



A race to the bottom in labor standards? An empirical investigation [☆]



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ABSTRACT

One of the concerns over globalization is that as nations compete for investment, they relax labor standards to attract firms. Using spatial estimation on panel data for 135 countries over 17 years, we find that the labor standards in one country are positively correlated with those elsewhere (i.e. a cut in labor standards in other countries reduces labor standards in the country in question). This interdependence is more evident in labor practices (i.e. enforcement) than in labor laws. Further, while we find evidence of competition in both developed and developing countries, it is strongest among developing countries with weak standards.

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1. Introduction

While many concerns have been expressed over the impact of increasing globalization, many of them center on the possibility of a race to the bottom in which governments seek to attract foreign direct investment (FDI) by removing policies that, although potentially socially desirable, are viewed as unattractive to firms. This worry has been expressed in the arenas of taxation, environmental regulation, and labor standards, among others. While there is a growing literature estimating the extent of the such competition in international taxation and environmental policies, there is little work on the potential strategic interactions in labor standards. To our knowledge,

the only study besides the current one that does so is [Olney \(2010\)](#), who finds evidence of a race to the bottom in employment protection among OECD countries. The current study complements this by using panel data on 135 developed and developing countries from 1985 to 2002 to estimate whether the [Mosley \(2011\)](#) and [Mosley and Uno \(2007\)](#) measures of labor rights in one country depend on those elsewhere. These measures capture various factors regarding the ability of workers to bargain collectively. For the full sample, we find a significant and positive spatial lag, which is consistent with strategic complements and a necessary condition for there to be a race to the bottom. In particular, this seems to be driven primarily by competition in labor practices rather than labor laws, suggesting that competition is driven less by a failure to institute regulations than by an unwillingness to enforce them. Since there is a noticeable downward trend in the average of both of these measures over the sample period, we take this as evidence of a race to the bottom for the average country.

Although there has been less attention paid to the potential for a race to the bottom in labor standards as compared to one in taxes or environmental policies, the essence of the argument is the same. Labor standards such as the right of collective bargaining result in higher labor costs. All else equal, mobile investment would prefer a location with weaker standards and lower costs. Evidence of FDI being deterred by labor standards is provided by [Dewit et al. \(2009\)](#), [Görg \(2002\)](#) and [Javorcik and Spatareanu \(2005\)](#). It should be noted, however, that there is disagreement on this issue, with [Kucera \(2002\)](#) and [Rodrik \(1996\)](#) providing

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dissenting opinions.¹ The issue of how FDI depends on standards, however, is a very different question from the one we ask, which is whether labor standards in one location depend on those in another.² In particular, even if FDI does not flow in as a result of a country's reduction in labor standards, if politicians believe that it does then this alone could result in a race to the bottom.

The use of spatial econometrics to look for strategic interaction has been increasingly utilized in the tax and environmental literature. The first group of work includes [Davies and Voget \(2008\)](#), [Devereux et al. \(2008\)](#), [Overesch and Rincke \(2009\)](#) and others. Generally, this work has focused on tax competition between developed countries where there is some evidence of a positive spatial lag, meaning that as tax rates fall in one nation, this lowers tax rates elsewhere. An exception to this is [Klemm and van Parys \(2012\)](#) who focus on Latin America and Africa, finding that they compete in tax holidays. In the environmental literature, the focus has been on two issues: the joint adoption of environmental agreements (including the work of [Beron et al. \(2003\)](#), [Davies and Naughton \(2006\)](#), and [Murdoch et al. \(2003\)](#)) and interaction in environmental policies (which includes [Fredriksson and Millimet \(2002\)](#), [Fredriksson et al. \(2004\)](#), and [Levinson \(2003\)](#)). These studies tend to find evidence consistent with a race to the bottom. However, due to data limitations, many of them either restrict their attention to developed countries or to competition across US states. [Davies and Naughton \(2006\)](#) are an exception to this and find that developed countries affect the treaty participation of both developed and developing nations whereas the developing nations only tend to impact themselves.

For our full sample when using GDP weights (which assume that a given nation pays more attention to standards in larger economies), our estimates find that a standard deviation decline in the weighted average of labor standards elsewhere (equivalent to a decline from Israel's standards to Mexico's) leads a given country to lower its own standards by 4.2% at the mean. Although this magnitude varies somewhat when utilizing other weighting schemes, the qualitative result is the same. When we decompose our measure of labor standards into its components – the laws guaranteeing labor rights (laws) and the enforcement of those laws (practices) – we find evidence of competition primarily for labor practices, not laws. This is particularly true for non-OECD countries, suggesting that while these nations may well attempt to “put on a good face” by instituting labor-friendly laws for reasons similar to those discussed by [Kucera \(2002\)](#), they may then be competing for FDI by simply turning a blind eye towards violations of those laws (or are simply unable to adequately enforce them). This finding is also notable because both laws and practices have similar trends, indicating our finding for practices is causal rather than the result of an uncontrolled for variable. We also estimate our model for subsamples of the data. These estimates reveal that the competition occurs both within the OECD (in line with [Olney, 2010](#)) and the non-OECD countries, although the first competes in laws while the latter does in practices. Similarly, we find competition among high standard countries and among low standard ones with larger effects in this latter group.

