



**IDB WORKING PAPER SERIES No. IDB-WP-543**

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**November 2014**

**Inter-American Development Bank**  
Department of Research and Chief Economist

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Inter-American Development Bank

2014

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

Dewan, Sabina.

U.S. free trade agreements and enforcement of labor law in Latin America / Sabina Dewan, Lucas Ronconi.

p. cm. — (IDB Working Paper Series ; 543)

Includes bibliographic references.

1. Labor laws and legislation—Economic aspects—Latin America. 2. Labor policy—Economic aspects—Latin America. 3. Free trade— Social policy—Latin America. 4. Latin America—Commercial treaties. I. Ronconi, Lucas. II. Inter-American Development Bank. Department of Research and Chief Economist. III. Title. IV. Series.

IDB-WP-543

<http://www.iadb.org>

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## Abstract\*

This paper analyzes whether Free Trade Agreements (FTAs) signed between the United States and Latin American countries during the last decade produced higher enforcement of labor regulations. The paper computes before-after estimates of the effect of FTAs on labor inspections and exploits variation across countries using non-signers as a comparison group. The empirical strategy benefits from the fact that about half of Latin American countries have signed a trade agreement with the United States. Difference-in-differences estimates suggest that signing an FTA produced a 20 percent increase in the number of labor inspectors and a 60 percent increase in the number of inspections. The North American Free Trade Agreement (NAFTA), however, does not appear to have the same positive impacts on Mexico. The paper concludes with a discussion of these results.

**JEL codes:** F16, J83, K31

**Keywords:** Enforcement, Labor, Trade, Latin America

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## 1. Introduction

Violations of labor law and noncompliance with employment and social security regulations are common in many developing countries.<sup>1</sup> Although government enforcement of labor laws and regulations is an important instrument through which to achieve compliance, until recently there have been few studies examining the factors that drive government enforcement in the developing world. Recent research (Piore and Schrank, 2008; Pires, 2008; Amengual, 2010; Murillo, Ronconi, and Schrank, 2011; Ronconi, 2012) is starting to reveal that factors such as a government's political ideology, the strength of labor unions and business groups, and the exposure of an economy to foreign trade all affect government enforcement of labor laws, employment and social security regulations.

This study adds to this growing field of inquiry by empirically exploring whether an external force, such as a trade agreement, alters the political economy equilibrium affecting the degree of enforcement. Most scholars agree that the scrutiny and debates that come with negotiations of labor chapters in trade agreements can encourage improvements in labor enforcement. But this paper goes a step further by measuring and empirically testing whether FTAs signed between the United States and Latin American countries over the last decade resulted in higher enforcement of labor laws and regulations in the signatory Latin American nations.

Enforcing labor regulations requires a government in a given country to possess both the capacity and the political will to uphold the law. A deficiency in either adversely affects enforcement. Many developing countries lack adequate capacity (such as financial resources, inspectors and technical skills) to enforce their labor regulations. In addition, as more countries integrate into the global economy and trade competition intensifies, countries are tempted to exploit low production costs and cheap labor in pursuit of higher profits, greater investment and growth. It therefore becomes difficult to acquire the political will necessary to enforce labor

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<sup>1</sup> Rani et al. (2013), among others, find very low levels of compliance with minimum wages in 11 African, Asian and Latin American countries. Borat, Kanbur, and Mayet (2012), Kanbur, Ronconi, and Wedenoja (2013), and Ronconi (2010) compute measures of noncompliance with employment and social security regulations in South Africa, Chile and Argentina.

laws. Yet trade, the primary driver of global integration, can also be a powerful tool to build capacity and generate the political will needed to improve the enforcement of labor regulations.<sup>2</sup>

During the last decade there has been a shift in U.S. policy towards including the enforcement of labor law as a provision in trade agreements. Did the free trade agreements (FTAs) signed between the US and developing countries produce higher enforcement as intended in the FTAs? Or did lobbies and the economic pressures associated with a more open economy and higher competition push governments in the developing world to turn a blind eye to violations of labor regulations?

This paper, first, examines the labor provisions in the U.S. trade agreements signed with Latin American countries during the last decade, and traces the evolution of the debate over the inclusion of labor provisions in FTAs. Second, it empirically investigates whether these FTAs improved the enforcement of labor laws in the signing Latin American nations. We exploit before-after variation in labor inspections (from 2000 to 2012) in countries that signed an FTA with the United States and use non-signer countries in the region as a comparison group. The results suggest that, on average, an FTA had a positive effect on inspection resources and productivity.

One limitation is that our study does not estimate the impact of NAFTA on enforcement in Mexico because the agreement was signed in the early nineties and the dataset does not cover that period. Back of the envelope calculations suggest that NAFTA did not increase enforcement in Mexico, and we briefly discuss in the conclusions whether this is due to differences in the letter of the agreement.

