

Calderón, César; Chong, Alberto; Valdés, Rodrigo

**Working Paper**

## Labor Market Regulations and Income Inequality: Evidence for a Panel of Countries

Working Paper, No. 514

**Provided in Cooperation with:**

Inter-American Development Bank (IDB), Washington, DC

*Suggested Citation:* Calderón, César; Chong, Alberto; Valdés, Rodrigo (2004) : Labor Market Regulations and Income Inequality: Evidence for a Panel of Countries, Working Paper, No. 514, Inter-American Development Bank, Research Department, Washington, DC

This Version is available at:

<https://hdl.handle.net/10419/87998>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



*INTER-AMERICAN DEVELOPMENT BANK  
BANCO INTERAMERICANO DE DESARROLLO (BID)  
RESEARCH DEPARTMENT  
DEPARTAMENTO DE INVESTIGACIÓN  
WORKING PAPER #514*

# **LABOR MARKET REGULATIONS AND INCOME INEQUALITY: EVIDENCE FOR A PANEL OF COUNTRIES**

BY

**CÉSAR CALDERÓN\***  
**ALBERTO CHONG\*\***  
**RODRIGO VALDÉS\***

**\*CENTRAL BANK OF CHILE**

**\*\*INTER-AMERICAN DEVELOPMENT BANK**

OCTOBER 2004

**Cataloging-in-Publication data provided by the  
Inter-American Development Bank  
Felipe Herrera Library**

Calderón, César.

Labor market regulations and income inequality : evidence for a panel of countries / by  
César Calderón, Alberto Chong, Rodrigo Valdés.

p. cm. (Research Department Working Papers ; 514)  
Includes bibliographical references.

1. Labor market. 2. Income distribution. 3. Manpower policy I. Chong, Alberto. II. Valdés,  
Rodrigo O. (Rodrigo Osvaldo) III. Inter-American Development Bank. Research Dept. IV.  
Title. V. Series.

331.12 C466-----dc21

©2004  
Inter-American Development Bank  
1300 New York Avenue, N.W.  
Washington, DC 20577

The views and interpretations in this document are those of the authors and should not be  
attributed to the Inter-American Development Bank, or to any individual acting on its behalf.

The Research Department (RES) produces a quarterly newsletter, *IDEA (Ideas for Development  
in the Americas)*, as well as working papers and books on diverse economic issues. To obtain a  
complete list of RES publications, and read or download them please visit our web site at:  
<http://www.iadb.org/res>

## Abstract<sup>\*</sup>

This paper presents evidence on the impact of labor regulations on income inequality using two recently published databases on labor institutions and outcomes (Rama and Artecona, 2002; Botero, Djankov, La Porta, López-de-Silanes and Shleifer, 2003) and different cross-section and panel data analysis techniques for a sample of 121 countries over the 1970-2000 period. When we consider the techniques most likely to be robust, we find that: (i) *de jure* regulations do not improve income distribution; (ii) relative compliance with existing regulations improves income distribution; (iii) *de facto* regulations are weakly associated with improving income inequality. This result partly reflects the fact that regulations are endogenous and, more interestingly, different regulations have quite distinct effects. In particular, we find that any redistributive effect of labor regulations may come from trade union membership, public employment and mandated benefits (proxied by maternity leave).

**JEL Classification:** D30, F10

**Key Words:** Labor regulation, Income Inequality, GMM-IV

---

<sup>\*</sup> Prepared for the 7<sup>th</sup> Central Bank of Chile Annual Conference “Labor Markets and Institutions,” November 6 and 7, 2003. The authors would like to thank Osvaldo Larrañaga and Conference participants for their comments and suggestions. The usual disclaimer applies. The ideas expressed in this paper are those of the authors, and do not necessarily reflect those of the Central Bank of Chile or its board of directors.



## 1. Introduction

The fact that labor market regulations are at the cornerstone of the economic policy and political economy debate in many countries shows that changes in regulations can have non-trivial effects. Because there are protected and unprotected groups, changes in regulation have, at the very least, different consequences for particular groups. From a more general perspective, however, labor regulations may also represent interesting tradeoffs, specifically regarding efficiency and equity. In this paper we empirically study one particular ingredient of this type of tradeoff, namely the effect of labor regulations on income distribution.

For that purpose, we present evidence on the impact of labor regulations on income inequality using two recently published databases on labor institutions of *de jure* regulations and outcomes of *de facto* regulations. The first is Rama and Artecona (2002), subsequently referred to as RA, and Botero, Djankov, La Porta, López-de-Silanes and Shleifer (2003), subsequently referred to as BDLLS. We consider other country characteristics that may affect income distribution, including income level and growth, education and the structure of the economy. Furthermore, we use a battery of cross-section and panel data analysis techniques in order to evaluate the robustness of the results. In particular, we use cross-section, pooled, country fixed effects, and time fixed-effects panel data, with instrumental variables and GMM estimators. The sample we consider includes 121 countries over the 1970-2000 period, and we focus on two groups: the total sample and the sample of developing countries.

This paper is closely related to Calderón and Chong (2004) and should, in certain dimensions, be taken as its complement. To begin with, it is based on the same datasets (except for inequality) and considers similar estimation techniques. More interestingly, perhaps, both papers taken together precisely allow the reader to evaluate whether the tradeoff mentioned above exists and what its relative importance may be.

The main findings are the following:

- (i) There is evidence that *de jure* regulations (what labor codes prescribe) do not improve income inequality. In fact, with the RA database, we do not find robust results, although in a few cases, the effect shows that regulations worsen income distribution. When we consider the BDLLS dataset, we find

that regulations on employment and industrial relations (though not on social security) have a negative effect on income distribution.

- (ii) There is a positive effect of compliance with labor regulations, measured as the ratio between a *de facto* index and a *de jure* index, on income distribution. Considering that the result cannot be explained by summing up the individual effects of each index separately, it may capture institutional development rather than labor market considerations.
- (iii) *De facto* regulations are weakly associated with better income distribution. This result could be due to endogeneity of labor regulations. When controlling for this problem, many times the effect is not different from zero, although there are some cases in which the results show that these regulations improve income distribution.
- (iv) Apart from the endogeneity problem, these mixed results are in part explained by the fact that once one considers specific *de facto* regulations, the results can differ markedly across regulations. In this regard, the most robust results are the following:
  - Minimum wages, especially measured as a percentage of per capita income, worsen income inequality.
  - Trade union membership (as percentage of labor force) has a positive effect on income distribution. Its effect on the poorest 20 percent is smaller and less robust than for the “middle class.”
  - Government employment at the general level (less so at the central level) has a positive effect on income distribution. Its effect on the poorest quintile is nil.
  - Days of maternity leave have a positive effect on income distribution.
  - ILO Convention 87 ratification and social security contributions do not have a robust effect on income inequality across estimation methods and samples.

The paper is organized as follows. Section 2 presents a brief literature review on the impact of labor market regulations on income inequality. Section 3 reviews the data sets and the methodology we use. Section 4 presents the results of the different estimation techniques. Section 5 discusses the overall results and concludes.

## **2. Literature Review**

In a seminal paper, Kuznets (1955) argues that the relationship between income inequality and the level of development follows an inverted U-shaped curve. Inequality rises in the face of economic expansion during the initial stages of development, and it declines afterwards. The relationship stipulated by Kuznets has been recently simulated successfully within a general equilibrium framework (Galor and Tsiddon, 1996). In addition, recent evidence has shown that: (i) unemployment is one of the major sources of inequality (Jenkins, 1995, 1996), and (ii) labor market policies are a potential instrument to reduce inequality (Rama, 2001a).

Saint-Paul (1999) claims that labor market institutions around the world usually consist of tax systems or other transfer mechanisms that divert resources from the working to the non-working population. These institutions include unemployment benefits, employment protection laws, and active employment policies by the government, among others. It has been argued that these institutions are necessary to protect workers from bad outcomes and unexpected shocks (Blanchard, 2002). In general, labor market institutions are supposed to help achieve socially desirable redistributive goals (Emerson and Dramais, 1988; Rama, 2001a, 2003). In this context, labor market policies may be an effective tool for reducing income inequality. However, there is increasing debate on the benefits of labor policies such as minimum wages, mandated benefits, collective bargaining, job security or public sector employment in developing countries (Rama, 2001a, 2003).

Regarding the imposition of minimum wages, Saint-Paul (1994) argues that they may have an adverse effect on income distribution. Minimum wages redistribute income: (a) from skilled to unskilled labor, and (b) from the poorest to the lower-middle quintiles by generating unemployment.<sup>1</sup> Microeconomic studies suggest that the impact of minimum wages on income

---

<sup>1</sup> Saint-Paul (1994) claims that minimum wages create unemployment among unskilled workers and reduces the income of skilled workers, thus reducing output. In addition, the impact of minimum wages on inequality is affected by other forms of labor rigidities. For example, income is shared equally among unskilled workers in a world with high job turnover, hence, minimum wages have a small impact on inequality among the unskilled.



inequality is small in many developing countries (Maloney and Nuñez, 2001). On the other hand, Rama (2001b) analyzes the doubling of minimum wages (in real terms) in Indonesia in the early 1990s. He finds that the elasticity of average to minimum wages was approximately 10 percent over this period, and that the doubling of minimum wages was associated with a slight decline in total wage employment and a substantial increase in unemployment among small enterprises. On the other hand, trade union membership seems to guarantee a higher wage for members. However, the union wage premium in developing countries is smaller than among industrial countries. This finding may be due to the role of trade unions in keeping wage rates invariant during periods of economic adjustment (Nelson, 1991).

Rama (2001a) finds a small number of studies on the impact of public sector employment on income inequality. For example, public sector wages in countries with a small formal sector, such as in Sub-Saharan Africa, could have a significant effect on private sector wages (Rama, 2000). Finally, the impact of separation costs on employment and on income distribution depends on the tightness of job security regulations. Fallon and Lucas (1991) have found that very strict regulations on job security have depressed labor demand in India and Zimbabwe. Also, it has been shown that separation costs—in the form of mandatory severance payments—may reduce the level of employment (Heckman and Pagés, 2000).

Rama (2003) analyzes the impact of labor market interventions on indicators of income inequality after controlling for some of their determinants.<sup>2</sup> He shows that social security programs help reduce income inequality. Collective bargaining, however, is less effective in improving income distribution, with a statistically significant impact only on the share of the second-richest quintile of the population. On the other hand, the “core” ILO conventions seem ineffective in reducing inequality.<sup>3</sup> In summary, he finds that countries pushing to adopt ILO labor standards, higher minimum wages, or to expand government employment, may not generate any significant effect on inequality.

Finally, Vanhoudt (1997) analyzes the impact of labor market policies on income inequality in OECD countries. He finds that the Gini coefficient is not affected by labor market policies. However, they affect other measures of inequality. Specifically, he finds that active

---

<sup>2</sup> Rama (2003) includes as determinants of income inequality educational attainment, civil liberties, and financial development, among others.

labor market policies—e.g., expenditures for public employment services, labor market training, and subsidized employment, among others—improve the income share of the bottom quintiles of the population and reduce the income gap between top and bottom quintiles. On the other hand, passive labor markets—i.e., income compensation schemes—have only a negligible impact.

### 3. Data and Methodology

In the present section we describe the database used in our regression analysis, as well as the estimation strategy. Since our discussion will draw heavily from Calderón and Chong (2004), we will present a brief description of both the data and the methodology used. For further detail, see the paper mentioned above.

#### 3.1 The Data<sup>4</sup>

To test whether labor regulations have been an effective tool to reduce income inequality, we use two recently developed databases on labor regulations: (a) the RA database (Rama and Artecona, 2002), and (b) the BDLLS database (Botero, Djankov, La Porta, López-de-Silanes and Shleifer, 2003).

##### 3.1.1 The RA Database

Rama and Artecona have collected data for 121 countries on labor market regulations and outcomes over the period 1945-49. The data are organized by 5-year period averages and distinguish between regulation on paper and regulation in practice. Regulation on paper—or *de jure* regulation—is approximated by the number of ILO standards ratified by the national labor laws.<sup>5</sup> On the other hand, regulation in practice—or *de facto* regulation—is approximated by information on categories such as minimum wages, conditions of work and benefits, trade unions and collective bargaining, and public sector employment. The distinction between *de jure* and *de facto* regulations is very important, since developing countries' ability to enforce the regulations stipulated in labor laws is quite limited (Squire and Suthiwart-Narueput, 1997).

---

<sup>3</sup> According to Rama, the “core” ILO conventions are those that call for the abolition of forced labor, the effective elimination of child labor, nondiscrimination in the workplace, and freedom of association and the right to collective bargaining.

<sup>4</sup> This sub-section draws heavily on Calderón and Chong (2004).

<sup>5</sup> Among the conventions ratified and included in this index, we have universal legislation on issues such as child labor, compulsory labor, equal remuneration for male and female workers, equal opportunity, the right of collective bargaining, and organization in unions, among others.

In order to define the aggregate indices of the overall extent of labor regulations in the economy, we follow the strategy pursued by Rama (1995) and Forteza and Rama (2001). We define an index of regulation on paper,  $L_0$ , as the cumulative number of ILO conventions ratified by a country over time. This index reflects the ideal regulatory framework of the country from an *institutionalist* point of view (Freeman, 1993), but it also captures the *thickness* of the labor code (Forteza and Rama, 2001). The  $L_0$  index includes the ratification of ILO conventions on minimum age of employment, compulsory labor, the abolition of forced labor, equal male-female remuneration, the right for collective bargaining, and discrimination or inequality of opportunity or conditions of employment on the basis of race, religion, sex, political opinion or social origin. However, the number of existing regulations does not give us information on the ability of the country to implement and enforce these regulations. For this reason, we require an index that reflects the extent of labor regulations instead of their number.

Rama (1995) constructs an aggregate index of regulations in practice using information on the following four categories: minimum wages (MW), mandated benefits (MB), trade unions (TU) and public sector employment (GE). Unfortunately, data on job separation costs is available only for a very limited sample of countries.<sup>6</sup> Following Rama (1995) and Forteza and Rama (2001), we construct two aggregate indices of labor regulations in practice, both including different proxies for these four dimensions. The first aggregate index of labor regulations in practice,  $L_1$ , is the simple average of the ratio of the minimum wage to unit labor costs in the manufacturing sector (MW), social security contributions as a percentage of salaries (MB), total trade union membership as a percentage of total labor force (TU), and the share of general government employment in total employment (GE). On the other hand, the second aggregate index of regulations in practice,  $L_2$ , is also the simple average of the ratio of minimum wage to income per capita (MW), the number of days of maternity leave for a first child born without complications (MB), the ratification of ILO Convention 87 that allows workers to organize in trade unions (TU), and the ratio of central government employment to total employment (GE).

In order to make all these variables comparable across countries, we normalized all the labor market regulation indicators so that their values range between 0 and 1. Countries with the highest (lowest) extent of labor regulation have a score of 1 (0). In addition, the aggregate

---

<sup>6</sup> Heckman and Pagés (2000) constructed data on job separation costs for Latin America and found that these costs have a substantial impact on the level of employment in the region.

indices of regulation in practice,  $L_1$  or  $L_2$ , are computed for countries with at least 2 of the 4 dimensions involved in the analysis.

### *3.1.2 The BDLLS Database*

Based on the labor codes of 85 countries across the world, BDLLS (2003) evaluated the degree of regulations in the labor markets. They specifically evaluated the extent of regulations stipulated in three types of labor laws: employment laws, industrial relations laws, and social security laws. We should note that we only have a cross-section of labor regulation indices for a broad sample of countries.

Employment laws encompass laws governing the employment contracts of individuals in the economy. This type of law specifically regulates individual labor contracts, terms of reference and termination of contracts, involving restrictions placed on alternative employment contracts, conditions of the employment contract and job security.

Industrial relations laws regulate the adoption, bargaining, and enforcement of collective agreements, the unionization of workers, and industrial actions by workers and employers. These laws address aspects of the worker-employer relationship such as collective bargaining, the participation of workers in company management, and the resolution of collective disputes by means such as strikes and lockouts.

Finally, social security laws involve the social response to quality-of-life conditions and requirements. Specifically, social security laws protect workers against the risk of disability, sickness and unemployment. It should be noted that, since most of these measures are drawn from labor codes, they are closer in spirit to *de jure* labor rigidities than the measures cited above.

### *3.1.3 Income Inequality and its Determinants*

The dependent variable in our regression analysis is the Gini coefficient. Our main source of data is the information gathered by Deininger and Squire (1996). However, we only have information from this source until 1995. For the final 5 years we extrapolated data for income shares and the Gini coefficient for the countries included in Milanovic (2002a, 2002b). In addition, for the countries not included in Milanovic's work, we generated information on the Gini coefficient based on the coefficient of variation of income and the income's linear correlation of income,

with ranks as in Milanovic (1997). We also use the income shares of top, bottom and middle quintiles of the population. This will allow us to analyze the robustness of our results to changes in the dependent variable as well as assess the impact of labor market policies on the income of the poor.

Following the empirical literature on income distribution (Milanovic, 2000; Gradstein, Milanovic and Ying, 2001; Calderón and Chong, 2001; Clarke, Xu and Zou, 2003), we choose the set of determinants of income inequality. We include the (log) level of GDP per capita as well as its square value. This variable is obtained from the Penn World Tables 6.1 compiled by Heston, Summers and Aten (2002). The squared specification of GDP per capita will allow us to test for the presence of the Kuznets curve, that is, whether income inequality rises in the early stages of development and declines in later stages. We also consider indicators of education like the level of secondary schooling from Barro and Lee (2001), and of financial depth such as the ratio of credit to the private sector to GDP (Beck, Demirgüç-Kunt and Levine, 2000). The number of physicians (per 1,000 people) is included as a proxy for improvements in the health sector. Macroeconomic instability is proxied by the CPI inflation rate, and the size of the modern sector is calculated as the share of industry and services in the economy's total value added.

### ***3.2 The Methodology***

#### *3.2.1 The Regression Framework*

Our main goal is to assess the impact of labor regulations on income distribution by running the following regression:

$$y_{it} = \mu_i + \eta_t + X_{it}\beta + L_{it}\Gamma + \xi_{it} \quad (1)$$

According to equation (1), income inequality in country  $i$  during period  $t$ ,  $y_{it}$ , depends upon a set of determinants described by the matrix  $X_{it}$ , as well as unobserved country and period-specific effects,  $\mu_i$  and  $\eta_t$ , respectively. Our set of long-term growth determinants follows the work of Milanovic (2000), Gradstein, Milanovic and Ying (2001) and Calderón and Chong (2001). Among the determinants of income inequality we include: the initial level of output per capita (in logs) and output per capita squared, human capital, financial depth, health, inflation, and the size of the modern sector.

We also included in our income inequality regression framework a set of variables that captures the extent of regulations in the labor markets, as represented by the matrix  $L_{it}$  in equation (1). This matrix  $L$  includes different indicators that focus on specific policies or institutions in the labor market such as minimum wages, mandatory benefits, trade union membership, government employment, social security laws, and collective bargaining, among others. The matrix  $L_{it}$  consists of a series of  $K$  labor regulations,  $\{\ell_{it}^k\}_{k=1}^K$ . The larger the values of these  $\{\ell_{it}^k\}_{k=1}^K$  variables, the more regulated labor markets are. We do not assume that labor regulations and outcomes are time-invariant, as we expect them to change over longer horizons.

We normalize these variables in such a way that they are equal to one (zero) if labor markets are fully regulated (deregulated).<sup>7</sup> If our dependent variable is the Gini coefficient, a negative estimate for the parameters in the  $\Gamma$  matrix implies that de-regulating labor markets may enhance the distribution of income.

There are additional problems when we attempt to run a regression of equation (1), that is, we may find that some variables in the  $L_{it}$  may be highly correlated with each other. In fact, trade unions and public employment display the highest correlation (0.8), whereas mandated benefits and minimum wages have a correlation of 0.5. In this case, we may be unable to identify the parameters of the  $\Gamma$  matrix. To address this issue, we create aggregate indices of labor market regulations as in Rama (1995) and Forteza and Rama (2001). We compute a simple average of the normalized values of our labor regulation indicators as described above.<sup>8</sup> Hence, we use the aggregate index of regulations in the labor market,  $\ell_{it}^A$ , to test the overall effects of labor market regulation on income inequality. We reformulate our income inequality regression equation in (1) as:

$$y_{it} = \mu_i + \eta_t + X_{it}\beta + \gamma_A \ell_{it}^A + \xi_{it} \quad (2)$$

---

<sup>7</sup> In order to aggregate the variables, we first need to normalize them since not all of them are expressed in comparable units. We have defined above our labor market rigidity indicator as  $\ell_{it}^k$ , for  $k=1, \dots, K$ . Next, we define  $\{\ell_{\min}^k\}$  and  $\{\ell_{\max}^k\}$  as the closest and farthest a country can get to perfect competition in the labor markets. Hence, we can define our normalized labor market rigidity indicator as  $\gamma_{it}^k = \frac{\ell_{it}^k - \ell_{\min}^k}{\ell_{\max}^k - \ell_{\min}^k}$ .

<sup>8</sup> In principle, we compute the average of  $J$  out of the  $K$  relevant labor market rigidities (where  $J \leq K$ ). Note that our aggregate index takes values between zero and one. But unless all of the labor market rigidities are perfectly

The nature and magnitude of the overall impact of labor market regulations on income inequality are captured by the sign and size of  $\gamma_A$ . However, individual regulations may have different consequences that may cancel each other to some extent in the aggregate. One of the shortcomings of a significant parameter estimate for  $\gamma_A$  is that its sign may not help in identifying the specific regulations that need to be reformulated. Hence, we still need to estimate the individual effect of different regulations as captured by the  $\gamma_j$  parameters.

If we replace the aggregate index  $\ell_{it}^A$  in (2) by one of our individual measures of labor market regulations, the coefficient estimate will be biased due to omitted variables. That is, the coefficient of the individual regulation will capture the effects of the labor market rigidity  $k$ , but also (partly) those of all of the other missing rigidities. Since they are likely to be correlated with each other, the value obtained for  $\gamma_k$  might be reflecting the effects of these other rigidities. We can partially solve this problem by defining “complementary” labor market regulations,  $\gamma_{it}^{-k}$ , as the average of the indicators that are different from  $k$ . This complementary variable can be used to control for all other labor market features, apart from  $\gamma_{it}^k$ , by using the following model:

$$y_{it} = \mu_i + \eta_t + X_{it}\beta + \gamma_k \gamma_{it}^k + \gamma_{-k} \gamma_{it}^{-k} + \xi_{it} \quad (3)$$

where the coefficient  $\gamma_k$  captures the effect of labor market rigidity  $k$  on long-term growth.

### 3.2.2 The Estimation Strategy<sup>9</sup>

We estimate our regression equation in two dimensions: cross-section and panel data. Our cross-section regressions are estimated using least squares with robust standard errors (White, 1980). Then we use an IV estimator where we control for the endogeneity of labor market regulations using a set of instruments outlined by BDLLS (2003). The outline of the IV strategy will be discussed when we analyze the panel data techniques.

