Foreign Direct Investment and Labor Rights:

A Panel Analysis of Bilateral FDI Flows

Matthias Busse (Bochum University)*

Peter Nunnenkamp (Kiel Institute)**

Mariana Spatareanu (Rutgers University)***

Abstract

The paper analyses the impact of fundamental labor rights on bilateral FDI flows to 82 developing countries. The results indicate that investments by multinationals are significantly higher in countries that adhere to labor rights, thereby refuting the hypothesis that repression of these rights fosters FDI.

*Corresponding author; contact details: Matthias Busse, Bochum University, Department of Economics, Universitaetsstr. 150, GC 3/145, 44801 Bochum, Germany, phone: +49-234-32-22902, e-mail: matthias.busse@rub.de
** Kiel Institute for the World Economy, Hindenburgufer 66, D-24105 Kiel, Germany. Email: peter.nunnenkamp@ifw-kiel.de
*** Rutgers University, Department of Economics, 360 Dr. Martin Luther King, Jr. Blvd. Newark, NJ 07102, USA. Email: marianas@andromeda.rutgers.edu

Motivation

Policymakers around the world lure multinational enterprises in order to boost productivity and growth. However, poor and small host countries may have little to offer to attract FDI – except perhaps abundant and cheap labor. Furthermore, by aggressively competing for FDI, policymakers may in effect engage in a race to the bottom with respect to social standards and worker rights.

We focus on a closely related question: Does it really pay, in terms of attracting FDI inflows, for policymakers to keep organized labor in check and be lax in enforcing worker rights and labor norms? Previous literature is inconclusive on whether FDI, in order to reduce labor costs, goes where social standards are low, worker rights repressed and labor markets unrestricted. Violations of basic civil liberties and core labor standards appear to *reduce* FDI (e.g., Kucera 2002; Harms and Ursprung 2002; Busse 2003). On the other hand, the literature focusing on specific aspects of labor market regulations finds that host countries with more flexible labor markets attract more FDI (e.g., Haaland et al. 2003; Görg 2005; Javorcik and Spatareanu 2005).

We attempt to overcome several shortcomings of previous studies. First, we use detailed information on labor rights violations related to freedom of association and collective bargaining. These data, kindly made available by Layna Mosley, help redress severe measurement problems when using simplistic measures like the number of ratified ILO conventions (Mosley and Uno 2007). Second, previous literature is largely restricted to cross-section studies and aggregated FDI flows. By contrast, our FDI gravity analysis covers the period 1984-2004. We avoid a potentially serious sample selection bias by covering 28 source countries of FDI, including non-OECD countries, and 82 low- and middle-income host countries. Previous studies typically excluded most small and lower-income countries with minor (or no) FDI inflows, i.e., exactly those developing countries

for which the question of how to attract FDI is particularly relevant. Third, we isolate the effect of labor rights on FDI from other means through which policymakers in developing countries attempt to attract FDI. Fourth, in contrast to previous studies, we account for potential endogeneity of FDI by performing system GMM estimations.

Data and Method

Our variable of interest, labor rights (*LabR*), captures the presence and actual adherence to legal rights of workers to organize, bargain collectively and strike. It records 37 specific violations of such rights ranging from the absence of legal rights to limitations and the breach of legal obligations by governments and employers. The seriousness of violations is weighted through expert assessments.[1] Higher scores reflect stronger labor rights in the host country of FDI. The sign of *LabR* should be negative if repressed labor rights are associated with higher FDI inflows. The counterhypothesis applies if multinational enterprises are under strict public scrutiny to show good corporate conduct concerning workers and, therefore, shy away from host countries with pervasive social injustice (Neumayer and De Soysa 2006).

We control for FDI promotion through bilateral trade agreements (*RTA*), bilateral investment treaties (*BIT*) and unilateral capital account liberalization (*CapOpen*). Other controls are fairly standard in the literature on FDI determinants: host-country GDP (*GDP*) and GDP growth (*Growth*) to account for horizontal FDI, the difference in per-capita GDP between the source and the host country (*DiffGDPpc*) to account for vertical FDI, inflation

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[1] See Kucera (2002) for a detailed account. For our sample of countries, *LabR* has a mean of 22.3 and a (within) standard deviation of 4.36, and ranges from 2.5 to 37.