## **2. Evolution of Labor Provisions in U.S.–Latin America Trade Agreements**

The United States has free trade agreements in force in twenty countries, eleven of which are with Latin American nations. The Dominican Republic-Central America Free Trade Agreement (CAFTA-DR) was signed in 2004 and includes Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua. Bilateral FTAs have been signed in 2003 with Chile, in 2006 with Peru and Colombia, and in 2007 with Panama. Finally, Mexico and Canada are

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<sup>2</sup> Following the theoretical model in Basu, Chau, and Kanbur (2010), it is also plausible to consider a trade agreement as a commitment device that can solve the consistency problems that are inherent to enforcement.

signatories of the North American Free Trade Agreement (NAFTA) and its complementary labor accord, the North American Agreement on Labor Cooperation (NAALC).

Labor provisions in trade agreements are intended to hold the signatories responsible for upholding certain commitments with respect to labor rights. These commitments pertain to i) the scope of national laws in protecting labor rights and the extent to which they are coherent with international standards, and ii) the enforcement of existing laws (Polaski, 2004). The linking of international trade and labor in US policy was first initiated in the Generalized System of Preferences Act and then in the Omnibus Trade and Competitiveness Act of 1988 authorizing US participation in the Uruguay Round of multilateral trade talks, which included workers' rights as one of the principle trade negotiating objects. Beyond these, labor provisions in U.S. free trade agreements can arguably be seen as having "evolved" in four stages corresponding to the signing of a free trade agreement with a Latin American country. The first stage is NAFTA; the second stage begins with the U.S.-Chile FTA; the third stage with the U.S.-Peru FTA; and the fourth stage with the U.S.-Colombia FTA.

### ***2.1 The Side Agreement on Labor***

NAFTA, as negotiated under President George H.W. Bush did not include a labor chapter, but incoming President William J. Clinton made the submission of NAFTA for Congressional approval contingent on the negotiation of side agreements on labor and environment. NAALC (i.e., the labor accord accompanying NAFTA) marked the beginning of the inclusion of labor provisions in free trade agreements in the United States. It was negotiated as a means of encouraging better labor standards and enforcement in Mexico, but also as a means of constraining the adverse impacts of Mexico's lower labor costs on the United States.

The NAALC does not establish common minimum standards that the Parties must uphold in their domestic laws. Rather it states that "each Party shall ensure that its labor laws and regulations provide for high labor standards." It provides 11 "guiding principles" that the parties commit to promoting subject to their domestic law.<sup>3</sup>

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<sup>3</sup> The 11 guiding principles are the following: i) freedom of association and the protection of the right to organize; ii) the right to bargain collectively; iii) the right to strike; iv) prohibition of forced labor; v) labor protections for children and young persons; vi) minimum employment standards; vii) elimination of employment discrimination; viii) equal pay for women and men; ix) prevention of occupational injuries and illnesses; x) compensation in cases of occupational injuries and illnesses; and xi) protection of migrant workers.

The NAALC creates a Commission for Labor Cooperation comprising of a Ministerial Council and a Secretariat, assisted by a National Administrative Office at the federal level, to oversee the implementation of the agreement. It also sets up a complex procedure of consultations, dispute resolution, and arbitration—enforceable with sanctions only in cases where there is a persistent pattern of failure by a Party to effectively enforce its occupational safety and health, child labor or minimum wage technical labor standards (Bolle, 2014). The violation must be trade-related and covered by mutually recognized labor laws.

The NAALC makes no reference to international labor standards, but subsequent trade agreements refer to the International Labor Organization’s 1998 Declaration on Fundamental Principles and Rights at Work, which came to be internationally accepted as a minimum floor for labor standards.<sup>4</sup>

## ***2.2 From Side Agreement to a Labor Chapter***

The most notable difference between the NAALC and subsequent trade agreements (with the exception of the U.S.-Colombia FTA) was the inclusion of a labor chapter directly into the trade agreement itself. This is the second stage in the evolution of labor provisions in U.S. trade agreements.

The U.S.-Chile FTA, which entered into force in 2004, included a robust labor chapter that came to be widely recognized as the template for many future U.S. FTAs, particularly with Latin America (Samet, 2011). In addition to including a chapter on labor, this agreement differs from the NAALC in several important ways. First, while Parties to the NAALC were obligated to “*ensure* that its labor laws and regulations provide for high labor standards,” the Chilean FTA states, “each Party shall *strive to ensure* that such labor principles [as those articulated in the 1998 ILO Declaration] and the internationally recognized labor rights set forth in Article 18.8 are recognized and protected by its domestic law.” The Chile-FTA subscribes to the 1998 ILO Declaration, which narrows the scope of the areas of labor law to which the agreement applies

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<sup>4</sup> Adopted in 1998, the Declaration commits ILO members to respect and promote principles and rights in four categories irrespective of whether the members have ratified the relevant ILO Conventions. The four categories of the Declaration are: i) freedom of association and the effective recognition of the right to collective bargaining; ii) the elimination of forced or compulsory labor; iii) the abolition of child labor; and iv) the elimination of discrimination in respect of employment and occupation.

relative to NAALC.<sup>5</sup> Second, unlike NAALC, the U.S.-Chile FTA treats all five of the latter areas of labor law as equal for the purposes of dispute settlement. Should a country be found to be in violation of a labor obligation as per the agreement, it can be required to pay a fine into a fund dedicated to remedying the alleged violation. If the offending Party fails to pay the fine then the complaining Party can suspend benefits, but unlike with commercial disputes arising from other parts of the agreement, penalties for labor disputes are capped at \$15 million (adjusted for inflation) per year.