For the panel estimation of equations (2) and (3), we first use a series of least-squares-based estimators: (i) the pooled OLS estimator, which is the simplest regression technique given

---

correlated with each other, the actual range of variation across countries should be significantly narrower for the aggregate measures than for any of the individual indicators.

<sup>9</sup> Here, we heavily draw on Calderón and Chong (2004).

that we do not account for either unobserved effects or endogeneity; (ii) the time-effects estimator—least squares with time dummies—where we can explain differences in income inequality across country due to differences in the extent of labor market regulations; and (iii) the within-group or country-effects estimator—least squares with country dummies—where we analyze the movement of income inequality indicators in a country in relation to changes in its labor market regulations.

To complement these least-squares-based estimation techniques, we control for endogenous regressors. Hence, we present several estimators from the family of the Instrumental Variables (IV). In general, because it is very likely that labor regulations are partly endogenous, we focus our final analysis on techniques that account for the endogeneity problems. We will tackle this issue using two different strategies.

Our first strategy will use IV techniques where we select “external instruments” for labor regulations, and we will present pooled IV estimates, IV with time effects, and IV with country effects. This set of instruments follows the literature on the choice of labor regulations as outlined by BDLS (2003). According to these authors, the choice of labor regulations across countries is explained by efficiency considerations, political power theories, and legal theories.

North (1981) claims that a set of regulations is usually chosen based on an *efficiency* criterion. The efficiency theory focuses on the distinction between regulation and social insurance. It has been argued that social insurance may be an efficient way to deal with market failures in countries with lower social marginal cost of tax revenues—i.e., richer countries (Becker and Mulligan, 1998). Poor countries regulate to protect workers from being mistreated by employers, while rich countries provide unemployment insurance, sick leave, and early retirement since they can raise taxes more cheaply to finance such operations (Blanchard, 2000). On the other hand, the efficiency theory may argue the opposite. Government officials may use labor regulations to force firms to hire and keep excess labor or to empower unions friendly with the government. In this case, countries with better governance have a comparative advantage at regulation relative to other forms of social control of business.

According to *political power* theories, institutions are designed to transfer resources from those out of power to those in political power (Olson, 1993). Hence, institutions would be inefficient and designed to be so by political leaders to help themselves and their favored groups. It is argued that regulations protecting workers are introduced by socialist, social-democratic,



and more generally leftist governments to benefit their political constituencies (Hicks, 1999). In addition, labor regulations are a response to the pressure from trade unions, and the degree of regulations should be higher when unions are more powerful. 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 (Djankov, La Porta, López-de-Silanes and Shleifer, 2002). Likewise, open economies may find it expensive to introduce regulations, since competition makes it less lucrative for governments to raise firms' regulatory costs (Ades and Di Tella, 1999).

Finally, *legal theories* suggest that the legal tradition is at the root of the way countries control economic activities (BDLLS, 2003). Common law countries tend to rely more on markets and contracts, civil law countries on regulation, and socialist countries on state ownership.<sup>10</sup> This implies that civil law countries and socialist law countries should regulate labor markets more extensively than common law countries. Common law countries may also have a less generous social security system since they rely on markets to provide insurance.

After this brief description of the different theories explaining the choice of labor regulation, our set of instruments is the following: (a) For efficiency purposes, we use (the log of) GDP per capita. (b) Testing the political power theories implies testing the significance of the index of institutionalized autocracy from the Polity IV Codebook (Marshall and Jaggers, 2003), the political orientation of the government and congress to the left (Beck, Demirgüç-Kunt and Levine, 2001), and measures of trade openness. (c) We include the dummy variables for countries with British common law, and German civil code to test the legal theories (La Porta, López-de-Silanes, A. Shleifer and Vishny, 1998).

---

<sup>10</sup> Common law emerged in England. It is mostly characterized by decision-making by juries and independent judges, stressing the role of judicial discretion as opposed to codes. Common law was transmitted to the British colonies (US, Canada, Australia, New Zealand, India, Pakistan, and other countries in Southeast Asia, East Africa, and the Caribbean). On the other hand, civil law evolved from Roman law in Western Europe and was incorporated into civil codes in France and Germany in the nineteenth century. It is characterized by less independent judiciaries, the relative unimportance of juries and a greater role of both substantive and procedural codes as opposed to judicial discretion. 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, Latin America, and parts of Asia. German codes became accepted in Germanic Western Europe and were transferred to Japan, China, Korea and Taiwan. Countries under the influence of the USSR adopted socialist law, while Sweden, Norway, Denmark, Iceland and Finland developed an indigenous Scandinavian legal tradition (BDLLS, 2003).

Our second way to tackle the endogeneity of labor rigidities is to use the GMM estimators developed by Arellano and Bover (1995) and Blundell and Bond (1998). This technique takes account of the following: First, the presence of unobserved period- and country-specific effects. Time effects are accounted for by the inclusion of period-specific dummy variables, whereas country-specific effects are dealt with via differencing given the dynamic nature of the regression. Second, we control for biases resulting from simultaneous or reverse causation. A more detailed reference to the GMM-IV techniques is presented in Appendix II of Calderón and Chong (2004).

## 4. Empirical Assessment

In the present section, we present the empirical assessment of the link between income inequality and regulation in the labor market. We gather data for a sample of 121 countries over the 1970-2000 period (see list of countries in Appendix). We present some basic statistics on income inequality and labor regulations as well as the correlation analysis. Next, we perform the regression analysis. Our assessment will be undertaken in two dimensions: (i) a cross-section analysis over the 1970-2000 period, and (ii) a panel data of 5-year average non-overlapping observations over the same period.

### 4.1. Basic Statistics

In Table 1 we report simple averages of the income inequality and the indicators of labor regulation across the world for a *cross-section of countries* over the 1970-2000 period. First we find that the distribution of income is more egalitarian among industrial nations (with an average Gini coefficient of 0.32) than among developing countries (0.41). Income distribution in Latin America (LAC) is more unequal on average than among developing countries considered as a whole. Second, labor codes in industrial countries (as proxied by the index  $L_0$  in the RA dataset) contain more regulations (i.e., ILO standards) than developing countries. Third, industrial countries have a greater ability to enforce regulations than developing countries (as displayed by indices  $L_1$  and  $L_2$  in the RA dataset), while Latin American countries are even less able to enforce regulations than the developing country average. Finally, we should note the following among the variables in the aggregate indices  $L_1$  and  $L_2$ : (a) The ratio of minimum wages to income per capita is larger in developing than in industrial countries. (b) The contribution to

social security as a percentage of workers' salaries is larger in industrial than in developing countries. (c) Trade unions are larger in industrial than in developing nations. (d) Public sector employment (proxied by employment in the central or general government) is larger in industrial countries than in developing nations.

Using the BDLLS dataset, we find that labor codes in developing countries contain more regulations regarding employment laws and industrial (collective) relations laws than in industrial countries. Latin American countries, in particular, appear to have even more regulations. On the other hand, labor codes in industrial countries contain more benefits in their social security laws. If we look further into the components of the different aggregate indices of laws protecting workers, we find that: (a) Regulations on the conditions of employment are significantly greater among developing nations than among industrial countries; (b) Industrial countries have more regulations regarding the participation of workers in management than developing countries, although the latter group has more regulations on collective bargaining and collective disputes; (c) Workers in industrial countries are more protected than in developing countries in terms of the benefits stipulated in their social security laws, especially in the area of unemployment benefits (for further details, see Table 1).

In Table 2, we present the evolution of the sample averages by decade over the 1970-2000 period. Our panel statistics are reported for the sample of all countries as well as for the sample of industrial and developing countries. We first find that income inequality has decreased over time regardless of the sample of countries evaluated. Gini coefficients have decreased (from 0.40 over the 1970s to 0.38 over the 1990s), income shares of top quintiles have decreased and income shares of middle and bottom quintiles have increased (see Table 2). Second, labor codes have incorporated more ILO standards over time. Specifically, the index  $L_0$  has increased from 0.27 in the 1970s to 0.32 in the 1990s for the full sample of countries. Third, the enforcement of labor regulations has also increased on average over time for the full sample of countries (whether we use the aggregate index  $L_1$  or  $L_2$ ). However, we observe that whereas labor markets were slightly deregulated among industrial countries in the 1990s (relative to the 1980s), labor regulations have increased among developing countries. Finally, a closer look into the components of the aggregate indices  $L_1$  and  $L_2$  yields the following: (a) The decline in the aggregate indices  $L_1$  and  $L_2$  among developing countries is mainly attributed to the reduction in public sector employment (as a percentage to total employment) and the reduction of the

percentage of workers in labor unions. (b) The increase in aggregate indices  $L_1$  and  $L_2$  among developing nations is explained by upward trends in minimum wages and social security contributions (for additional details, see Table 2).

## 4.2. Correlation Analysis

*Cross-Section Correlations.* In Table 3, we present the correlation analysis of income inequality and labor regulation indicators for the full sample of countries as well as industrial and developing countries.<sup>11</sup> For the sake of robustness, we use not only different sets of labor market rigidity indicators, but also different measures of income inequality, namely Gini coefficients and income shares. We first present the cross-section correlation between inequality and the labor regulation indicators in the RA dataset (see panel I of Table 3). In general, we find that labor regulation on paper and in practice (as proxied by the aggregate indices  $L_0$ ,  $L_1$  and  $L_2$ ) has a negative association with the Gini coefficient for the full sample of countries (see Figures 1 through 3). We should also note that these labor regulation indices have a negative correlation with the income shares of the top quintiles of the population and a positive association with the income shares of the middle and bottom quintiles (see Table 3). We specifically find that the aggregate index of “de facto” rigidities  $L_1$  has a larger negative correlation with the Gini coefficient than  $L_2$  (-0.46 vs. -0.12).

A further look at the correlation between income inequality (as proxied by the Gini coefficient) and the aggregate indices of labor regulation yields: (a) Minimum wages and trade union membership in the  $L_1$  index display the largest correlation with the Gini coefficient (approximately -0.5). (b) Trade union membership and public sector employment in the  $L_2$  index exhibit the largest negative association with the Gini coefficient (with a correlation coefficient of approximately -0.1). This preliminary evidence suggests that the countries with more labor regulations (independently of whether they are *de jure* or *de facto*) usually display lower levels of income inequality.

Next we analyze the cross-section correlation between income inequality and the labor regulation indicators in the BDLS dataset (see panel II of Table 3). We find that (the aggregate index of) employment laws (as well as their different sub-indices) are positively correlated with

---

<sup>11</sup> For reasons of space, we will not comment on the results for the full sample of countries. If necessary, we will point out some differences in the correlation analysis between industrial and developing countries.

the Gini coefficient—with the largest positive correlation displayed by regulations on job security (see Figure 4). Also, we find a negative association between the index of industrial relations laws and the Gini coefficient that is mainly driven by worker participation in management (see Figure 5). On the other hand, the other two components of that aggregate index (collective bargaining and collective disputes) exhibit a positive correlation with income inequality. Finally, we find a negative degree of association between social security laws and the Gini coefficient—displaying the largest negative coefficient among aggregate indices at -0.38 (see Figure 6). Among the different benefits covered by social security laws, unemployment benefits display the largest negative correlation with the Gini coefficient (-0.47), while sickness and health benefits display the smallest correlation (-0.17). In summary, we observe that countries with more egalitarian distribution usually display a better social security environment (with a legal framework that entails more old age, sickness and unemployment benefits than in other countries).

*Panel Data Correlations.* In Table 4 we display the panel data correlation analysis between the Gini coefficient and the different indicators of labor market regulations from the RA database. We find that for most of our indicators (aggregate indices and individual categories) there is an unconditional negative correlation between income inequality and regulations in the labor market. The correlation coefficient between  $L_0$  and the Gini coefficient is -0.32, while the correlation between  $L_1$  and income inequality is higher than the correlation with  $L_2$  (-0.47 as opposed to -0.20).<sup>12</sup>

Regarding the evolution of the correlation between these variables over decades, we first find that the correlation between income inequality and labor regulation on paper ( $L_0$ ) is negative in all decades, although it decreases from -0.34 in the 1970s to -0.30 in the 1990s. In the case of regulations in practice (as proxied by the aggregate indices  $L_1$  and  $L_2$ ), we find that after decreasing in the 1980s with respect to the previous decade, the correlations have increased in the 1990s (although very slightly for  $L_1$ ). Finally, note that regulations on minimum wages

---

<sup>12</sup> The largest negative correlation among the categories of the aggregate  $L_1$  index is trade union membership (-0.5), followed by general government employment (-0.36) and social security contribution (-0.3). The smallest correlation is exhibited by minimum wages (-0.10). On the other hand, maternity days of leave and trade union membership (as proxied by the ratification of ILO Convention 87) show a negative correlation with the Gini coefficient among the  $L_2$  components (-0.31 and -0.18, respectively), while minimum wages and central government employment display a positive correlation (0.16 and 0.03, respectively).

(whether they are normalized by industrial wages or income per capita) are positively associated with income inequality for industrial countries. For developing countries, the positive correlation has been found only for minimum wages normalized by income per capita. Of course, one needs to control for other determinants of inequality and the possible reverse causation in order to properly conclude whether labor regulations affect inequality.

### ***4.3 Cross-Section Regression Analysis***

We first analyze the impact of labor regulations on income inequality for our cross-section of 121 countries over the 1970-2000 period. We first analyze our cross-section OLS estimates, and then we instrument for labor regulation in our simple IV estimates. In Tables 5 and 6 we present the results of OLS and IV estimates, respectively, reporting the coefficient of all regressors, the two samples, and the three aggregate labor regulations variables constructed from each data set. In Table 7 we present both the OLS and IV estimates only of our coefficient of interest, namely the coefficient of the labor regulation indicator, for both samples.<sup>13</sup> In this table, we report the coefficient, its standard error and the coefficient of determination (R squared) of the full regression.<sup>14</sup> Our dependent variable is the Gini coefficient and, for robustness, we also report regression results for the income shares of selected quintiles of the population. Our discussion of the OLS results will focus on the Gini coefficient as the dependent variable.

Regulations on paper  $L_0$  do not seem to have a significant relationship with income inequality regardless of the sample and estimation technique used. The index  $L_1$  of regulations in practice has a negative coefficient that is significant only for the OLS regression for developing countries. On the other hand, the index  $L_2$  has no significant association with the Gini coefficient. Note that using our IV estimates, we find that the following variables have a robust negative impact on the Gini coefficient across samples: the share of unionized labor, the share of

---

<sup>13</sup> Following the strategy applied by Calderón and Chong (2004), we find instruments for the indicators of labor market rigidities according to the literature summarized by BDLLS (2003). Among our main findings is that labor markets are more regulated in richer countries, and in left-oriented governments. On the other hand, countries with common law (British legal tradition) are less regulated. In addition, labor regulations (proxied by employment laws, industrial relations laws and social security laws) are fewer in richer countries, in more open countries, and in countries with a British legal tradition. For the sake of brevity, we do not report the first stage regression results. However, they are available from the authors upon request.

<sup>14</sup> The income inequality regression includes the following explanatory variables: output per capita (in logs), output per capita squared, secondary schooling, liquid liabilities, inflation, size of the modern sector, physicians (per 1,000 people), and the different indicators of labor regulation. A full report of the regression results is available from the authors upon request.

general government employment, and the ratio of minimum wages to income per capita. Using their estimated coefficients in Table 7, we can infer that: (i) a one-standard-deviation increase in trade union membership and public employment will reduce the Gini coefficient (0-1) by 0.094 and 0.082, respectively. (b) An analogous increase in the ratio of minimum wages to income per capita will increase income inequality by 0.15 over the 30-year period. Finally, we find that, using the ratio between L1 (L2) and L0 as a measure of compliance, the first ratio significantly improves income inequality in both samples.

Using the BDLLS indicators of labor regulations (panel II of Table 7) we find that the aggregate index of employment laws has a positive and significant relationship with the Gini coefficient regardless of the sample and estimation technique used. This positive relationship is mainly explained by regulations on alternative employment contracts. Second, industrial relations laws have a positive association with inequality, although significant only using IV. This effect on inequality is attributed to regulations on collective bargaining and collective disputes. Finally, social security laws also have a positive relationship with inequality, which is significant only using OLS and mainly attributed to the significance of regulations on sickness and health benefits. Economically speaking, a one-standard-deviation increase in the aggregate index of employment laws and industrial relations laws will increase the Gini coefficient (0-1) by 0.02 over the 30-year period (that is, it moves from an average of 0.39 for the full sample of countries to 0.37). We should mention that an analogous increase in the regulations of both collective bargaining and disputes has a stronger negative impact on the distribution of income. That is, the Gini coefficient increases by 0.04 and 0.10 over the 30-year period.

#### ***4.4 Panel Data Regression Analysis***

After performing our cross-section regression analysis, we evaluate the relationship between labor market regulations and income inequality using a panel data set of 5-year non-overlapping observations during the 1970-2000 period. We take advantage of the additional dimension (i.e., the time dimension) to draw some inferences on the impact of labor market regulations on income inequality with robust panel data estimation techniques.

#### 4.4.1 Simple Techniques

We first characterize the relationship between labor market regulations and income inequality using simpler techniques such as pooled, time fixed-effects and country fixed effects OLS. While the pooled OLS does not take into account unobserved specific effects and endogeneity of the regressors, time fixed effects and country fixed effects isolate these unobserved effects. Next, we account for the possible endogeneity of our labor regulation variable by using some exogenous instruments. Here we report estimates using IV and IV with time effects and with fixed country effects. In the next subsection, we will present estimates using the GMM-IV system estimator developed by Arellano and Bover (1995) and Blundell and Bond (1998), which takes into account the unobserved effects and endogeneity by using both internal instruments and the exogenous instruments for the labor regulation indicators. Since the latter method is our preferred estimation technique, we will put more emphasis on these estimates for our discussion of the results.

Our regression analysis using OLS and IV estimates (pooled, time- and country-effects) of income inequality and aggregate indices labor regulations on paper ( $L_0$ ) and in practice ( $L_1$  and  $L_2$ ) are presented in Tables 8.1 to 8.3. Our specification includes other explanatory variables such as output per capita (in logs), and output per capita squared, secondary schooling, liquid liabilities (as percentage to GDP), the number of physicians (per 1,000 people), the CPI inflation rate, and the size of the modern sector.<sup>15</sup> Table 9 reports the coefficient estimate of the different measures of labor regulations.

Focusing on IV estimates—given that in principle they tackle the endogeneity problem—we find that labor regulations *de jure* generally have no significant relationship with income inequality in almost all cases. However,  $L_0$  has a negative and significant impact on inequality for the world sample using our country-effects estimator. Index  $L_1$  has a negative and significant impact on inequality in developing countries when using the country-effects estimator, while  $L_2$  has no significant impact on income distribution regardless of the sample. In addition, if we look at the components of  $L_1$ , the share of unionized labor and the size of public employment seem to drive down inequality among developing countries. On the other hand, when we analyze the

---

<sup>15</sup> In general, we find that there is a non-linear relationship between income inequality and output per capita that is consistent with the Kuznets Curve hypothesis (an U-inverted curve for the Gini coefficient). We also find that countries with more equal income distribution seem to also have a higher stock of human capital, deeper financial



components of  $L_2$ , we find that maternity leave and public employment have a negative and significant effect on the Gini coefficient for developing countries (see Table 9).

#### *4.4.2 The GMM-IV System Estimator*

In Section 4.4.1 we used simpler panel data techniques that allowed us to characterize the relationship between income inequality and labor market regulations. In this section, we will use the GMM-IV system estimator proposed by Arellano and Bover (1995) and Blundell and Bond (1998). The GMM-IV system estimator is our preferred estimator for two reasons. First, it accounts for (unobserved) country-specific effects that may bias our estimates. Specifically, we eliminate the control for the presence of time effects with time dummies, and we eliminate the country-specific effects by expressing our equation in differences. Second, this estimator controls for the possibility of endogenous regressors. We use both internal instruments (i.e., lagged levels as instrument for the differences, and lagged differences as instruments for the levels) and other exogenous instruments for labor regulations suggested by the theory (i.e., legal and institutional variables). To confirm the validity of our income inequality regressions, we compute the following specification tests: (a) a Sargan test of over-identifying restrictions, which tests the validity of the moment conditions that we set up to perform the IV regressions, and (b) tests of higher-order serial correlation.<sup>16</sup> In general, the specification tests validate our regressions for statistical inference. That is, our instruments are valid according to the Sargan test, and we reject the possibility of our errors displaying high-order serial correlation.

Before we discuss our results on the variable of interest (i.e., labor market regulations), we briefly comment on the coefficient estimates for the other explanatory variables. First, we find evidence in favor of the Kuznets hypothesis. That is, income inequality increases in the early stages of development, and then decreases in the later stages. On average, the turning point for the GDP (in logs) in the full sample of countries is 8.1 (approximately the initial level of GDP per capita in Morocco during the 1996-2000 period), whereas the mean in the regression sample is 8.6 (Colombia during the same period). Second, a larger stock of human capital (as proxied by a larger enrollment rate in secondary education or a larger number of physicians per

---

systems, better health systems, lower macroeconomic instability, and a larger agricultural sector (see Tables 8.1 to 8.3 for more details).

<sup>16</sup> Recall that, by construction, our error terms displays first-order serial correlation. For more technical details on the estimation technique, see Calderón and Chong (2004).

1,000 people) may help reduce income inequality. Deeper financial systems also drive down inequality. On the other hand, income inequality will increase if the country has higher inflation or if the modern sector is larger, although we should note that the coefficient estimate of inflation is not robust (see Table 10 for more details).

Now we turn to the effect of labor market regulations on income inequality. First, we find that regulations on paper, as proxied by  $L_0$ , have a positive and significant impact on the Gini coefficient for the full sample of countries, as well as for the sample of developing countries. Hence, income inequality is worsened by the adoption of a larger number of ILO standards. A one-standard-deviation increase in  $L_0$  (0.21 for the full sample of countries) would reduce the Gini coefficient by 0.01. On the other hand, an analogous increase in  $L_0$  for developing countries (0.18) would raise the Gini coefficient by 0.025. We should note that the standard deviation increase in  $L_0$ —0.21 for the full sample of countries—is much larger than the average observed in 1996-2000 with respect to 1976-80 (0.06). Such a change over that period has only occurred in Spain, Finland, Brazil and Uruguay (i.e., an increase of approximately 0.21 in the normalized number of ILO standards in 1996-2000 relative to 1976-80). However, we should take this result with caution. Reducing the number of regulations contained in the labor codes does not guarantee that the enforcement abilities of the regulators will be enhanced.

In contrast to our results for regulations on paper, we find that our indices of labor regulations in practice—either  $L_1$  or  $L_2$ —have a negative and significant coefficient estimate for the full sample of countries as well as among developing countries. Hence, labor market regulations in countries with better law-enforcement capabilities would reduce income inequality. In effect, we find that a one-standard-deviation increase in  $L_1$  (0.13) may reduce income inequality by 0.037. In addition, an analogous increase in  $L_2$  (0.15) may reduce the Gini coefficient by 0.033. An analogous increase in the extent of *de facto* regulations would cause a decline of the Gini coefficient between 0.028 (when  $L_1$  declines) and 0.032 (when  $L_2$  declines).<sup>17</sup>

In Table 11 we report the sensitivity analysis of our coefficient estimates of labor regulations to changes in (i) the indicator of labor regulation used in the regression. Here we use the different components of the aggregate indices used in Table 10. (ii) The proxy of income

---

<sup>17</sup> The  $L_1$  index in Jordan, South Africa and Bangladesh has increased more than one standard deviation, whereas the  $L_1$  index in Israel, Syria, United Kingdom, Australia and Bulgaria has decreased one standard deviation or more in 1996-00 relative to 1976-80. On the other hand, the  $L_2$  index in Bangladesh, Venezuela, Romania, and Turkey has

inequality is used as our dependent variable. Besides using the Gini coefficient, we use the income share of selected quintiles of the population.

