 to 1 of: (i) Part-time contracts. (ii) Fixed-term contracts, and (iii) Family members are not exempt from any aspect of the labor law.
<i>Conditions of employment</i>	
Mandatory minimum daily rest	Measures the mandatory minimum daily rest, normalized from 0 to 1, where higher values mean higher duration of mandatory daily rest (higher protection). If there is no legally mandated ceiling, the variable equals zero. Limits may be defined either as mandatory minimum rest hours per day, or mandatory maximum regular and overtime working hours per day. The highest observation in our sample was 14 hours and the lowest observation was 0 hours.

Variable	Description
Maximum number of hours in a regular work week	Measures the maximum duration of the regular workweek (excluding overtime), normalized from 0 to 1, where higher values mean less hours of work (higher protection). If there is no legally mandated limit, the variable equals zero. The highest observation in our sample was 52 hours and the lowest observation was 37 hours.
Premium for overtime work	Measures the premium for overtime work, as defined by the law or mandatory collective agreement, normalized from 0 to 1, where higher values mean higher premium (higher protection). If the law provides for a variable schedule of overtime premium, we code the basic premium for the first hour of overtime. The highest observation in our sample was 100% and the lowest observation was 0%.
There are restrictions on night work	Equals one if by law or mandatory collective agreement: (I) there are restrictions on the maximum number of hours of work that can be performed at night; and/or (ii) if there are specific premiums for night-time work. Equals zero if night-time work is not subject to express limitations, i.e., if it is only subject to the general restrictions on the maximum length of the workday or workweek, and the regular overtime premium. For codifying this variable we only consider specific regulations on night-time work, as defined by each country, and did not consider regulations on work-shifts.
There are restrictions on "weekly holiday" work	Equals one if by law or mandatory collective agreement there are restrictions on work during the weekly holiday (Sunday, Saturday or Friday, depending on the country). Restrictions include: (i) complete prohibition; (ii) express designation of certain day of the week as weekly holiday, which the employer cannot change unless with the worker's consent; (iii) specific maximum hours of work on such day; and (iv) special premiums for work on such day. Equals zero if work during the weekly holiday is: (i) allowed without restriction, or (ii) it is only subject to the general limitations on the maximum length of the workweek or workday and it does not entail higher than regular overtime premiums.
Hours of work	Measures the protectionism of the regulation on hours of work. This variable is computed as the normalized sum of the above five variables.
Days of annual leave with pay in manufacturing	Measures the length of the annual paid leave in manufacturing after twenty years of employment, normalized from 0 to 1, where higher values mean longer annual paid leave (higher protection). If there is no minimum by law or mandatory collective agreement, the variable equals zero. If annual leave entails less than full pay, the number of days are discounted proportionally. The highest observation in our sample was 30 days and the lowest was 0 days. We assume that 7 calendar days equal 5 working days.
Paid time off for holidays is mandatory	Equals one if workers are granted paid time-off for national or local holidays by law or mandatory collective agreement. Equals zero otherwise.
Statutory duration of maternity leave with 100% earnings	Measures the length of the statutory duration of maternity leave with 100% earnings, for normal delivery birth of a normal child, normalized from 0 to 1, where higher values mean longer maternity leave (higher protection). If maternity leave is unpaid the variable equals zero. If payment is less than 100%, time is reduced proportionally. The highest observation in our sample was 12 months and the lowest observation was 0 months. Maternity leave is still regulated as an employment issue by the labor code in most of the developing world, but developed countries generally consider maternity a component of the social security system. Source: <i>ILO. Conditions of Work Digest, 1994.</i>
Leaves	Measures the protectionism of the regulation on leaves of absence as the normalized sum of the above three variables.
There is a mandatory minimum wage	Equals one if there is a mandatory minimum wage by law or mandatory collective agreement, and zero otherwise.
Conditions of employment in the constitution	Measures the degree to which the regulation of conditions of employment appear in the country's constitution. Equals one if there is a 'right' to certain minimum conditions of employment expressly granted by the constitution. It equals 0.67 if the minimum conditions of employment are mentioned as a State public policy or public interest (or simply mentioned within the chapter on rights). It equals 0.33 if conditions of employment are mentioned in the constitution. It equals zero otherwise.
Subindex: Conditions of employment	Measures the level of protectionism in the law on conditions of employment. It is computed as the normalized sum of: (i) hours of work; (ii) leaves; (iii) there is a mandatory minimum wage; and (iv) conditions of employment in the constitution.

Variable	Description
<i>Job security</i>	
It is unfair to terminate the employment contract without cause	Measures the parties' leeway to agree on the conditions of termination of the employment contract. Equals one: (i) if the employer may not terminate the employment contract without cause; (ii) if the termination without cause always entails a mandatory penalty; or (iii) if the law bans the parties to enter into employment contracts that may be terminated by either party entirely at will or with a simple advance notice without any mandatory penalty. Equals zero otherwise.
The law establishes a public policy list of "fair" grounds for dismissal	Equals one if the law establishes a public policy list of "fair" grounds for dismissal. Equals zero if there is no list of grounds for dismissal or if parties are allowed to contract out.
Redundancy is not considered a "fair" ground for dismissal	Equals one if redundancy (or as it is also known in other countries: 'retrenchment', 'termination for economic reasons', 'necessities of the company', 'objective causes') is not considered a "fair" ground for dismissal by law, or if such dismissal always entails a mandatory penalty. Equals zero otherwise.
Protectionism of grounds for dismissal	Measures the protectionism of the rules on grounds for dismissal. This variable is computed as the normalized sum of the above three variables.
The employer must notify a third party before dismissing one redundant employee	Equals one if by law or mandatory collective agreement the employer must notify a third party (labor union, workers' council or government agency) before dismissing one redundant worker. Equals zero if the employer may dismiss one worker without notifying a third party, or if the employer may contract out of the prohibition.
The employer needs the approval of a third party to dismiss one redundant worker	Equals one if by law or mandatory collective agreement the employer needs the approval of a third party (labor union, workers' council or government agency) to dismiss one redundant worker. Equals zero if the employer may dismiss one worker without the approval of a third party, or if the employer may contract out of the prohibition.
The employer must notify a third party prior to a collective dismissal	Equals one if by law or mandatory collective agreement the employer must notify a third party (labor union, workers' council, government agency) before making a collective dismissal. Equals zero if the employer may dismiss more than one worker without notifying a third party, or if the employer may contract out of the prohibition.
The employer needs the approval of a third party prior to a collective dismissal	Equals one if by law or mandatory collective agreement the employer needs the approval of a third party (labor union, workers' council or government agency) prior to a collective dismissal. Equals zero if the employer may dismiss workers without third party approval, or if the employer may contract out of the prohibition.
The law mandates retraining or replacement prior to dismissal	Equals one if by law or mandatory collective agreement the employer must consider relocation or retraining alternatives for redundant employees prior to dismissal. Equals zero otherwise.
There are priority rules applying to dismissal or lay-offs	Equals one if by law or mandatory collective agreement there are priority rules applying to dismissal or lay-offs, i.e., in order to fire redundant employees, the employer must follow a specific order of seniority, marital status, number of dependants or other objective priority criteria. Equals zero otherwise.
There are priority rules applying to re-employment	Equals one if by law or mandatory collective agreement there are priority rules applying to re-employment. Equals zero if former redundant employees need not be considered for new positions (i.e. there are no priority rules for re-employment).
Protectionism of dismissal procedures	Measures the protectionism of collective dismissal procedures as the normalized sum of the above seven variables.
Legally mandated notice period	Measures the length of the mandatory notice period for the dismissal of one redundant worker in manufacturing after twenty years of employment, normalized from 0 to 1, where higher values mean longer notice (higher protection). If there is no minimum notice period by law the variable equals zero. The highest observation in our sample was 24 weeks and the lowest was 0 weeks.
Legally mandated severance payment	Measures the amount of the mandatory severance payment (including mandatory indemnity) for the dismissal of one redundant worker after twenty years of employment in manufacturing, normalized from 0 to 1, where higher values mean higher amounts (higher protection). If there is no severance payment by law the variable equals zero. The highest observation in our sample was 28 and a half months and the lowest observation was 0 months.

Variable	Description
Notice and severance payment	Measures the level of protectionism of the notice period and the severance payment for the unilateral termination of the employment contract by the employer. The variable is computed as the normalized sum of the above two variables.
Right to job security in the constitution	Measures the presence of rules on termination of the employment contract in the country's constitution. Equals one if there is a 'right' to job security or to the stability in the employment relation expressly granted by the constitution. Equals 0.67 if job security is mentioned as a State public policy or public interest (or simply mentioned within the chapter on rights). Equals 0.33 if job security is mentioned in the constitution. Equals zero otherwise.
Subindex: Job security	Measures the level of protectionism of the rules governing the termination of the employment contract as the normalized sum of: (i) protectionism of grounds for dismissal; (ii) protectionism of dismissal procedures; (iii) notice and severance payment; and (iv) right to job security in the constitution.
Index: Employment laws	Measures the level of protection of labor and employment laws. The index is formed by the normalized sum of: (i) subindex: alternative employment contracts, (ii) subindex: conditions of employment, and (iii) subindex: job security.
<i>Industrial (collective) relations laws</i>	
<i>Collective bargaining</i>	
Employers have the legal duty to bargain with unions	Equals one if employers have the legal duty to bargain with unions, workers councils or other organizations of workers. Equals zero if employers may lawfully refuse to bargain with workers. The variable only measures the duty to bargain, as opposed to the duty to bargain in good faith or any positive obligation to reach an agreement.
Collective contracts are extended to third parties by law	Equals one if collective contracts are extended by law to third parties at the national or sectoral level. Extensions may be automatic or subject to governmental approval. Equals zero if collective contracts may not be extended to non-signatory workers or unions, or if collective contracts may be extended only at the plant level. Mandatory administrative extensions of collective contracts are coded as equivalent to mandatory extensions by law.
Law allows closed shops	Equals one if the law allows closed shops, and zero otherwise. Closed shops are agreements providing for mandatory union membership, which are binding on non-signatory and new employees. Union security legislation in general includes the following measures: (1) Pre-entry closed shops, where workers have to belong to a union prior to taking up a job; (2) post-entry closed shops (or union shops), where workers are forced to join a union after taking up a job; and (3) absolute preferences, where an employer has to give a job to a union member if equally qualified to another non-union candidate. We have not considered post-entry closed shops.
Labor union power	Measures the level of statutory protection of unions as the normalized sum of the above three variables.
Right to unionization in the constitution	Measures the protection of the right to form labor unions in the country's constitution. Equals one if there is a 'right' to form labor unions expressly granted by the constitution. Equals 0.67 if labor unions are mentioned as a State public policy or public interest (or simply mentioned within the chapter on rights). Equals 0.33 if labor unions are mentioned in the constitution. Equals zero otherwise.
Right to collective bargaining in the constitution	Measures the protection of the right to collective bargaining or the right to enter into collective labor contracts in the country's constitution. Equals one if there is a 'right' to collective bargaining expressly granted by the constitution. Equals 0.67 if collective bargaining is mentioned as a State public policy or public interest (or simply mentioned within the chapter on rights). Equals 0.33 if collective bargaining is mentioned in the constitution. Equals zero otherwise.
Subindex: Collective bargaining	Measures the level of legal protection of the right to unionization and collective bargaining as the normalized sum of: (i) labor union power, (ii) right to unionization in the constitution, and (iii) right to collective bargaining in the constitution.