Labor provisions under CAFTA-DR are largely similar to those of the Chile-FTA, with the exception of the greater emphasis on capacity building (Samet, 2011). CAFTA-DR was the subject of intense debate in the United States over the lack of compliance with labor laws in the CAFTA-DR countries. While national laws were largely in conformity with the ILO's principles, effective enforcement was lacking. This prompted the governments in the region to undertake a reform agenda outlined in a "White Paper" supported by the Inter-American Development Bank (IDB). The agreement itself established a technical assistance and cooperation mechanism to strengthen compliance with labor law and enhance capacity of labor ministries. Some of the actions taken include training labor inspectors, ending the political appointment process and reclassifying inspectors into the career civil service, and increasing the compliance budget. The "Cumple y Gana" (comply and win) Initiative—funded by the United States Department of Labor—provided computers, case management systems, and training to enhance the capacity of inspection agencies (although total funding between 2003-2008 was only \$13.4 million).

Vega Ruiz (2009: 14–15) notes "The important role of labor administration has been brought to the fore by the free trade agreements...In effect, these agreements paved the way for the famous 'White Book', which contains a number of commitments on upgrading national inspections and affects Central American countries and the Dominican Republic. Andean countries which have entered into an FTA with the US are currently implementing similar programs ... for example the US MIDAS project in Colombia."<sup>6</sup>

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<sup>5</sup> The Chile-FTA diverges from the ILO Declaration on one provision: it includes "acceptable conditions of work with respect to minimum wages, hours of work and occupational safety and health." This is more specific than the Declaration's reference to "the elimination of discrimination in respect of employment and occupation."

<sup>6</sup> Rosado Marzán (2010), Schrank (2009), and Velásquez Pinto (2011) also point out that FTAs had positive effects on labor enforcement in Chile, Dominican Republic and El Salvador respectively.

### ***2.3 From “Strive to Ensure” to “Adopt, Maintain and Enforce”***

The U.S.-Peru FTA further improved upon the inclusion of labor provisions in trade agreements by changing “shall strive to ensure... [high labor standards] in its domestic law,” to “shall adopt and maintain in its statutes and regulations, and practices thereunder” high labor standards commensurate with the ILO Declaration. The important difference is that rather than striving to have high standards in the law, the Parties are required to do so.

Another major change involves what a Party’s labor laws must protect workers. The third-generation agreements cite the 1998 ILO Declaration but move the exact protections from the definitions section to Article X.1. The third-generation agreements also change the fifth standard. Whereas the second generation agreements called on the Parties to provide “acceptable conditions of work with respect to minimum wages, hours of work, and occupational health and safety,” the third-generation agreements call on the Parties to provide for “the elimination of discrimination in respect of employment and occupation.” Only later in the definitions section do the third-generation agreements also say that labor law includes the health and safety provisions.

The third and final major change pertains to dispute settlement. The third-generation agreements contain the same language on domestic enforcement requirements as the second-generation agreements. That language is still actionable under the dispute settlement provisions. Unlike the second-generation agreements, however, the third-generation agreements make the dispute settlement provisions accessible for the entire labor chapter, including whether a Party is upholding its commitments under Article X.1 to have strong labor protections in its laws. There are also no special restrictions for the labor chapter on penalties if an offending Party fails to come into compliance. The complaining Party can remove benefits or the offending Party can choose to pay a fine into a fund that will be used to bring the Party into compliance.<sup>7</sup>

### ***2.4 U.S.-Colombia Labor Action Plan (LAP)***

The fourth stage in the evolution of labor provisions pertains to the US-Colombia Free Trade Agreement that once again included a side accord, the Labor Action Plan (LAP). The labor provisions were articulated in an accord alongside the FTA rather than embedded within it. Nonetheless, the LAP outlined over 25 distinct measures to be taken by the Colombian

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<sup>7</sup> Toyama Miyagusuku (2011) argues that labor inspections have recently improved both quantitatively and qualitatively in Peru because the FTA with the US explicitly mentions the need to enforce labor laws.

government before the Obama administration submitted the U.S.-Colombia free trade agreement to Congress. The administration required that Colombia take measures to significantly improve its record on labor and to extend greater protection to unions, including target dates spanning from April to December 2011. This was the first time that U.S. Congressional approval of the agreement and its maintenance were contingent on achieving specific benchmarks.<sup>8</sup>

### **3. Estimating the Effect of FTAs on Enforcement**

A number of country studies, some of which were mentioned above, provide qualitative evidence of the effects of US FTAs on enforcement of labor law in several of the signing Latin American countries (Rosado Marzán, 2010; Monroy Gallego, 2012; Schrank, 2009; Toyama Miyagusuku, 2011; Vega Ruiz, 2009; Velásquez Pinto, 2011; Weller, 2011).<sup>9</sup> They all suggest a positive effect through a number of different channels, including an increase in the inspection agency budget, hiring of additional labor inspectors, training of labor inspectors, providing new vehicles and computers, implementing a new case management system, and ending the political appointment process and reclassifying inspectors into the career civil service. That is, the qualitative evidence highlights that positive changes occurred in both the resources devoted to inspection and their productivity.