We first analyze the impact of the different individual measures of labor market regulations on the Gini coefficient. The negative impact of  $L_1$  on income inequality for the full sample of countries is mainly attributed to a negative and significant impact of social security contribution, trade unions, and government employment. We specifically find that a one-standard-deviation increase in the contribution to the social security reduces the Gini coefficient by 0.008, whereas analogous increases in trade union membership and public employment generate declines in the Gini coefficient of 0.028 and 0.01, respectively. In the case of the negative impact of  $L_2$ , we find negative and significant effects on income inequality from maternity leave and trade unions—as proxied by the ratification of the ILO convention on organized labor. We find that a one-standard-deviation increase in mandated benefits—as proxied by a one-standard-deviation increase in days of maternity leave—may reduce the Gini coefficient by 0.01. When we restrict our regression analysis to developing countries, mandated benefits—i.e., social security contribution—drive the redistributive impact of  $L_1$ , whereas maternity leave and trade unions drive the redistributive effects of  $L_2$ . The impact of a one-standard-deviation increase in mandated benefits among developing nations generates a reduction in the Gini coefficient of 0.012 regardless of the proxy used.

We next analyze the impact of the different aggregate indices on the incomes shares of the top, middle, and bottom quintiles of the population. Our index of regulations on paper,  $L_0$ , has a positive but not significant impact on the income shares of the top quintiles. However, it has a negative and significant impact on the income share of the middle class, as proxied by the income share of the middle quintile, and the poor, as proxied by the share of the bottom quintile. A one standard-deviation-increase in the (normalized) number of ILO standards ratified would reduce the income shares of the middle and bottom quintiles by 0.005 and 0.003, respectively. For the sample of developing countries, regulations on paper have a positive and significant relationship with the income share of the second largest quintile (Top 40), and a negative and significant relationship with the middle and bottom quintiles. A one-standard-deviation increase

---

increased by at least one standard deviation, while the index for Niger, Bahrain, and New Zealand has decreased one standard deviation or more.

in  $L_0$  will raise the income share of the Top 40 by 0.03, and reduce the income share of the middle and bottom quintiles by 0.015 and 0.008, respectively.

On the other hand,  $L_1$  has a positive and significant impact on the top shares and a negative and significant effect on the middle and bottom shares, while social security contribution is the dimension that reduces the income share of the top quintiles and increases the income share of the middle quintile. Specifically, we find that a one-standard-deviation increase in social security contribution (0.22) may help reduce the income share of the top quintiles around 0.01, increase marginally the income share of the middle quintile by 0.003, and reduce the income share of the bottom quintiles between 0.008 and 0.04. Besides social security, active labor policies that raise public employment also work as an effective tool in raising the income share of the bottom quintiles of the population (although the economic impact is negligible). When we analyze the sample of developing countries, we find that the redistributive impact of  $L_1$  across income shares is mainly attributable to mandated benefits, proxied by the social security contribution as a percentage of salaries. The redistributive effects of higher social security contributions are larger than when we analyze the full sample of countries. A one-standard-deviation increase in the social security contribution would reduce the shares of the top quintiles between 0.018 and 0.02, increase the middle quintile by 0.01, and raise the income share of the bottom quintiles between 0.004 and 0.011.

In addition, an increase in labor market regulations—approximated by a decline in the  $L_2$  index—would reduce the income shares of the top quintiles of the population, and increase the income shares of the bottom quintiles. Its impact on the income share of the middle quintile is statistically negligible. The redistributive effects across income shares are basically attributed to mandated benefits, as proxied by the number of days of maternity leave. A one-standard-deviation increase in mandated benefits (i.e., maternity leave) would reduce the shares of the top quintiles between 0.013 and 0.0171, increase the middle quintile by 0.004, and raise the income share of the bottom quintiles between 0.005 and 0.01. We further find, consistent with the impact of  $L_1$  on developing countries, that the number of days of maternity leave (our proxy for mandated benefits) drives the redistributive effects of  $L_2$  in developing nations. The quantitative effects of higher mandated benefits are similar to those found for the full sample of countries.

Finally, an increase in our measures of compliance, as proxied by a lower gap between regulations on paper and in practice, will significantly improve income inequality. This

proposition holds for the full sample of countries when the gap is measured with  $L_1$ , and for the sample of developing countries regarding the measure of regulations in practice used. If the compliance in the extent of regulations in the labor markets improves, as proxied by a decrease in the gap between the  $L_0$  and  $L_1$  indices, the Gini coefficient would decrease between 0.03 (when using the full sample regressions) and 0.05 (when using the developing country regressions).

#### ***4.5 A Scorecard on the Redistributive Benefits of Labor Regulations***

Like Calderón and Chong (2004), we construct a scorecard to evaluate the redistributive benefits of labor market regulations for the full sample of countries and for the sample of developing countries. In this case, we evaluate the relationship between our indicators of labor regulations and inequality measures such as the Gini coefficient, and income shares of the top, middle and bottom 20 percent of the population. Again, we summarize the information from our different panel estimations by imputing the value of -1 (+1) to a negative (positive) and significant coefficient estimate, and 0 to a non-significant coefficient. The proportion of these negative and/or positive coefficients is presented in Table 12. Our discussion of the summary results will focus on the full sample of countries.

Regarding the relationship between labor regulations and the Gini coefficient, we find, first, that *de jure* regulations have a positive but weak relationship with income inequality. Second, *de facto* regulations—measured by either the  $L_1$  or  $L_2$  aggregate index—have a negative relationship with income inequality. The robust relationship between the  $L_1$  index and the Gini coefficient may be attributed to the redistributive effects of both trade union membership and public employment. On the other hand, mandated benefits (as proxied by the number of days of maternity leave) seem to explain the robust relationship between the  $L_2$  index and the Gini coefficient. Finally, our two measures of enforcement of the labor regulations seem to have a negative and robust relationship with the Gini coefficient.

On the other hand, the aggregate index  $L_1$  of “*de facto*” labor regulations is negatively associated with the income share of the top 20 percent of the population, and positively associated with the income shares of the bottom and middle quintiles of the population. The negative relationship between the  $L_1$  index and the income share of the top quintile may be explained by the negative robust relationship with trade union membership and public

employment. The positive relationship between  $L_1$  index and the income share of the bottom quintile may be explained by social security contribution. Finally, the aggregate index  $L_2$  of “de facto” labor regulations has a robust negative relationship with the income share of the top quintile of the population, and positive but weak associations with the income share of both middle and bottom quintiles of the population. The negative robust association with the income share of the top quintile may be attributed to mandated benefits, proxied by maternity leave rights, and trade union membership.

## 5. Conclusions

We have analyzed the relationship between labor regulations and income inequality. Because there are alternative ways of measuring regulations, and perhaps more importantly, there are alternative estimation techniques to (imperfectly) deal with simultaneity and probable measurement errors, finding robust results is not a straightforward process. Nonetheless, after using alternative econometric approaches, considering two data sets and two alternative samples, there are some results that do appear to be more robust.

The main results in our paper can be grouped into three types (see Table 12 for a scorecard of these results). First, we find that *de jure* regulations do not improve income distribution. The RA indicator does not have any consistent pattern, and the BDLS indicators either have no effect or worsen income distribution. Second, relative compliance with existing regulations, particularly the ratio  $L_1$  to  $L_0$  of the RA data set seems to improve income distribution. It is not possible to rule out that this measure is proxying for other factors such as institutional development. Third, *de facto* regulations are overall weakly associated with improving income inequality. In part, this result is due to the fact that different regulations have quite distinct effects. In particular, we find that a higher minimum wage tends to worsen income distribution, whereas the extent of trade unions, the importance of government employment and maternity leave improve wage distribution. As mentioned above, some of these positive results do not carry through to the bottom quintile of the population.

## References

- Ades, A., and R. Di Tella. 1999. "Rents, Competition, and Corruption." *American Economic Review* 89(4): 982-993.
- Arellano, M., and O. Bover. 1995. "Another Look at the Instrumental Variable Estimation of Error-Components Models." *Journal of Econometrics* 68: 29-51.
- Barro, R.J., and J-W. Lee. 2001. "International Data on Educational Attainment: Updates and Implications." *Oxford Economics Papers* 3: 541-563.
- Beck, T., A. Demirgüç-Kunt and R. Levine. 2000. "A New Database on Financial Development and Structure." Policy Research Paper 2147. Washington, DC, United States: World Bank.
- . 2001. "Law, Politics, and Finance." Working Paper 2585. Washington, DC, United States: World Bank.
- Becker, G.S., and C.B. Mulligan. 1998. "Deadweight Costs and the Size of Government." NBER Working Paper 6789. Cambridge, United States: National Bureau of Economic Research.
- Besley, T., and R. Burgess. 2002. "Can Labor Regulation Hinder Economic Performance? Evidence from India." London, United Kingdom: London School of Economics. Mimeographed document.
- Blanchard, O. 2000. *Macroeconomics*. Upper Saddle River, United States: Prentice Hall.
- Blundell, R., and S. Bond. 1998. "Initial Conditions and Moment Conditions in Dynamic Panel Data Models." *Journal of Econometrics* 87: 115-143.
- Botero, J., S. Djankov, R. La Porta, F. López-de-Silanes and A. Shleifer. 2003. "The Regulation of Labor." NBER Working Paper 9756. Cambridge, United States: National Bureau of Economic Research.
- Calderón, C., and A. Chong. 2001. "External Sector and Income Inequality in Interdependent Economies Using a Dynamic Panel Data Approach." *Economics Letters* 71: 225-231.
- . 2004. "Are Labor Market Rigidities an Obstacle for Long-Term Growth?" Santiago, Chile: Central Bank of Chile. Mimeographed document.
- Clarke, G., L.C. Xu and H.F. Zou. 2003. "Finance and Income Inequality: Test of Alternative Theories." World Bank Policy Research Working Paper 2984. Washington, DC, United States: World Bank.

- Deininger, K., and L. Squire. 1996. "A New Data Set Measuring Income Inequality." *World Bank Economic Review* 10(3): 565-591.
- Deininger, K., and L. Squire. 1998. "New Ways of Looking at Old Issues: Inequality and Growth." *Journal of Development Economics* 57: 259-287
- Djankov, S., R. La Porta, F. López-de-Silanes and A. Shleifer. 2002. "The Regulation of Entry." *Quarterly Journal of Economics* 117(1): 1-37.
- Emerson, M., and A. Dramais. 1988. *What Model for Europe?* Cambridge, United States: MIT Press
- Fallon, P.R., and R. Lucas. 1991. "The Impact of Changes in Job Security Regulations in India and Zimbabwe." *World Bank Economic Review* 5(3): 395-413.
- Forteza, A., and M. Rama. 2001. "Labor Market Rigidity and the Success of Economic Reforms across More than 100 Countries." Policy Research Working Paper 2521. Washington, DC, United States: World Bank, Development Research Group.
- Freeman, R.B. 1993. "Labor Market Institutions and Policies: Help or Hindrance to Economic Development." In: *Proceedings of the World Bank Conference on Development Economics, 1992*. Washington, DC, United States: World Bank.
- Galor, O., and D. Tsiddon. 1996. "Income Distribution and Growth: The Kuznets Hypothesis Revisited." *Economic Journal* 63(250): S103-S117.
- Gradstein, M., B. Milanovic and Y. Ying. 2001. "Democracy and Income Inequality: An Empirical Analysis." World Bank Policy Research Working Paper 2561. Washington, DC, United States: World Bank.
- Heckman, J.J., and C. Pagés. 2000. "The Cost of Job Security Regulation: Evidence from Latin American Labor Markets." NBER Working Paper 7773. Cambridge, United States: National Bureau of Economic Research.
- Heston, A., R. Summers and B. Aten. 2002. *Penn World Table Version 6.1*. Philadelphia, United States: Center for International Comparisons at the University of Pennsylvania.
- Hicks, A. 1999. *Social Democracy and Welfare Capitalism*. Ithaca, United States: Cornell University Press.
- Jenkins, S.P. 1995. "Accounting for Inequality Trends: Decomposition Analysis for the UK, 1971-86." *Economica* 62(245): 29-63.



- . 1996. "Recent Trends in the UK Income Distribution: What Happened and Why?" *Oxford Review of Economic Policy* 12(1): 29-46.
- Kuznets, S. 1955. "Economic Growth and Income Inequality." *American Economic Review* 45(1): 1-28.
- La Porta, R., F. López-de-Silanes, A. Shleifer, and R. Vishny. 1998. "Law and Finance." *Journal of Political Economy* 106: 1113-1155.
- Maloney, W.F., and J. Nuñez. 2001. "Measuring the Impact of Minimum Wages: Evidence from Latin America." World Bank Policy Research Working Paper 2597. Washington, D.C.: The World Bank
- Marshall, M.G., and K. Jaggers. 2003. "Polity IV Project: Political Regime Characteristics and Transitions, 1800-2001." College Park, Maryland, United States. University of Maryland, Center for International Development and Conflict Management (CIDCM). Mimeographed document. <http://www.cidcm.umd.edu/inscr/polity/index.htm>
- Milanovic, B. 1997. "A Simple Way to Calculate the Gini Coefficient, and Some Implications." *Economic Letters* 56: 45-49.
- . 2000. "Determinants of Cross-Country Income Inequality: An Augmented Kuznets Hypothesis." In: M. Uvalic and V. Franicevic, editors. *Equality, Participation, Transition: Essays in the Honor of Branko Horvat*. London, United Kingdom: St. Martin's.
- . 2002a. "True World Income Distribution, 1988 and 1993: First Calculation Based on Household Surveys Alone." *Economic Journal* 112: 51-92.
- . 2002b. "Worlds Apart: Inter-National and World Inequality 1950-2000." Washington, DC, United States: World Bank. Working Paper.  
<http://www.worldbank.org/research/inequality/pdf/Maksense4.pdf>
- Nelson, J. 1991. "Organized Labor, Politics, and Labor Market Flexibility in Developing Countries." *World Bank Research Observer* 6(1): 37-56.
- North, D. 1981. *Growth and Structural Change in Economic History*. New York, United States: Norton
- Olson, M. 1993. "Dictatorship, Democracy, and Development." *American Political Science Review* 87: 567-576

- Rama, M. 1995. "Do Labor Market Policies and Institutions Matter? The Adjustment Experience in Latin America and the Caribbean." *Labour* (Special Issue): S243-S268.
- . 2000. "Wage Misalignment in CFA Countries: Are Labor Market Policies to Blame?" *Journal of African Economies* 9(4): 475-511.
- . 2001a. "Globalization, Inequality, and Labor Market Policies." Washington, DC, United States: World Bank. Mimeographed document.
- . 2001b. "The Consequences of Doubling the Minimum Wage: the Case of Indonesia." *Industrial and Labor Relations Review* 54(4): 864-81.
- . 2003. "Globalization and Workers in Developing Countries." In: R. Hasan and D. Mitra, editors. *Trade and Labor: Issues, Perspectives and Experiences from Developing Asia*. Amsterdam, The Netherlands: North-Holland.
- Rama, M., and R. Artecona. 2002. "A Database of Labor Market Indicators Across Countries." Washington, DC, United States: World Bank. Manuscript.
- Saint-Paul, G. 1994. "Do Labor Market Rigidities Fulfill Distributive Objectives? Searching for the Virtues of the European Model." *IMF Staff Papers* 41: 624-642.
- . 1999. "Towards a Theory of Labor Market Institutions." Barcelona, Spain: Universitat Pompeu Fabra. Mimeographed document.
- Squire, L., and S. Suthiwart-Narueput. 1997. "The Impact of Labor Market Regulations." *World Bank Economic Review* 11(1): 119-144.
- Vanhoudt, P. 1997. "Do Labor Market Policies and Growth Fundamentals Matter for Income Inequality in OECD Countries?" *IMF Staff Papers* 44: 356-373.
- White, H.L. 1980. "A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity." *Econometrica* 48: 817-838.

## **Appendix 1.**

### **List of Countries**

**Industrial Countries (22):** Australia, Austria, Belgium, Canada, Switzerland, Germany, Denmark, Spain, Finland, France, United Kingdom, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, Norway, New Zealand, Portugal, Sweden, United States.

**Latin America and the Caribbean (21):** Argentina, The Bahamas, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Peru, Paraguay, El Salvador, Trinidad and Tobago, Uruguay, Venezuela.

**East Asia and the Pacific (12):** China, Hong Kong, Indonesia, Republic of Korea, Mongolia, Malaysia, Philippines, Papua New Guinea, Singapore, Thailand, Taiwan, Vietnam.

**Eastern Europe and Central Asia (17):** Bulgaria, Belarus, Czech Republic, Estonia, Croatia, Hungary, Kazakhstan, Kyrgyz Republic, Lithuania, Latvia, Poland, Romania, Russian Federation, Slovak Republic, Slovenia, Ukraine, Yugoslavia.

**Middle East and North Africa (21):** United Arab Emirates, Bahrain, Cyprus, Algeria, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Malta, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, Turkey, Yemen.

**South Asia (5):** Bangladesh, India, Sri Lanka, Nepal, Pakistan.

**Sub-Saharan Africa (23):** Burkina Faso, Botswana, Cote d'Ivoire, Ethiopia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Madagascar, Mali, Mauritania, Mauritius, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Tanzania, Uganda, South Africa, Zambia, Zimbabwe.

**Table 1.**  
**Income Inequality and Labor Market Regulations: Basic Statistics**  
**Cross-Section Sample of 121 Countries, 1970-2000**  
*Averages across Groups of Countries*

Variable	All	Industrial	Developing	East Asia	LAC	Chile
<b>0. Income Distribution (Deininger and Squire, 1996; Milanovic, 2000)</b>						
Gini Coefficient (0-1)	0.39	0.32	0.41	0.39	0.48	0.53
Income Shares by:						
Top 20%	46.4%	39.3%	48.9%	46.8%	55.0%	61.6%
Top 40%	67.5%	62.6%	69.3%	68.3%	74.7%	77.4%
Middle 20%	15.5%	17.8%	14.8%	15.0%	13.0%	12.0%
Bottom 40%	16.9%	19.6%	16.0%	16.7%	12.2%	10.6%
Bottom 20%	6.3%	7.0%	6.0%	6.1%	4.2%	3.9%
<b>I. Indicators of Labor Market Rigidity (Rama and Artecona, 2002)</b>						
(0) "De Jure" Index	0.30	0.49	0.25	0.09	0.34	0.33
(1) "De Facto" Index 1	0.28	0.36	0.25	0.18	0.25	0.17
(2) "De Facto" Index 2	0.29	0.32	0.28	0.14	0.32	0.08
(3) De Jure vs. De Facto						
L1 relative to L0	-0.04	-0.12	-0.01	0.08	-0.09	-0.16
L2 relative to L0	-0.02	-0.17	0.03	0.06	-0.02	-0.26
<b>II. Indicators of Labor Regulation (Botero, Djankov, La Porta, Lopez-de-Silanes and Shleifer, 2003)</b>						
(1) Employment Laws	1.53	1.36	1.60	1.39	1.79	1.46
(2) Industrial (Collective) Relations Law	1.25	1.22	1.26	1.12	1.44	1.18
(3) Social Security Laws	1.70	2.21	1.53	1.58	1.69	1.98

*Notes:* All variables are normalized. For the mean of the different sub-categories of the aggregate indices of labor institutions, see Calderon and Chong (2004).

**Table 2.**  
**Income Inequality and Labor Market Regulations: Basic Statistics over Decades**  
**Panel Data Sample of 121 Countries, 5-year Average Observations, 1970-2000**  
*Averages across Groups of Countries*

Variable	1970s				1980s				1990s			
	All	Developing	LAC	Chile	All	Developing	LAC	Chile	All	Developing	LAC	Chile
<b>0. Income Distribution (Deininger and Squire, 1996; Milanovic, 2000)</b>												
Gini Coefficient (0-1)	0.40	0.43	0.49	0.49	0.39	0.41	0.48	0.56	0.38	0.40	0.47	0.56
Income Shares by:												
Top 20%	47.4%	50.4%	53.9%	59.7%	46.3%	48.8%	55.3%	64.5%	45.7%	47.9%	56.0%	60.6%
Top 40%	68.4%	70.4%	75.0%	75.0%	67.5%	69.2%	74.4%	78.3%	66.9%	68.4%	74.8%	78.9%
Middle 20%	15.2%	14.2%	12.3%	13.8%	15.6%	14.8%	13.4%	11.6%	15.8%	15.2%	13.3%	10.9%
Bottom 40%	16.4%	15.4%	12.7%	11.2%	16.9%	16.1%	12.1%	10.1%	17.3%	16.4%	11.9%	10.2%
Bottom 20%	6.1%	5.8%	4.4%	4.2%	6.3%	6.1%	4.2%	3.9%	6.5%	6.2%	4.1%	3.7%
<b>I. Indicators of Labor Market Rigidity (Rama and Artecona, 2002)</b>												
(0) "De Jure" Index	0.27	0.23	0.30	0.32	0.29	0.25	0.34	0.32	0.32	0.27	0.39	0.36
(1) "De Facto" Index 1	0.27	0.24	0.24	0.15	0.27	0.25	0.26	0.17	0.28	0.26	0.24	0.20
(2) "De Facto" Index 2	0.28	0.27	0.31	0.06	0.29	0.27	0.33	0.06	0.30	0.29	0.32	0.11
(3) De Jure vs. De Facto												
L1 relative to L0	0.00	0.01	-0.06	-0.16	-0.02	0.00	-0.08	-0.15	-0.06	-0.03	-0.14	-0.16
L2 relative to L0	0.01	0.05	0.01	-0.26	-0.01	0.03	-0.01	-0.26	-0.04	0.01	-0.07	-0.26

See footnote 1.