(*Inflation*) and openness to trade (*Openness*) of the host country, and alternative indicators of country risk (*InvestProfile, PolRisk*).[2]

The basic specification is:

$$\ln\left(\frac{FDI_{ijt}}{FDI_{it}}\right) = \alpha_0 + \alpha_1 \ln\left(\frac{FDI_{ijt-1}}{FDI_{it-1}}\right) + \gamma' X_{jt} + \varphi' Y_{ijt} + \alpha_2\, LabR_{jt} + \lambda_t + \mu_{jt} + \varepsilon_{ijt} \qquad (1)$$

where FDI_{ijt} stands for the (three-year average of) foreign direct investment by country i in (developing) country j in period t, FDI_{it} for total FDI of country i in all (developing) countries included in our sample, X_{jt} represents a set of host country control variables, Y_{ijt} denotes the difference between source and host country characteristics, λ_t is a set of year dummies, and $LabR_{jt}$ is the labor rights variable; μ_{jt} and ε_{ijt} represent host-year effects and, respectively, the error term.

The definition of the dependent FDI variable in (1) is preferred as it is mainly developing countries that may violate labor rights to attract FDI. Moreover, the "competitive model" of Elkins et al. (2006) suggests that host countries vying for similar types of FDI are mainly diverting FDI away from (often neighboring) competitors.

We use the logarithm of *FDI*, *GDP*, *DiffGDPpc*, and *Inflation*. To avoid the loss of observations with negative values or zeros, we apply the following transformation:

$$y = \ln\left(x + \sqrt{(x^2 + 1)}\right) \qquad (2)$$

The sign of x is left unchanged in this way, but the values of x pass from a linear scale at small absolute values to a logarithmic scale at large values.[3]

We perform system GMM estimations proposed by Blundell and Bond (1998) to account for potential endogeneity. The estimator combines a differenced and a level equation. Lagged levels of endogenous variables are used as instruments for contemporary differences, and lagged differences are used as instruments for the level equation.

Results

The coefficients of most controlling variables are statistically significant with the expected signs (Table 1). FDI is strongly path dependent, and we find significant evidence for both horizontal (*GDP*; *Growth*) and vertical FDI (*DiffGDPpc*). Bilateral agreements (*RTA; BIT*) stimulate FDI, whereas higher country risk (i.e., low values of *InvestProfile* and *PolRisk*) discourage FDI.[4]

The labor rights variable *LabR* is highly significantly positive in all specifications. This shows that it is not a promising option to lure FDI by repressing labor rights. Multinational enterprises prefer host countries where labor rights are respected – either because they are concerned about their reputation regarding corporate conduct, or cost savings cannot be realized by violating labor rights. This finding remains when additionally controlling for centralized wage setting in the host country. Note that we do

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[3] For our preferred FDI variable, negative values are set to zero. We relax this assumption later as we introduce another FDI measure.

[4] All estimations pass the Sargan-Hansen-J statistic test for overidentifying restrictions, demonstrating that the instruments are valid. The exception is the last specification, which might be due to the significant decline in the sample size when including *CentralBargaining*. The Arellano-Bond test shows that the null hypothesis of no second-order serial correlation cannot be rejected.

not find evidence for the widely held view that FDI is discouraged by centralized bargaining on wages (*CentralBargaining* = 1).[5]

The quantitative effect of *LabR* on FDI seems rather small (coefficient of 0.00698 in Model I). Yet if we focus on the long-run effect, we find that an increase in our labor rights variable by 4.36 (i.e., the standard deviation of *LabR*) leads to an increase in the FDI measure by 19.6%.[6]

Table 2 presents five robustness tests; we report only the labor rights coefficients to save space. First, the effect of *LabR* remains significantly positive when redefining the dependent FDI variable in absolute terms. Second, redefining our labor rights variable to reflect the difference in *LabR* between the host and the source country shows that better labor rights in the host country lead to higher FDI. Third, we return to variable definitions as in Table 1, but consider sub-samples of developing host countries. Excluding the largest host countries hardly affects our results. Robustness tests 4 and 5 reveal that it is mainly for middle-income countries that *LabR* has a positive effect on FDI. However, it does not even pay for low-income countries to repress labor rights, although especially this sub-group may have little to offer but cheap labor to attract FDI.