This evidence has some shortcomings in providing an overall assessment of the effects of U.S. FTAs on enforcement because it only covers some of the signing countries, it ignores changes in enforcement in neighboring non-signing countries, it does not control for other factors that affect enforcement, and it does not provide a magnitude of the change. However, this evidence complements the quantitative evidence we present below.

We confront two challenges in providing a quantitative estimate of the effects on U.S. FTAs on labor enforcement in the signing Latin American countries. First, measuring enforcement is complicated due to lack of data. Second, estimating a causal effect is difficult due to the uniqueness of each country, and the fact that the signature of a trade agreement is not an exogenous event. Signing an FTA involves a selection process. Political institutions in the United States, as well as in Latin America, decide whether to engage in a trade agreement. This

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<sup>8</sup> Monroy Gallego (2012) points out that the Colombian government hired a substantial number of additional labor inspectors in 2011 because this was a prerequisite for signing an FTA with the United States.

<sup>9</sup> See also the “White Paper,” a report produced in 2005 by the working group of the Vice Ministers responsible for trade and labor in the countries of Central America and the Dominican Republic following the signing of CAFTA-DR, and the related verification reports. They are available at [www.ustr.gov](http://www.ustr.gov)

would bias the estimates if the political and economic factors that affect the decision to sign an agreement also have a direct effect on enforcement.

Our empirical strategy is to compare the before-after implementation change in enforcement in LAC countries signing an FTA with the United States to the temporally corresponding pre-post change in the group of comparison countries that do not sign a trade agreement with the United States. Our strategy benefits from the fact that there are both signers and non-signers in each of the three geographic sub-regions (i.e., Central America, the Caribbean, and South America) allowing for the construction of a better comparison group. To control for selection bias we include a number of economic and political variables that could affect both the likelihood of an FTA and the level of enforcement such as GDP, unemployment, democracy and the ideology of the executive power in each Latin American country.

### **3.1 Data**

We use the dataset in Ronconi (2012), which provides measures of labor inspection resources and activities in 18 Latin American and Caribbean (LAC) countries up to the year 2009. We expand the dataset in two directions. First, we add data for the years 2010-2012. This is necessary since several countries signed FTAs in the late 2000s.<sup>10</sup> Second, we include seven additional countries in the sample, mainly small countries in Central America and the Caribbean that did not sign an FTA. We believe that this improves the quality of the comparison group, since in the original dataset all the countries located in this region are FTA signers.<sup>11</sup>

We use measures of labor enforcement resources and activities:  $Inspector_{it}$ , which is defined as the number of labor inspectors per million workers in country  $i$  and year  $t$ , and  $Inspections_{it}$ , which is defined as the number of labor inspections per thousand workers. These two measures should capture the changes in resources and productivity suggested by the qualitative evidence. An important limitation is their low coverage. Out of 325 country-year cells (i.e., annual data for 25 countries from 2000 to 2012), we only observe  $Inspector$  in 222 cases and  $Inspections$  in 188. There is particularly little data (i.e., covering less than half of the analyzed period) for Barbados, Bolivia, Cuba, Ecuador, Trinidad and Tobago, and Venezuela.

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<sup>10</sup> These additional data are collected from the same data sources as in Ronconi (2012), that is, official websites, newspapers, reports produced by the ILO, the U.S. Department of Labor, and the U.S. State Department.

<sup>11</sup> The countries we added are: Barbados, Belize, Cuba, Guyana, Jamaica, Suriname, and Trinidad and Tobago. The countries in the original dataset are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

Complete information for both variables is available only for Brazil and Costa Rica. This is the unbalanced panel that we use in all regression models presented in the paper.

Before presenting the econometric results, we illustrate the evolution of labor enforcement in countries that signed an FTA with the United States and compare them with changes in enforcement in countries that did not sign an FTA. Because the unbalanced panel is of limited use to graphically illustrate changes, we impute the missing values assuming that the number of labor inspectors and inspections in country  $i$  and year  $t$  is equal to the average between  $t-1$  and  $t+1$  in country  $i$ . The imputation is only used for the purposes of Figures 1 to 4.