**Table 3.**  
**Labor Market Regulations and Income Inequality: Cross-Section Correlation Analysis**  
*Cross-Section Sample of 121 countries, 1970-2000*

Variable	Full Sample of Countries						Developing Countries					
	Gini	Top 20	Top 40	Middle 20	Bottom 40	Bottom 20	Gini	Top 20	Top 40	Middle 20	Bottom 40	Bottom 20
<b>I. Indicators of Labor Market Rigidity (Rama and Artecona, 2002)</b>												
(0) "De Jure" Index	-0.28	-0.23	-0.25	0.29	0.20	0.17	-0.08	0.02	-0.05	0.15	-0.02	0.02
(1) "De Facto" Index 1	-0.46	-0.44	-0.44	0.36	0.43	0.36	-0.44	-0.39	-0.43	0.34	0.42	0.37
Minimum Wage 1/	-0.49	-0.47	-0.43	0.34	0.44	0.36	-0.48	-0.42	-0.42	0.29	0.44	0.38
Social Security Contribution	-0.08	-0.15	-0.13	0.15	0.10	0.08	-0.17	-0.28	-0.27	0.25	0.26	0.28
Trade Union Membership	-0.48	-0.46	-0.43	0.32	0.44	0.37	-0.42	-0.36	-0.36	0.24	0.38	0.33
General Govt. Employment	-0.41	-0.40	-0.38	0.34	0.36	0.27	-0.40	-0.33	-0.35	0.28	0.35	0.30
(2) "De Facto" Index 2	-0.12	-0.14	-0.13	0.16	0.09	0.04	-0.08	-0.08	-0.08	0.13	0.04	0.00
Minimum Wage 2/	-0.06	-0.08	-0.05	0.09	0.02	-0.04	0.00	0.00	0.03	0.03	-0.06	-0.11
Maternity Leave (# days)	0.24	0.06	0.06	-0.06	-0.06	-0.02	0.18	-0.05	-0.05	0.04	0.06	0.11
Ratification of ILO Conv. 87	-0.10	-0.12	-0.10	0.16	0.05	0.00	0.01	0.00	0.00	0.09	-0.06	-0.10
Central Govt. Employment	-0.09	0.02	0.03	-0.06	-0.01	-0.07	-0.03	0.18	0.18	-0.17	-0.16	-0.18
(3) De Jure vs. De Facto												
L1 relative to L0	-0.09	-0.14	-0.11	0.01	0.16	0.12	-0.36	-0.43	-0.39	0.20	0.46	0.36
L2 relative to L0	0.15	0.09	0.12	-0.15	-0.08	-0.11	-0.06	-0.16	-0.10	0.03	0.14	0.05
<b>II. Indicators of Labor Regulation (Botero, Djankov, La Porta, Lopez-de-Silanes and Shleifer, 2003)</b>												
(1) Employment Laws	0.10	0.09	0.06	-0.08	-0.05	-0.03	0.07	-0.03	0.01	0.00	-0.01	-0.08
Alternative Employment Contracts	0.07	0.02	0.03	-0.02	-0.03	-0.05	0.17	0.09	0.12	-0.09	-0.12	-0.16
Conditions of Employment	0.05	0.06	0.01	-0.02	0.00	0.05	-0.10	-0.17	-0.16	0.16	0.14	0.13
Job Security	0.10	0.10	0.10	-0.13	-0.08	-0.09	0.10	0.03	0.07	-0.07	-0.07	-0.14
(2) Industrial (Collective) Relations Law	-0.01	0.03	0.01	0.03	-0.04	-0.01	0.03	0.03	0.02	0.08	-0.07	-0.05
Collective Bargaining	0.11	0.13	0.11	-0.07	-0.12	-0.10	0.13	0.12	0.11	-0.07	-0.13	-0.14
Worker Participation in Management	-0.23	-0.23	-0.17	0.12	0.18	0.16	-0.12	-0.17	-0.11	0.11	0.09	0.12
Collective Disputes	0.14	0.23	0.11	0.02	-0.19	-0.13	0.05	0.14	0.02	0.14	-0.12	-0.09
(3) Social Security Laws	-0.38	-0.36	-0.35	0.39	0.29	0.19	-0.27	-0.21	-0.24	0.27	0.20	0.14
Old Age, Disability and Death Benefits	-0.23	-0.31	-0.25	0.29	0.20	0.07	-0.10	-0.15	-0.12	0.12	0.11	0.02
Sickness and Health Benefits	-0.17	-0.11	-0.15	0.22	0.10	0.05	-0.10	-0.03	-0.10	0.17	0.05	0.02
Unemployment Benefits	-0.47	-0.45	-0.42	0.41	0.37	0.28	-0.36	-0.31	-0.31	0.29	0.28	0.22

Notes: 1/ Minimum wages are normalized with the average labor cost in the manufacturing sectors. 2/ Minimum wages are normalized with the real income per capita. We should mention that all labor indicators are normalized as specified in the paper.

**Table 4.**  
**Labor Market Regulations and Income Inequality: Panel Data Correlation Analysis**  
**Income Inequality Indicator: Gini Coefficient (0-1)**  
*Panel Data of 121 countries, 5-year average observations, 1970-2000*

Variable	Full Sample of Countries				Developing Countries			
	70-00	70s	80s	90s	70-00	70s	80s	90s
<b>I. Indicators of Labor Market Rigidity (Rama and Artecona, 2002)</b>								
(0) "De Jure" Index	-0.3183	-0.3390	-0.3224	-0.2987	-0.1327	-0.1827	-0.1144	-0.1081
(1) "De Facto" Index 1	-0.4662	-0.5071	-0.4468	-0.4531	-0.4308	-0.4561	-0.3871	-0.4487
Minimum Wage 1/	-0.0988	-0.1308	-0.0635	-0.1121	-0.1813	-0.2068	-0.1002	-0.2450
Social Security Contribution	-0.2987	-0.2245	-0.2948	-0.3429	-0.2387	-0.1736	-0.2169	-0.2806
Trade Union Membership	-0.5001	-0.5959	-0.4957	-0.4419	-0.4577	-0.5549	-0.4483	-0.4038
General Govt. Employment	-0.3622	-0.3782	-0.3340	-0.3818	-0.2498	-0.2278	-0.1669	-0.3480
(2) "De Facto" Index 2	-0.2005	-0.2391	-0.1491	-0.2044	-0.1647	-0.1897	-0.0712	-0.2087
Minimum Wage 2/	0.1586	0.1716	0.1759	0.1558	0.0718	0.0869	0.1060	0.0620
Maternity Leave (# days)	-0.3120	-0.3581	-0.3248	-0.2881	-0.3373	-0.4083	-0.3426	-0.3272
Ratification of ILO Conv. 87	-0.1756	-0.1869	-0.1544	-0.1710	-0.0833	-0.0874	-0.0355	-0.0996
Central Govt. Employment	0.0280	0.0893	0.0682	-0.0882	0.1508	0.2841	0.1739	-0.0035
(3) De Jure vs. De Facto								
L1 relative to L0	-0.0183	0.0333	-0.0087	-0.0750	-0.2641	-0.1467	-0.2588	-0.3618
L2 relative to L0	0.1733	0.1869	0.2270	0.1216	-0.0451	-0.0075	0.0239	-0.1257

1/ 2/ See footnote in Table 3.

**Table 5.**  
**OLS Cross-Country Regression Analysis between Income Inequality and Labor Market Regulations**  
*Dependent Variable: Gini Coefficient (0-1)*

	Full Sample			Developing Countries			Full Sample			Developing Countries		
	[L0]	[L1]	[L2]	[L0]	[L1]	[L2]	[EL0]	[IR0]	[SS0]	[EL0]	[IR0]	[SS0]
Constant	0.362 (0.88)	-0.166 (0.85)	0.354 (0.94)	0.763 (1.08)	-0.375 (1.05)	0.700 (1.16)	0.235 (1.04)	0.460 (1.05)	0.188 (0.86)	0.534 (1.23)	0.866 (1.25)	0.373 (1.02)
Output per capita (logs)	0.125 ** (0.06)	0.118 ** (0.06)	0.119 ** (0.05)	0.143 ** (0.07)	0.175 ** (0.07)	0.148 ** (0.06)	0.057 ** (0.03)	0.056 ** (0.03)	0.058 ** (0.02)	0.110 ** (0.03)	0.170 ** (0.03)	0.163 ** (0.03)
Output per capita squared	-0.008 ** (0.00)	-0.007 ** (0.00)	-0.007 ** (0.00)	-0.009 ** (0.00)	-0.010 ** (0.00)	-0.009 ** (0.00)	-0.003 ** (0.00)	-0.003 ** (0.00)	-0.003 ** (0.00)	-0.008 ** (0.00)	-0.011 ** (0.00)	-0.010 ** (0.00)
Economic Growth	-0.958 * (0.62)	-0.911 * (0.60)	-1.016 * (0.62)	-0.766 * (0.47)	-0.771 * (0.48)	-0.779 * (0.48)	-1.692 ** (0.79)	-1.694 ** (0.83)	-1.741 ** (0.71)	-0.911 ** (0.45)	-0.804 ** (0.39)	-1.482 ** (0.71)
Secondary Schooling	-0.020 * (0.01)	-0.020 * (0.01)	-0.021 * (0.01)	-0.028 * (0.02)	-0.034 * (0.02)	-0.027 * (0.01)	-0.016 * (0.01)	-0.020 * (0.01)	-0.019 * (0.01)	-0.018 (0.04)	-0.035 (0.04)	-0.047 (0.04)
Liquid Liabilities	-0.015 (0.03)	-0.023 (0.03)	-0.019 (0.02)	-0.007 (0.04)	-0.013 (0.04)	-0.010 (0.04)	-0.002 (0.03)	-0.013 (0.03)	-0.001 (0.02)	0.033 (0.04)	0.001 (0.05)	0.010 (0.04)
Inflation Rate	0.079 ** (0.04)	0.076 ** (0.04)	0.080 ** (0.04)	0.069 * (0.04)	0.072 * (0.04)	0.085 ** (0.04)	0.055 * (0.04)	0.064 * (0.03)	0.078 * (0.04)	0.049 * (0.03)	0.058 * (0.03)	0.088 ** (0.04)
Modern Sector	0.294 * (0.16)	0.274 * (0.15)	0.295 * (0.16)	0.285 * (0.16)	0.279 * (0.16)	0.289 * (0.16)	0.265 * (0.17)	0.299 * (0.19)	0.262 * (0.17)	0.261 (0.18)	0.312 * (0.19)	0.216 (0.17)
Physicians per 1000 people	-6.117 ** (2.17)	-4.222 ** (1.55)	-5.461 ** (2.00)	-6.550 ** (2.68)	-5.486 ** (2.43)	-5.887 ** (2.53)	-6.722 ** (1.99)	-6.569 ** (1.91)	-7.964 ** (2.06)	-7.704 ** (2.40)	-6.712 ** (2.49)	-9.537 ** (2.50)
Labor Regulation	0.040 (0.07)	-0.123 * (0.07)	0.026 (0.08)	0.084 (0.10)	-0.215 * (0.11)	0.047 (0.09)	0.054 ** (0.02)	0.022 (0.02)	0.043 ** (0.02)	0.084 ** (0.03)	0.031 (0.03)	0.058 ** (0.03)
No. Observations	68	67	68	53	52	53	53	53	53	38	38	38
R**2	0.407	0.417	0.405	0.227	0.241	0.221	0.480	0.452	0.482	0.349	0.264	0.341
Turning Point	8.0	8.6	8.1	8.4	8.6	8.5	8.5	8.3	8.6	7.2	7.8	8.0

Note: Numbers in parenthesis below the coefficients are standard errors. \* (\*\*) indicates that the explanatory variable is statistically significant at the 10 (5) percent level.



**Table 6.**  
**IV Cross-Country Regression Analysis between Income Inequality and Labor Market Regulations 1/**  
*Dependent Variable: Gini Coefficient (0-1)*

	Full Sample			Developing Countries			Full Sample			Developing Countries		
	[L0]	[L1]	[L2]	[L0]	[L1]	[L2]	[EL0]	[IR0]	[SS0]	[EL0]	[IR0]	[SS0]
Constant	0.409 (0.87)	-0.039 (0.86)	0.495 (0.92)	0.609 (1.08)	0.062 (1.05)	0.863 (1.18)	0.372 (1.08)	0.402 (1.08)	0.354 (1.06)	1.170 (1.26)	0.890 (1.22)	0.863 (1.25)
Output per capita (logs)	0.077 ** (0.02)	0.079 ** (0.02)	0.059 ** (0.02)	0.049 * (0.03)	0.052 * (0.03)	0.063 * (0.03)	0.068 ** (0.03)	0.052 ** (0.02)	0.060 ** (0.03)	0.317 ** (0.03)	0.295 ** (0.03)	0.304 ** (0.03)
Output per capita squared	-0.004 ** (0.00)	-0.004 ** (0.00)	-0.003 ** (0.00)	-0.003 ** (0.00)	-0.002 ** (0.00)	-0.003 ** (0.00)	-0.004 * (0.00)	-0.003 * (0.00)	-0.004 * (0.00)	-0.018 * (0.01)	-0.017 * (0.01)	-0.018 * (0.01)
Economic Growth	-1.001 ** (0.17)	-1.048 ** (0.17)	-0.966 ** (0.18)	-0.779 ** (0.09)	-0.905 ** (0.08)	-0.719 ** (0.09)	-1.159 ** (0.09)	-1.188 ** (0.09)	-1.096 ** (0.09)	-1.154 ** (0.21)	-1.552 ** (0.27)	-1.060 ** (0.22)
Secondary Schooling	-0.021 * (0.01)	-0.023 * (0.01)	-0.022 * (0.01)	-0.028 * (0.02)	-0.027 * (0.02)	-0.024 * (0.01)	-0.012 * (0.01)	-0.017 * (0.01)	-0.018 * (0.01)	-0.027 * (0.01)	-0.037 * (0.02)	-0.029 * (0.02)
Liquid Liabilities	-0.033 (0.04)	-0.035 (0.04)	-0.028 (0.03)	-0.030 (0.06)	-0.018 (0.06)	-0.030 (0.06)	-0.002 (0.03)	-0.013 (0.03)	-0.010 (0.03)	-0.072 (0.06)	-0.103 * (0.06)	-0.052 (0.06)
Inflation Rate	0.078 ** (0.04)	0.074 * (0.04)	0.079 ** (0.04)	0.077 ** (0.04)	0.077 ** (0.04)	0.078 ** (0.04)	0.060 (0.04)	0.045 (0.04)	0.058 (0.04)	0.065 * (0.04)	0.051 (0.04)	0.061 (0.04)
Modern Sector	0.300 * (0.16)	0.251 * (0.16)	0.298 * (0.16)	0.304 * (0.16)	0.302 * (0.17)	0.305 * (0.16)	0.275 * (0.18)	0.302 * (0.18)	0.276 * (0.18)	0.278 * (0.16)	0.302 * (0.17)	0.255 * (0.17)
Physicians per 1000 people	-5.332 ** (1.93)	-4.734 ** (1.76)	-5.768 ** (2.12)	-5.675 ** (2.56)	-4.788 ** (2.41)	-6.428 ** (2.76)	-7.813 ** (2.14)	-7.463 ** (2.11)	-6.840 ** (2.22)	-9.743 ** (2.44)	-9.468 ** (2.36)	-8.566 ** (2.80)
Labor Regulation	-0.008 (0.18)	-0.125 (0.23)	0.128 (0.28)	0.047 (0.21)	-0.055 (0.30)	0.258 (0.36)	0.092 * (0.05)	0.058 * (0.03)	0.062 (0.06)	0.151 ** (0.06)	0.096 ** (0.04)	0.107 (0.08)
No. Observations	66	65	66	51	50	51	51	51	51	36	36	36
R**2	0.407	0.409	0.409	0.216	0.210	0.225	0.482	0.479	0.456	0.359	0.342	0.285
Turning Point	9.6	9.4	9.4	9.7	10.8	10.6	8.6	8.3	8.4	8.8	8.5	8.6

1/ Our set of instruments for the labor indicators consists of: the level of development, trade openness adjusted by geographic variables, political orientation of the government to the left, British legal origin, German legal origin, and institutionalized autocracy. The set of instruments was chosen from the existing literature, following Botero et al. (2003).

Note: Numbers in parenthesis below the coefficients are standard errors. \* (\*\*) indicates that the explanatory variable is statistically significant at the 10 (5) percent level.

Table 7.

# Cross-Country Regression Analysis between Income Inequality and Labor Market Regulations 1/ Dependent Variable: Gini Coefficient (0-1)

Labor Regulation Indicators	Full Sample of Countries						Developing Countries					
	Least Squares 2/			Instrumental Variables 3/			Least Squares 2/			Instrumental Variables 3/		
	Coeff.	Std. Dev.	R**2	Coeff.	Std. Dev.	R**2	Coeff.	Std. Dev.	R**2	Coeff.	Std. Dev.	R**2
<b>I. Rama and Artecona (2002) Indicators</b>												
(0) "De Jure" Index	0.040	(0.07)	0.41	-0.008	(0.18)	0.41	0.084	(0.10)	0.23	0.047	(0.21)	0.22
(1) "De Facto" Index 1	-0.123	(0.07) *	0.42	-0.125	(0.23)	0.41	-0.215	(0.11) *	0.24	-0.055	(0.30)	0.21
Minimum Wage 1/	0.059	(0.05)	0.53	0.265	(0.24)	0.54	0.018	(0.06)	0.38	0.351	(0.28)	0.40
Social Security	-0.071	(0.04) *	0.42	0.107	(0.16)	0.42	-0.038	(0.07)	0.23	0.176	(0.19)	0.22
Trade Union	-0.077	(0.06)	0.42	-0.421	(0.21) **	0.44	-0.144	(0.09) *	0.25	-0.399	(0.26) *	0.25
General Govt. Employment	-0.083	(0.05) *	0.44	-0.444	(0.25) *	0.44	-0.186	(0.08) **	0.30	-0.787	(0.38) **	0.29
(2) "De Facto" Index 2	0.026	(0.08)	0.41	0.128	(0.28)	0.41	0.047	(0.09)	0.22	0.258	(0.36)	0.23
Minimum Wage 2/	0.130	(0.10)	0.51	1.011	(0.33) **	0.54	0.118	(0.11)	0.36	1.623	(0.49) **	0.42
Maternity Leave (# days)	-0.023	(0.08)	0.41	-0.466	(0.36)	0.43	-0.138	(0.09) *	0.24	-1.372	(0.71) *	0.28
Ratification of ILO Conv. 87	-0.004	(0.02)	0.41	0.031	(0.10)	0.41	0.011	(0.03)	0.22	0.066	(0.13)	0.22
Central Govt. Employment	-0.069	(0.09)	0.39	-0.120	(0.22)	0.39	-0.109	(0.10)	0.20	0.078	(0.37)	0.21
(3) De Jure vs. De Facto												
L1 relative to L0	-0.077	(0.05) *	0.42	-0.495	(0.23) **	0.44	-0.152	(0.08) *	0.25	-0.582	(0.29) **	0.26
L2 relative to L0	-0.013	(0.08)	0.40	0.134	(0.33)	0.41	-0.014	(0.11)	0.22	0.107	(0.41)	0.22
<b>II. Botero et al. (2002) Indicators</b>												
(1) Employment Laws	0.054	(0.02) **	0.480	0.092	(0.05) *	0.482	0.084	(0.03) **	0.349	0.151	(0.06) **	0.359
Alternative Employment Contracts	0.105	(0.06) *	0.490	0.239	(0.22)	0.473	0.175	(0.08) **	0.375	0.479	(0.34)	0.339
Conditions of Employment	0.046	(0.06)	0.480	0.185	(0.13)	0.497	0.062	(0.10)	0.350	0.282	(0.16) *	0.379
Job Security	0.001	(0.05)	0.492	0.098	(0.12)	0.503	0.022	(0.05)	0.372	0.181	(0.15)	0.386
(2) Industrial (Collective) Relations Law	0.022	(0.02)	0.452	0.058	(0.03) *	0.479	0.031	(0.03)	0.264	0.096	(0.04) **	0.342
Collective Bargaining	0.049	(0.04)	0.459	0.152	(0.08) *	0.491	0.071	(0.05)	0.278	0.234	(0.11) **	0.360
Worker Participation in Management	-0.021	(0.03)	0.476	-0.173	(0.15)	0.515	-0.012	(0.04)	0.291	0.064	(0.15)	0.293
Collective Disputes	0.098	(0.06) *	0.469	0.602	(0.25) **	0.537	0.075	(0.10)	0.270	0.342	(0.15) **	0.382
(3) Social Security Laws	0.043	(0.02) **	0.482	0.062	(0.06)	0.456	0.058	(0.03) **	0.341	0.107	(0.08)	0.285
Old Age, Disability and Death Benefits	0.052	(0.07)	0.482	0.208	(0.49)	0.481	0.023	(0.10)	0.343	0.639	(0.63)	0.358
Sickness and Health Benefits	0.077	(0.04) **	0.498	0.277	(0.17) *	0.470	0.094	(0.04) **	0.368	0.208	(0.12) *	0.299
Unemployment Benefits	-0.005	(0.04)	0.501	-0.103	(0.20)	0.465	0.014	(0.04)	0.363	0.014	(0.21)	0.365

1/ We report the regression coefficient for the indicator of labor rigidity according to the equations (2) and (3) in the text. Our control variables are: output per capita (in logs), output per capita squared, secondary schooling, liquid liabilities, inflation, size of the modern sector, physicians (per 1000 people), and the labor regulation indicator.

2/ We report standard errors robust to autocorrelation and heteroskedasticity (White, 1980)

3/ Our set of instruments for the labor indicators consists of: the level of development, trade openness adjusted by geographic variables, political orientation of the government to the left, British legal origin, German legal origin, and institutionalized autocracy. The set of instruments was chosen from the existing literature, following Botero et al. (2003).

Full regression results and standard errors of the coefficients of the labor regulation variables are not reported for reasons of space, although they are available from the authors upon request.

Finally, \* (\*\*) indicates that the indicator of labor regulation is significant at the 10 (5) percent level.