Summing up, we find fairly strong evidence that it does not pay, in terms of higher FDI inflows, for policymakers to repress labor rights. Rather, violations of labor rights tend to discourage FDI – even in small and poor developing countries. More research is required to determine why exactly multinationals prefer to locate where labor rights are respected. This may be due to increasing public scrutiny of corporate conduct.

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[5] See Leahy and Montagna (2000) for a theoretical model suggesting that FDI is not necessarily attracted by decentralized wage bargaining.

[6] The long-run effect is calculated by dividing the coefficient of *LabR* by one minus the coefficient of the lagged dependent variable times the increase in *LabR* in percent of the FDI measure. Note that the impact of *LabR* on FDI diminishes as we add further control variables.

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Table 1: FDI Inflows and Labor Rights

Model:	I	II	III	IV	V
LabR	0.00698***	0.00523***	0.00407***	0.00293**	0.00454**
	(5.16)	(4.18)	(2.83)	(2.19)	(2.42)
lnFDI, lagged	0.844***	0.814***	0.832***	0.800***	0.754***
	(25.7)	(26.8)	(29.4)	(25.1)	(22.2)
lnGDP	0.0598***	0.0545***	0.0451***	0.0447***	0.0787***
	(5.85)	(6.04)	(4.94)	(4.67)	(5.43)
lnDiffGDPpc	0.00723***	0.00556**	0.00809**	0.0105***	0.0204***
	(2.66)	(2.02)	(2.50)	(3.12)	(3.22)
Growth	0.00374***	0.00306***	0.00348*	0.00336*	0.00141
	(4.16)	(3.53)	(1.78)	(1.77)	(0.35)
lnInflation	0.00395	0.000569	0.00173	0.00188	0.00380
	(0.89)	(0.14)	(0.39)	(0.41)	(0.35)
Openness	-0.000365	0.0000235	-0.000104	-0.000134	0.000137
	(-1.58)	(0.11)	(-0.52)	(-0.65)	(0.38)
RTA	0.104**	0.127***	0.123***	0.121***	0.134*
	(2.44)	(2.98)	(2.80)	(2.62)	(1.83)
BIT	0.0601**	0.0726***	0.0521**	0.0513**	0.0188
	(2.42)	(2.86)	(1.99)	(2.00)	(0.47)
CapOpen		0.00716	0.0113**	0.00540	0.00804
		(1.59)	(2.28)	(1.04)	(0.79)
InvestProfile			0.00994**		
			(2.03)		
PolRisk				0.00485***	0.00651***
				(4.27)	(3.13)
CentralBargaining					-0.0469
					(-1.21)
Observations	11,745	11,546	10,690	10,690	4,181
Country pairs	2,287	2,287	2,175	2,175	861
Sargan (p-value)[1]	0.12	0.15	0.13	0.14	0.01
AB 2 (p-value)[2]	0.14	0.14	0.16	0.16	0.52
Instruments	284	324	351	351	299

Notes: Estimation based on one-step system-GMM estimator with robust standard errors; corresponding z-values are reported in parentheses; ***, **, * significant at 1, 5, and 10 % level, respectively. [1] Sargan-test of overidentification. [2] Arellano-Bond-test that second-order autocorrelation in residuals is 0; first-order autocorrelation is always rejected (not reported); host-year effects and time dummies always included (not shown).

Table 2: Robustness Checks: Coefficients for Labor Rights

Model:	I	II	III	IV	V
Full developing country sample					
1. Dependent variable: absolute FDI flows, logged	0.0109***	0.00776**	0.00872**	0.00726**	0.0140***
	(2.98)	(2.27)	(2.28)	(1.96)	(2.61)
2. *LabR*, difference host minus source country	0.00412***	0.00373***	0.00326***	0.00282***	0.00310*
	(4.79)	(4.56)	(3.51)	(3.13)	(1.83)
Reduced samples (all variables as in Table 1)					
3. Excluding Brazil, China, India and Indonesia	0.00677***	0.00475***	0.00333**	0.00297**	0.00345*
	(4.86)	(3.84)	(2.36)	(2.36)	(1.84)
4. Middle-income host countries	0.00624***	0.00591***	0.00724***	0.00471***	0.00932***
	(3.29)	(3.19)	(3.59)	(2.58)	(3.20)
5. Low-income host countries	0.00161	0.00197*	0.00193*	0.00174*	0.00435***
	(1.56)	(1.93)	(1.82)	(1.74)	(3.55)

Notes as for Table 1.