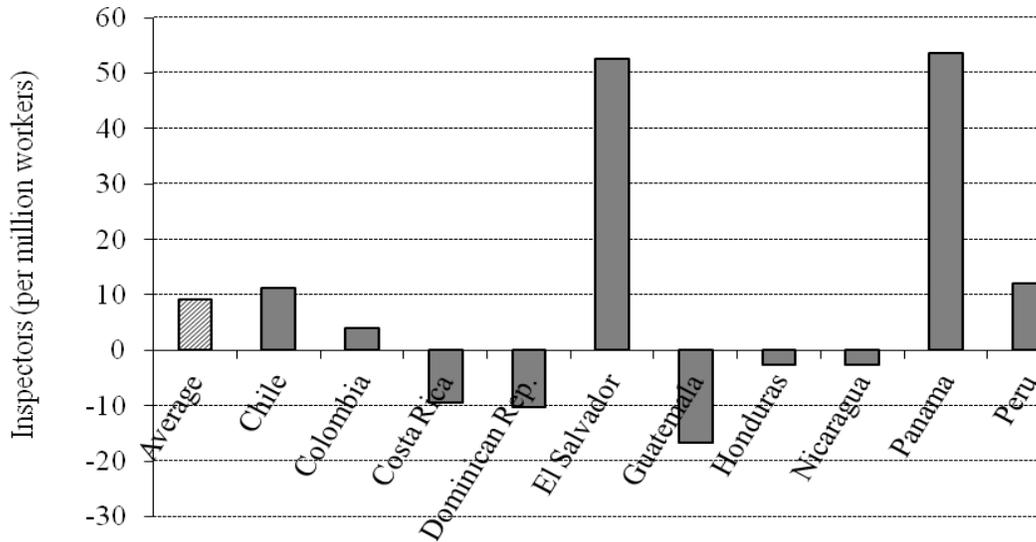
Figure 1 shows the pre-post change in the number of labor inspectors (per million workers) in countries that signed an FTA computed as the difference between the average number of inspectors during 2000-2003 and the average during 2009-2012 (that is, before and after the signature of FTAs). Taking the group of signing countries as a whole, there was a small positive increase of 9 additional inspectors per million workers (from an average of 41 inspectors during 2000-2003 to 50 inspectors during 2009-2012).<sup>12</sup> That is, inspection resources increased after the signature of the FTA. But, there is large heterogeneity across countries. In El Salvador and Panama the figure increased by more than 50 additional inspectors per million workers while in Guatemala the number of inspectors declined by approximately 16 inspectors per million workers. There was also a reduction in Costa Rica, Dominican Republic, Honduras and Nicaragua, which is due to an increase in the number of inspectors that was lower than the increase in the labor force.

Figure 2 shows the corresponding pre-post change for inspection activities. Overall, there was a larger positive increase, from 4.8 inspections per thousand workers in 2000-2003 to 8.4 in 2009-2012. Combining these figures with the changes in Figure 1 implies that the productivity of inspectors (defined as the number of inspections per inspector) increased by almost 50 percent. These findings are consistent with the qualitative evidence presented before: Some countries that signed an FTA with the United States improved enforcement through more resources, but the majority of countries did it via higher productivity.

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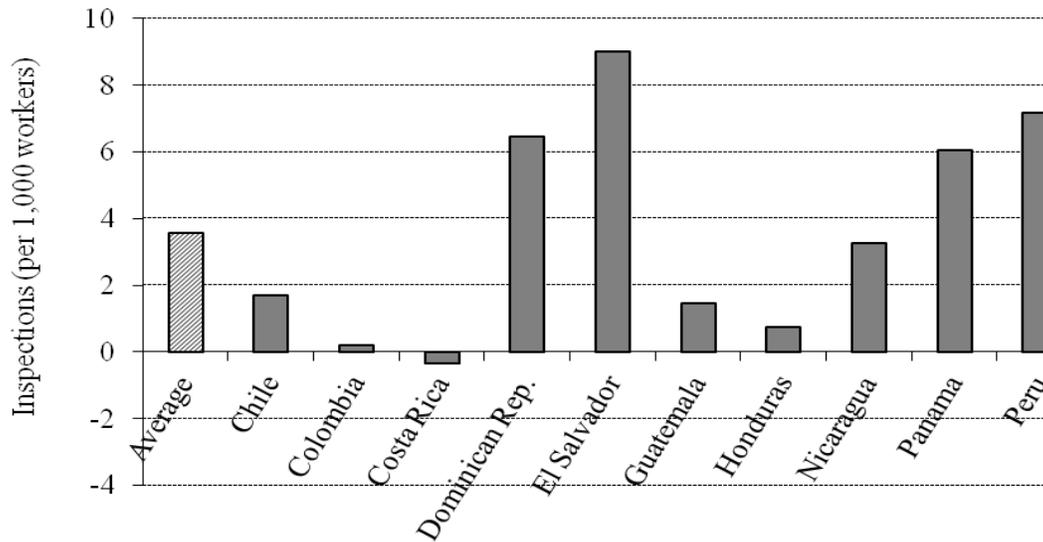
<sup>12</sup> The values are computed as the simple average across countries and time.

**Figure 1. Pre-Post Change in the Number of Labor Inspectors per Worker in LAC Countries that Signed an FTA with the United States**



*Notes:* The pre-post change is computed as the difference between the average number of labor inspectors per one million workers from 2009 to 2012 and the average from 2000 to 2003.