**Table 8.1.**  
**Panel Data Regression Analysis between Income Inequality and Labor Market Regulations**  
**The Impact of Regulations in Paper ("De Jure" Regulations)**  
*Dependent Variable: Gini Coefficient (0-1)*

Variable	Full Sample of Countries						Sample of Developing Countries					
	Least Squares			Instrumental Variables			Least Squares			Instrumental Variables		
	Pooled	F-E (Time)	F-E (Country)	Pooled	F-E (Time)	F-E (Country)	Pooled	F-E (Time)	F-E (Country)	Pooled	F-E (Time)	F-E (Country)
Constant	-0.459 (0.32)	...	...	-0.611 * (0.33)	...	...	-0.583 (0.40)	...	...	-1.214 ** (0.47)	...	...
Output per capita (in logs)	0.180 ** (0.08)	0.181 ** (0.09)	0.068 (0.12)	0.221 ** (0.08)	0.214 ** (0.09)	0.112 (0.14)	0.200 ** (0.10)	0.255 ** (0.11)	0.138 (0.15)	0.372 ** (0.12)	0.455 ** (0.14)	0.232 (0.19)
Output per capita squared	-0.011 ** (0.00)	-0.010 ** (0.01)	-0.004 (0.01)	-0.014 ** (0.00)	-0.013 ** (0.01)	-0.007 (0.01)	-0.012 * (0.01)	-0.014 ** (0.01)	-0.008 (0.01)	-0.024 ** (0.01)	-0.028 ** (0.01)	-0.014 (0.01)
Economic Growth	-0.229 (0.16)	-0.164 (0.15)	0.135 (0.10)	-0.338 ** (0.17)	-0.282 * (0.16)	0.116 (0.11)	-0.143 (0.17)	-0.060 (0.17)	0.172 (0.13)	-0.247 (0.17)	-0.158 (0.18)	0.143 (0.14)
Secondary Schooling	-0.021 ** (0.01)	-0.027 ** (0.01)	-0.018 ** (0.01)	-0.019 ** (0.01)	-0.025 ** (0.01)	-0.020 ** (0.01)	-0.027 ** (0.01)	-0.039 ** (0.01)	-0.031 ** (0.01)	-0.025 ** (0.01)	-0.039 ** (0.01)	-0.033 ** (0.01)
Liquid Liabilities	-0.040 ** (0.02)	-0.050 ** (0.02)	0.026 (0.02)	-0.048 ** (0.02)	-0.056 ** (0.02)	0.025 (0.02)	-0.047 ** (0.02)	-0.048 ** (0.02)	0.026 (0.03)	-0.067 ** (0.02)	-0.074 ** (0.02)	0.026 (0.03)
Physicians (per 1,000 people)	-3.773 ** (0.84)	-4.521 ** (0.90)	1.260 * (0.76)	-3.117 ** (0.82)	-3.785 ** (0.85)	0.741 (0.72)	-5.565 ** (1.02)	-6.157 ** (1.12)	2.331 * (1.29)	-4.359 ** (1.04)	-4.832 ** (1.07)	1.145 (1.23)
Inflation	0.022 (0.02)	0.026 * (0.02)	-0.011 (0.01)	0.018 (0.02)	0.022 (0.02)	-0.010 (0.01)	0.022 (0.02)	0.034 * (0.02)	-0.013 (0.01)	0.022 (0.02)	0.033 * (0.02)	-0.011 (0.01)
Size of the Modern Sector	0.294 ** (0.06)	0.257 ** (0.07)	-0.088 (0.08)	0.303 ** (0.06)	0.268 ** (0.07)	-0.090 (0.08)	0.294 ** (0.06)	0.263 ** (0.07)	-0.075 (0.09)	0.316 ** (0.06)	0.278 ** (0.07)	-0.065 (0.10)
Labor Rigidity Indicator	0.022 (0.03)	0.024 (0.03)	-0.110 * (0.06)	0.033 (0.07)	0.015 (0.07)	-0.030 (0.15)	0.067 * (0.04)	0.055 (0.04)	-0.154 * (0.09)	0.102 (0.09)	0.055 (0.08)	0.007 (0.19)
No. Observations	327	327	327	312	312	312	263	263	263	248	248	248
R**2	0.378	0.410	0.908	0.396	0.425	0.906	0.267	0.303	0.892	0.296	0.332	0.889
Adjusted R**2	0.361	0.383	0.847	0.378	0.398	0.840	0.241	0.263	0.787	0.269	0.292	0.769
GDP Turning Point	7.97	8.68	8.08	7.78	8.40	8.23	8.52	8.87	8.46	7.84	8.20	8.25

Note: Numbers in parenthesis below the coefficients are standard errors robust to autocorrelation and heteroskedasticity (White, 1980). For the set of instruments see footnote 3 in Table 7.

\* (\*\*) indicates that the explanatory variable is statistically significant at the 10 (5) percent level.

**Table 8.2.**  
**Panel Data Regression Analysis between Income Inequality and Labor Market Regulations**  
**The Impact of Regulations in Practice Using the L1 Aggregate Index of "De Facto" Regulations**  
*Dependent Variable: Gini Coefficient (0-1)*

	Full Sample of Countries						Sample of Developing Countries					
	Least Squares			Instrumental Variables			Least Squares			Instrumental Variables		
	Pooled	F-E (Time)	F-E (Country)	Pooled	F-E (Time)	F-E (Country)	Pooled	F-E (Time)	F-E (Country)	Pooled	F-E (Time)	F-E (Country)
Constant	-0.560 *	...	...	-0.825 **	...	...	-0.819 **	...	...	-1.411 **	...	...
	(0.31)			(0.32)			(0.38)			(0.44)		
Output per capita	0.217 **	0.213 **	0.049	0.277 **	0.262 **	0.161	0.279 **	0.311 **	0.071	0.423 **	0.474 **	0.252
(in logs)	(0.08)	(0.08)	(0.11)	(0.08)	(0.09)	(0.12)	(0.09)	(0.11)	(0.15)	(0.11)	(0.14)	(0.17)
Output per capita squared	-0.013 **	-0.012 **	-0.003	-0.017 **	-0.015 **	-0.008	-0.016 **	-0.017 **	-0.004	-0.026 **	-0.028 **	-0.013
	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Economic Growth	-0.159	-0.116	0.129	-0.284 *	-0.234 *	0.068	-0.072	-0.034	0.170	-0.165	-0.111	0.077
	(0.16)	(0.14)	(0.10)	(0.16)	(0.16)	(0.10)	(0.16)	(0.16)	(0.12)	(0.17)	(0.18)	(0.13)
Secondary Schooling	-0.025 **	-0.029 **	-0.023 **	-0.024 **	-0.030 **	-0.017 **	-0.034 **	-0.043 **	-0.035 **	-0.030 **	-0.042 **	-0.031 **
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Liquid Liabilities	-0.058 **	-0.065 **	0.035 *	-0.060 **	-0.069 **	0.025	-0.064 **	-0.062 **	0.031	-0.079 **	-0.081 **	0.026
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.03)
Physicians (per 1,000 people)	-1.883 **	-2.590 **	0.780	-2.503 **	-3.147 **	0.780	-1.852 **	-2.582 **	1.473	-3.765 **	-4.253 **	1.297
	(0.55)	(0.80)	(0.66)	(0.73)	(0.81)	(0.68)	(0.83)	(1.11)	(1.11)	(0.96)	(1.03)	(1.15)
Inflation	0.018	0.022	-0.015	0.018	0.022	-0.013	0.019	0.029 *	-0.015	0.022	0.033 *	-0.012
	(0.02)	(0.02)	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)	(0.02)	(0.01)
Size of the Modern Sector	0.219 **	0.191 **	-0.156 **	0.253 **	0.222 **	-0.174 **	0.205 **	0.187 **	-0.144 *	0.253 **	0.231 **	-0.155 *
	(0.06)	(0.06)	(0.07)	(0.06)	(0.07)	(0.08)	(0.06)	(0.07)	(0.08)	(0.06)	(0.07)	(0.09)
Labor Regulation Indicator	-0.174 **	-0.159 **	0.162 **	-0.103	-0.130	-0.360 **	-0.248 **	-0.231 **	0.160 *	0.023	-0.028	-0.498 **
	(0.03)	(0.04)	(0.06)	(0.08)	(0.10)	(0.14)	(0.05)	(0.06)	(0.09)	(0.12)	(0.13)	(0.20)
No. Observations	341	341	341	326	326	326	269	269	269	254	254	254
R**2	0.409	0.430	0.910	0.395	0.419	0.910	0.299	0.323	0.893	0.280	0.308	0.896
Adjusted R**2	0.393	0.405	0.855	0.378	0.392	0.851	0.275	0.286	0.794	0.253	0.268	0.787
GDP Turning Point	8.54	9.07	8.61	8.36	8.94	9.93	8.85	9.03	9.66	8.21	8.44	9.95

See footnotes in Table 8.1.

**Table 8.3.**  
**Panel Data Regression Analysis between Income Inequality and Labor Market Regulations**  
**The Impact of Regulations in Practice using the L2 aggregate index of "De Facto" Regulations**  
*Dependent Variable: Gini Coefficient (0-1)*

	Full Sample of Countries						Sample of Developing Countries					
	Least Squares			Instrumental Variables			Least Squares			Instrumental Variables		
	Pooled	F-E (Time)	F-E (Country)	Pooled	F-E (Time)	F-E (Country)	Pooled	F-E (Time)	F-E (Country)	Pooled	F-E (Time)	F-E (Country)
Constant	-0.427 (0.32)	...	...	-0.575 * (0.33)	...	...	-0.589 (0.40)	...	...	-1.079 ** (0.46)	...	...
Output per capita (in logs)	0.185 ** (0.08)	0.182 ** (0.09)	0.101 (0.12)	0.215 ** (0.09)	0.210 ** (0.09)	0.158 (0.13)	0.217 ** (0.10)	0.261 ** (0.12)	0.154 (0.15)	0.330 ** (0.12)	0.403 ** (0.15)	0.269 (0.18)
Output per capita squared	-0.012 ** (0.00)	-0.011 ** (0.01)	-0.005 (0.01)	-0.014 ** (0.01)	-0.012 ** (0.01)	-0.010 (0.01)	-0.013 ** (0.01)	-0.015 ** (0.01)	-0.008 (0.01)	-0.020 ** (0.01)	-0.024 ** (0.01)	-0.016 (0.01)
Economic Growth	-0.281 * (0.16)	-0.238 * (0.15)	0.125 (0.10)	-0.302 * (0.17)	-0.262 * (0.16)	0.073 (0.11)	-0.203 (0.17)	-0.162 (0.17)	0.172 (0.12)	-0.201 (0.17)	-0.158 (0.18)	0.104 (0.14)
Secondary Schooling	-0.024 ** (0.01)	-0.029 ** (0.01)	-0.022 (0.01)	-0.021 ** (0.01)	-0.027 ** (0.01)	-0.017 ** (0.01)	-0.032 ** (0.01)	-0.043 ** (0.01)	-0.034 ** (0.01)	-0.032 ** (0.01)	-0.043 ** (0.01)	-0.033 ** (0.01)
Liquid Liabilities	-0.051 ** (0.02)	-0.058 ** (0.02)	0.025 (0.02)	-0.048 ** (0.02)	-0.055 ** (0.02)	0.027 (0.02)	-0.064 ** (0.02)	-0.062 ** (0.02)	0.022 (0.03)	-0.065 ** (0.02)	-0.069 ** (0.02)	0.022 (0.03)
Physicians (per 1,000 people)	-2.753 ** (0.72)	-3.398 ** (0.80)	0.806 (0.70)	-3.121 ** (0.85)	-3.664 ** (0.86)	0.994 (0.73)	-3.963 ** (0.97)	-4.574 ** (1.01)	1.295 (1.16)	-4.463 ** (1.06)	-4.760 ** (1.08)	1.521 (1.26)
Inflation	0.013 (0.02)	0.018 (0.02)	-0.018 (0.01)	0.016 (0.02)	0.020 (0.02)	-0.016 (0.01)	0.017 (0.02)	0.028 * (0.02)	-0.017 (0.01)	0.021 (0.02)	0.031 * (0.02)	-0.017 (0.01)
Size of the Modern Sector	0.265 ** (0.06)	0.230 ** (0.06)	-0.175 (0.07)	0.257 ** (0.07)	0.224 ** (0.07)	-0.130 * (0.08)	0.261 ** (0.06)	0.232 ** (0.07)	-0.168 ** (0.08)	0.265 ** (0.07)	0.234 ** (0.07)	-0.122 (0.10)
Labor Regulation Indicator	-0.065 ** (0.03)	-0.061 ** (0.03)	0.126 (0.05)	0.091 (0.10)	0.059 (0.10)	-0.364 (0.31)	-0.053 (0.04)	-0.054 * (0.03)	0.159 ** (0.06)	0.181 (0.13)	0.109 (0.13)	-0.144 (0.39)
No. Observations	344	344	344	330	330	330	272	272	272	258	258	258
R**2	0.385	0.409	0.904	0.394	0.414	0.902	0.258	0.290	0.887	0.286	0.311	0.882
Adjusted R**2	0.368	0.383	0.846	0.377	0.388	0.838	0.233	0.251	0.785	0.260	0.271	0.763
GDP Turning Point	7.98	8.60	9.34	7.90	8.44	8.30	8.53	8.82	9.49	8.15	8.37	8.54

See footnotes in Table 8.1.

**Table 9. Panel Data Regression Analysis between Income Inequality and Labor Market Regulations 1/  
Dependent Variable: Gini Coefficient (0-1)**

Labor Regulation Indicators	Full Sample of Countries						Developing Countries					
	Least Squares 2/			Instrumental Variables 3/			Least Squares 2/			Instrumental Variables 3/		
	Coeff.	Std. Dev.	R**2	Coeff.	Std. Dev.	R**2	Coeff.	Std. Dev.	R**2	Coeff.	Std. Dev.	R**2
<b>I. Pooled Estimator</b>												
(0) "De Jure" Index	0.022	(0.03)	0.38	0.033	(0.07)	0.40	0.067	(0.04) *	0.27	0.102	(0.09)	0.30
(1) "De Facto" Index 1	-0.174	(0.03) **	0.41	-0.103	(0.08)	0.39	-0.248	(0.05) **	0.30	0.023	(0.12)	0.28
Minimum Wage 1/	-0.014	(0.02)	0.48	0.075	(0.10)	0.49	-0.063	(0.03) **	0.36	0.105	(0.12)	0.38
Social Security	-0.038	(0.02) **	0.39	0.122	(0.06) **	0.39	-0.030	(0.03)	0.29	0.151	(0.08) **	0.29
Trade Union	-0.087	(0.03) **	0.42	-0.547	(0.14) **	0.42	-0.112	(0.04) **	0.31	-0.534	(0.17) **	0.31
General Govt. Employment	-0.049	(0.02) **	0.45	-0.368	(0.13) **	0.44	-0.076	(0.03) **	0.36	-0.681	(0.21) **	0.35
(2) "De Facto" Index 2	-0.065	(0.03) **	0.38	0.091	(0.10)	0.39	-0.053	(0.04)	0.26	0.181	(0.13)	0.29
Minimum Wage 2/	0.041	(0.05)	0.44	0.282	(0.16) *	0.47	0.027	(0.05)	0.31	0.465	(0.21) **	0.37
Maternity Leave (# days)	-0.090	(0.03) **	0.39	-0.841	(0.29) **	0.41	-0.121	(0.03) **	0.26	-0.645	(0.36) *	0.30
Ratification of ILO Conv. 87	-0.015	(0.01) *	0.38	0.087	(0.05) *	0.40	-0.008	(0.01)	0.26	0.051	(0.05)	0.29
Central Govt. Employment	-0.024	(0.03)	0.43	-0.297	(0.13) **	0.43	-0.014	(0.04)	0.32	-0.352	(0.21) *	0.33
(3) De Jure vs. De Facto												
L1 relative to L0	-0.084	(0.02) **	0.39	-0.347	(0.11) **	0.41	-0.142	(0.03) **	0.29	-0.513	(0.14) **	0.32
L2 relative to L0	-0.059	(0.03) *	0.39	0.051	(0.12)	0.40	-0.083	(0.04) **	0.28	-0.010	(0.16)	0.29
<b>II. Time-Effects Estimator</b>												
(0) "De Jure" Index	0.024	(0.03)	0.41	0.015	(0.07)	0.42	0.055	(0.04)	0.30	0.055	(0.08)	0.33
(1) "De Facto" Index 1	-0.159	(0.04) **	0.43	-0.130	(0.10)	0.42	-0.231	(0.06) **	0.32	-0.028	(0.13)	0.31
Minimum Wage 1/	-0.017	(0.02)	0.49	0.045	(0.11)	0.51	-0.063	(0.03) **	0.37	0.137	(0.27)	0.38
Social Security	-0.043	(0.02) *	0.41	0.108	(0.06) *	0.42	-0.037	(0.03)	0.32	0.119	(0.07) *	0.32
Trade Union	-0.064	(0.03) **	0.44	-0.557	(0.15) **	0.45	-0.084	(0.04) **	0.34	-0.539	(0.18) **	0.35
General Govt. Employment	-0.032	(0.03)	0.48	-0.443	(0.13) **	0.48	-0.055	(0.03) *	0.40	-0.661	(0.21) **	0.39
(2) "De Facto" Index 2	-0.061	(0.03) **	0.41	0.059	(0.10)	0.41	-0.054	(0.03) *	0.29	0.109	(0.13)	0.31
Minimum Wage 2/	0.023	(0.04)	0.47	0.323	(0.17) *	0.49	0.011	(0.05)	0.33	0.430	(0.23) *	0.39
Maternity Leave (# days)	-0.089	(0.04) **	0.41	-0.880	(0.29) **	0.43	-0.126	(0.06) **	0.30	-0.761	(0.36) **	0.33
Ratification of ILO Conv. 87	-0.014	(0.01) *	0.41	0.106	(0.06) *	0.42	-0.010	(0.01)	0.29	0.066	(0.11)	0.31
Central Govt. Employment	-0.012	(0.03)	0.45	-0.391	(0.15) **	0.46	0.002	(0.04)	0.35	-0.400	(0.24) *	0.35
(3) De Jure vs. De Facto												
L1 relative to L0	-0.076	(0.03) **	0.42	-0.352	(0.11) **	0.44	-0.124	(0.04) **	0.32	-0.440	(0.15) **	0.35
L2 relative to L0	-0.055	0.03 **	0.42	0.050	(0.12)	0.43	-0.074	(0.03) **	0.32	0.028	(0.16)	0.34
<b>III. Country-Effects Estimator</b>												
(0) "De Jure" Index	-0.110	(0.06) *	0.91	-0.154	(0.07) **	0.89	-0.030	(0.13)	0.91	0.007	(0.15)	0.89
(1) "De Facto" Index 1	0.162	(0.06) **	0.91	0.160	(0.07) **	0.89	-0.360	(0.12) **	0.91	-0.498	(0.16) **	0.90
Minimum Wage 1/	0.043	(0.03)	0.90	0.054	(0.04)	0.88	-0.269	(0.13) **	0.90	-0.434	(0.18) **	0.88
Social Security	0.083	(0.04) **	0.91	0.100	(0.05) **	0.89	-0.357	(0.13) **	0.91	-0.417	(0.15) **	0.89
Trade Union	0.071	(0.03) **	0.91	0.047	(0.04)	0.89	-0.318	(0.09) **	0.91	-0.449	(0.12) **	0.90
General Govt. Employment	-0.032	(0.03)	0.91	-0.031	(0.04)	0.89	-0.462	(0.14) **	0.92	-0.738	(0.20) **	0.90
(2) "De Facto" Index 2	0.126	(0.05) **	0.90	0.159	(0.05) **	0.89	-0.364	(0.27)	0.90	-0.143	(0.31)	0.88
Minimum Wage 2/	-0.075	(0.07)	0.90	-0.087	(0.08)	0.88	0.706	(0.32) **	0.91	0.719	(0.39) *	0.88
Maternity Leave (# days)	0.128	(0.04) **	0.91	0.158	(0.05) **	0.90	-0.677	(0.26) **	0.91	-0.826	(0.31) **	0.89
Ratification of ILO Conv. 87	0.039	(0.02) **	0.90	0.043	(0.02) **	0.89	-0.056	(0.07)	0.90	0.336	(0.13) **	0.89
Central Govt. Employment	-0.003	(0.04)	0.91	0.125	(0.07) *	0.89	0.125	(0.05) **	0.91	-0.895	(0.24) **	0.90
(3) De Jure vs. De Facto												
L1 relative to L0	0.190	(0.04) **	0.91	0.198	(0.05) **	0.90	-0.489	(0.18) **	0.91	-0.576	(0.20) **	0.90
L2 relative to L0	0.149	(0.04) **	0.91	0.170	(0.04) **	0.90	-0.083	(0.17)	0.91	-0.077	(0.20)	0.89

See footnotes in Table 7.

**Table 10. GMM-IV Panel Data Regression Analysis between Income Inequality and Labor Market Regulations**

Panel Data of 121 countries over period 1970-2000 (5-year observations)

Dependent Variable: Gini Coefficient (0-1), Estimation Method: GMM-IV System Estimator (Arellano and Bover, 1995)

	Full Sample			Developing Countries		
	[L0]	[L1]	[L2]	[L0]	[L1]	[L2]
Constant	-0.54792 ** (0.279)	-0.86464 ** (0.153)	-1.11522 ** (0.211)	-0.57990 (0.656)	-1.13006 * (0.709)	-2.13406 ** (0.633)
Output per capita (logs)	0.21379 ** (0.072)	0.33337 ** (0.039)	0.36383 ** (0.054)	0.19348 (0.172)	0.37726 ** (0.185)	0.60374 ** (0.162)
Output per capita squared	-0.01342 ** (0.004)	-0.02026 ** (0.002)	-0.02252 ** (0.003)	-0.01185 (0.010)	-0.02207 ** (0.011)	-0.03586 ** (0.010)
Economic Growth	-0.45007 ** (0.063)	-0.51518 ** (0.046)	-0.61235 ** (0.044)	-0.43762 ** (0.071)	-0.48180 ** (0.076)	-0.61839 ** (0.108)
Secondary Schooling	-0.01813 ** (0.003)	-0.00754 ** (0.003)	-0.01933 ** (0.003)	-0.03518 ** (0.007)	-0.05820 ** (0.010)	-0.04012 ** (0.011)
Liquid Liabilities	-0.01496 ** (0.007)	-0.03890 ** (0.007)	-0.05673 ** (0.007)	-0.04522 ** (0.018)	-0.02379 (0.017)	-0.07726 ** (0.013)
Physicians per 1000 people	-2.86656 ** (0.384)	0.55577 (0.538)	-0.90757 ** (0.383)	-4.73321 ** (0.846)	0.45144 (1.248)	-1.10078 (1.196)
Inflation Rate	-0.00213 (0.003)	-0.01125 ** (0.004)	-0.00801 (0.005)	-0.00549 (0.006)	-0.01563 * (0.008)	-0.01457 * (0.009)
Modern Sector	0.20053 ** (0.045)	0.04739 (0.038)	0.25711 ** (0.048)	0.35136 ** (0.139)	0.13603 (0.127)	0.23976 ** (0.115)
Labor Rigidity	0.04569 ** (0.022)	-0.28914 ** (0.022)	-0.22156 ** (0.021)	0.10311 ** (0.047)	-0.29065 ** (0.075)	-0.20472 ** (0.056)
No. Countries	65	65	65	52	51	51
No. Observations	182	199	200	146	156	157
R**2	0.419	0.378	0.421	0.340	0.314	0.293
Turning Point	7.96	8.23	8.08	8.16	8.55	8.42
Specification Tests (p-values)						
- Sargan Test	0.846	0.700	0.855	0.849	0.797	0.862
- 2nd Order Correlation	0.709	0.994	0.913	0.625	0.957	0.912

Note: Numbers in parenthesis below the coefficients are standard errors.

\* (\*\*) indicates that the explanatory variable is statistically significant at the 10 (5) percent level.

Table 11.