Variable	Description
<i>Worker participation in management</i>	
Workers and/or unions have a right to appoint members to the boards of directors	Equals one if the law gives workers and/or unions the right to appoint members to the Boards of Directors of individual companies, and zero otherwise. This arrangement is usually associated with the “German” model of co-determination where workers or unions have some actual power in the management of the company, since they have the right to appoint members to the board of directors. However, the mechanics of the two-tiered board system in Germany have severely reduced the actual powers of workers to participate in operational decisions of the company.
Workers councils are mandated by law	Equals one if workers councils, committees or equivalent bodies are mandated by law. Equals zero if workers councils are not regulated by law or if their creation is voluntary for the employer. Workers councils are institutions of employers and workers created for the discussion of company's policies affecting workers at the company level. This arrangement is sometimes called the “Swedish” model. The employer still has the sole right to decide on the operations of the company, but must negotiate and decide all matters affecting workers within the framework of workers councils (Fransson, 2000).
Worker participation by law	Measures the statutory rights of workers to participate in the management of the companies as the normalized sum of the above two variables.
Right to participation in management in the constitution	Measures the protection of the workers' right to participation in management in the country's constitution. Equals one if there is a ‘right’ to participation in management expressly granted by the constitution. Equals 0.67 if participation in management is mentioned as a State public policy or public interest (or simply mentioned within the chapter on rights). Equals 0.33 if participation in management is mentioned in the constitution. Equals zero otherwise.
Subindex: Worker participation in management	Measures the legal rights of workers to participate in the management of the companies as the normalized sum of: (i) worker participation by law; and (ii) right to worker participation in management in the constitution.
<i>Collective disputes</i>	
Workers have the right to strike	Equals one if the laws grant workers the right or the freedom to strike, and zero otherwise.
Wildcat strikes are legal	Equals one if wildcat strikes are legal. Equals zero if wildcat strikes are prohibited. Wildcat strikes are defined as strikes not authorized by the labor union or legally required assembly of workers.
Political strikes are legal	Equals one if political strikes are legal, and zero otherwise. Political strikes are defined as strikes for political reasons or to protest government's policy, i.e., non work-related issues.
Sympathy / solidarity / secondary strikes are legal	Equals one if the law allows sympathy, solidarity or secondary strikes used to force decisions affecting workers other than those joining the strike. Equals zero if they are prohibited. Sympathy or solidarity strikes are strikes by union members or workers who have no grievances against their employer, but who want to show solidarity with another union or workers. Secondary strikes are those against another employer who has business dealings with the employer involved in a dispute with the union or workers.
Legal strikes	Measures the level of protection of the right to strike in the law as the normalized sum of the above four variables.
There is no mandatory waiting period or notification requirement before strikes can occur	Equals one if by law there is no mandatory waiting period or notification requirement before strikes can occur, and zero otherwise.
A strike is not illegal even if there is a collective agreement in force	Equals one if a strike is not illegal even if there is a collective agreement in force, and zero otherwise.
Laws do not mandate reconciliation procedures before a strike	Equals one if laws do not mandate conciliation procedures or other alternative-dispute-resolution mechanisms (other than binding arbitration) before the strike, and zero otherwise.

Variable	Description
Procedural restrictions to strikes	Measures the absence of procedural restrictions to the right to strike in the law as the normalized sum of the above three variables.
Employer lockouts are not allowed	Equals one if employers' lockouts (strikes by employers) are not allowed, and zero otherwise. Lockouts may be offensive (when they are not provoked by workers) or defensive. We have coded both as if they were equivalent.
Employers are not allowed to fire or replace striking workers	Equals one if the law prohibits employers both to fire striking workers and to hire replacement labor to maintain the plant in operation during a non-violent and non-political strike. Equals zero otherwise.
Employer defenses	Measures the powers of employers during a collective dispute as the normalized sum of the above two variables.
Compulsory third party arbitration during a labor dispute is mandated by law	Equals one if compulsory third party arbitration during a labor dispute is mandated by law or if the government is always entitled to impose compulsory arbitration on the parties to a labor dispute. The term 'compulsory arbitration' refers to arbitration of private disputes against the will of the parties. It normally protects workers by granting them an alternative to costly strikes in case of deadlocks in the negotiation process, but it may also limit the workers' right to strike. Equals zero otherwise.
Right to industrial action in the constitution	Measures the protection of the right to industrial action (i.e. strike, go-slow or work-to-rule) in the country's constitution. It equals one if there is a 'right' to industrial action expressly granted by the constitution. Equals 0.67 if strikes are mentioned as a State public policy or public interest (or simply mentioned within the chapter on rights). Equals 0.33 if strikes are mentioned in the constitution. Equals zero otherwise.
Subindex: Collective disputes	Measures the level of protection of workers during a collective dispute as the normalized sum of: (i) legal strikes; (ii) procedural restrictions to strikes; (iii) employer defenses; (iv) compulsory third party arbitration during a labor dispute; and (v) right to industrial action in the constitution.
Index: Industrial (collective) relations laws	Measures the level of protection of industrial (collective) relations laws as the normalized sum of: (i) subindex of collective bargaining; (ii) subindex of worker participation in management; and (iii) subindex of collective disputes.
<i>Social security laws</i>	
<i>Old age, disability and death benefits</i>	
The Social Security system covers the risk of old age, disability and death	Equals one if the social security system covers the risk of old age, disability and death, and zero otherwise.
Difference between retirement age and life expectancy	Measures the difference between the minimum legal age for normal retirement and the country's life expectancy at birth, normalized from 0 to 1, where higher values mean post-retirement life expectancy (higher protection). Normal retirement is the legally defined age for retirement with standard pension, and it excludes voluntary early or late retirement schemes. Equals zero if life expectancy is lower than retirement age. The highest observation in our sample was 23.8 years and the lowest was 0 years. Source: <i>Human Development Report, 1997</i> .
Months of contributions or employment required for normal retirement by law	Measures the number of months of contributions or employment required by law for normal retirement, normalized from 0 to 1, where higher values mean less contribution (higher protection). The highest observation in our sample was 540 months and the lowest was 0 months. Normal retirement is the legally defined age for retirement with standard pension, and it excludes voluntary early or late retirement schemes. If the law requires the worker to have a combination of certain number of months of work and a different number of months of contributions, we use the number of months of the highest part of the constant since it is the one that is binding. Lump-sum and private pension systems do not define the number of months of contributions for normal retirement by law. In these cases the amount of the pension solely depends on the number of months of contributions, thus we assume twenty years of contributions for normal retirement.

Variable	Description
Percentage of the worker's monthly salary deducted by law to cover old-age and disability benefits	Measures the share of the worker's monthly salary deducted by law to cover old-age, disability, and death benefits, normalized from 0 to 1, where higher values mean lower deductions (higher protection). If the risk of disability and death was not included in the contribution for old -age pension, we added the percentage of contribution for the individual components. The highest observation in our sample was 20% and the lowest was 0%. In some countries the social security contribution for old age, disability and death benefits also covers sickness and health benefits and/or unemployment benefits. In these cases, we calculated the share of contributions for each benefit for the average country in our sample, and apportioned the total contribution among the several risks covered accordingly.
Percentage of the pre-retirement salary covered by the old-age cash-benefit pension	This variable is the equivalent to the "replacement rate", which is the percentage of the pre-retirement salary covered by the average old-age cash-benefit pension, normalized from 0 to 1, where higher values mean higher percentage (higher protection). The highest observation in our sample was 90% and the lowest was 0%. For the countries that provide workers more than 12 payments a year for the pension, we added up to the amount of all the payments and divided the total by 12 to get the equivalent "monthly" old-age cash benefit pension. Where the pension plan provided for fixed monthly payments, rather than a percentage, the replacement rate was calculated using a pre-retirement salary equal to the country's GNP per worker. For lump-sum systems, where at the time of retirement a one-time payment is made that is equal to the worker's contributions plus accrued interest, the monthly old -age cash-benefit pension was calculated using the lump-sum payment divided by the difference between the average life expectancy and retirement age in months. As in the case of fixed monthly payment systems the pre-retirement salary was calculated to be equal to the country's GNP per worker. The interest used in the calculation was the previous ten years' average monthly Labor. The same methodology as in the lump-sum systems was applied to the private pension systems. If there are more than twelve payments per year we the adjust percentage accordingly.
Subindex: Old age, disability and death benefits	Measures the level of protection of the old age, disability and death benefits as the normalized sum of the above four variables.
<i>Sickness and health benefits</i>	
The social security system covers the risk of sickness	Equals one if the social security system covers the risk of sickness and zero otherwise.
Months of contributions or employment required to qualify for sickness benefits by law	Measures the number months of contributions or employment required by law to qualify for sickness benefits, normalized from 0 to 1, where higher values mean less contribution (higher protection). If the law requires the worker to have a combination of certain number of months of work and a different number of months of contributions, we use the number of months of the highest part of the constant since it is the one that is binding. The highest observation in our sample was 24 months and the lowest was 0 months.
Percentage of the worker's monthly salary deducted by law to cover sickness and health benefits	Measures the share of the worker's monthly salary deducted by law to cover sickness and health benefits, normalized from 0 to 1, where higher values mean lower deductions (higher protection). If the risks of sickness and health demand separate contributions, we added the percentages for the individual components. The highest observation in our sample was 11.8% and the lowest observation was 0%. In some countries the social security contribution for old age, disability and death benefits also covers sickness and health benefits and/or unemployment benefits. In these cases we calculated the share of contributions for each benefit for the average country in our sample, and apportioned the total contribution among the several risks covered accordingly.
Waiting period for sickness benefits	Measures the waiting period for obtaining sickness cash benefits from the first day of sickness, normalized from 0 to 1, where higher values mean lower waiting periods (higher protection). The waiting period is the number of days until legal entitlement to coverage by the social security system. The highest observation in our sample was 42 days and the lowest observation was 0 days.
Percentage of the salary covered by sickness cash benefits for two month sickness	Measures the percentage of the salary covered by the average sickness cash benefit for a two-month sickness, normalized from 0 to 1, where higher values mean higher percentage (higher protection). If maximum duration of benefits lasts less than 2 months the percent of salary is discounted proportionally. The highest observation in our sample was 100% and the lowest observation was 0%. Sickness cash benefits are defined in some countries as a fixed amount in local currency, rather than as a percentage. In these cases, the percentage of the salary covered was calculated based on a salary equal to the country's GNP per worker.
Subindex: Sickness and health benefits	Measures the level of protection of sickness and health benefits as the normalized sum of the above four variables.

Variable	Description
<i>Unemployment benefits</i>	
The Social Security system covers the risk of unemployment	Equals one if the social security system covers the risk of unemployment, and zero otherwise.
Months of contributions or employment required to qualify for unemployment benefits by law	Measures the number of months of contributions or employment required by law to qualify for unemployment benefits, normalized from 0 to 1, where higher values mean less contribution (higher protection). If the law requires the worker to have a combination of certain number of months of work and a different number of months of contributions, we use the number of months of the highest part of the constant since it is the one that is binding. The highest observation in our sample was 120 months and the lowest observation was 0 months.
Percentage of the worker's monthly salary deducted by law to cover unemployment benefits	Measures the share of the worker's monthly salary deducted by law to cover unemployment benefits, normalized from 0 to 1, where higher values mean lower deductions (higher protection). The highest observation in our sample was 6.1% and the lowest observation was 0%. In some countries the social security contribution for old age, disability and death benefits also covers sickness and health benefits and/or unemployment benefits. In these cases we calculated the share of contributions for each benefit for the average country in our sample, and apportioned the total contribution among the several risks covered accordingly.
Waiting period for unemployment benefits	Measures the waiting period for obtaining unemployment benefits from the first day of unemployment, normalized from 0 to 1, where higher values mean lower waiting periods (higher protection). The waiting period is the number of days until legal entitlement to coverage by the social security system. The highest observation in our sample was 70 days and the lowest observation was 0 days.
Percentage of the salary covered by unemployment benefits for one year	Measures the percentage of the pre-retirement salary covered by unemployment benefits for one year unemployment from social security system, normalized from 0 to 1, where higher values mean higher percentage of salary (higher protection). If maximum duration of benefits lasts less than one year the percent of salary is discounted proportionally. The highest observation in our sample was 90% and the lowest observation was 2.78%. Unemployment benefits are defined in some countries as a fixed amount in local currency, rather than as a percentage. In these cases the percentage of the salary covered was calculated based on a salary equal to the country's GNP per worker.
Subindex: Unemployment benefits	Measures the level of protection of unemployment benefits as the normalized sum of the above four variables.
Average of dummies on coverage of three risks (old age, sickness and unemployment)	Equals the average of the following three variables: (i) social security system covers the risk of old age, disability and death; (ii) social security system covers the risk of sickness and health; and (iii) social security system covers the risk of unemployment.
Index: Social security laws	Measures the level of protection of social security laws as the normalized sum of: (i) subindex of old age, disability and death benefits; (ii) subindex of sickness and health benefits; and (iii) subindex of unemployment benefits.
<i>Left power</i>	
Chief Executive's party has left or center political orientation.	Measures the percentage of years between 1928 and 1995, and between 1975 and 1995, during which the party of the country's chief executive was of left or center orientation. If the country was not independent in the initial year of the period, we calculated the variable for the number of years since it became independent. For the countries that were part of a larger country in the initial year of the period, and subsequently broke-up during the period we considered the political orientation of the larger country until the breakup. In the case of military regimes, where political affiliations were not clear, we classified the regime based on its policies. Source: <i>Authors' calculations based on descriptions and classifications coming from: Political Handbook of the World, Europa Yearbook, Statesmen database</i> < <a href="http://www.worldstatesmen.org">http://www.worldstatesmen.org</a> >, <i>Country Reports History</i> < <a href="http://www.countryreports.org">http://www.countryreports.org</a> >, Beck, Clarke, Groff, Keefer and Walsh [2001], various regional and country sources.