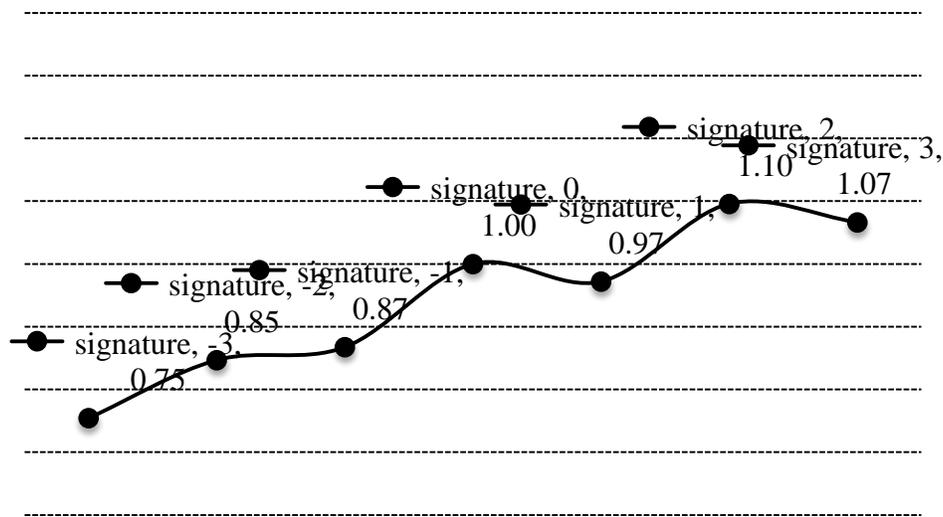
**Figure 2. Pre-Post Change in the Number of Labor Inspections in LAC Countries that Signed an FTA with the United States**



*Notes:* The pre-post change is computed as the difference between the average number of labor inspections per 1,000 workers from 2009 to 2012 and the average from 2000 to 2003.

Figure 3 presents the evolution over time of the ratio of inspectors per million workers in the treatment group (i.e., countries that signed an FTA with the US) relative to the comparison group (i.e., non-signing countries). The ratio is indexed to one as of the date of signature. We use a seven-year evaluation window consisting of the three years prior to the signature of the FTA and the three years following signature. That is, the figure compares the pre-post change in LAC countries that signed an FTA to the temporally corresponding pre-post change in countries that did not sign an FTA.

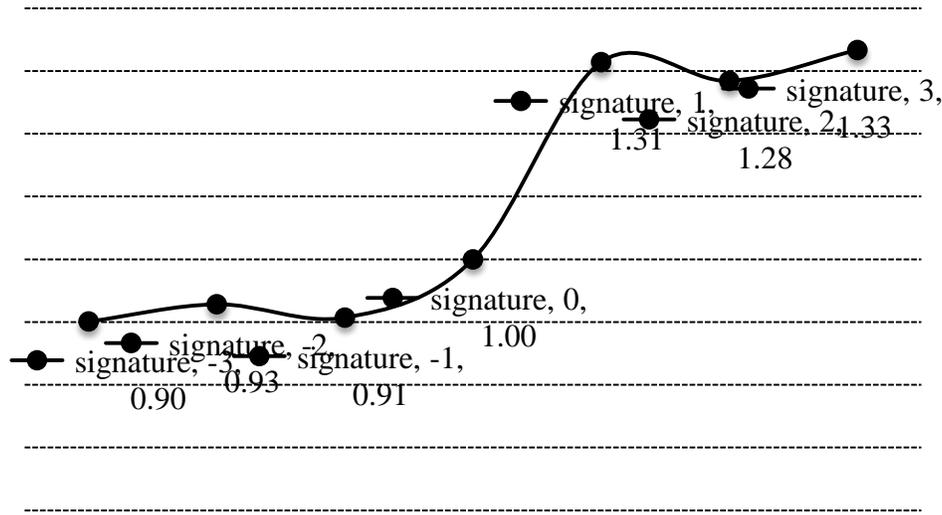
**Figure 3. Evolution of Ratio of Labor Inspectors in LAC Countries that Signed an FTA Relative to Non-Signers**



*Notes:* The figure shows the ratio between the number of labor inspectors per million workers in LAC countries that signed an FTA with the United States between 2000 and 2012 (i.e., Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Panama and Peru) and the number of inspectors in LAC countries that did not sign an FTA with the United States (i.e., Argentina, Barbados, Belize, Bolivia, Brazil, Cuba, Ecuador, Guyana, Jamaica, Mexico, Paraguay, Suriname, Trinidad and Tobago, Uruguay and Venezuela). The ratio is indexed to one as of the date of signature of the FTA ( $t=0$ ). The evaluation window consists of changes in the three years prior to signature and changes in the three years after signature.

Figure 3 shows an increase in the number of inspectors in signing countries relative to non-signers of almost 15 percent during the year of signature ( $t = 0$ ) and an additional increase of 7 percent during the next three years. There is also a 10 percent increase during the two years before signature, suggesting that countries hired additional inspectors during the negotiation process. Figure 4, on the other hand, shows a much larger increase in inspections (i.e., 10 percent during the year of signature and an additional 30 percent afterwards) and almost no change during the negotiation process.

**Figure 4. Evolution of Labor Inspections in LAC Countries that Signed an FTA Relative to Non-Signers**



*Notes:* The figure shows the ration between the number of labor inspections per 1,000 workers in LAC countries that signed an FTA with the United States and those that did not. See notes to Figure 3.