The paper proceeds as follows. [Section 2](#) provides a simple model intended to motivate our weighting schemes in the empirics.

¹ One possible reason they provide is that operating in a high standards location provides consumers a guarantee on how a firm treats its workers. As such, they may be willing to pay more for the firm's product on humanitarian grounds. See [Greenhill et al. \(2009\)](#) for a full discussion. In addition, there is evidence that increased FDI may improve labor standards ([Davies and Voy, 2009](#); [Mosley, 2011](#); [Neumayer and de Soysa, 2005](#)).

² [Greenhill et al. \(2009\)](#) do test to see whether the “practice content of trade” is a predictor for a given nation's labor standards. However, although they control for the potential endogeneity of trade volumes, they do not deal with potential endogeneity in standards that would result from competition.

[Section 3](#) describes both our data and our methodology. [Section 5](#) discusses the results and [Section 6](#) concludes.

2. A simple model of labor standards competition for FDI

In this section, we provide a simple model to frame our empirical analysis. Although it is admittedly stylized and omits many important factors influencing the choice of labor standards, investment decisions, and the competition for FDI, as its intent is to provide intuition for our empirical approach, not a structural equation, we omit these complications for brevity.

Consider a setting in which there are three countries and a large number of firms (N) from elsewhere (a situation similar to that facing a group of developing countries). The N firms are indexed by i and the countries are indexed by l where $l \in \{1, 2, 3\}$. The timing of the game is that in the first stage, governments simultaneously set labor rights levels, which in line with our measure of labor standards, governs collective bargaining. Following this, firms choose where to locate. Given these location decisions, the firm and workers bargain over the split of the surplus, with the relative bargaining strength being determined by the labor rights. Finally, payoffs accrue. We solve the game via backwards induction.

Each firm i sets up an affiliate in a given location, generating profit $\Pi_i(Z_l) = \pi(Z_l) + \sigma_{i,l}$. This has two components. The first is $\pi(Z_l)$ which is an increasing function of Z_l , a vector of location-specific characteristics. Items that could factor into Z_l include the size of the domestic market (important for FDI with a horizontal component), access to other markets (important for export platform and vertical FDI), as well as the productivity of domestic inputs (important for all types of investment). These profits are split between firm i and the workers it hires in l . The second component is an additional amount of income $\sigma_{i,l}$. One interpretation of this would be the benefits to the rest of the multinational firm from locating an affiliate in l . This term is identical and independently distributed across firms and locations according to a log Weibull distribution with mean zero. Unlike $\pi(Z_l)$, these rents accrue solely to the firm.

Since in the bargaining stage of the game locations are fixed, the firm's outside option is zero. The bargaining process is solved using the generalized Nash bargaining solution where the bargaining strength of workers in l is α_l , which is increasing in the labor rights in l . For simplicity, we restrict ourselves without loss of generality to mechanisms where governments choose bargaining strength directly. The outside option of workers is normalized to zero. The bargaining game amounts to a transfer T from the firm to the workers. Under the Nash bargaining solution, this maximizes $(\pi_i(Z_l) - T)^{1-\alpha_l} T^{\alpha_l}$, the solution to which is $T = \alpha_l \pi_i(Z_l)$. Thus, payoffs to the firm are $\Pi_i(Z_l) - T = (1 - \alpha_l)\pi(Z_l) + \sigma_{i,l}$.

Anticipating these payoffs, each firm locates in the region offering it the greatest expected equilibrium profits. Similar to the derivation of the Logit estimator (see [Greene, 2007](#)), the probability that firm i locates in country l (denoted P_l) is:

$$P_l = \exp[(1 - \alpha_l)\pi(Z_l)] / \sum_{j=1}^3 \exp[(1 - \alpha_j)\pi(Z_j)]. \quad (1)$$

Note that $\frac{dP_l}{d\alpha_l} = -P_l(1 - P_l)\pi(Z_l) < 0$, i.e. as the labor rights in country l increase, it drives firms away (in expectation). In addition, for $j \neq l$,

$$\frac{dP_l}{d\alpha_j} = \frac{P_l \pi(Z_l)}{\left(\sum_{j=1}^3 \exp[(1 - \alpha_j)\pi(Z_j)] \right)} > 0, \text{ meaning that when another}$$

country j lowers its labor rights, it attracts firms away from l . For future use, note that, as the denominator is the same across all countries, this effect is greater for countries that offer higher profits, i.e. where $\pi(Z_l)$ is greater.

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