Variable	Description
Largest party in congress have left or center political orientation	Measures the percentage of years between 1928 and 1995, and between 1975 and 1995, during which the largest party in congress was of left or center orientation. If the country was not independent in the initial year of the period, we calculated the variable for the number of years since it became independent. For the countries that were part of a larger country in the initial year of the period, and subsequently broke-up during the period we considered the political orientation of the larger country until the breakup. In the case of military regimes, where political affiliations were not clear, we classified the regime based on its policies. Source: <i>Authors' calculations based on descriptions and classifications coming from: Political Handbook of the World, Europa Yearbook, Statesmen database</i> < <a href="http://www.worldstatesmen.org">http://www.worldstatesmen.org</a> >, <i>Country Reports History</i> < <a href="http://www.countryreports.org">http://www.countryreports.org</a> >, Beck, Clarke, Groff, Keefer and Walsh [2001], various regional and country sources.
Chief Executive and largest party in congress have left or center political orientation	Measures the percentage of years between 1928 and 1995, and between 1975 and 1995, during which both the party of the chief executive and the largest party in congress were of left or center orientation. If the country was not independent in the initial year of the period, we calculated the variable for the number of years since it became independent. For the countries that were part of a larger country in the initial year of the period, and subsequently broke-up during the period we considered the political orientation of the larger country until the breakup. In the case of military regimes, where political affiliations were not clear, we classified the regime based on its policies. Source: <i>Authors' calculations based on descriptions and classifications coming from: Political Handbook of the World, Europa Yearbook, Statesmen database</i> < <a href="http://www.worldstatesmen.org">http://www.worldstatesmen.org</a> >, <i>Country Reports History</i> < <a href="http://www.countryreports.org">http://www.countryreports.org</a> >, Beck, Clarke, Groff, Keefer and Walsh [2001], various regional and country sources.
Union density	Measures the percentage of the workforce affiliated to labor unions. Source: <i>ILO, Laborista, World Bank</i> .
Percentage of the labor force covered by collective agreements	Measures the percentage of the labor force covered by collective agreements. Source: <i>ILO, Laborista, World Bank</i> .
<i>Political and economic constrains</i>	
Constraints on executive power	Index of constraints on the executive power based on the number of effective veto points in a country. Veto points include: (i) an effective legislature (represents two veto points in the case of bicameral systems); (ii) an independent judiciary; and (iii) a strong federal system. Average of the years 1945 through 1998. Source: <i>Henisz [2000]</i> .
Effectiveness of legislature	Index of the effectiveness of the legislature. Ascending scale from 1 to 4 (1=no legislature; 2=largely ineffective; 3=partly effective; 4=effective;). Average of the years 1945 through 1998. Source: <i>The Cross-National Time-Series Data Archive</i> < <a href="http://www.databanks.sitesting.net/www/main.htm">http://www.databanks.sitesting.net/www/main.htm</a> >.
Autocracy	Indicates the "general closedness of political institutions." Scale from 0 to 10 with 0 being low in autocracy and 10 being high in autocracy. Average of the years 1945 through 1998. Source: <i>Jagers and Marshall, [2000]</i> .
Actual openness	Trade share as a proportion of GDP in each country in 1985 calculated using bilateral trade data. Source: <i>Frankel and Romer [1999]</i> .
Geographic openness	Trade share as a proportion of GDP in each country in 1985 calculated using bilateral trade data and adjusted by the geographic component of each country's overall trade share. The estimate of the geographic component of a country's trade is the sum of the estimated geographic components of its bilateral trade with each other country in the world. Source: <i>Frankel and Romer [1999]</i> .
Factor accumulation openness	Trade share as a proportion of GDP in each country in 1985 calculated using bilateral trade data and adjusted by the country's rates of factor accumulation. Source: <i>Frankel and Romer [1999]</i> .
<i>Other variables</i>	
Size of the unofficial economy	Size of the shadow economy as a percentage of GDP (varying time periods). Source: <i>Authors owns computations based on averaging over all estimates reported in Schneider and Enste (2000) for any given country as well as Sananikone [1996] for Burkina Faso, Chidzero [1996] for Senegal, Turnham and Schwartz [1990] for Indonesia and Pakistan, and Kasnakoglu and Yayla [2000] for Turkey.</i>

Variable	Description
Employment in the unofficial economy	Share of the labor force employed in the unofficial economy in the capital city of each country as a percent of the official labor. Figures are based on surveys and, for some countries, on econometric estimates. Source: <i>Schneider [2000] and the Global Urban Indicators Database [2000]</i> < <a href="http://www.urbanobservatory.org/indicators/database">http://www.urbanobservatory.org/indicators/database</a> >.
Log of GNP per capita	Logarithm of GNP per capita in 1997, Atlas method, expressed in current US dollars. Source: <i>World Development Indicators</i> .
Rule of law	Assessment of the law and order tradition in the country produced by the country-risk rating agency International Country Risk (ICR). Average of the months of April and October of the monthly index between 1982 and 1995. Scale from 0 to 10, with lower scores for less tradition for law and order. (We changed the scale from its original range going from 0 to 6). Source: <i>La Porta, et al. [1998]</i> .
Corruption	ICR's assessment of the corruption in government. Lower scores indicate "high government officials are likely to demand special payments" and "illegal payments are generally expected throughout lower levels of government" in the form of "bribes connected with import and export licenses, exchange controls, tax assessment, policy protection, or loans". Average of the months of April and October of the monthly index between 1982 and 1995. Scale from 0 to 10, with lower scores for higher levels of corruption. (We changed the scale from its original range going from 0 to 6). Source: <i>La Porta, et al. [1998]</i> .
Legal origin	Identifies the legal origin of the company law or commercial code of each country (English, French, Socialist, German, Scandinavian). Source: <i>La Porta, et al. [1999]</i> .
Unemployment rate 1997	Total unemployment in percent of the labor force in 1997. Source: <i>Laborista</i> .
Average Unemployment rate 1990-1997	Total unemployment, in percent of the labor force. Includes persons of both sexes, aged 15 to 64. May refer only to major urban areas or the capital of the country. Based on population censuses or household surveys. Age limits may vary slightly across countries. Source: <i>Forteza and Rama [2000] and ILO [1999]</i> .
Total labor force participation rate 1990-1994	Labor force participation rate, in percentage of the population aged 15 to 64, for both sexes. Based on population censuses or household surveys. Age limits may vary slightly across countries. Source: <i>Forteza and Rama [2000]</i> .
Male participation rate in labor force 1990-1994	Male participation rate, in percentage of the female population aged 15 to 64. Based on population censuses or household surveys. Age limits may vary slightly across countries. Source: <i>Forteza and Rama [2000]</i> .
Female participation rate in labor force 1990-1994	Female participation rate, in percentage of the female population aged 15 to 64. Based on population censuses or household surveys. Age limits may vary slightly across countries. Source: <i>Forteza and Rama [2000]</i> .

**Table II**  
**Employment laws and industrial (collective) relations laws by GNP per capita**

The table classifies countries by GNP per capita and shows the Employment laws index, the Industrial (collective) relations laws index, and their respective subindices. The components of each subindex are not included in the table but can be found at <http://icg.som.yale.edu/>. All the variables are described in Table I.

Countries	Employment laws				Industrial (collective) relations laws			
	Subindex: Alternative employment contracts	Subindex: Conditions of employment	Subindex: Job security	<b>Employment laws index</b>	Subindex: Collective bargaining	Subindex: Worker participation in management	Subindex: Collective disputes	<b>Industrial (collective) relations laws index</b>
<i>Bottom 25 percentile of GNP per capita</i>								
Mozambique	0.72	0.82	0.71	<b>2.25</b>	0.44	0.00	0.8	<b>1.24</b>
Malawi	0.56	0.75	0.44	<b>1.74</b>	0.44	0.00	0.25	<b>0.69</b>
Tanzania	0.58	0.67	0.50	<b>1.76</b>	0.11	0.25	0.38	<b>0.74</b>
Burkina Faso	0.60	0.72	0.23	<b>1.54</b>	0.56	0.00	0.77	<b>1.32</b>
Madagascar	0.60	0.74	0.56	<b>1.90</b>	0.78	0.00	0.62	<b>1.39</b>
Mali	0.60	0.80	0.21	<b>1.61</b>	0.44	0.00	0.70	<b>1.14</b>
Nigeria	0.44	0.61	0.26	<b>1.32</b>	0.22	0.00	0.25	<b>0.47</b>
Uganda	0.44	0.79	0.50	<b>1.74</b>	0.78	0.00	0.32	<b>1.09</b>
Vietnam	0.62	0.77	0.43	<b>1.82</b>	0.33	0.75	0.62	<b>1.70</b>
Kenya	0.56	0.53	0.17	<b>1.26</b>	0.44	0.00	0.30	<b>0.74</b>
Zambia	0.56	0.62	0.00	<b>1.17</b>	0.22	0.25	0.22	<b>0.69</b>
Ghana	0.22	0.75	0.16	<b>1.14</b>	0.89	0.25	0.35	<b>1.49</b>
India	0.35	0.65	0.19	<b>1.19</b>	0.00	0.58	0.50	<b>1.08</b>
Mongolia	0.56	0.64	0.19	<b>1.39</b>	0.17	0.00	0.40	<b>0.57</b>
Kyrgyz Republic	0.83	0.84	0.36	<b>2.02</b>	0.33	0.25	0.57	<b>1.15</b>
Pakistan	0.18	0.70	0.18	<b>1.06</b>	0.11	0.25	0.45	<b>0.81</b>
Armenia	0.62	0.81	0.40	<b>1.82</b>	0.44	0.00	0.75	<b>1.19</b>
Senegal	0.64	0.71	0.29	<b>1.63</b>	0.78	0.00	0.63	<b>1.41</b>
Georgia	0.62	0.61	0.51	<b>1.74</b>	0.44	0.25	0.68	<b>1.38</b>
China	0.56	0.62	0.42	<b>1.59</b>	0.00	1.00	0.40	<b>1.40</b>
Zimbabwe	0.56	0.13	0.20	<b>0.89</b>	0.44	0.25	0.52	<b>1.21</b>
Sri Lanka	0.56	0.53	0.42	<b>1.50</b>	0.44	0.25	0.58	<b>1.28</b>
Bolivia	0.39	0.89	0.57	<b>1.85</b>	0.44	0.00	0.67	<b>1.11</b>
Ukraine	0.72	0.81	0.68	<b>2.21</b>	0.56	0.25	0.62	<b>1.42</b>
Indonesia	0.78	0.47	0.43	<b>1.68</b>	0.22	0.00	0.57	<b>0.79</b>
Bulgaria	0.51	0.85	0.31	<b>1.66</b>	0.44	0.25	0.55	<b>1.24</b>
<b>Mean</b>	<b>0.55</b>	<b>0.69</b>	<b>0.36</b>	<b>1.59</b>	<b>0.40</b>	<b>0.19</b>	<b>0.52</b>	<b>1.11</b>
<b>Median</b>	<b>0.56</b>	<b>0.71</b>	<b>0.38</b>	<b>1.65</b>	<b>0.44</b>	<b>0.13</b>	<b>0.56</b>	<b>1.17</b>
<i>Middle 50 percentile of GNP per capita</i>								
Egypt, Arab Rep.	0.56	0.79	0.46	<b>1.81</b>	0.44	1.00	0.30	<b>1.74</b>
Philippines	0.39	0.67	0.57	<b>1.63</b>	0.89	0.50	0.65	<b>2.04</b>
Morocco	0.56	0.64	0.11	<b>1.30</b>	0.33	0.00	0.88	<b>1.22</b>
Kazakhstan	0.62	0.79	0.59	<b>2.00</b>	0.78	0.25	0.83	<b>1.86</b>
Romania	0.52	0.78	0.30	<b>1.60</b>	0.89	0.00	0.70	<b>1.59</b>
Ecuador	0.49	0.59	0.67	<b>1.75</b>	0.78	0.00	0.83	<b>1.61</b>
Jordan	0.39	0.55	0.55	<b>1.49</b>	0.56	0.00	0.45	<b>1.01</b>
Dominican Rep.	0.56	0.76	0.33	<b>1.64</b>	0.56	0.00	0.38	<b>0.94</b>
Jamaica	0.56	0.45	0.13	<b>1.13</b>	0.44	0.00	0.15	<b>0.59</b>
Tunisia	0.81	0.51	0.38	<b>1.70</b>	0.44	0.25	0.32	<b>1.01</b>
Lithuania	0.66	0.82	0.34	<b>1.82</b>	0.44	0.00	0.65	<b>1.09</b>
Latvia	0.56	0.78	0.41	<b>1.74</b>	0.67	0.25	0.70	<b>1.62</b>
Peru	0.27	0.76	0.70	<b>1.74</b>	0.89	0.58	0.82	<b>2.29</b>
Colombia	0.56	0.85	0.62	<b>2.02</b>	0.78	0.33	0.70	<b>1.81</b>
Russian Federation	0.83	0.72	0.68	<b>2.23</b>	0.78	0.25	0.62	<b>1.64</b>
Thailand	0.65	0.64	0.43	<b>1.72</b>	0.67	0.00	0.32	<b>0.98</b>
Panama	0.74	0.86	0.67	<b>2.28</b>	0.44	0.00	0.80	<b>1.24</b>
Turkey	0.72	0.82	0.20	<b>1.74</b>	0.89	0.00	0.55	<b>1.44</b>
Lebanon	0.26	0.48	0.40	<b>1.14</b>	0.22	0.00	0.53	<b>0.76</b>
Venezuela	0.76	0.86	0.64	<b>2.26</b>	0.89	0.00	0.57	<b>1.46</b>
Poland	0.56	0.87	0.46	<b>1.88</b>	0.89	0.25	0.50	<b>1.64</b>
South Africa	0.56	0.33	0.16	<b>1.05</b>	0.89	0.25	0.60	<b>1.74</b>
Mexico	0.41	0.80	0.71	<b>1.91</b>	0.89	0.00	0.72	<b>1.61</b>