# GMM-IV Panel Data Regression Analysis between Income Inequality and Labor Market Regulations, Sensitivity Analysis on Panel Regressions for Different Measures of Labor Regulations

Sample of All Countries, 1970-2000, Panel data of 5-year non-overlapping observations

Dependent Variable: Gini Coefficient (0-1)

Labor Indicator	Gini			Top 20			Top 40			Middle 20			Bottom 40			Bottom 20			Nobs.
	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	
I. Full Sample of Countries																			
(0) "De Jure" Index	0.0457	(0.022) **	0.419	0.0068	(0.097)	0.433	0.0598	(0.042)	0.444	-0.0260	(0.012) **	0.421	0.0107	(0.025)	0.356	-0.0167	(0.010) *	0.262	182
(1) "De Facto" Index 1	-0.2891	(0.022) **	0.378	-0.2832	(0.040) **	0.398	-0.1575	(0.034) **	0.410	0.0412	(0.018) **	0.415	0.0995	(0.017) **	0.307	0.0365	(0.010) **	0.219	199
Minimum Wage 1/	0.0302	(0.020)	0.492	0.0262	(0.028)	0.466	0.0200	(0.035)	0.488	0.0066	(0.012)	0.436	-0.0317	(0.021)	0.412	-0.0163	(0.009) *	0.318	198
Social Security Contribution	-0.0384	(0.020) *	0.345	-0.0342	(0.026)	0.384	-0.0382	(0.017) **	0.380	0.0135	(0.005) **	0.385	0.0343	(0.010) **	0.290	0.0192	(0.013) *	0.228	171
Trade Union Membership	-0.1396	(0.024) **	0.425	0.0369	(0.028)	0.374	0.0272	(0.031)	0.372	-0.0146	(0.030)	0.413	-0.0339	(0.014) **	0.250	-0.0214	(0.007) **	0.159	194
General Govt. Employment	-0.0919	(0.017) **	0.478	-0.0503	(0.026) *	0.434	-0.0969	(0.039) **	0.431	0.0116	(0.010)	0.459	0.0562	(0.015) **	0.321	0.0227	(0.025)	0.206	174
(2) "De Facto" Index 2	-0.2216	(0.021) **	0.421	-0.1700	(0.031) **	0.415	-0.0705	(0.027) **	0.415	0.0158	(0.031)	0.413	0.0402	(0.021) *	0.324	0.0185	(0.009) **	0.207	200
Minimum Wage 2/	-0.0410	(0.084)	0.499	-0.0237	(0.118)	0.523	-0.0335	(0.041)	0.497	-0.0065	(0.031)	0.427	0.0008	(0.050)	0.441	-0.0228	(0.040)	0.331	199
Maternity Leave (# days)	-0.0485	(0.022) **	0.409	-0.1214	(0.042) **	0.408	-0.0847	(0.035) **	0.423	0.0250	(0.005) **	0.428	0.0614	(0.026) **	0.325	0.0290	(0.011) **	0.225	175
Ratification of ILO Conv. 87	-0.0180	(0.012) *	0.409	-0.0167	(0.010) *	0.363	0.0032	(0.008)	0.384	0.0014	(0.003)	0.396	0.0008	(0.012)	0.300	-0.0046	(0.002) **	0.195	200
Central Govt. Employment	-0.0478	(0.085)	0.450	-0.0626	(0.047)	0.449	-0.0068	(0.032)	0.449	0.0046	(0.014)	0.449	0.0128	(0.017)	0.338	-0.0076	(0.020)	0.237	174
(3) De Jure vs. De Facto																			
L1 relative to L0	-0.1750	(0.024) **	0.354	-0.1691	(0.033) **	0.427	-0.1324	(0.033) **	0.410	0.0738	(0.011) **	0.397	0.0720	(0.018) **	0.331	0.0371	(0.009) **	0.243	180
L2 relative to L0	-0.0645	(0.024) **	0.459	-0.1142	(0.039) **	0.453	-0.0854	(0.062)	0.456	0.0014	(0.013)	0.459	0.0478	(0.027) *	0.355	0.0184	(0.010) *	0.238	181
II. Sample of Developing Countries																			
(0) "De Jure" Index	0.1031	(0.047) **	0.340	0.1404	(0.096)	0.211	0.1698	(0.050) **	0.334	-0.0829	(0.022) **	0.301	-0.0995	(0.035) **	0.284	-0.0433	(0.016) **	0.304	146
(1) "De Facto" Index 1	-0.2906	(0.075) **	0.314	-0.4153	(0.118) **	0.233	-0.2350	(0.061) **	0.271	0.1012	(0.040) **	0.178	0.1520	(0.053) **	0.242	0.0774	(0.022) **	0.227	156
Minimum Wage 1/	-0.0709	(0.057)	0.340	-0.0927	(0.063)	0.298	-0.0567	(0.047)	0.362	-0.0618	(0.031) **	0.204	0.0477	(0.037)	0.375	0.0174	(0.016)	0.352	128
Social Security Contribution	-0.0534	(0.032) *	0.289	-0.0937	(0.047) **	0.196	-0.0840	(0.047) *	0.263	0.0289	(0.019)	0.210	0.0472	(0.026) *	0.232	0.0220	(0.011) **	0.236	149
Trade Union Membership	-0.0584	(0.040)	0.344	0.1398	(0.063) **	0.156	0.0965	(0.043) **	0.214	-0.0368	(0.023) *	0.181	-0.0880	(0.091)	0.159	-0.0232	(0.018)	0.172	151
General Govt. Employment	-0.0628	(0.045)	0.354	-0.0471	(0.071)	0.250	-0.0216	(0.053)	0.331	0.0275	(0.019)	0.337	-0.0164	(0.036)	0.276	-0.0056	(0.011)	0.269	131
(2) "De Facto" Index 2	-0.2047	(0.056) **	0.293	-0.0635	(0.054)	0.184	-0.0286	(0.038)	0.287	0.0398	(0.013) **	0.242	0.0174	(0.052)	0.240	0.0051	(0.014)	0.240	157
Minimum Wage 2/	0.0383	(0.193)	0.338	0.2389	(0.215)	0.260	0.1848	(0.152)	0.374	-0.1266	(0.084) *	0.186	-0.1147	(0.101)	0.365	-0.1033	(0.044) **	0.370	132
Maternity Leave (# days)	-0.1036	(0.031) **	0.292	-0.1437	(0.044) **	0.235	-0.1099	(0.035) **	0.333	0.0351	(0.010) **	0.263	0.0898	(0.024) **	0.290	0.0326	(0.014) **	0.297	147
Ratification of ILO Conv. 87	-0.0280	(0.012) **	0.336	0.0144	(0.017)	0.167	0.0170	(0.012)	0.293	0.0032	(0.008)	0.254	-0.0074	(0.006)	0.246	-0.0073	(0.003) **	0.244	157
Central Govt. Employment	0.0532	(0.093)	0.334	-0.0353	(0.069)	0.167	-0.0403	(0.053)	0.312	0.0044	(0.029)	0.296	0.0234	(0.035)	0.215	-0.0170	(0.028)	0.255	131
(3) De Jure vs. De Facto																			
L1 relative to L0	-0.3225	(0.049) **	0.301	-0.2437	(0.062) **	0.257	-0.2422	(0.036) **	0.355	0.0594	(0.013) **	0.321	0.1274	(0.039) **	0.291	0.0595	(0.015) **	0.304	144
L2 relative to L0	-0.1631	(0.025) **	0.376	-0.2488	(0.046) **	0.230	-0.1782	(0.025) **	0.319	0.0483	(0.012) **	0.291	0.1005	(0.020) **	0.256	0.0439	(0.011) **	0.250	145

\*(\*\*) indicates that the explanatory variable is statistically significant at the 10 (5) percent level. See footnote in Table 3.

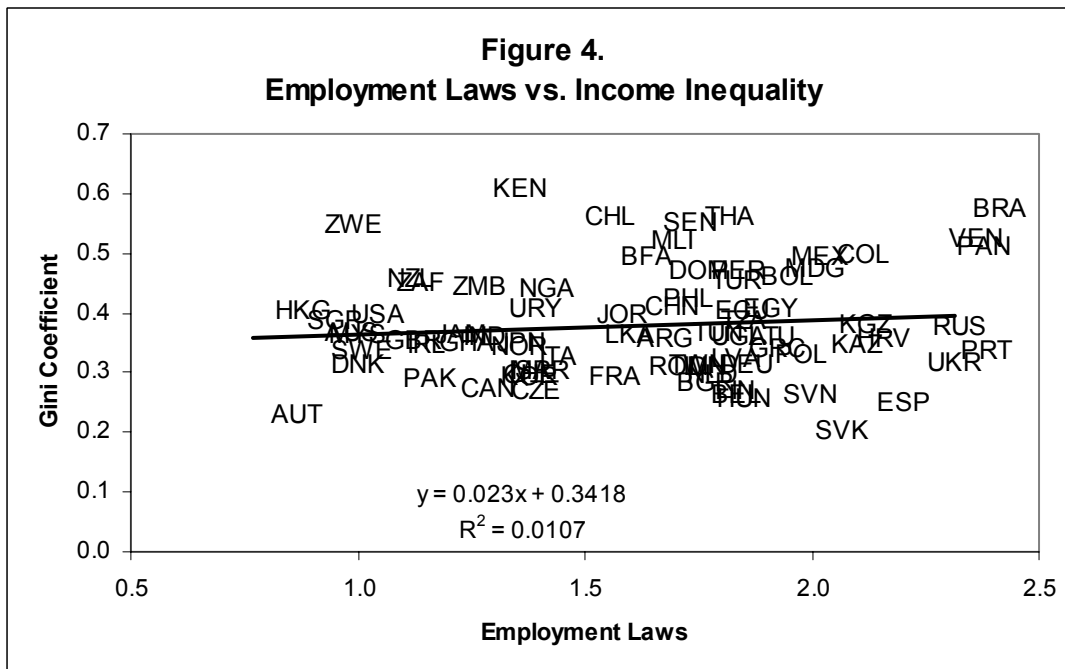
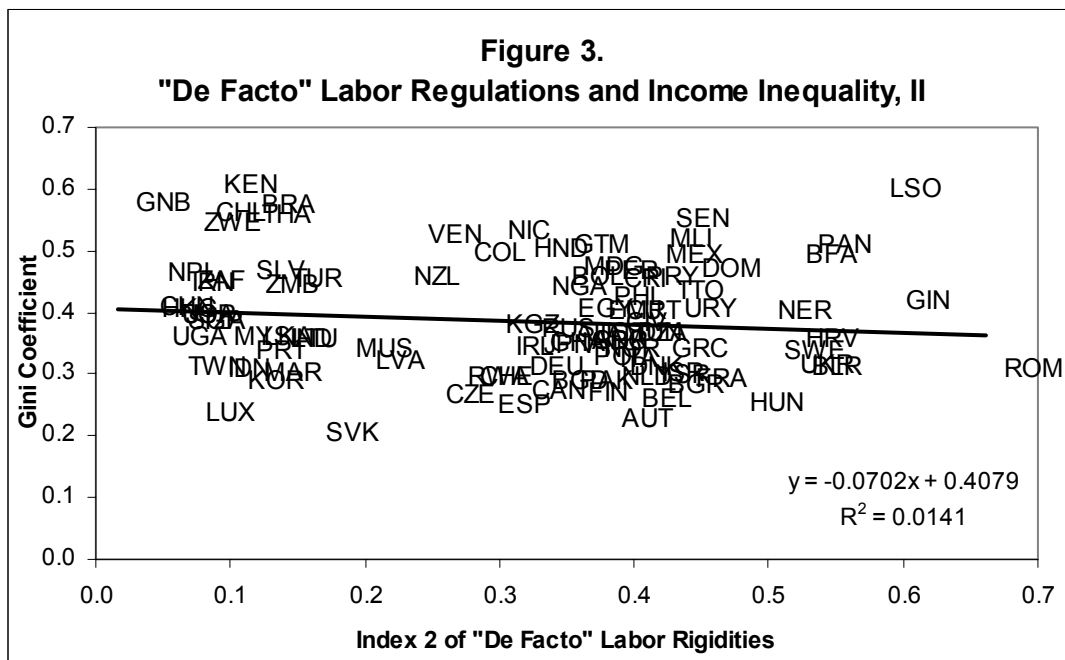


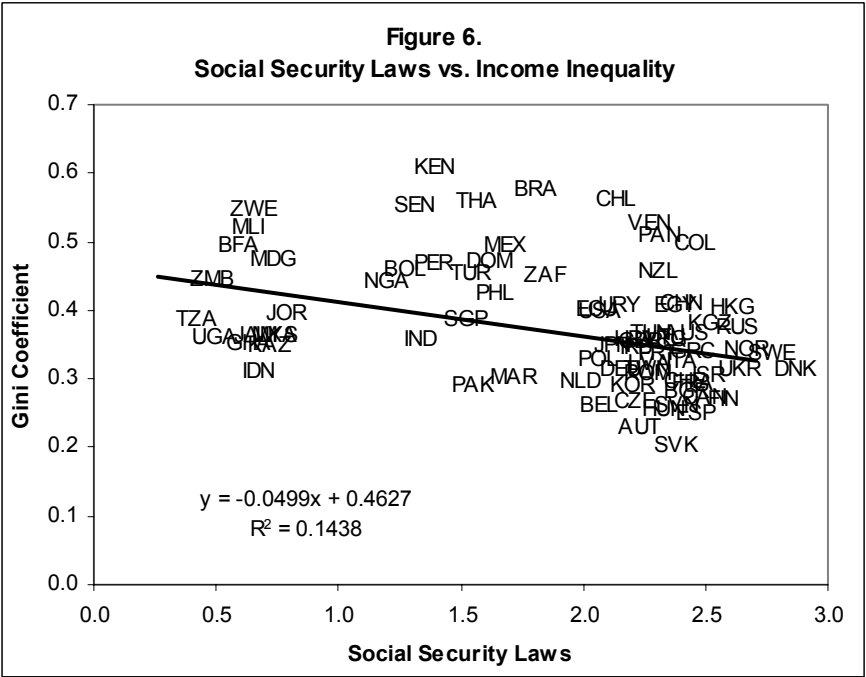
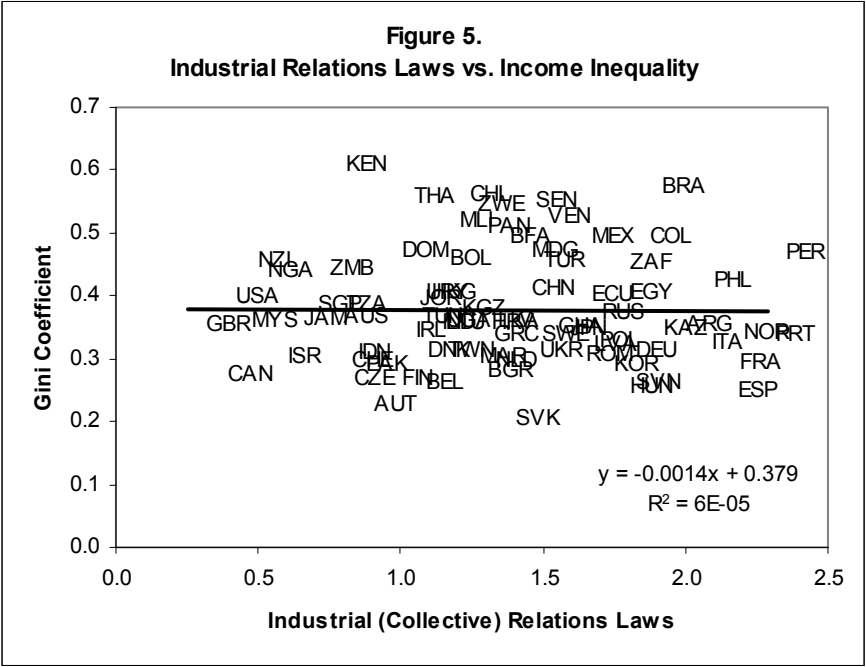
**Table 12.**  
**Labor Regulations and Income Inequality: A Scorecard**  
*Based on Panel Data Estimations with Different Techniques*

Labor Indicator	Full Sample of Countries				Developing Countries			
	Gini	Top20	Mid20	Bot20	Gini	Top20	Mid20	Bot20
(0) "De Jure" Index	0.2	0.0	-0.6	-0.2	0.4	0.0	-0.6	-0.4
(1) "De Facto" Index 1	-0.6	-1.0	0.6	0.6	-0.6	-0.6	0.6	0.4
Minimum Wages	0.0	-0.2	0.4	-0.2	-0.4	-0.4	0.2	0.0
Social Security Contribution	-0.2	-0.4	0.0	0.6	0.2	-0.6	-0.2	0.4
Trade Union Membership	-1.0	-0.8	0.4	0.4	-0.8	-0.8	0.2	0.6
General Govt. Employment	-0.8	-1.0	0.4	0.4	-0.8	-0.8	0.4	0.4
(2) "De Facto" Index 2	-0.6	-0.6	0.4	0.2	-0.4	-0.2	0.2	0.0
Minimum Wages	0.4	0.4	0.0	0.0	0.4	0.4	-0.6	-0.2
Maternity Leave (# days)	-1.0	-1.0	0.6	1.0	-1.0	-1.0	0.8	0.8
Ratification of ILO Conv. 87	-0.2	-0.6	0.0	-0.2	-0.2	0.0	0.0	-0.2
Central Govt. Employment	-0.4	-0.2	0.0	0.0	-0.4	0.0	0.0	0.0
(3) De Jure vs. De Facto								
L1 relative to L0	-1.0	-0.6	0.6	0.8	-1.0	-1.0	1.0	0.8
L2 relative to L0	-0.6	0.0	0.4	0.2	-0.6	-0.6	0.6	0.2

*Note:* Using 5 different estimations, we input the value of -1 (+1) to a negative (positive) and significant coefficient estimate, and 0 to non-significant coefficients. Here, we report the proportion of significant negative and/or positive coefficients.







**Table A.1.**  
**Cross-Country Regression Analysis between Income Inequality and Labor Market Regulations 1/**  
**Indicators of Labor Market Rigidity from Rama and Artecona (2002)**  
*Using Income Shares as proxy for our dependent variable*

Labor Indicator	Top 20		Top 40		Middle 20		Bottom 40		Bottom 20		Nobs.
	Coeff.	R**2	Coeff.	R**2	Coeff.	R**2	Coeff.	R**2	Coeff.	R**2	
I. Full Sample of Countries											
I.1 Least Squares 2/											
(0) "De Jure" Index	0.026	0.47	0.050	0.48	-0.030	0.51	-0.020	0.43	-0.018	0.35	68
(1) "De Facto" Index 1	-0.176 **	0.50	-0.109 *	0.50	0.030	0.50	0.079 *	0.45	0.026	0.36	67
Minimum Wage 1/	0.006	0.62	0.029	0.62	-0.001	0.55	-0.028	0.61	-0.022 *	0.57	56
Social Security	-0.065 *	0.50	-0.077 **	0.50	0.017	0.50	0.060 **	0.46	0.030 **	0.40	61
Trade Union	-0.106	0.51	-0.042	0.50	-0.003	0.50	0.044	0.45	0.014	0.36	67
General Govt. Employment	-0.035	0.53	-0.002	0.52	0.009	0.51	-0.007	0.47	-0.001	0.36	58
(2) "De Facto" Index 2	0.008	0.47	0.018	0.48	0.008	0.49	-0.026	0.43	-0.013	0.35	68
Minimum Wage 2/	0.018	0.59	0.026	0.59	-0.012	0.55	-0.014	0.56	-0.014	0.52	57
Maternity Leave (# days)	-0.056	0.48	-0.017	0.48	-0.012	0.49	0.029	0.44	0.008	0.35	67
Ratification of ILO Conv. 87	-0.012	0.48	-0.006	0.48	0.008	0.50	-0.002	0.43	0.000	0.35	68
Central Govt. Employment	0.039	0.45	0.020	0.46	0.004	0.50	-0.024	0.41	-0.015	0.34	59
(3) De Jure vs. De Facto											
L1 relative to L0	-0.094 *	0.50	-0.085 **	0.50	0.036 **	0.52	0.049 *	0.45	0.025 *	0.37	67
L2 relative to L0	-0.016	0.47	-0.028	0.48	0.031	0.51	-0.003	0.43	0.005	0.34	68
I.2 Instrumental Variables 3/											
(0) "De Jure" Index	-0.131	0.48	-0.010	0.49	-0.009	0.51	0.018	0.44	-0.014	0.36	66
(1) "De Facto" Index 1	-0.292	0.50	-0.037	0.49	-0.031	0.51	0.068	0.44	0.004	0.36	65
Minimum Wage 1/	0.274	0.61	0.468 *	0.62	-0.243 **	0.59	-0.225	0.60	-0.173 **	0.56	60
Social Security	0.043	0.51	0.042	0.48	-0.012	0.50	-0.042	0.44	-0.028	0.37	64
Trade Union	-0.317 *	0.52	-0.281	0.51	0.035	0.51	0.246 *	0.48	0.120 *	0.40	65
General Govt. Employment	-0.231	0.54	-0.080	0.50	-0.061	0.52	0.106	0.46	0.052	0.35	57
(2) "De Facto" Index 2	0.038	0.47	0.101	0.49	-0.038	0.51	-0.064	0.44	-0.054	0.36	66
Minimum Wage 2/	0.991 **	0.62	0.835 **	0.65	-0.252 **	0.62	-0.576 **	0.62	-0.312 **	0.60	65
Maternity Leave (# days)	-0.607 *	0.51	-0.833 *	0.52	0.153	0.51	0.680 **	0.49	0.284 *	0.40	66
Ratification of ILO Conv. 87	0.026	0.47	-0.059	0.49	0.043	0.52	0.016	0.44	0.014	0.36	66
Central Govt. Employment	-0.102	0.45	0.092	0.47	-0.096	0.51	0.024	0.41	-0.017	0.35	58
(3) De Jure vs. De Facto											
L1 relative to L0	-0.405 *	0.50	-0.251	0.50	0.034	0.50	0.217	0.46	0.121 *	0.39	65
L2 relative to L0	0.414	0.49	0.121	0.49	-0.011	0.51	-0.110	0.44	-0.005	0.36	66