### 3.2 Econometric Evidence

The basic econometric model we use is:

$$(1) \quad Y_{it} = \delta_i + \tau_t + \beta FTA_{it} + \varepsilon_{it},$$

where  $Y$  is a place-holder for one of the two outcome variables (*Inspector* and *Inspections*);  $FTA_{it}$  is an indicator variable equal to 1 if country  $i$  has signed an FTA with the United States in year  $t$ ;  $\delta$  and  $\tau$  are country and year fixed effects; and  $\varepsilon$  is a mean-zero disturbance term. The coefficient of interest is  $\beta$ . This parameter gives an estimate of the pre-post change in labor enforcement in signing countries relative to the corresponding change in non-signing countries. The inclusion of country-specific fixed effects indicates that we have swept out all time-invariant differences across countries that contribute to cross-country variation in enforcement, and the inclusion of year-specific fixed effects controls for common shocks that affect the whole region. In all regression models we compute standard errors clustering by country to control for serial correlation.

Table 1 presents the results. In columns (1) and (4) we only include country and year fixed effects. In columns (2) and (5) we add a set of political and economic variables that could

be correlated with both FTA and enforcement.<sup>13</sup> Finally, in columns (3) and (6) we include a complete set of interaction terms between year dummies and indicator variables denoting the three major geographic sub-regions (Central America, the Caribbean, and South America) to allow for differential regional trends.

The results indicate that signing an FTA with the United States appears to improve enforcement of labor law both through more inspection resources and activities. The point estimates are statistically significant and they indicate that the increase in the number of inspectors (per million workers) ranges between 10 and 12, and that the effect on inspections (per thousand workers) is roughly 2.5. The magnitude of the effects is substantial. Compared to the average number of inspectors and inspections in the region in the early 2000s (that is, before the signature of FTA), the coefficients imply an approximately 20 percent increase in the number of labor inspectors and a 60 percent increase in the number of inspections.

**Table 1. Estimates of the Effects of U.S. FTAs on Labor Enforcement in LAC Countries**

	Labor Inspectors			Labor Inspections		
	(1)	(2)	(3)	(4)	(5)	(6)
FTA	11.49*	12.30**	10.58**	3.43***	2.45*	2.30*
	(5.79)	(5.92)	(5.01)	(1.16)	(1.35)	(1.28)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Economic and Political controls	No	Yes	Yes	No	Yes	Yes
Year x Region	No	No	Yes	No	No	Yes
Observations	222	205	205	188	177	177

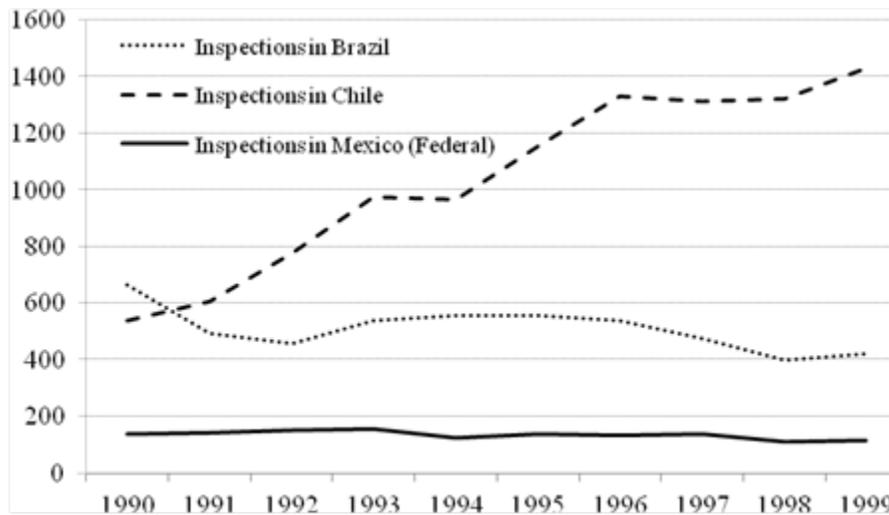
*Notes:* The dependent variable is the number of inspectors per million workers in columns 1 to 3, and the number of inspections per 1,000 workers in columns 4 to 6. Each cell is a country-year, and the sample covers annual data for 25 LAC countries between 2000 and 2012. Robust standard errors clustered by country are in parentheses. The list of economic and political controls is in footnote 10. Columns 3 and 6 include the interaction between year dummies and indicator variables for Central America, Caribbean and South America. \* Statistically significant at the 10%, \*\* 5%, and \*\*\* 1%.

<sup>13</sup> The variables we include are GDP per capita PPP, Trade Openness (defined as exports plus imports over GDP), Foreign Direct Investment, Unemployment rate, Democracy (using the revised combined political score in Marshall and Jaggers (2009)), and Ideology of the President (using an ordinal scale from “left” (-2) to “right” (2) in Murillo, Oliveros, and Vaishnav (2010)). The reasons for including these variables are twofold. First, there is evidence that shows that they are correlated with enforcement of labor law (Ronconi, 2012). Second, they could also be correlated with FTA since both signing countries decide to enter into the agreement, and that decision is likely to be affected by political and economic conditions in each country.