Countries	Employment laws				Industrial (collective) relations laws			
	Subindex: Alternative employment contracts	Subindex: Conditions of employment	Subindex: Job security	<b>Employment laws index</b>	Subindex: Collective bargaining	Subindex: Worker participation in management	Subindex: Collective disputes	<b>Industrial (collective) relations laws index</b>
Slovak Republic	0.51	0.85	0.61	<b>1.97</b>	0.89	0.00	0.45	<b>1.34</b>
Croatia	0.78	0.86	0.42	<b>2.06</b>	0.56	0.25	0.45	<b>1.26</b>
Hungary	0.66	0.87	0.22	<b>1.75</b>	0.89	0.25	0.60	<b>1.74</b>
Malaysia	0.56	0.25	0.09	<b>0.90</b>	0.00	0.00	0.42	<b>0.42</b>
Brazil	0.76	0.86	0.69	<b>2.31</b>	0.56	0.75	0.55	<b>1.86</b>
Chile	0.58	0.58	0.31	<b>1.46</b>	0.78	0.00	0.40	<b>1.18</b>
Czech Republic	0.33	0.62	0.35	<b>1.30</b>	0.22	0.25	0.30	<b>0.77</b>
Uruguay	0.72	0.55	0.03	<b>1.29</b>	0.56	0.00	0.47	<b>1.02</b>
Argentina	0.39	0.74	0.44	<b>1.58</b>	0.89	0.33	0.72	<b>1.94</b>
Slovenia	0.60	0.85	0.45	<b>1.90</b>	0.44	0.75	0.57	<b>1.76</b>
Taiwan	0.74	0.57	0.34	<b>1.65</b>	0.33	0.42	0.35	<b>1.10</b>
Portugal	0.78	0.81	0.70	<b>2.29</b>	0.89	0.75	0.62	<b>2.26</b>
Korea	0.26	0.75	0.26	<b>1.27</b>	0.89	0.25	0.55	<b>1.69</b>
Greece	0.78	0.75	0.29	<b>1.82</b>	0.44	0.25	0.57	<b>1.26</b>
Spain	0.78	0.82	0.50	<b>2.10</b>	0.89	0.58	0.65	<b>2.12</b>
New Zealand	0.56	0.44	0.04	<b>1.03</b>	0.00	0.00	0.43	<b>0.43</b>
Israel	0.56	0.58	0.16	<b>1.29</b>	0.22	0.00	0.32	<b>0.54</b>
Ireland	0.56	0.39	0.12	<b>1.07</b>	0.56	0.00	0.43	<b>0.99</b>
<b>Mean</b>	<b>0.58</b>	<b>0.69</b>	<b>0.40</b>	<b>1.67</b>	<b>0.62</b>	<b>0.21</b>	<b>0.55</b>	<b>1.38</b>
<b>Median</b>	<b>0.56</b>	<b>0.75</b>	<b>0.41</b>	<b>1.74</b>	<b>0.67</b>	<b>0.25</b>	<b>0.55</b>	<b>1.44</b>
<i>Top 25 percentile of GNP per capita</i>								
Canada	0.56	0.46	0.17	<b>1.19</b>	0.11	0.00	0.22	<b>0.33</b>
Italy	0.63	0.48	0.24	<b>1.36</b>	0.78	0.50	0.75	<b>2.03</b>
United Kingdom	0.56	0.26	0.20	<b>1.02</b>	0.00	0.00	0.25	<b>0.25</b>
Australia	0.22	0.52	0.14	<b>0.89</b>	0.22	0.00	0.52	<b>0.74</b>
Hong Kong	0.56	0.21	0.01	<b>0.78</b>	0.44	0.00	0.60	<b>1.04</b>
Finland	0.83	0.35	0.57	<b>1.75</b>	0.44	0.25	0.25	<b>0.94</b>
France	0.65	0.50	0.31	<b>1.47</b>	0.78	0.75	0.60	<b>2.13</b>
Belgium	0.72	0.79	0.22	<b>1.74</b>	0.44	0.25	0.33	<b>1.03</b>
Netherlands	0.56	0.77	0.37	<b>1.69</b>	0.22	0.58	0.47	<b>1.27</b>
Singapore	0.56	0.18	0.11	<b>0.85</b>	0.11	0.00	0.53	<b>0.64</b>
Sweden	0.24	0.27	0.39	<b>0.90</b>	0.67	0.25	0.52	<b>1.43</b>
Austria	0.22	0.37	0.18	<b>0.77</b>	0.11	0.50	0.23	<b>0.84</b>
Germany	0.89	0.37	0.50	<b>1.76</b>	0.78	0.50	0.48	<b>1.76</b>
United States	0.56	0.31	0.08	<b>0.94</b>	0.11	0.00	0.25	<b>0.36</b>
Denmark	0.56	0.22	0.12	<b>0.90</b>	0.33	0.50	0.20	<b>1.03</b>
Norway	0.61	0.34	0.30	<b>1.26</b>	0.56	1.00	0.58	<b>2.14</b>
Japan	0.47	0.61	0.19	<b>1.27</b>	1.00	0.00	0.53	<b>1.53</b>
Switzerland	0.56	0.46	0.26	<b>1.28</b>	0.33	0.00	0.43	<b>0.77</b>
<b>Mean</b>	<b>0.55</b>	<b>0.42</b>	<b>0.24</b>	<b>1.21</b>	<b>0.41</b>	<b>0.28</b>	<b>0.43</b>	<b>1.13</b>
<b>Median</b>	<b>0.56</b>	<b>0.37</b>	<b>0.21</b>	<b>1.22</b>	<b>0.39</b>	<b>0.25</b>	<b>0.48</b>	<b>1.03</b>
<b>Mean all countries</b>	<b>0.57</b>	<b>0.63</b>	<b>0.35</b>	<b>1.55</b>	<b>0.51</b>	<b>0.22</b>	<b>0.51</b>	<b>1.24</b>
<b>Median all countries</b>	<b>0.56</b>	<b>0.67</b>	<b>0.34</b>	<b>1.63</b>	<b>0.44</b>	<b>0.25</b>	<b>0.53</b>	<b>1.24</b>
<i>Tests of Means (t-stats)</i>								
Bottom 25 vs middle 50 percentile	-1.04	-0.91	-2.07 <sup>b</sup>	<b>-1.97<sup>c</sup></b>	-3.47 <sup>a</sup>	-0.33	-1.33	<b>-2.84<sup>a</sup></b>
Bottom 25 vs top 25 percentile	-0.19	5.15 <sup>a</sup>	2.28 <sup>b</sup>	<b>3.42<sup>a</sup></b>	0.12	-0.51	1.49	<b>0.29</b>
Middle 50 vs top 25 percentile	0.77	6.62 <sup>a</sup>	4.43 <sup>a</sup>	<b>5.73<sup>a</sup></b>	3.38 <sup>a</sup>	-0.30	3.16 <sup>a</sup>	<b>2.63<sup>b</sup></b>
<i>Tests of Medians (z-stats)</i>								
Bottom 25 vs Middle 50 percentile	-0.78	-1.51	-1.97 <sup>b</sup>	<b>-1.92<sup>c</sup></b>	-3.33 <sup>a</sup>	-0.54	-1.22	<b>-2.62<sup>a</sup></b>
Bottom 25 vs Top 25 percentile	0.21	4.25 <sup>a</sup>	2.26 <sup>b</sup>	<b>2.96<sup>a</sup></b>	0.22	-0.32	1.44	<b>0.80</b>
Middle 50 vs Top 25 percentile	0.77	4.91 <sup>a</sup>	3.94 <sup>a</sup>	<b>4.53<sup>a</sup></b>	3.12 <sup>a</sup>	0.00	3.04 <sup>a</sup>	<b>2.47<sup>b</sup></b>

a=significant at 1% level; b=significant at 5% level; c=significant at 10% level.

**Table III**  
**Social security laws by GNP per capita**

The table classifies countries by GNP per capita and shows the social security laws index and its subindices. The components of each subindex are not included in the table but can be found at <http://iicg.som.yale.edu/>. All the variables are described in Table I.

Countries	The Social security system covers the risk of old age, disability and death	Subindex: Old age, disability and death benefits	The social security system covers the risk of sickness	Subindex: Sickness and health benefits	The Social security system covers the risk of unemployment	Subindex: Unemployment benefits	Social security laws index
<i>Bottom 25 percentile of GNP per capita</i>							
Mozambique	1	0.00	1	0.76	0	0.00	<b>0.76</b>
Malawi	0	0.00	0	0.00	0	0.00	<b>0.00</b>
Tanzania	1	0.26	0	0.00	0	0.00	<b>0.26</b>
Burkina Faso	1	0.43	0	0.00	0	0.00	<b>0.43</b>
Madagascar	1	0.56	0	0.00	0	0.00	<b>0.56</b>
Mali	1	0.49	0	0.00	0	0.00	<b>0.49</b>
Nigeria	1	0.55	1	0.61	0	0.00	<b>1.16</b>
Uganda	1	0.33	0	0.00	0	0.00	<b>0.33</b>
Vietnam	1	0.62	1	0.94	0	0.00	<b>1.55</b>
Kenya	1	0.33	1	0.91	0	0.00	<b>1.24</b>
Zambia	1	0.32	0	0.00	0	0.00	<b>0.32</b>
Ghana	1	0.47	0	0.00	0	0.00	<b>0.47</b>
Mongolia	1	0.00	1	0.89	1	0.82	<b>1.71</b>
India	1	0.43	1	0.80	0	0.00	<b>1.22</b>
Kyrgyz Republic	1	0.57	1	0.97	1	0.82	<b>2.36</b>
Pakistan	1	0.53	1	0.89	0	0.00	<b>1.42</b>
Armenia	1	0.47	1	0.98	1	0.75	<b>2.21</b>
Senegal	1	0.51	1	0.67	0	0.00	<b>1.17</b>
Georgia	1	0.60	0	0.00	1	0.75	<b>1.35</b>
China	1	0.56	1	0.96	1	0.72	<b>2.24</b>
Zimbabwe	1	0.48	0	0.00	0	0.00	<b>0.48</b>
Sri Lanka	1	0.59	0	0.00	0	0.00	<b>0.59</b>
Bolivia	1	0.23	1	0.90	0	0.00	<b>1.13</b>
Ukraine	1	0.57	1	1.00	1	0.91	<b>2.48</b>
Indonesia	1	0.53	0	0.00	0	0.00	<b>0.53</b>
Bulgaria	1	0.60	1	0.87	1	0.84	<b>2.32</b>
<b>Mean</b>	<b>0.96</b>	<b>0.42</b>	<b>0.54</b>	<b>0.47</b>	<b>0.27</b>	<b>0.22</b>	<b>1.11</b>
<b>Median</b>	<b>1.00</b>	<b>0.49</b>	<b>1.00</b>	<b>0.64</b>	<b>0.00</b>	<b>0.00</b>	<b>1.14</b>
<i>Middle 50 percentile of GNP per capita</i>							
Egypt	1	0.56	1	0.89	1	0.80	<b>2.25</b>
Philippines	1	0.62	1	0.90	0	0.00	<b>1.52</b>
Morocco	1	0.68	1	0.89	0	0.00	<b>1.56</b>
Kazakhstan	1	0.56	0	0.00	0	0.00	<b>0.56</b>
Romania	1	0.52	1	0.75	1	0.82	<b>2.09</b>
Ecuador	1	0.62	1	0.85	1	0.49	<b>1.96</b>
Jordan	1	0.63	0	0.00	0	0.00	<b>0.63</b>
Dominican Republic	1	0.63	1	0.83	0	0.00	<b>1.46</b>
Jamaica	1	0.50	0	0.00	0	0.00	<b>0.50</b>
Tunisia	1	0.68	1	0.76	1	0.69	<b>2.14</b>
Lithuania	1	0.48	1	0.96	1	0.74	<b>2.18</b>
Latvia	1	0.51	1	0.80	1	0.80	<b>2.11</b>
Peru	1	0.42	1	0.85	0	0.00	<b>1.27</b>
Colombia	1	0.66	1	0.80	1	0.85	<b>2.31</b>
Russia	1	0.57	1	1.00	1	0.90	<b>2.47</b>
Thailand	1	0.62	1	0.82	0	0.00	<b>1.44</b>
Panama	1	0.69	1	0.93	1	0.60	<b>2.22</b>
Turkey	1	0.67	1	0.76	0	0.00	<b>1.42</b>
Lebanon	1	0.56	1	0.66	0	0.00	<b>1.22</b>
Venezuela	1	0.64	1	0.85	1	0.63	<b>2.12</b>
Poland	1	0.33	1	0.74	1	0.83	<b>1.90</b>
South Africa	1	0.34	1	0.64	1	0.73	<b>1.72</b>
Mexico	1	0.73	1	0.81	0	0.00	<b>1.53</b>