Table A.1., continued

Labor Indicator	Gini Coefficient			Top 20			Top 40			Middle 20			Bottom 40			Bottom 20			Nobs.
	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	
(1) "De Facto" Index 1	-0.215	(0.11)*	0.24	-0.281	(0.17)*	0.36	-0.222	(0.12)*	0.361	0.054	(0.04)	0.32	0.078	(0.04)**	0.34	0.168	(0.08)**	0.370	52
Minimum Wage 1/	0.018	(0.06)	0.38	-0.095	(0.08)	0.53	-0.038	(0.06)	0.560	0.007	(0.02)	0.40	0.009	(0.02)	0.63	0.031	(0.04)	0.606	41
Social Security	-0.038	(0.07)	0.23	-0.064	(0.06)	0.37	-0.088	(0.06)*	0.358	0.036	(0.02)*	0.33	0.027	(0.02)*	0.33	0.052	(0.04)	0.364	49
Trade Union	-0.144	(0.09)*	0.25	-0.148	(0.12)	0.366	-0.067	(0.10)	0.358	-0.016	(0.04)	0.324	0.027	(0.03)	0.335	0.083	(0.07)	0.373	52
General Govt. Employment	-0.186	(0.08)**	0.30	-0.107	(0.12)	0.400	-0.088	(0.11)	0.389	0.039	(0.05)	0.344	0.040	(0.03)	0.336	0.050	(0.07)	0.394	43
(2) "De Facto" Index 2	0.047	(0.09)	0.22	0.037	(0.10)	0.314	0.038	(0.08)	0.316	-0.001	(0.03)	0.304	-0.021	(0.02)	0.284	-0.037	(0.05)	0.314	53
Minimum Wage 2/	0.118	(0.11)	0.36	0.002	(0.07)	0.476	-0.001	(0.05)	0.500	-0.004	(0.02)	0.388	0.002	(0.02)	0.549	0.005	(0.04)	0.528	42
Maternity Leave (# days)	-0.138	(0.09)*	0.24	-0.140	(0.09)*	0.343	-0.069	(0.08)	0.334	-0.021	(0.04)	0.309	0.035	(0.03)	0.309	0.090	(0.05)*	0.352	52
Ratification of ILO Conv. 87	0.011	(0.03)	0.22	-0.002	(0.03)	0.312	0.002	(0.02)	0.312	0.006	(0.01)	0.310	-0.005	(0.01)	0.278	-0.008	(0.02)	0.309	53
Central Govt. Employment	-0.109	(0.10)	0.20	0.074	(0.16)	0.289	0.050	(0.12)	0.292	0.006	(0.05)	0.308	-0.025	(0.04)	0.271	-0.057	(0.08)	0.296	44
(3) De Jure vs. De Facto																			
L1 relative to L0	-0.152	(0.08)*	0.25	-0.208	(0.13)*	0.377	-0.171	(0.08)**	0.380	0.048	(0.03)*	0.332	0.067	(0.03)**	0.375	0.123	(0.06)**	0.387	52
L2 relative to L0	-0.014	(0.11)	0.22	-0.022	(0.12)	0.312	-0.012	(0.10)	0.312	0.016	(0.04)	0.308	0.001	(0.03)	0.271	-0.004	(0.06)	0.305	53
<b>I.2 Instrumental Variables 3/</b>																			
(0) "De Jure" Index	0.047	(0.21)	0.22	-0.106	(0.20)	0.32	0.002	(0.17)	0.32	-0.014	(0.06)	0.32	0.013	(0.12)	0.31	-0.013	(0.05)	0.28	51
(1) "De Facto" Index 1	-0.055	(0.30)	0.21	-0.222	(0.28)	0.34	0.001	(0.22)	0.34	-0.035	(0.09)	0.32	0.034	(0.14)	0.33	-0.002	(0.07)	0.30	50
Minimum Wage 1/	0.351	(0.28)	0.40	0.668	(0.35)*	0.52	0.702	(0.26)**	0.57	-0.227	(0.08)**	0.50	-0.358	(0.17)**	0.61	-0.180	(0.08)**	0.63	39
Social Security	0.176	(0.19)	0.22	-0.102	(0.16)	0.37	0.082	(0.16)	0.32	-0.014	(0.05)	0.31	-0.068	(0.11)	0.33	-0.055	(0.05)	0.31	48
Trade Union	-0.399	(0.26)*	0.25	-0.473	(0.30)*	0.37	-0.232	(0.25)	0.35	0.041	(0.08)	0.33	0.191	(0.18)	0.36	0.093	(0.08)	0.33	50
General Govt. Employment	-0.787	(0.38)**	0.29	-0.330	(0.46)	0.37	-0.222	(0.34)	0.36	-0.047	(0.11)	0.35	0.207	(0.25)	0.35	0.152	(0.10)	0.32	42
(2) "De Facto" Index 2	0.258	(0.36)	0.23	0.097	(0.33)	0.31	0.153	(0.27)	0.33	-0.055	(0.10)	0.33	-0.098	(0.18)	0.32	-0.078	(0.09)	0.30	51
Minimum Wage 2/	1.623	(0.49)**	0.42	1.765	(0.63)**	0.56	1.437	(0.45)**	0.62	-0.520	(0.19)**	0.48	-0.917	(0.31)**	0.65	-0.448	(0.14)**	0.68	40
Maternity Leave (# days)	-1.372	(0.71)*	0.28	-1.599	(0.65)**	0.40	-0.813	(0.55)	0.37	0.176	(0.20)	0.33	0.637	(0.39)*	0.37	0.296	(0.19)*	0.34	50
Ratification of ILO Conv. 87	0.066	(0.13)	0.22	-0.116	(0.23)	0.32	-0.128	(0.17)	0.34	0.070	(0.06)	0.35	0.058	(0.12)	0.32	-0.018	(0.03)	0.29	51
Central Govt. Employment	0.078	(0.37)	0.21	0.219	(0.38)	0.29	0.267	(0.27)	0.32	-0.154	(0.11)	0.35	-0.114	(0.17)	0.31	-0.073	(0.08)	0.31	43
(3) De Jure vs. De Facto																			
L1 relative to L0	-0.582	(0.29)**	0.26	-0.408	(0.33)	0.35	-0.271	(0.28)	0.35	0.064	(0.08)	0.33	0.207	(0.21)	0.351	0.127	(0.09)	0.333	50
L2 relative to L0	0.107	(0.41)	0.22	0.409	(0.38)	0.33	0.144	(0.32)	0.33	-0.010	(0.11)	0.32	-0.134	(0.23)	0.322	-0.036	(0.11)	0.285	51

See footnote in Table 7

**Table A.2.**  
**Cross-Country Regression Analysis between Income Inequality and Labor Market Regulations 1/**  
**Indicators of Labor Market Regulation from Botero, Djankov, La Porta, López-de-Silanes and Shleifer (2003)**  
**Using Income Shares as proxy for our dependent variable**

Labor Indicator	Gini Coefficient			Top 20 Top 20			Top 40 Top 40			Middle 20 Middle 20			Bottom 40 Bottom 40			Bottom 20 Bottom 20			Nobs.
	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	
I. Full Sample of Countries																			
I.1 Least Squares 2/																			
(1) Employment Laws	0.054	(0.02)	**0.480	0.038	(0.03)	0.565	0.033	(0.02)*	0.542	-0.012	(0.01)*	0.542	-0.021	(0.02)	0.505	-0.012	(0.01)*	0.398	53
Alternative Employment Contracts	0.105	(0.06)	* 0.490	0.055	(0.05)	0.566	0.054	(0.04)	0.545	-0.024	(0.02)	0.547	-0.030	(0.03)	0.506	-0.015	(0.02)	0.398	53
Conditions of Employment	0.046	(0.06)	0.480	0.043	(0.06)	0.565	0.032	(0.05)	0.542	-0.006	(0.02)	0.543	-0.026	(0.03)	0.505	-0.011	(0.02)	0.398	53
Job Security	0.001	(0.05)	0.492	0.011	(0.04)	0.567	0.008	(0.03)	0.546	-0.004	(0.01)	0.544	-0.004	(0.02)	0.509	-0.009	(0.01)	0.398	53
(2) Industrial (Collective) Relations Law	0.022	(0.02)	0.452	0.022	(0.02)	0.554	0.026	(0.02)*	0.540	-0.008	(0.01)	0.536	-0.018	(0.01)*	0.505	-0.010	(0.01)*	0.394	53
Collective Bargaining	0.049	(0.04)	0.459	0.043	(0.03)	0.559	0.033	(0.03)	0.540	-0.008	(0.01)	0.536	-0.025	(0.02)	0.507	-0.011	(0.01)	0.395	53
Worker Participation in Management	-0.021	(0.03)	0.476	-0.021	(0.03)	0.579	0.010	(0.02)	0.545	-0.009	(0.01)	0.536	-0.002	(0.02)	0.518	-0.003	(0.01)	0.404	53
Collective Disputes	0.098	(0.06)	* 0.469	0.116	(0.07)*	0.580	0.062	(0.05)	0.545	-0.009	(0.02)	0.536	-0.053	(0.04)	0.518	-0.030	(0.02)*	0.414	53
(3) Social Security Laws	0.043	(0.02)	**0.482	0.023	(0.02)	0.558	0.027	(0.02)*	0.546	-0.005	(0.01)	0.529	-0.022	(0.01)**	0.524	-0.012	(0.01)**	0.424	53
Old Age, Disability and Death Benefits	0.052	(0.07)	0.482	-0.131	(0.06)**	0.591	-0.037	(0.06)	0.555	0.020	(0.03)	0.537	0.018	(0.04)	0.533	-0.017	(0.02)	0.424	53
Sickness and Health Benefits	0.077	(0.04)	**0.498	0.067	(0.03)**	0.585	0.047	(0.03)*	0.555	-0.013	(0.01)	0.537	-0.034	(0.02)*	0.532	-0.017	(0.01)*	0.429	53
Unemployment Benefits	-0.005	(0.04)	0.501	0.003	(0.04)	0.562	0.017	(0.03)	0.548	-0.001	(0.01)	0.530	-0.016	(0.02)	0.526	-0.005	(0.01)	0.431	53
I.2 Instrumental Variables 3/																			
(1) Employment Laws	0.092	(0.05)	* 0.482	0.038	(0.04)	0.551	0.041	(0.04)	0.546	-0.012	(0.01)	0.548	-0.030	(0.03)	0.507	-0.021	(0.01)*	0.407	51
Alternative Employment Contracts	0.239	(0.22)	0.473	0.151	(0.19)	0.553	0.219	(0.15)	0.555	-0.068	(0.06)	0.554	-0.151	(0.10)*	0.517	-0.087	(0.05)*	0.424	51
Conditions of Employment	0.185	(0.13)	0.497	0.196	(0.25)	0.554	0.049	(0.09)	0.552	0.020	(0.08)	0.549	-0.047	(0.07)	0.510	-0.036	(0.03)	0.412	51
Job Security	0.098	(0.12)	0.503	-0.016	(0.10)	0.579	0.017	(0.08)	0.556	0.092	(0.07)	0.559	0.279	(0.14)*	0.544	0.134	(0.07)*	0.450	51
(2) Industrial (Collective) Relations Law	0.058	(0.03)	* 0.479	0.023	(0.03)	0.550	0.017	(0.02)	0.539	-0.004	(0.01)	0.544	-0.013	(0.02)	0.500	-0.010	(0.01)	0.392	51
Collective Bargaining	0.152	(0.08)	* 0.491	0.309	(0.18)*	0.595	0.104	(0.14)	0.545	-0.003	(0.05)	0.544	-0.101	(0.10)	0.516	-0.021	(0.02)	0.403	51
Worker Participation in Management	-0.173	(0.15)	0.515	-0.276	(0.13)**	0.614	-0.119	(0.11)	0.559	0.018	(0.04)	0.547	0.101	(0.07)	0.535	0.040	(0.04)	0.423	51
Collective Disputes	0.602	(0.25)	**0.537	0.573	(0.23)**	0.612	0.359	(0.18)**	0.577	-0.089	(0.07)	0.558	-0.270	(0.13)**	0.551	-0.143	(0.06)**	0.454	51
(3) Social Security Laws	0.062	(0.06)	0.456	-0.009	(0.06)	0.545	0.009	(0.05)	0.535	-0.002	(0.02)	0.542	-0.007	(0.03)	0.494	-0.011	(0.02)	0.381	51
Old Age, Disability and Death Benefits	0.208	(0.49)	0.481	-0.277	(0.46)	0.573	0.112	(0.38)	0.535	-0.099	(0.17)	0.547	-0.013	(0.23)	0.494	-0.054	(0.12)	0.382	51
Sickness and Health Benefits	0.277	(0.17)	* 0.470	0.071	(0.15)	0.547	0.094	(0.13)	0.538	-0.045	(0.04)	0.548	-0.049	(0.09)	0.496	-0.046	(0.05)	0.387	51
Unemployment Benefits	-0.103	(0.20)	0.465	-0.073	(0.14)	0.566	-0.059	(0.12)	0.563	0.048	(0.06)	0.551	0.034	(0.08)	0.535	0.021	(0.05)	0.387	51

Table A.2., continued

Labor Indicator	Gini Coefficient			Top 20 Top 20			Top 40 Top 40			Middle 20 Middle 20			Bottom 40 Bottom 40			Bottom 20 Bottom 20			Nobs.
	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	
(1) Employment Laws	0.084	(0.03)	**0.349	0.046	(0.04)	0.416	0.030	(0.03)**	0.441	-0.024	(0.01)**	0.423	-0.036	(0.02)**	0.438	-0.026	(0.01)**	0.454	38
Alternative Employment Contracts	0.175	(0.08)	**0.375	0.089	(0.09)	0.422	0.089	(0.07)	0.445	-0.032	(0.03)	0.425	-0.057	(0.05)	0.443	-0.032	(0.02)	0.456	38
Conditions of Employment	0.062	(0.10)	0.350	0.037	(0.08)	0.416	0.074	(0.07)	0.442	-0.034	(0.03)	0.426	-0.039	(0.05)	0.439	-0.023	(0.02)	0.454	38
Job Security	0.022	(0.05)	0.372	0.015	(0.04)	0.421	0.025	(0.03)	0.450	-0.010	(0.01)	0.433	-0.015	(0.02)	0.446	-0.023	(0.01)**	0.455	38
(2) Industrial (Collective) Relations Law	0.031	(0.03)	0.264	0.005	(0.03)	0.386	0.023	(0.03)	0.375	-0.007	(0.01)	0.351	-0.017	(0.02)	0.388	-0.012	(0.01)*	0.339	38
Collective Bargaining	0.071	(0.05)	0.278	0.024	(0.05)	0.389	0.042	(0.04)	0.381	-0.015	(0.02)	0.356	-0.028	(0.03)	0.392	-0.020	(0.01)	0.348	38
Worker Participation in Management	-0.012	(0.04)	0.291	-0.022	(0.04)	0.399	0.005	(0.03)	0.384	0.000	(0.01)	0.358	-0.005	(0.02)	0.395	-0.002	(0.01)	0.364	38
Collective Disputes	0.075	(0.10)	0.270	0.057	(0.09)	0.394	0.039	(0.07)	0.377	-0.011	(0.03)	0.351	-0.028	(0.05)	0.390	-0.029	(0.02)	0.351	38
(3) Social Security Laws	0.058	(0.03)	**0.341	0.033	(0.03)	0.419	0.037	(0.02)*	0.428	-0.011	(0.01)	0.382	-0.026	(0.01)**	0.445	-0.014	(0.01)**	0.395	38
Old Age, Disability and Death Benefits	0.023	(0.10)	0.343	-0.173	(0.08)**	0.476	-0.087	(0.07)	0.459	0.028	(0.04)	0.403	0.059	(0.05)	0.479	0.002	(0.03)	0.400	38
Sickness and Health Benefits	0.094	(0.04)	**0.368	0.072	(0.04)*	0.452	0.057	(0.03)*	0.439	-0.019	(0.01)*	0.394	-0.038	(0.02)*	0.455	-0.020	(0.01)**	0.405	38
Unemployment Benefits	0.014	(0.04)	0.363	0.014	(0.04)	0.423	0.032	(0.04)	0.428	-0.008	(0.02)	0.384	-0.024	(0.02)	0.445	-0.009	(0.01)	0.400	38
<b>II.2 Instrumental Variables 3/</b>																			
(1) Employment Laws	0.151	(0.06)	**0.359	0.080	(0.06)	0.414	0.069	(0.05)	0.426	-0.022	(0.02)	0.394	-0.047	(0.03)	0.434	-0.034	(0.02)**	0.401	36
Alternative Employment Contracts	0.479	(0.34)	0.339	0.334	(0.26)	0.430	0.250	(0.23)	0.442	-0.046	(0.10)	0.411	-0.204	(0.15)	0.451	-0.083	(0.07)	0.432	36
Conditions of Employment	0.282	(0.16)	*0.379	0.065	(0.23)	0.423	0.061	(0.18)	0.443	-0.011	(0.06)	0.417	-0.050	(0.13)	0.444	-0.032	(0.06)	0.446	36
Job Security	0.181	(0.15)	0.386	-0.774	(0.43)*	0.428	0.028	(0.13)	0.457	0.000	(0.04)	0.437	-0.028	(0.09)	0.453	-0.035	(0.04)	0.432	36
(2) Industrial (Collective) Relations Law	0.096	(0.04)	**0.342	0.029	(0.04)	0.405	0.036	(0.04)	0.411	-0.012	(0.01)	0.386	-0.024	(0.02)	0.418	-0.020	(0.01)*	0.382	36
Collective Bargaining	0.234	(0.11)	**0.360	0.254	(0.20)	0.443	0.088	(0.09)	0.415	-0.026	(0.03)	0.385	-0.063	(0.07)	0.425	-0.047	(0.03)*	0.389	36
Worker Participation in Management	0.064	(0.15)	0.293	-0.236	(0.16)*	0.471	0.012	(0.10)	0.411	-0.013	(0.04)	0.386	0.048	(0.09)	0.435	-0.019	(0.04)	0.376	36
Collective Disputes	0.342	(0.15)	**0.382	0.673	(0.31)**	0.499	0.147	(0.14)	0.426	-0.050	(0.05)	0.398	-0.097	(0.10)	0.432	-0.069	(0.04)*	0.397	36
(3) Social Security Laws	0.107	(0.08)	0.285	-0.010	(0.08)	0.398	0.035	(0.07)	0.398	-0.014	(0.03)	0.378	-0.022	(0.04)	0.403	-0.024	(0.02)	0.349	36
Old Age, Disability and Death Benefits	0.639	(0.63)	0.358	0.093	(0.54)	0.398	0.286	(0.42)	0.404	-0.119	(0.17)	0.385	-0.113	(0.28)	0.480	-0.121	(0.13)	0.357	36
Sickness and Health Benefits	0.208	(0.12)	*0.299	0.095	(0.19)	0.401	0.124	(0.16)	0.402	-0.079	(0.05)	0.393	-0.028	(0.07)	0.408	-0.038	(0.03)	0.354	36
Unemployment Benefits	0.014	(0.21)	0.365	-0.123	(0.18)	0.455	-0.057	(0.18)	0.405	0.040	(0.07)	0.393	0.017	(0.10)	0.460	-0.011	(0.05)	0.407	36

See footnote in Table 7.



**Table A.3.**  
**Panel Data Regression Analysis between Income Inequality and Labor Market Regulations 1/**  
**Sensitivity Analysis on Panel Regressions for Different Measures of Labor Regulations**  
**Sample of ALL Countries, 1970-2000, Panel data of 5-year non-overlapping observations**  
*Dependent Variable: Gini Coefficient (0-1)*

Labor Indicator	Gini Coefficient			Top 20 Top 20			Top 40 Top 40			Middle 20 Middle 20			Bottom 40 Bottom 40			Bottom 20 Bottom 20			Nobs.	
	Coeff.	Std. Dev.	R**2	Coeff.	Std. Dev.	R**2	Coeff.	Std. Dev.	R**2	Coeff.	Std. Dev.	R**2	Coeff.	Std. Dev.	R**2	Coeff.	Std. Dev.	R**2		
I. Pooled Estimators																				
I.1 Least Squares 2/																				
(0) "De Jure" Index	0.022	(0.03)		0.38	-0.019	(0.03)	0.37	0.014	(0.02)	0.39	-0.022	(0.01)*	0.31	0.008	(0.02)	0.33	-0.005	(0.01)	0.29	327
(1) "De Facto" Index 1	-0.174	(0.03)	** 0.41	-0.193	(0.04)**	0.41	-0.134	(0.03)**	0.42	0.057	(0.02)**	0.32	0.077	(0.02)**	0.33	0.028	(0.01)**	0.28	341	
Minimum Wage 1/	-0.014	(0.02)		0.48	-0.030	(0.02)	0.47	-0.018	(0.02)	0.49	0.014	(0.01)*	0.37	0.004	(0.01)	0.41	-0.001	(0.00)	0.34	286
Social Security	-0.038	(0.02)	** 0.39	-0.040	(0.02)*	0.39	-0.040	(0.01)**	0.40	0.000	(0.01)	0.30	0.039	(0.01)**	0.34	0.016	(0.00)**	0.30	312	
Trade Union	-0.087	(0.03)	** 0.42	-0.075	(0.03)**	0.42	-0.037	(0.02)*	0.43	0.003	(0.01)	0.33	0.034	(0.02)**	0.34	0.013	(0.01)*	0.28	334	
General Govt. Employment	-0.049	(0.02)	** 0.45	-0.077	(0.02)**	0.43	-0.039	(0.02)**	0.44	0.030	(0.01)**	0.37	0.009	(0.01)	0.36	0.001	(0.01)	0.30	295	
(2) "De Facto" Index 2	-0.065	(0.03)	** 0.38	-0.083	(0.04)**	0.38	-0.038	(0.03)	0.39	0.020	(0.01)*	0.31	0.018	(0.02)	0.31	-0.003	(0.01)	0.26	344	
Minimum Wage 2/	0.041	(0.05)		0.44	0.056	(0.04)	0.44	0.032	(0.03)	0.45	0.002	(0.02)	0.34	-0.034	(0.02)*	0.38	-0.015	(0.01)	0.33	292
Maternity Leave (# days)	-0.090	(0.03)	** 0.39	-0.115	(0.02)**	0.38	-0.084	(0.02)**	0.39	0.014	(0.01)	0.30	0.070	(0.01)**	0.33	0.033	(0.01)**	0.29	331	
Ratification of ILO Conv. 87	-0.015	(0.01)	* 0.38	-0.021	(0.01)**	0.38	-0.009	(0.01)	0.39	0.004	(0.00)	0.31	0.005	(0.01)	0.32	-0.001	(0.00)	0.27	344	
Central Govt. Employment	-0.024	(0.03)		0.43	-0.043	(0.04)	0.41	-0.012	(0.03)	0.41	0.002	(0.01)	0.33	0.010	(0.02)	0.32	-0.004	(0.01)	0.26	298
(3) De Jure vs. De Facto																				
L1 relative to L0	-0.084	(0.02)	** 0.39	-0.061	(0.03)**	0.38	-0.061	(0.02)**	0.40	0.039	(0.01)**	0.33	0.023	(0.02)	0.32	0.014	(0.01)**	0.29	321	
L2 relative to L0	-0.059	(0.03)	* 0.39	-0.035	(0.03)	0.37	-0.031	(0.02)	0.39	0.029	(0.01)**	0.32	0.002	(0.02)	0.32	-0.001	(0.01)	0.29	323	
I.2 Instrumental Variables 3/																				
(0) "De Jure" Index	0.033	(0.07)		0.40	-0.067	(0.06)	0.40	-0.017	(0.05)	0.41	0.005	(0.03)	0.308	0.013	(0.03)	0.348	0.001	(0.01)	0.315	312
(1) "De Facto" Index 1	-0.103	(0.08)		0.39	-0.177	(0.08)**	0.40	-0.078	(0.07)	0.40	0.029	(0.04)	0.304	0.049	(0.04)	0.327	0.022	(0.02)	0.282	326
Minimum Wage 1/	0.075	(0.10)		0.49	0.078	(0.10)	0.50	0.094	(0.07)	0.51	-0.025	(0.04)	0.378	-0.068	(0.05)	0.443	-0.024	(0.02)	0.369	273
Social Security	0.122	(0.06)	** 0.39	0.044	(0.06)	0.39	0.055	(0.05)	0.39	-0.037	(0.02)*	0.297	-0.018	(0.03)	0.322	-0.010	(0.01)	0.295	301	
Trade Union	-0.547	(0.14)	** 0.42	-0.512	(0.16)**	0.42	-0.386	(0.12)**	0.42	0.195	(0.06)**	0.328	0.192	(0.09)**	0.339	0.081	(0.04)**	0.294	321	
General Govt. Employment	-0.368	(0.13)	** 0.44	-0.241	(0.12)*	0.42	-0.131	(0.09)	0.42	0.042	(0.04)	0.347	0.089	(0.06)	0.343	0.043	(0.03)*	0.297	283	
(2) "De Facto" Index 2	0.091	(0.10)		0.39	0.016	(0.10)	0.39	0.020	(0.08)	0.40	0.005	(0.04)	0.311	-0.024	(0.05)	0.324	-0.011	(0.02)	0.279	330
Minimum Wage 2/	0.282	(0.16)	* 0.47	0.314	(0.16)*	0.48	0.176	(0.12)	0.48	-0.092	(0.07)	0.359	-0.084	(0.08)	0.408	-0.024	(0.04)	0.355	279	
Maternity Leave (# days)	-0.841	(0.29)	** 0.41	-1.075	(0.28)**	0.42	-0.697	(0.23)**	0.42	0.298	(0.11)**	0.321	0.400	(0.16)**	0.339	0.174	(0.07)**	0.295	319	
Ratification of ILO Conv. 87	0.087	(0.05)	* 0.40	-0.011	(0.04)	0.40	-0.010	(0.03)	0.41	0.008	(0.01)	0.314	0.003	(0.03)	0.324	-0.004	(0.01)	0.279	330	
Central Govt. Employment	-0.297	(0.13)	** 0.43	-0.147	(0.14)	0.43	-0.060	(0.10)	0.42	0.051	(0.05)	0.330	0.009	(0.07)	0.334	0.014	(0.03)	0.273	286	
(3) De Jure vs. De Facto																				
L1 relative to L0	-0.347	(0.11)	** 0.41	-0.120	(0.11)	0.40	-0.134	(0.08)*	0.41	0.060	(0.04)	0.305	0.074	(0.06)	0.344	0.050	(0.03)	0.316	306	
L2 relative to L0	0.051	(0.12)		0.40	0.190	(0.10)*	0.40	0.080	(0.09)	0.41	-0.026	(0.05)	0.312	-0.054	(0.06)	0.346	-0.019	(0.03)	0.315	309