An important limitation of the econometric analysis is that it does not cover the effect of NAFTA on enforcement in Mexico. This is because the agreement entered into force in 1994 and there is very little data available about enforcement for the majority of Latin American countries in the early nineties. Previous studies, usually conducted by legal scholars, are mainly qualitative and suggest that NAFTA “has failed to facilitate” enforcement in Mexico (LaSala, 2001: 320) although lack of information does not allow reaching strong conclusions (McGuinness, 2000).

We were able to gather data about labor inspections conducted by the federal government of Mexico in the nineties, and data about inspections in Brazil and Chile during the same period. But, we could not collect information about inspections conducted by state governments in Mexico. We also obtained information about fines imposed in Brazil and by the federal government in Mexico. Figure 5 shows the evolution of the inspection variables from 1990 to 1999 where each measure is divided by the labor force (i.e., number of inspections per 100,000 workers). Figure 6 presents the data on fines, also per 100,000 workers from 1990 to 1999.

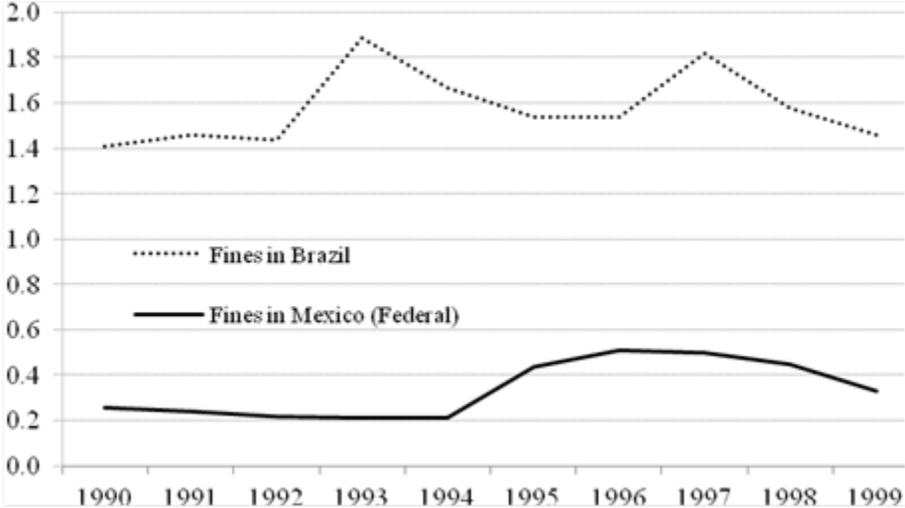
**Figure 5. Evolution of Labor Inspections per Worker in Mexico (federal government only), Brazil and Chile from 1990 to 1999**



The figures show first that the number of federal inspections per worker in Mexico experienced a small reduction after 1994 of similar magnitude (in percentage terms) as the reduction occurred in Brazil during the same period, but very different from the substantial increase in inspections observed in Chile. Second, the number of labor fines imposed by the

federal government in Mexico increased after signing NAFTA in 1994 (although from a very low starting point of only 2 fines per one million workers), while in Brazil fines fluctuated around 16 fines per million workers. Overall, these results suggest that, contrary to the trade agreements signed during the last decade, NAFTA did not have a noticeable positive effect on enforcement in the signing Latin American country.

**Figure 6. Evolution of Labor Fines per Worker in Mexico (federal government only) and Brazil from 1990 to 1999**



#### 4. Conclusion

This paper analyzes labor inspection resources and activities between 2000 and 2012 in Latin American and Caribbean countries that signed and did not sign an FTA with the United States. The results indicate that trade agreements can promote better enforcement of existing labor laws. The number of labor inspectors increased, on average, by approximately 20 percent and the number of inspections by 60 percent in countries with a US FTA as compared to the corresponding change in enforcement in non-signing countries in the region. The qualitative evidence suggests that these improvements are due to increases in the budget allocated to inspection agencies, training of labor inspectors, new computers, vehicles and case management systems, and the reclassification of labor inspectors into the career service.

These results do not cover the changes in enforcement that occurred in Mexico at the time of NAFTA in 1994, and as discussed above, previous studies as well as our own back of the

envelope calculations suggests that NAFTA did not have any visible positive effect on labor enforcement in Mexico. Which factors, then, could explain the heterogeneous effects of U.S. trade agreements on labor inspection in Latin America? We speculate that differences in the letter of the agreements itself partially account for them. While in NAFTA the labor side agreement states that each party “shall ensure that its labor laws and regulations provide for high labor standards,” subsequent agreements (such as the U.S.-Peru or U.S.-Panama FTA) state in the trade agreement itself that each party “shall adopt, maintain and enforce” high labor standards. Presumably more important, however, was that after NAFTA, the U.S. government and U.S. Congress put more pressure and devoted more resources towards improving labor inspections in the signing LAC countries. That is, labor provisions in free trade agreements matter. Robust provisions can provide the appropriate incentives, oversight and capacity building assistance to garner the necessary political will and bolster a country’s ability to effectively enforce its labor laws.

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