Countries	The Social security system covers the risk of old age, disability and death	Subindex: Old age, disability and death benefits	The social security system covers the risk of sickness	Subindex: Sickness and health benefits	The Social security system covers the risk of unemployment	Subindex: Unemployment benefits	Social security laws index
Slovak Republic	1	0.56	1	0.86	1	0.79	2.22
Croatia	1	0.49	1	0.76	1	0.80	2.05
Hungary	1	0.55	1	0.85	1	0.78	2.18
Malaysia	1	0.57	0	0.00	0	0.00	0.57
Brazil	1	0.51	1	0.70	1	0.56	1.77
Chile	1	0.46	1	0.82	1	0.73	2.01
Czech Republic	1	0.51	1	0.80	1	0.74	2.05
Uruguay	1	0.48	1	0.78	1	0.76	2.01
Argentina	1	0.37	1	0.94	1	0.85	2.15
Slovenia	1	0.53	1	0.82	1	0.86	2.21
Taiwan	1	0.67	1	0.75	1	0.67	2.09
Portugal	1	0.59	1	0.76	1	0.85	2.21
Korea	1	0.60	1	0.72	1	0.72	2.03
Greece	1	0.71	1	0.81	1	0.80	2.32
Spain	1	0.73	1	0.83	1	0.81	2.37
New Zealand	1	0.84	1	0.75	1	0.56	2.15
Israel	1	0.69	1	0.84	1	0.85	2.37
Ireland	1	0.72	1	0.70	1	0.76	2.18
<b>Mean</b>	<b>1.00</b>	<b>0.58</b>	<b>0.90</b>	<b>0.73</b>	<b>0.71</b>	<b>0.53</b>	<b>1.84</b>
<b>Median</b>	<b>1.00</b>	<b>0.57</b>	<b>1.00</b>	<b>0.80</b>	<b>1.00</b>	<b>0.73</b>	<b>2.05</b>

*Top 25 percentile of GNP per capita*

Canada	1	0.74	1	0.89	1	0.70	2.33
Italy	1	0.64	1	0.88	1	0.73	2.26
United Kingdom	1	0.61	1	0.69	1	0.78	2.07
Australia	1	0.75	1	0.72	1	0.79	2.25
Hong Kong	1	0.81	1	0.92	1	0.72	2.45
Finland	1	0.71	1	0.82	1	0.91	2.45
France	1	0.83	1	0.68	1	0.82	2.32
Belgium	1	0.50	1	0.61	1	0.86	1.97
Netherlands	1	0.48	1	0.68	1	0.68	1.83
Singapore	1	0.56	1	0.86	0	0.00	1.42
Sweden	1	0.82	1	0.85	1	0.94	2.61
Austria	1	0.54	1	0.91	1	0.63	2.07
Germany	1	0.69	1	0.53	1	0.78	2.00
United States	1	0.57	1	0.67	1	0.66	1.90
Denmark	1	0.82	1	0.99	1	0.90	2.71
Norway	1	0.74	1	0.95	1	0.82	2.50
Japan	1	0.61	1	0.67	1	0.82	2.10
Switzerland	1	0.65	1	0.86	1	0.74	2.26
<b>Mean</b>	<b>1.00</b>	<b>0.67</b>	<b>1.00</b>	<b>0.79</b>	<b>0.94</b>	<b>0.74</b>	<b>2.20</b>
<b>Median</b>	<b>1.00</b>	<b>0.67</b>	<b>1.00</b>	<b>0.84</b>	<b>1.00</b>	<b>0.78</b>	<b>2.26</b>
<b>Mean all countries</b>	<b>0.99</b>	<b>0.55</b>	<b>0.81</b>	<b>0.66</b>	<b>0.62</b>	<b>0.48</b>	<b>1.69</b>
<b>Media all countries</b>	<b>1.00</b>	<b>0.56</b>	<b>1.00</b>	<b>0.80</b>	<b>1.00</b>	<b>0.70</b>	<b>2.01</b>

*Tests of Means (t-stats)*

Bottom 25 vs Middle 50 percentile	-1.39	-3.86 <sup>a</sup>	-3.62 <sup>a</sup>	-3.27 <sup>a</sup>	-3.62 <sup>a</sup>	-3.51 <sup>a</sup>	-4.76 <sup>a</sup>
Bottom 25 vs Top 25 percentile	-0.98	-5.55 <sup>a</sup>	-4.47 <sup>a</sup>	-3.51 <sup>a</sup>	-6.93 <sup>a</sup>	-6.71 <sup>a</sup>	-7.18 <sup>a</sup>
Middle 50 vs Top 25 percentile	n.a.	-4.18 <sup>a</sup>	-1.66	-0.92	-2.60 <sup>b</sup>	-2.62 <sup>b</sup>	-3.07 <sup>a</sup>

*Tests of Medians (z-stats)*

Bottom 25 vs Middle 50 percentile	-1.38	-3.41 <sup>a</sup>	-3.32 <sup>a</sup>	-1.91 <sup>c</sup>	-3.31 <sup>a</sup>	-3.06 <sup>a</sup>	-3.80 <sup>a</sup>
Bottom 25 vs Top 25 percentile	-0.98	-4.69 <sup>a</sup>	-3.71 <sup>a</sup>	-2.03 <sup>b</sup>	-4.76 <sup>a</sup>	-4.25 <sup>a</sup>	-4.69 <sup>a</sup>
Middle 50 vs Top 25 percentile	n.a.	-3.59 <sup>a</sup>	-1.63	-0.26	-2.49 <sup>b</sup>	-1.94 <sup>c</sup>	-2.77 <sup>a</sup>

a=significant at 1% level; b=significant at 5% level; c=significant at 10% level; na=not applicable.

**Table IV**  
**Correlations between regulation of labor, income, left power and legal origin**

This table presents the pairwise correlations between the measures of regulation of labor, income, left power and legal origin for the whole sample. All the variables are described in Table I.

	Employment laws index	Industrial (collective) relations laws index	Social security laws index	Log GNP per capita	Chief executive left or center party	Legislature left or center party	Chief executive and legislature left or center party	Union density	Percentage of labor force covered by collective agreements	English legal origin	Socialist legal origin	French legal origin	German legal origin
Industrial (collective) relations laws index	0.5014 <sup>a</sup>												
Social security laws index	0.0526	0.2256											
Log GNP per capita	-0.2990	0.0456	0.6651 <sup>a</sup>										
Chief executive left or center party	0.3033	0.2532	0.0170	-0.3660 <sup>a</sup>									
Legislature left or center party	0.2812	0.2398	0.0794	-0.2571	0.8704 <sup>a</sup>								
Chief executive and legislature left or center party	0.2987	0.2333	0.0067	-0.3802 <sup>b</sup>	0.9791 <sup>a</sup>	0.9003 <sup>a</sup>							
Union density	0.0438	0.0780	0.3875	0.2775	0.2454	0.2908	0.2313						
Percentage of labor force covered by collective agreements	0.1855	0.3718	0.4146	0.3885	0.3442	0.3789	0.3105	0.4541					
English legal origin	-0.5617 <sup>a</sup>	-0.5661 <sup>a</sup>	-0.3663 <sup>a</sup>	-0.0843	-0.2096	-0.2374	-0.1869	-0.2138	-0.3640				
Socialist legal origin	0.3529	0.1607	0.2579	-0.2182	0.4329 <sup>a</sup>	0.3728 <sup>c</sup>	0.4400 <sup>a</sup>	0.2594	-0.0136	-0.3365			
French legal origin	0.3831 <sup>b</sup>	0.3468	-0.0887	-0.0568	-0.1135	-0.1305	-0.1560	-0.2789	0.2269	-0.4874 <sup>a</sup>	-0.4169 <sup>a</sup>		
German legal origin	-0.1506	0.0225	0.1576	0.3474	-0.1863	-0.1073	-0.1681	-0.0036	0.0461	-0.1729	-0.1479	-0.2141	
Scandinavian legal origin	-0.1948	0.0665	0.2837	0.3180	0.0789	0.1996	0.0918	0.5708 <sup>a</sup>	0.1960	-0.1394	-0.1192	-0.1727	-0.0612

a=significant at 1% level; b=significant at 5% level; c=significant at 10% level.

**Table V**  
**Regulation of labor and legal origin**

Ordinary least squares regressions of the cross section of countries. The dependent variables are the Employment laws index, the Industrial (collective) relations laws index, the Social security laws index and their respective components. Robust standard errors are in parentheses. All the variables are described in Table I and the data can be found in <http://iicg.som.yale.edu/>.

Dependent variables:	Log GNP per capita	Socialist legal origin	French legal origin	German legal origin	Scandinavian legal origin	Constant	N [R <sup>2</sup> ]
<i>Panel A: Employment laws and legal origin</i>							
Employment laws index	-0.0505 <sup>b</sup> (0.0205)	0.6009 <sup>a</sup> (0.0815)	0.5620 <sup>a</sup> (0.0770)	0.2537 <sup>c</sup> (0.1444)	0.1352 (0.1902)	1.5865 <sup>a</sup> (0.1819)	85 [0.50]
Alternative employment contracts subindex	0.0127 (0.0093)	0.1184 <sup>a</sup> (0.0391)	0.0976 <sup>a</sup> (0.0377)	-0.0054 (0.1066)	0.0269 (0.1135)	0.3999 <sup>a</sup> (0.0810)	85 [0.10]
Conditions of employment subindex	-0.0361 <sup>a</sup> (0.0106)	0.2704 <sup>a</sup> (0.0421)	0.2237 <sup>a</sup> (0.0410)	0.1118 <sup>c</sup> (0.0662)	-0.1026 <sup>b</sup> (0.0487)	0.7719 <sup>a</sup> (0.0923)	85 [0.55]
Job security subindex	-0.0271 <sup>b</sup> (0.1119)	0.2120 <sup>a</sup> (0.0438)	0.2406 <sup>a</sup> (0.0439)	0.1473 <sup>a</sup> (0.0530)	0.2109 <sup>b</sup> (0.0870)	0.4146 <sup>a</sup> (0.1060)	85 [0.33]
<i>Panel B: Industrial (collective) relation laws and legal origin</i>							
Industrial (collective) relations laws index	0.0094 (0.0292)	0.5847 <sup>a</sup> (0.1114)	0.6505 <sup>a</sup> (0.1123)	0.4540 <sup>b</sup> (0.1995)	0.5565 <sup>b</sup> (0.2685)	0.7336 <sup>a</sup> (0.2331)	85 [0.33]
Collective bargaining subindex	0.0013 (0.0189)	0.2070 <sup>b</sup> (0.0853)	0.2928 <sup>a</sup> (0.0705)	0.2424 (0.1548)	0.1679 <sup>c</sup> (0.0966)	0.3182 <sup>c</sup> (0.1628)	85 [0.18]
Worker participation in management subindex	0.0166 (0.0185)	0.1864 <sup>b</sup> (0.0734)	0.1328 <sup>b</sup> (0.0638)	0.1430 (0.1024)	0.3606 <sup>b</sup> (0.1658)	-0.0329 (0.1559)	85 [0.12]
Collective disputes subindex	-0.0085 (0.0105)	0.1912 <sup>a</sup> (0.0420)	0.2248 <sup>a</sup> (0.0401)	0.0686 (0.0608)	0.0279 (0.0948)	0.4483 <sup>a</sup> (0.0846)	85 [0.34]
<i>Panel C: Social security laws and legal origin</i>							
Social security laws index	0.3146 <sup>a</sup> (0.0295)	0.8775 <sup>a</sup> (0.1460)	0.2951 <sup>a</sup> (0.1185)	0.0942 (0.1368)	0.4970 <sup>a</sup> (0.1260)	-1.1885 <sup>a</sup> (0.2526)	85 [0.65]
Old age, disability and death benefits subindex	0.0591 <sup>a</sup> (0.0131)	0.0075 (0.0430)	0.0273 (0.0375)	-0.0304 (0.0446)	0.0971 <sup>b</sup> (0.0455)	0.0623 (0.1109)	85 [0.37]
Sickness and health benefits subindex	0.0954 <sup>a</sup> (0.0222)	0.3533 <sup>a</sup> (0.0975)	0.1658 <sup>b</sup> (0.0809)	0.0308 (0.0900)	0.1845 <sup>b</sup> (0.0725)	-0.2750 (0.2101)	85 [0.31]
Unemployment benefits subindex	0.1600 <sup>a</sup> (0.0149)	0.5166 <sup>a</sup> (0.0712)	0.1019 (0.0665)	0.0938 (0.0783)	0.2153 <sup>a</sup> (0.0806)	-0.9758 <sup>a</sup> (0.0986)	85 [0.62]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level.