Table A.3., continued

Labor Indicator	Gini Coefficient			Top 20 Top 20			Top 40 Top 40			Middle 20 Middle 20			Bottom 40 Bottom 40			Bottom 20 Bottom 20			Nobs.
	Coeff.	Std. Dev.	R <sup>2</sup> 2	Coeff.	Std. Dev.	R <sup>2</sup> 2	Coeff.	Std. Dev.	R <sup>2</sup> 2	Coeff.	Std. Dev.	R <sup>2</sup> 2	Coeff.	Std. Dev.	R <sup>2</sup> 2	Coeff.	Std. Dev.	R <sup>2</sup> 2	
(1) "De Facto" Index 1	-0.159	(0.04)	** 0.43	-0.183	(0.04)**	0.43	-0.128	(0.03)**	0.44	0.056	(0.02)**	0.33	0.072	(0.02)**	0.360	0.026	(0.01)**	0.289	341
Minimum Wages	-0.017	(0.02)	0.49	-0.036	(0.02)*	0.49	-0.022	(0.02)	0.51	0.015	(0.01)*	0.38	0.007	(0.01)	0.439	0.000	(0.01)	0.351	286
Social Security	-0.043	(0.02)	* 0.41	-0.049	(0.02)**	0.42	-0.044	(0.02)**	0.42	0.001	(0.01)	0.30	0.044	(0.01)**	0.374	0.017	(0.01)**	0.315	312
Trade Union	-0.064	(0.03)	** 0.44	-0.050	(0.03)*	0.45	-0.020	(0.02)	0.46	-0.002	(0.01)	0.35	0.022	(0.02)	0.370	0.010	(0.01)	0.298	334
General Govt. Employment	-0.032	(0.03)	0.48	-0.056	(0.03)*	0.47	-0.025	(0.02)	0.47	0.026	(0.01)**	0.39	-0.001	(0.01)	0.391	-0.001	(0.01)	0.314	295
(2) "De Facto" Index 2	-0.061	(0.03)	** 0.41	-0.081	(0.03)**	0.41	-0.038	(0.02)*	0.41	0.020	(0.01)*	0.32	0.018	(0.02)	0.338	-0.003	(0.01)	0.272	344
Minimum Wages	0.023	(0.04)	0.47	0.035	(0.04)	0.48	0.018	(0.03)	0.48	0.006	(0.02)	0.36	-0.024	(0.02)	0.412	-0.013	(0.01)	0.340	292
Maternity Leave (# days)	-0.089	(0.04)	** 0.41	-0.111	(0.04)**	0.42	-0.081	(0.03)**	0.42	0.013	(0.02)	0.31	0.068	(0.02)**	0.360	0.033	(0.01)**	0.307	331
Ratification of ILO Conv. 87	-0.014	(0.01)	* 0.41	-0.021	(0.01)**	0.41	-0.009	(0.01)	0.41	0.004	(0.00)	0.32	0.005	(0.01)	0.345	-0.001	(0.00)	0.278	344
Central Govt. Employment	-0.012	(0.03)	0.45	-0.026	(0.04)	0.44	-0.001	(0.03)	0.43	0.000	(0.01)	0.34	0.001	(0.02)	0.351	-0.006	(0.01)	0.271	298
(3) De Jure vs. De Facto																			
L1 relative to L0	-0.076	(0.03)	** 0.42	-0.051	(0.03)*	0.41	-0.055	(0.02)**	0.43	0.037	(0.01)**	0.34	0.018	(0.01)	0.357	0.013	(0.01)**	0.310	321
L2 relative to L0	-0.055	0.03	** 0.42	-0.029	(0.03)	0.41	-0.027	(0.02)	0.42	0.028	(0.01)**	0.336	0.000	(0.01)	0.360	-0.001	(0.01)	0.306	323
<b>I.2 Instrumental Variables 3/</b>																			
(0) "De Jure" Index	0.015	(0.07)	0.42	-0.076	(0.07)	0.43	-0.024	(0.05)	0.44	0.006	(0.03)	0.319	0.018	(0.04)	0.379	0.002	(0.02)	0.329	312
(1) "De Facto" Index 1	-0.130	(0.10)	0.42	-0.198	(0.10)**	0.43	-0.093	(0.07)	0.42	0.033	(0.04)	0.312	0.060	(0.05)	0.355	0.025	(0.02)	0.293	326
Minimum Wage 1/	0.045	(0.11)	0.51	-0.083	(0.23)	0.49	0.065	(0.08)	0.53	-0.019	(0.05)	0.384	-0.046	(0.06)	0.465	-0.018	(0.03)	0.377	273
Social Security	0.108	(0.06)	* 0.42	-0.037	(0.06)	0.42	0.050	(0.05)	0.41	-0.036	(0.02)	0.304	0.012	(0.03)	0.351	-0.009	(0.02)	0.306	301
Trade Union	-0.557	(0.15)	** 0.45	-0.515	(0.16)**	0.45	-0.389	(0.12)**	0.45	0.196	(0.06)**	0.338	0.193	(0.08)**	0.370	0.083	(0.04)**	0.308	321
General Govt. Employment	-0.443	(0.13)	** 0.48	-0.346	(0.14)**	0.47	-0.207	(0.10)**	0.46	0.069	(0.05)	0.370	0.137	(0.07)*	0.381	0.056	(0.03)*	0.312	283
(2) "De Facto" Index 2	0.059	(0.10)	0.41	-0.005	(0.11)	0.41	0.006	(0.08)	0.42	0.007	(0.04)	0.318	-0.014	(0.06)	0.350	-0.008	(0.03)	0.290	330
Minimum Wages	0.323	(0.17)	* 0.49	0.364	(0.17)**	0.51	0.213	(0.13)*	0.50	-0.103	(0.07)	0.369	-0.110	(0.09)	0.438	-0.030	(0.04)	0.367	279
Maternity Leave (# days)	-0.880	(0.29)	** 0.43	-1.095	(0.30)**	0.44	-0.709	(0.23)**	0.44	0.299	(0.12)**	0.327	0.410	(0.16)**	0.365	0.179	(0.07)**	0.306	319
Ratification of ILO Conv. 87	0.106	(0.06)	* 0.42	0.042	(0.06)	0.42	-0.008	(0.03)	0.43	0.007	(0.02)	0.321	-0.010	(0.03)	0.351	-0.007	(0.02)	0.291	330
Central Govt. Employment	-0.391	(0.15)	** 0.46	-0.264	(0.15)*	0.46	-0.140	(0.12)	0.44	0.075	(0.06)	0.342	0.065	(0.08)	0.364	0.028	(0.04)	0.280	286
(3) De Jure vs. De Facto																			
L1 relative to L0	-0.352	(0.11)	** 0.44	-0.142	(0.12)	0.43	-0.153	(0.09)*	0.99	0.068	(0.05)	0.318	0.086	(0.06)	0.377	0.054	(0.03)*	0.331	306
L2 relative to L0	0.050	(0.12)	0.43	0.177	(0.13)	0.43	0.070	(0.09)	0.44	-0.022	(0.05)	0.325	-0.047	(0.07)	0.379	-0.018	(0.03)	0.330	309

See footnotes in Table 7.

**Table A.4., Panel Data Regression Analysis between Income Inequality and Labor Market Regulations 1/  
Sensitivity Analysis on Panel Regressions for Different Measures of Labor Regulations  
Sample of DEVELOPING Countries, 1970-2000, Panel data of 5-year non-overlapping observations**  
*Dependent Variable: Gini Coefficient (0-1)*

Labor Indicator	Gini Coefficient			Top 20 Top 20			Top 40 Top 40			Middle 20 Middle 20			Bottom 40 Bottom 40			Bottom 20 Bottom 20			Nobs.
	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	Coeff.	Std. Dev.	R <sup>2</sup>	
I. Pooled Estimators																			
I.1 Least Squares 2/																			
(0) "De Jure" Index	0.067	(0.04)	* 0.27	0.050	(0.05)	0.20	0.054	(0.03)*	0.26	-0.028	(0.01)**	0.16	-0.026	(0.02)	0.254	-0.018	(0.01)*	0.287	263
(1) "De Facto" Index 1	-0.248	(0.05)	** 0.30	-0.333	(0.06)**	0.26	-0.218	(0.04)**	0.30	0.082	(0.02)**	0.18	0.136	(0.03)**	0.277	0.047	(0.02)**	0.272	269
Minimum Wage 1/	-0.063	(0.03)	** 0.36	-0.109	(0.03)**	0.35	-0.064	(0.02)**	0.42	0.026	(0.01)**	0.26	0.038	(0.01)**	0.414	0.009	(0.01)	0.382	214
Social Security	-0.030	(0.03)	0.29	-0.051	(0.03)*	0.24	-0.048	(0.02)**	0.29	0.010	(0.01)	0.16	0.039	(0.02)**	0.268	0.015	(0.01)**	0.283	256
Trade Union	-0.112	(0.04)	** 0.31	-0.090	(0.05)*	0.28	-0.033	(0.04)	0.32	-0.022	(0.02)	0.24	0.055	(0.03)**	0.285	0.021	(0.01)*	0.282	262
General Govt. Employment	-0.076	(0.03)	** 0.36	-0.130	(0.03)**	0.29	-0.078	(0.02)**	0.34	0.042	(0.01)**	0.24	0.037	(0.02)*	0.322	0.011	(0.01)	0.326	223
(2) "De Facto" Index 2	-0.053	(0.04)	0.26	-0.058	(0.04)	0.18	-0.021	(0.03)	0.24	0.015	(0.01)	0.15	0.006	(0.02)	0.224	-0.007	(0.01)	0.246	272
Minimum Wage 2/	0.027	(0.05)	0.31	0.046	(0.05)	0.26	0.025	(0.04)	0.35	0.004	(0.02)	0.21	-0.029	(0.02)	0.344	-0.014	(0.01)	0.361	220
Maternity Leave (# days)	-0.121	(0.03)	** 0.26	-0.149	(0.03)**	0.20	-0.113	(0.03)**	0.26	0.025	(0.02)*	0.15	0.088	(0.02)**	0.256	0.041	(0.01)**	0.284	260
Ratification of ILO Conv. 87	-0.008	(0.01)	0.26	-0.010	(0.01)	0.19	0.000	(0.01)	0.25	0.001	(0.00)	0.16	-0.001	(0.01)	0.237	-0.004	(0.00)	0.259	272
Central Govt. Employment	-0.014	(0.04)	0.32	-0.034	(0.05)	0.20	-0.008	(0.04)	0.27	0.004	(0.02)	0.19	0.004	(0.03)	0.236	-0.005	(0.01)	0.262	226
(3) De Jure vs. De Facto																			
L1 relative to L0	-0.142	(0.03)	** 0.29	-0.156	(0.04)**	0.24	-0.117	(0.03)**	0.30	0.049	(0.01)**	0.19	0.069	(0.02)**	0.281	0.032	(0.01)**	0.307	257
L2 relative to L0	-0.083	(0.04)	** 0.28	-0.070	(0.04)*	0.20	-0.044	(0.03)*	0.26	0.028	(0.01)**	0.174	0.017	(0.02)	0.250	0.002	(0.01)	0.276	259
I.2 Instrumental Variables 3/																			
(0) "De Jure" Index	0.102	(0.09)	0.30	-0.016	(0.08)	0.21	0.044	(0.06)	0.27	-0.023	(0.03)	0.15	-0.021	(0.04)	0.27	-0.015	(0.02)	0.31	248
(1) "De Facto" Index 1	0.023	(0.12)	0.28	-0.154	(0.13)	0.20	-0.015	(0.10)	0.25	-0.018	(0.05)	0.14	0.033	(0.06)	0.25	0.010	(0.03)	0.27	254
Minimum Wage 1/	0.105	(0.12)	0.38	0.260	(0.31)	0.31	0.113	(0.10)	0.45	-0.049	(0.05)	0.27	-0.065	(0.06)	0.46	-0.020	(0.03)	0.45	201
Social Security	0.151	(0.08)	** 0.29	-0.076	(0.07)	0.25	0.097	(0.06)*	0.26	-0.047	(0.03)*	0.14	-0.051	(0.04)	0.25	-0.027	(0.02)	0.28	245
Trade Union	-0.534	(0.17)	** 0.31	-0.664	(0.19)**	0.24	-0.491	(0.14)**	0.31	0.221	(0.06)**	0.20	0.270	(0.11)**	0.28	0.109	(0.05)**	0.30	249
General Govt. Employment	-0.681	(0.21)	** 0.35	-0.583	(0.24)**	0.23	-0.437	(0.18)**	0.29	0.105	(0.07)	0.19	0.333	(0.12)**	0.29	0.151	(0.05)**	0.32	211
(2) "De Facto" Index 2	0.181	(0.13)	0.29	0.080	(0.13)	0.19	0.117	(0.10)	0.26	-0.029	(0.05)	0.15	-0.087	(0.07)	0.25	-0.044	(0.03)	0.28	258
Minimum Wage 2/	0.465	(0.21)	** 0.37	0.446	(0.22)**	0.33	0.343	(0.16)**	0.43	-0.170	(0.07)**	0.27	-0.172	(0.11)*	0.41	-0.059	(0.05)	0.44	207
Maternity Leave (# days)	-0.645	(0.36)	* 0.30	-1.050	(0.36)**	0.22	-0.643	(0.29)**	0.28	0.248	(0.14)*	0.17	0.395	(0.19)**	0.26	0.179	(0.09)**	0.30	248
Ratification of ILO Conv. 87	0.051	(0.05)	0.29	-0.005	(0.05)	0.21	0.017	(0.04)	0.28	0.038	(0.03)	0.15	-0.018	(0.02)	0.27	-0.010	(0.01)	0.29	258
Central Govt. Employment	-0.352	(0.21)	* 0.33	-0.256	(0.24)	0.21	-0.113	(0.18)	0.28	0.038	(0.08)	0.18	0.076	(0.12)	0.25	0.020	(0.06)	0.29	214
(3) De Jure vs. De Facto																			
L1 relative to L0	-0.513	(0.14)	** 0.32	-0.309	(0.15)**	0.22	-0.333	(0.11)**	0.29	0.128	(0.04)**	0.16	0.206	(0.08)**	0.29	0.105	(0.04)**	0.33	242
L2 relative to L0	-0.010	(0.16)	0.29	0.105	(0.14)	0.21	0.007	(0.12)	0.27	0.005	(0.05)	0.16	-0.012	(0.08)	0.27	-0.008	(0.04)	0.31	245

Table A.4, continued

Labor Indicator	Gini Coefficient			Top 20 Top 20			Top 40 Top 40			Middle 20 Middle 20			Bottom 40 Bottom 40			Bottom 20 Bottom 20			Nobs.
	Coeff.	Std. Dev.	R <sup>2</sup> 2	Coeff.	Std. Dev.	R <sup>2</sup> 2	Coeff.	Std. Dev.	R <sup>2</sup> 2	Coeff.	Std. Dev.	R <sup>2</sup> 2	Coeff.	Std. Dev.	R <sup>2</sup> 2	Coeff.	Std. Dev.	R <sup>2</sup> 2	
(1) "De Facto" Index 1	-0.231	(0.06)	** 0.32	-0.324	(0.07)**	0.28	-0.209	(0.05)**	0.32	0.080	(0.02)**	0.19	0.129	(0.03)**	0.304	0.044	(0.02)**	0.292	269
Minimum Wage 1/	-0.063	(0.03)	** 0.37	-0.113	(0.03)**	0.37	-0.064	(0.02)**	0.44	0.024	(0.01)**	0.27	0.040	(0.02)**	0.444	0.009	(0.01)	0.404	214
Social Security	-0.037	(0.03)	0.32	-0.057	(0.03)*	0.26	-0.053	(0.02)**	0.31	0.010	(0.01)	0.16	0.043	(0.02)**	0.304	0.017	(0.01)**	0.310	256
Trade Union	-0.084	(0.04)	** 0.34	-0.065	(0.05)	0.31	-0.014	(0.04)	0.35	-0.027	(0.02)	0.25	0.041	(0.03)*	0.315	0.016	(0.01)	0.303	262
General Govt. Employment	-0.055	(0.03)	* 0.40	-0.109	(0.04)**	0.32	-0.062	(0.03)**	0.37	0.037	(0.01)**	0.26	0.025	(0.02)	0.353	0.007	(0.01)	0.346	223
(2) "De Facto" Index 2	-0.054	(0.03)	* 0.29	-0.068	(0.04)*	0.21	-0.028	(0.03)	0.27	0.016	(0.01)	0.16	0.012	(0.02)	0.258	-0.006	(0.01)	0.269	272
Minimum Wage 2/	0.011	(0.05)	0.33	0.026	(0.05)	0.29	0.015	(0.04)	0.38	0.004	(0.02)	0.22	-0.019	(0.03)	0.375	-0.012	(0.01)	0.383	220
Maternity Leave (# days)	-0.126	(0.06)	** 0.30	-0.149	(0.06)**	0.23	-0.113	(0.04)**	0.29	0.024	(0.02)	0.16	0.088	(0.03)**	0.288	0.041	(0.01)**	0.304	260
Ratification of ILO Conv. 87	-0.010	(0.01)	0.29	-0.014	(0.01)	0.21	-0.002	(0.01)	0.28	0.002	(0.00)	0.17	0.001	(0.01)	0.269	-0.003	(0.00)	0.280	272
Central Govt. Employment	0.002	(0.04)	0.35	-0.019	(0.05)	0.23	0.003	(0.04)	0.30	0.002	(0.02)	0.20	-0.005	(0.02)	0.278	-0.008	(0.01)	0.290	226
(3) De Jure vs. De Facto																			
L1 relative to L0	-0.124	(0.04)	** 0.32	-0.142	(0.04)**	0.26	-0.107	(0.03)**	0.32	0.049	(0.01)**	0.19	0.059	(0.02)**	0.304	0.029	(0.01)	0.323	257
L2 relative to L0	-0.074	(0.03)	** 0.32	-0.064	(0.04)*	0.23	-0.039	(0.03)*	0.30	0.027	(0.01)**	0.18	0.013	(0.02)	0.287	0.001	(0.01)	0.301	259
<b>I.2 Instrumental Variables 3/</b>																			
(0) "De Jure" Index	0.055	(0.08)	0.33	-0.036	(0.09)	0.24	0.029	(0.07)	0.30	-0.021	(0.03)	0.17	-0.008	(0.05)	0.30	-0.011	(0.02)	0.33	248
(1) "De Facto" Index 1	-0.028	(0.13)	0.31	-0.176	(0.14)	0.22	-0.031	(0.10)	0.28	-0.015	(0.05)	0.15	0.047	(0.07)	0.27	0.015	(0.03)	0.29	254
Minimum Wage 1/	0.137	(0.27)	0.38	0.205	(0.31)	0.33	0.080	(0.11)	0.48	-0.045	(0.06)	0.29	-0.035	(0.07)	0.48	0.028	(0.07)	0.45	201
Social Security	0.119	(0.07)	* 0.32	-0.085	(0.08)	0.27	0.087	(0.06)	0.28	-0.046	(0.03)	0.15	-0.041	(0.04)	0.28	-0.023	(0.02)	0.30	245
Trade Union	-0.539	(0.18)	** 0.35	-0.668	(0.20)**	0.27	-0.495	(0.14)**	0.33	0.225	(0.07)**	0.21	0.270	(0.10)**	0.31	0.110	(0.05)**	0.32	249
General Govt. Employment	-0.661	(0.21)	** 0.39	-0.602	(0.24)**	0.27	-0.455	(0.18)**	0.34	0.110	(0.08)	0.22	0.345	(0.12)**	0.32	0.156	(0.06)**	0.34	211
(2) "De Facto" Index 2	0.109	(0.13)	0.31	0.039	(0.14)	0.21	0.089	(0.10)	0.28	-0.026	(0.05)	0.16	-0.063	(0.07)	0.27	-0.036	(0.03)	0.30	258
Minimum Wage 2/	0.430	(0.23)	* 0.39	0.416	(0.24)*	0.36	0.325	(0.17)*	0.46	-0.169	(0.09)*	0.28	-0.157	(0.12)	0.44	-0.055	(0.06)	0.46	207
Maternity Leave (# days)	-0.761	(0.36)	** 0.33	-1.117	(0.39)**	0.24	-0.688	(0.29)**	0.30	0.256	(0.14)*	0.17	0.432	(0.20)**	0.29	0.193	(0.09)**	0.32	248
Ratification of ILO Conv. 87	0.066	(0.11)	0.31	-0.019	(0.05)	0.23	0.008	(0.04)	0.30	0.039	(0.04)	0.16	-0.024	(0.06)	0.27	-0.019	(0.03)	0.29	258
Central Govt. Employment	-0.400	(0.24)	* 0.35	-0.287	(0.26)	0.23	-0.140	(0.19)	0.30	0.042	(0.09)	0.20	0.099	(0.13)	0.28	0.028	(0.06)	0.30	214
(3) De Jure vs. De Facto																			
L1 relative to L0	-0.440	(0.15)	** 0.35	-0.272	(0.17)*	0.24	-0.308	(0.12)**	0.32	0.123	(0.06)**	0.17	0.185	(0.08)**	0.313	0.098	(0.04)**	0.344	242
L2 relative to L0	0.028	(0.16)	0.34	0.110	(0.17)	0.24	0.012	(0.13)	0.30	0.004	(0.06)	0.17	-0.017	(0.09)	0.304	-0.011	(0.04)	0.331	245

See footnotes in Table 7.