**Table VI**  
**Regulation of labor and left power**

Ordinary least squares regressions of the cross-section of countries. The dependent variables are the Employment laws index, the Industrial (collective) relations laws index and the Social security laws index. Robust standard errors are in parenthesis. All the variables are described in Table I and the data can be found in <http://iicg.som.yale.edu/>.

Dependent variables:	Log GNP per capita	Left or center party			Interest groups		Constant	N [R <sup>2</sup> ]
		Chief executive	Legislature	Chief executive and legislature	Union density	Percentage of labor force covered by collective agreements		
<i>Panel A: Employment laws and left power</i>								
Employment laws index	-0.0539 <sup>b</sup> (0.0276)	0.2381 <sup>b</sup> (0.1194)					1.8345 <sup>a</sup> (0.2603)	85 [0.13]
	-0.0603 <sup>b</sup> (0.0271)		0.2372 <sup>b</sup> (0.1082)				1.8769 <sup>a</sup> (0.2506)	85 [0.13]
	-0.0538 <sup>b</sup> (0.0281)			0.2236 <sup>c</sup> (0.1160)			1.8490 <sup>a</sup> (0.2609)	85 [0.13]
	-0.0832 <sup>a</sup> (0.0299)				0.2363 (0.2227)		2.1432 <sup>a</sup> (0.2481)	70 [0.08]
	-0.1171 <sup>a</sup> (0.0443)					0.4629 <sup>b</sup> (0.1905)	2.2390 <sup>a</sup> (0.4050)	42 [0.17]
<i>Panel B: Industrial (collective) relation laws and left power</i>								
Industrial (collective) relations laws index	0.0477 (0.0365)	0.3990 <sup>a</sup> (0.1479)					0.6090 <sup>c</sup> (0.3413)	85 [0.08]
	0.0343 (0.0361)		0.3516 <sup>b</sup> (0.1500)				0.7324 <sup>b</sup> (0.3373)	85 [0.07]
	0.0469 (0.0371)			0.3648 <sup>b</sup> (0.1399)			0.6465 <sup>c</sup> (0.3398)	85 [0.07]
	0.0240 (0.0430)				0.2189 (0.2464)		1.3999 <sup>a</sup> (0.3277)	70 [0.01]
	-0.0635 (0.0618)					0.7624 <sup>a</sup> (0.2648)	1.4183 <sup>b</sup> (0.5287)	42 [0.16]
<i>Panel C: Social security laws and left power</i>								
Social security laws index	0.3334 <sup>a</sup> (0.0313)	0.5535 <sup>a</sup> (0.1484)					-1.3499 <sup>a</sup> (0.3139)	85 [0.52]
	0.3157 <sup>a</sup> (0.0320)		0.5031 <sup>a</sup> (0.1477)				-1.1963 <sup>a</sup> (0.3102)	85 [0.51]
	0.3357 <sup>a</sup> (0.0313)			0.5431 <sup>a</sup> (0.1418)			-1.3473 <sup>a</sup> (0.3080)	85 [0.52]
	0.2303 <sup>a</sup> (0.0392)				0.6229 <sup>b</sup> (0.2715)		-0.3231 (0.3325)	70 [0.45]
	0.1953 <sup>a</sup> (0.0581)					0.3631 (0.2318)	0.0037 (0.5205)	42 [0.41]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level.

**Table VII**  
**Regulation of labor, left power and legal origin**

Ordinary least squares regressions of the cross-section of countries, excluding socialist countries. The dependent variables are the employment laws index, the Industrial (collective) relations laws index and the Social security laws index. Robust standard errors are in parentheses. All the variables are described in Table I and the data can be found in <http://icg.som.yale.edu/>.

Dependent variables:	Log GNP per capita	Left power*	French legal origin	German legal origin	Scandinavian legal origin	Constant	N [R <sup>2</sup> ]
<i>Panel A: Employment laws, left power and legal origin</i>							
Employment laws index	-0.0524 <sup>b</sup> (0.0266)	0.0822 (0.1319)	0.5564 <sup>a</sup> (0.0765)	0.2687 <sup>c</sup> (0.1526)	0.1188 (0.1938)	1.5605 <sup>a</sup> (0.2733)	66 [0.49]
	-0.0502 <sup>b</sup> (0.0250)	0.1292 (0.1134)	0.5519 <sup>a</sup> (0.0749)	0.2535 <sup>c</sup> (0.1514)	0.0734 (0.2082)	1.5159 <sup>a</sup> (0.2526)	66 [0.50]
	-0.0497 <sup>c</sup> (0.0275)	0.1014 (0.1322)	0.5581 <sup>a</sup> (0.0761)	0.2643 <sup>c</sup> (0.1544)	0.1053 (0.1948)	1.5312 <sup>a</sup> (0.2807)	66 [0.49]
	-0.0498 <sup>b</sup> (0.0242)	0.0969 (0.2409)	0.6140 <sup>a</sup> (0.0829)	0.2790 (0.1458)	0.1097 (0.2251)	1.5237 <sup>a</sup> (0.2098)	57 [0.51]
	-0.0635 <sup>a</sup> (0.0208)	0.0971 (0.1603)	0.6497 <sup>a</sup> (0.1064)	0.3554 <sup>b</sup> (0.1760)	0.0241 (0.1344)	1.5867 <sup>a</sup> (0.2025)	38 [0.61]
<i>Panel B: Industrial (collective) relation laws, left power and legal origin</i>							
Industrial (collective) relations laws index	0.0220 (0.0344)	0.2345 (0.1565)	0.6326 <sup>a</sup> (0.1099)	0.4558 <sup>b</sup> (0.2213)	0.4636 <sup>c</sup> (0.2852)	0.5172 <sup>b</sup> (0.3248)	66 [0.37]
	0.0157 (0.0352)	0.2010 (0.1618)	0.6342 <sup>a</sup> (0.1124)	0.4407 <sup>b</sup> (0.2180)	0.4457 (0.2981)	0.5783 <sup>c</sup> (0.3293)	66 [0.37]
	0.0246 (0.0352)	0.2385 (0.1535)	0.6400 <sup>a</sup> (0.1096)	0.4486 <sup>b</sup> (0.2225)	0.4523 (0.2874)	0.4988 (0.3278)	66 [0.38]
	-0.0172 (0.0393)	-0.1397 (0.4065)	0.6947 <sup>a</sup> (0.1301)	0.5106 <sup>a</sup> (0.2029)	0.6934 <sup>c</sup> (0.3671)	0.9884 <sup>a</sup> (0.3203)	70 [0.01]
	-0.0587 (0.0606)	0.3752 (0.2437)	0.7360 <sup>a</sup> (0.1513)	0.4974 <sup>b</sup> (0.2130)	0.7745 <sup>b</sup> (0.3130)	1.1125 <sup>b</sup> (0.5322)	38 [0.49]
<i>Panel C: Social security laws, left power and legal origin</i>							
Social security laws index	0.3630 <sup>a</sup> (0.0319)	0.2567 <sup>c</sup> (0.1563)	0.2721 <sup>b</sup> (0.1164)	0.0185 (0.1508)	0.3081 <sup>a</sup> (0.1403)	-1.6948 <sup>a</sup> (0.3145)	66 [0.73]
	0.3564 <sup>a</sup> (0.0328)	0.2249 (0.1588)	0.2735 <sup>b</sup> (0.1173)	0.0010 (0.1606)	0.2852 <sup>c</sup> (0.1549)	-1.6333 <sup>a</sup> (0.3186)	66 [0.72]
	0.3658 <sup>a</sup> (0.0324)	0.2613 <sup>c</sup> (0.1484)	0.2802 <sup>b</sup> (0.1155)	0.0106 (0.1520)	0.2956 <sup>b</sup> (0.1428)	-1.7152 <sup>a</sup> (0.3151)	66 [0.73]
	0.3067 <sup>a</sup> (0.0390)	-0.1523 (0.3226)	0.2223 <sup>c</sup> (0.1321)	0.0289 (0.1451)	0.5134 <sup>a</sup> (0.2116)	-0.9961 <sup>a</sup> (0.3375)	57 [0.63]
	0.2591 <sup>a</sup> (0.0551)	0.0509 (0.2008)	0.3471 <sup>b</sup> (0.1388)	0.1000 (0.1636)	0.5641 <sup>a</sup> (0.1482)	0.6905 (0.4611)	38 [0.66]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level.

\* The rows in the Left power column consist of the values of: first row=chief executive left or center party; second row=legislature left or center party; third row=chief executive and legislature left or center party; fourth row=union density; and fifth row= percentage of labor force covered by collective agreements.

**Table VIII**  
**Correlations between regulation of labor, political and economic constraints, and legal origin**

This table shows the pairwise correlations between the measures of regulation of labor, political and economic constraints and legal origin for the whole sample. All the variables are described in Table I.

	Log GNP per capita	Constraints on executive power	Effectiveness of legislature	Autocracy	Actual openness	Geographic openness	Factor accumulation openness	English legal origin	Socialist legal origin	French legal origin	German legal origin
Constraints on executive power	0.6876 <sup>a</sup>										
Effectiveness of legislature	0.7523 <sup>a</sup>	0.9078 <sup>a</sup>									
Autocracy	-0.6548 <sup>a</sup>	-0.8844 <sup>a</sup>	-0.8514 <sup>a</sup>								
Actual openness	0.3465	0.1181	0.1484	-0.1050							
Geographic openness	0.3279	0.1361	0.1837	-0.0770	0.7103 <sup>a</sup>						
Factor accumulation openness	0.6410 <sup>a</sup>	0.4086 <sup>b</sup>	0.4270 <sup>b</sup>	-0.3318	0.6499 <sup>a</sup>	0.8106 <sup>a</sup>					
English legal origin	-0.0843	0.1998	0.1462	-0.2324	0.1601	-0.0494	-0.1843				
Socialist legal origin	-0.2182	-0.2927	-0.3236	0.5475 <sup>a</sup>	-0.0650	-0.0209	0.1333	-0.3365			
French legal origin	-0.0568	-0.1814	-0.1901	-0.0258	-0.1521	-0.0441	-0.1741	-0.4874 <sup>a</sup>	-0.4169 <sup>a</sup>		
German legal origin	0.3474 <sup>c</sup>	0.2008	0.2023	-0.1920	0.0356	0.0876	0.2344	-0.1729	-0.1479	-0.2141	
Scandinavian legal origin	0.3180	0.3274	0.3378	-0.2978	0.0462	0.1207	0.2927	-0.1394	-0.1192	-0.1727	-0.0612

a=significant at 1% level; b=significant at 5% level; c=significant at 10% level..

**Table IX**  
**Regulation of labor, political and economic constraints**

Ordinary least squares regressions of the cross section of countries. The dependent variables are the Employment laws index, the Industrial (collective) relations laws index and the Social security laws index. Robust standard errors are in parentheses. All the variables are described in Table I and the data can be found in <http://iicg.som.yale.edu/>.

Dependent variables:	Political constraints				Economic constraints			Constant	N	R <sup>2</sup>
	Lof GNP per capita	Constraints on executive power	Effectiveness of legislature	Autocracy	Actual openness	Geographic openness	Factor accumulation openness			
<i>Panel A: Employment laws, and political and economic constraints</i>										
Employment laws index	0.0019 (0.0372)	-0.0890 <sup>a</sup> (0.0320)						1.9290 <sup>a</sup> (0.2118)	84	[0.17]
	0.0195 (0.0441)		-0.2000 <sup>b</sup> (0.0785)					1.7013 <sup>a</sup> (0.2483)	73	[0.15]
	0.0063 (0.0322)			0.0695 <sup>a</sup> (0.0185)				1.267 <sup>a</sup> (0.3076)	84	[0.19]
	-0.0406 (0.0268)				-0.0026 <sup>a</sup> (0.0008)			1.9971 <sup>a</sup> (0.2026)	73	[0.15]
	-0.0565 <sup>b</sup> (0.0265)					-0.0035 (0.0034)		2.0213 <sup>a</sup> (0.2051)	73	[0.08]
	-0.0534 (0.0336)						-0.0017 (0.0034)	1.9717 <sup>a</sup> (0.2272)	73	[0.08]
<i>Panel B: Industrial relation laws, and political and economic constraints</i>										
Industrial (collective) relations laws index	0.0769 <sup>c</sup> (0.0455)	-0.0775 <sup>c</sup> (0.0406)						0.9639 <sup>a</sup> (0.2667)	84	[0.04]
	0.1111 <sup>c</sup> (0.0575)		-0.2347 <sup>b</sup> (0.1074)					0.7397 <sup>b</sup> (0.3218)	73	[0.07]
	0.0734 <sup>c</sup> (0.0414)			0.0536 <sup>b</sup> (0.0247)				0.4704 (0.3839)	84	[0.05]
	0.0543 (0.0401)				-0.0035 <sup>a</sup> (0.0010)			0.9996 <sup>a</sup> (0.2687)	73	[0.09]
	0.0445 (0.0411)					-0.0092 <sup>b</sup> (0.0046)		1.0172 <sup>a</sup> (0.2718)	73	[0.05]
	0.0501 (0.0558)						-0.0041 (0.0045)	0.8991 <sup>b</sup> (0.3566)	73	[0.02]
<i>Panel C: Social security laws, and political and economic constraints</i>										
Social security laws index	0.3165 <sup>a</sup> (0.0516)	-0.0406 (0.0464)						-0.6924 <sup>b</sup> (0.3230)	84	[0.44]
	0.3638 <sup>a</sup> (0.0572)		-0.1355 (0.1044)					-1.0788 <sup>b</sup> (0.3389)	73	[0.55]
	0.3668 <sup>a</sup> (0.0438)			0.0767 <sup>b</sup> (0.0298)				-1.5384 <sup>a</sup> (0.4358)	84	[0.48]
	0.3500 <sup>a</sup> (0.0327)				-0.0034 <sup>a</sup> (0.0012)			-0.9933 <sup>a</sup> (0.2704)	73	[0.60]
	0.3364 <sup>a</sup> (0.0314)					-0.0073 (0.0046)		-0.9710 <sup>a</sup> (0.2679)	73	[0.57]
	0.3234 <sup>a</sup> (0.0428)						-0.0008 (0.0042)	-0.9745 <sup>a</sup> (0.3218)	73	[0.56]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level.

**Table X**  
**Regulation of labor, political and economic constraints, and legal origin**

Ordinary least squares regressions of the cross section of countries, excluding all socialist countries. The dependent variables are the Employment laws index in Panel A, the Industrial (collective) relations laws index in Panel B, and the Social security laws index in Panel C. Robust standard errors are in parentheses. All the variables are described in Table I and the data can be found in <http://iicg.som.yale.edu/>.

Dependent Variables	Log GNP per capita	Political and economic constraints*	French legal origin	German legal origin	Scandinavian legal origin	Constant	N [R <sup>2</sup> ]
<i>Panel A: Employment laws, political and economic constraints, and legal origin</i>							
Employment laws index	-0.0491 (0.0322)	-0.0076 (0.0275)	0.5411 <sup>a</sup> (0.0846)	0.2433 (0.1578)	0.1348 (0.1935)	1.6262 <sup>a</sup> (0.1936)	65 [0.46]
	-0.0451 (0.0385)	-0.0261 (0.0712)	0.5420 <sup>a</sup> (0.0876)	0.2388 (0.1629)	0.1358 (0.1940)	1.6083 <sup>a</sup> (0.2125)	64 [0.47]
	-0.0417 (0.0316)	0.0132 (0.0224)	0.5353 <sup>a</sup> (0.0812)	0.2311 (0.1556)	0.1325 (0.1941)	1.4979 <sup>a</sup> (0.2931)	65 (0.47)
	-0.0427 <sup>c</sup> (0.0237)	-0.0014 <sup>b</sup> (0.0006)	0.5551 <sup>a</sup> (0.0763)	0.2293 (0.1517)	0.1132 (0.1910)	1.6273 <sup>a</sup> (0.1902)	65 [0.53]
	-0.0515 <sup>b</sup> (0.0233)	-0.0030 (0.0024)	0.5821 <sup>a</sup> (0.0763)	0.2700 <sup>c</sup> (0.1418)	0.1598 (0.1918)	1.6433 <sup>a</sup> (0.1948)	65 [0.52]
	-0.0457 (0.0282)	-0.0020 (0.0023)	0.5831 <sup>a</sup> (0.0766)	0.2817 <sup>b</sup> (0.1389)	0.1779 (0.1927)	1.5816 <sup>a</sup> (0.2178)	65 [0.52]
<i>Panel B: Industrial (collective) laws, political and economic constraints, and legal origin</i>							
Industrial (collective) relations laws index	-0.0166 (0.0417)	0.0158 (0.0353)	0.6814 <sup>a</sup> (0.1085)	0.5131 <sup>b</sup> (0.2091)	0.6012 <sup>b</sup> (0.2756)	0.8473 <sup>a</sup> (0.2564)	65 [0.35]
	0.0118 (0.0516)	-0.0420 (0.1012)	0.6595 <sup>a</sup> (0.1134)	0.4749 <sup>b</sup> (0.2104)	0.6040 <sup>b</sup> (0.2746)	0.7871 <sup>a</sup> (0.2833)	64 [0.36]
	-0.0108 (0.0455)	-0.0069 (0.0289)	0.6702 <sup>a</sup> (0.1154)	0.5053 <sup>b</sup> (0.2157)	0.6017 <sup>b</sup> (0.2757)	0.8977 <sup>b</sup> (0.4083)	65 [0.35]
	0.0228 (0.0365)	-0.0018 <sup>c</sup> (0.0010)	0.6389 <sup>a</sup> (0.1175)	0.4149 <sup>b</sup> (0.2130)	0.5197 <sup>c</sup> (0.2932)	0.7611 <sup>a</sup> (0.2409)	65 [0.39]
	0.0254 (0.0361)	-0.0094 <sup>a</sup> (0.0031)	0.6741 <sup>a</sup> (0.1123)	0.4618 <sup>b</sup> (0.1887)	0.5851 <sup>b</sup> (0.2736)	0.7623 <sup>a</sup> (0.2456)	65 [0.42]
	0.0453 (0.0457)	-0.0066 <sup>c</sup> (0.0034)	0.6773 <sup>a</sup> (0.1134)	0.4994 <sup>a</sup> (0.1871)	0.6442 <sup>b</sup> (0.2630)	0.5599 <sup>c</sup> (0.3001)	65 [0.40]
<i>Panel C: Social securities laws, political and economic constraints, and legal origin</i>							
Social security laws index	0.3211 (0.0490)	0.0140 (0.0459)	0.3274 <sup>a</sup> (0.1272)	0.0878 (0.1531)	0.4696 <sup>a</sup> (0.1305)	-1.3269 <sup>a</sup> (0.2747)	65 [0.71]
	0.3172 <sup>a</sup> (0.0555)	0.0376 (0.1055)	0.3285 <sup>a</sup> (0.1337)	0.0919 (0.1607)	0.4696 <sup>a</sup> (0.1295)	-1.3007 <sup>a</sup> (0.3025)	94 [0.71]
	0.3253 <sup>a</sup> (0.0487)	-0.0071 (0.0360)	0.3186 <sup>a</sup> (0.1207)	0.0824 (0.1526)	0.4702 <sup>a</sup> (0.1315)	-1.2721 <sup>a</sup> (0.4679)	65 [0.71]
	0.3749 <sup>a</sup> (0.0288)	-0.0029 <sup>a</sup> (0.0011)	0.2511 <sup>b</sup> (0.1117)	-0.0558 (0.1499)	0.3401 <sup>a</sup> (0.1126)	-1.4432 <sup>a</sup> (0.2448)	65 [0.75]
	0.3604 <sup>a</sup> (0.0278)	-0.0080 <sup>c</sup> (0.0043)	0.3083 <sup>a</sup> (0.1155)	0.0285 (0.1466)	0.4401 <sup>a</sup> (0.1321)	-1.4151 <sup>a</sup> (0.2481)	65 [0.73]
	0.3871 <sup>a</sup> (0.0345)	-0.0071 <sup>b</sup> (0.0034)	0.3117 <sup>a</sup> (0.1160)	0.0666 (0.1546)	0.5053 <sup>a</sup> (0.1422)	-1.6396 <sup>a</sup> (0.2748)	65 [0.74]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level.

\* The rows in the Political and economic constraints column consist of the values of: first row=constraints on executive power; second row= effectiveness of legislature; third row= autocracy; fourth row= actual openness; fifth row= geographic openness; sixth row= factor accumulation openness.

**Table XI**  
**Interactions between legal origin and left political orientation: French vs English legal origins**

Ordinary least squares regressions of the cross section of countries, excluding all socialist countries. The dependent variables are: (i) Employment laws in Panel A, and (ii) Industrial relation laws in Panel B. Each regression is separately run for French legal origin and English legal origin countries. We also perform a Chow test on the equity of the coefficient to assess the difference between the coefficients of the French legal origin and English legal origin countries for each pair of regressions. Robust standard errors are in parentheses. All the variables are described in Table I and the data can be found in <http://iicg.som.yale.edu/>.

	Left or center party				N [R <sup>2</sup> ]	Chow test of the equality of coefficients
	Log GNP per capita	Chief executive	Legislature	Chief executive and legislature		
<i>Panel A: Employment laws</i>						
French legal origin countries	0.0092 (0.0412)	0.2470 (0.1579)			1.5354 <sup>a</sup> (0.3685)	32 [0.09] F(1,50)=2.35 Prob>F=0.13
English legal origin countries	-0.1075 <sup>a</sup> (0.0289)	-0.1204 (0.1812)			2.0919 <sup>a</sup> (0.3102)	24 [0.37]
French legal origin countries	0.0109 (0.0395)		0.3310 <sup>b</sup> (0.1510)		1.4629 <sup>a</sup> (0.3497)	32 [0.15] F(1,50)=3.78 Prob>F=0.06
English legal origin countries	-0.1005 <sup>a</sup> (0.0257)		-0.0658 (0.1377)		2.0116 <sup>a</sup> (0.2640)	24 [0.36]
French legal origin countries	0.0144 (0.0415)			0.2826 <sup>c</sup> (0.1550)	1.4874 <sup>a</sup> (0.3657)	32 [0.13] F(1,50)=3.24 Prob>F=0.08
English legal origin countries	-0.1106 <sup>a</sup> (0.0291)			-0.1366 (0.1748)	2.1220 <sup>a</sup> (0.3080)	24 [0.38]
<i>Panel B: Industrial (collective) relation laws</i>						
French legal origin countries	0.1304 <sup>a</sup> (0.0406)	0.4378 <sup>b</sup> (0.1882)			0.1775 (0.3946)	32 [0.24] F(1,50)=1.14 Prob>F=0.29
English legal origin countries	-0.0592 (0.0442)	0.0873 (0.2708)			1.2251 <sup>b</sup> (0.4731)	24 [0.13]
French legal origin countries	0.1255 <sup>b</sup> (0.0468)		0.4586 <sup>b</sup> (0.2089)		0.1888 (0.4477)	32 [0.24] F(1,50)=2.02 Prob>F=0.16
English legal origin	-0.0700 (0.0430)		-0.0105 (0.2569)		1.3588 <sup>a</sup> (0.4606)	24 [0.12]
French legal origin countries	0.1359 <sup>a</sup> (0.0413)			0.4566 <sup>b</sup> (0.1773)	0.1453 (0.3851)	32 [0.26] F(1,50)=1.56 Prob>F=0.22
English legal origin countries	-0.0621 (0.0466)			0.0566 (0.2686)	1.2641 <sup>b</sup> (0.4905)	24 [0.12]

a=significant at 1% level; b=significant at 5% level; c=significant at 10% level.

**Table XII**  
**Correlations between regulation indices**

The table shows the pairwise correlations between various indices of regulation for the cross section of 85 countries.

	Employment laws index	Industrial (collective) relations laws index	Social security laws index	Court formalism index for the eviction of the non-paying tenant	Court formalism index for the collection of bounced check	Ln num. of steps to start a business	Ln num. of days to start a business
Industrial (collective) relations laws index	0.5014 <sup>a</sup>						
Social security laws index	0.0526	0.2256					
Court formalism index for the eviction of the non-paying tenant	0.4669 <sup>a</sup>	0.4736 <sup>a</sup>	0.0937				
Court formalism index for the collection of bounced check	0.5755 <sup>a</sup>	0.4257 <sup>a</sup>	0.0180	0.8505 <sup>a</sup>			
Ln number of steps to start a business	0.6074 <sup>a</sup>	0.4795 <sup>a</sup>	-0.2409	0.5036 <sup>a</sup>	0.5675 <sup>a</sup>		
Ln number of days to start a business	0.5324 <sup>a</sup>	0.4509 <sup>a</sup>	-0.3104	0.5274 <sup>a</sup>	0.5525 <sup>a</sup>	0.8263 <sup>a</sup>	
Ln cost to start a business/GDP per capita	0.3349 <sup>c</sup>	0.1712	-0.4736 <sup>a</sup>	0.3667 <sup>b</sup>	0.4309 <sup>a</sup>	0.6354 <sup>a</sup>	0.6147 <sup>a</sup>

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level.

**Table XIII**  
**Regulation of labor and outcomes**

Ordinary least squares regressions of the cross-section of countries. The dependent variables are: (i) Unofficial Economy in Panel A, (ii) Employment in unofficial economy in Panel B, (iii) Unemployment in Panel C, (iv) Unemployment 1990-1997 in Panel D, (v) Participation in labor force in Panel E, (vi) Male participation in labor force from 1990-1994 in Panel F, and (vii) Female participation in labor force 1990-1994 in Panel G. Robust standard errors are in parentheses. All the variables are described in Table I and the data can be found in <http://iicg.som.yale.edu/>.

Dependent Variable	Log GNP per capita	Employment laws index	Industrial (Collective) relations laws index	Social security laws index	Constant	N R <sup>2</sup>
<i>Panel A: Dependent Variable-Unofficial economy</i>						
Unofficial economy	-5.2770 <sup>a</sup> (0.7411)	7.2501 <sup>b</sup> (3.0215)			62.6044 <sup>a</sup> (9.5208)	85 [0.45]
	-5.8784 <sup>a</sup> (0.6747)		4.5755 <sup>b</sup> (2.1254)		72.9882 <sup>a</sup> (6.6536)	85 [0.44]
	-5.718 <sup>a</sup> (1.0739)			-0.3420 (2.4455)	77.9616 <sup>a</sup> (6.6963)	85 [0.42]
<i>Panel B: Dependent Variable-Employment in unofficial economy</i>						
Employment in unofficial economy	-5.7161 <sup>a</sup> (1.2765)	13.3504 <sup>b</sup> (5.2063)			62.4163 <sup>a</sup> (16.2025)	46 [0.40]
	-7.4709 <sup>a</sup> (1.0255)		11.579 <sup>a</sup> (4.2348)		81.5947 <sup>a</sup> (9.4134)	46 [0.42]
	-6.3956 <sup>a</sup> (2.1432)			-0.2363 (4.4897)	89.1139 <sup>a</sup> (11.6112)	46 [0.33]
<i>Panel C: Dependent Variable-Unemployment</i>						
Unemployment 1997	-0.7750 (0.6788)	3.555 <sup>b</sup> (1.3711)			10.2339 (7.4288)	66 [0.15]
	-1.1831 <sup>c</sup> (0.6439)		1.3787 (1.1291)		17.4726 <sup>b</sup> (6.6953)	66 [0.10]
	-1.7768 <sup>b</sup> (0.7960)			3.0872 <sup>c</sup> (1.7482)	18.4521 <sup>a</sup> (5.3459)	66 [0.16]
<i>Panel D: Dependent Variable-Unemployment 1990-1997</i>						
Unemployment average 1990-1997	0.1149 (0.4369)	1.9413 (1.4820)			4.3665 (5.4468)	70 [0.03]
	-0.0978 (0.3881)		0.4901 (1.0794)		8.5646 <sup>b</sup> (4.1790)	70 [0.01]
	-0.3122 (0.3901)			1.0680 (1.2507)	9.0078 <sup>a</sup> (3.3884)	70 [0.01]
<i>Panel E: Dependent Variable-Participation in labor force</i>						
Total participation in labor force 1990-1994	-1.8411 <sup>a</sup> (0.6216)	-3.9901 <sup>c</sup> (2.1457)			91.3852 <sup>a</sup> (6.7639)	78 [0.10]
	-1.5494 <sup>b</sup> (0.6271)		-2.7772 (1.8228)		86.3763 <sup>a</sup> (5.7567)	78 [0.10]
	-1.4354 <sup>c</sup> (0.7540)			-0.5072 (1.9695)	82.8062 <sup>a</sup> (5.2493)	78 [0.07]
<i>Panel F: Dependent Variable-Male participation in labor force</i>						
Male participation in labor force 1990-1994	-1.3466 <sup>a</sup> (0.2984)	-3.0257 <sup>a</sup> (0.9868)			99.0527 <sup>a</sup> (3.1342)	78 [0.26]
	-1.1249 <sup>a</sup> (0.2959)		-2.1552 <sup>a</sup> (0.6719)		95.3124 <sup>a</sup> (2.4506)	78 [0.24]
	-0.6392 (0.4017)			-1.8061 <sup>b</sup> (0.8837)	91.7210 <sup>a</sup> (2.4909)	78 [0.23]
<i>Panel G: Dependent Variable-Female participation in labor force</i>						
Female participation in labor force 1990-1994	-2.2227 <sup>c</sup> (1.1313)	-3.7324 (4.3365)			79.6435 <sup>a</sup> (12.5942)	78 [0.04]
	-1.9450 <sup>c</sup> (1.1362)		-3.0660 (3.7015)		75.5102 <sup>a</sup> (10.2537)	78 [0.04]
	-2.3900 <sup>c</sup> (1.3662)			1.4701 (3.6393)	72.7486 <sup>a</sup> (9.4927)	78 [0.03]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level ; na=Not applicable; .=Missing.

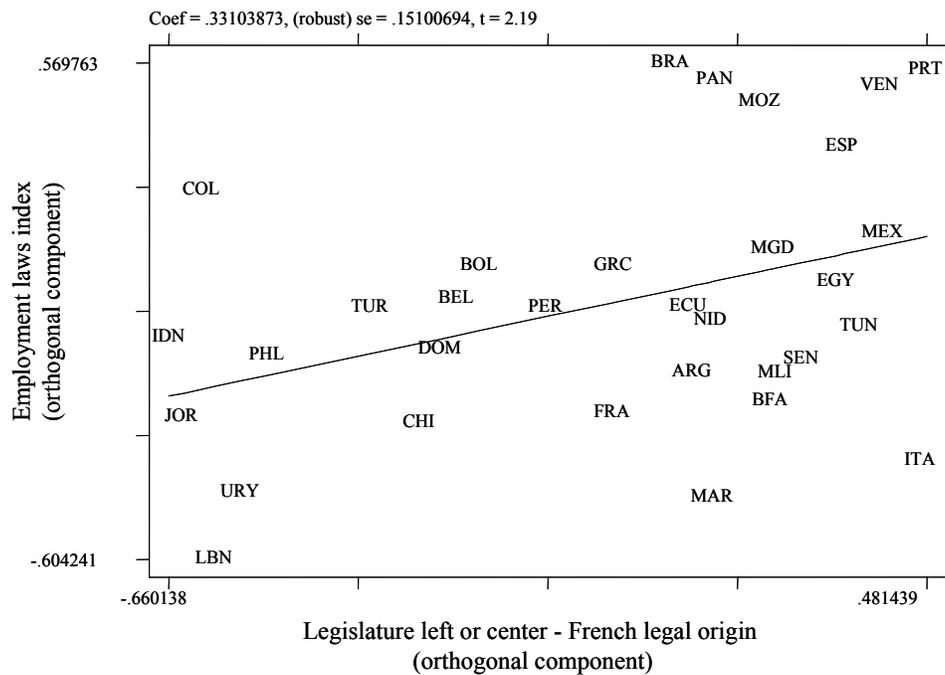
**Table XIV**  
**Regulation of labor and outcomes (instrumental variables regressions)**

Instrumental variables regressions for the cross-section of countries. The first stage of the regression (not shown) has the employment laws index, the industrial (collective) relations laws index and the social security laws index as the dependent variables and the independent variables are: (a) Log GNP per capita; (b) the set of legal origin dummies; and (c) a constant term. Standard errors are shown in parenthesis. All variables are described in Table I and the data can be found in <http://icg.som.yale.edu/>.

Dependent Variable	Log GNP per capita	Employment laws index	Industrial (collective) relations laws index	Social security laws index	Constant	N	R <sup>2</sup>
<i>Panel A: Dependent Variable-Unofficial economy</i>							
Unofficial economy	-5.6008 <sup>a</sup> (0.7242)	2.8940 (4.3891)			71.9595 <sup>a</sup> (10.6668)	85	[0.44]
	-5.8579 <sup>a</sup> (0.6752)		3.0764 (4.0152)		74.6875 <sup>a</sup> (7.3931)	85	[0.44]
	-5.4796 <sup>a</sup> (1.5250)			-1.1752 (4.0486)	77.4429 <sup>a</sup> (7.4153)	85	[0.42]
<i>Panel B: Dependent Variable-Employment in unofficial economy</i>							
Employment in unofficial economy	-5.7734 <sup>a</sup> (1.2388)	12.3429 (7.5151)			64.4484 <sup>a</sup> (17.6009)	46	[0.41]
	-7.9954 <sup>a</sup> (1.0937)		17.6829 <sup>b</sup> (6.9587)		77.5093 <sup>a</sup> (10.1388)	46	[0.39]
	-5.5528 <sup>c</sup> (3.2403)			-2.7155 (8.2463)	86.6915 <sup>a</sup> (13.8483)	46	[0.32]
<i>Panel C: Dependent Variable-Unemployment</i>							
Unemployment 1997	-0.5942 (0.7021)	4.9595 <sup>b</sup> (2.1308)			6.5033 (8.5019)	66	[0.14]
	-1.1029 <sup>c</sup> (0.6383)		3.6077 <sup>c</sup> (1.8781)		13.9094 <sup>b</sup> (6.6908)	66	[0.06]
	-2.1354 <sup>b</sup> (0.8519)			5.1217 <sup>c</sup> (2.6585)	17.6451 <sup>a</sup> (5.5243)	66	[0.13]
<i>Panel D: Dependent Variable-Unemployment 1990-1997</i>							
Unemployment average 1990-1997	0.2282 (0.4490)	2.8759 (2.0735)			1.9466 (6.3881)	70	[0.02]
	-0.0051 (0.3838)		2.4867 (1.9810)		5.1918 (4.6714)	70	[0.43]
	-0.1829 (0.4885)			0.3475 (1.9767)	9.2674 <sup>a</sup> (3.3802)	70	[0.01]
<i>Panel E: Dependent Variable-Participation in labor force</i>							
Total participation in labor force 1990-1994	-2.1122 <sup>a</sup> (0.6665)	-8.1021 <sup>b</sup> (3.6405)			99.9227 <sup>a</sup> (9.4457)	78	[0.07]
	-1.5146 <sup>b</sup> (0.6409)		-6.1485 <sup>c</sup> (3.4113)		90.3523 <sup>a</sup> (6.8204)	78	[0.06]
	-2.7202 <sup>a</sup> (0.8710)			4.0616 (2.7902)	85.4612 <sup>a</sup> (5.4479)	78	[0.01]
<i>Panel F: Dependent Variable-Male participation in labor force</i>							
Male participation in labor force 1990-1994	-1.5216 <sup>a</sup> (0.3164)	-5.6801 <sup>a</sup> (1.5247)			104.5637 <sup>a</sup> (4.1864)	78	[0.20]
	-1.1064 <sup>a</sup> (0.2962)		-3.9469 <sup>a</sup> (1.2706)		97.4255 <sup>a</sup> (2.7837)	78	[0.20]
	0.3692 (0.5610)			-5.3922 <sup>a</sup> (1.5657)	89.6370 <sup>a</sup> (2.7801)	78	[0.04]
<i>Panel G: Dependent Variable-Female participation in labor force</i>							
Female participation in labor force 1990-1994	-2.5793 <sup>b</sup> (1.1944)	-9.1425 (6.7960)			90.8762 <sup>a</sup> (16.9053)	78	[0.02]
	-1.9027 (1.1510)		-7.1619 (6.5154)		80.3408 <sup>a</sup> (12.4055)	78	[0.02]
	-6.0141 <sup>a</sup> (1.5452)			14.3579 <sup>a</sup> (5.3779)	80.238 <sup>a</sup> (10.1191)	78	[0.01]

a=significant at 1 percent level; b=significant at 5 percent level; c=significant at 10 percent level ; na=Not applicable; .=Missing.

**Figure I**  
**French legal origin countries: Partial scatter plot of employment laws index and legislature left or center party**



**Figure II**  
**English legal origin countries: Partial scatter plot of employment laws index and legislature left or center party**

