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**Article**

## Rate of return on foreign investment income and employment labour protection: A panel analysis of thirty OECD countries

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## GENERAL & APPLIED ECONOMICS | RESEARCH ARTICLE

# Rate of return on foreign investment income and employment labour protection: A panel analysis of thirty OECD countries

Burçak Polat<sup>1\*</sup>

**Abstract:** Scholars argue that multinational corporations tend to locate their investments in countries with lower employment protections to avoid potential future exit costs if an unfavourable event occurs. Yet, empirical results are highly inconsistent. The main objective of this study is to examine the causal relationship between rate of return on foreign investment income and employment labour protection (ELP) by employing one-step system generalized method of moments system. Strict ELP affects location choice of investments through the profit maximization appetite of foreign investors. Thus, contrary to previous studies investigating the effect of labour standards on foreign investment inflows, this study deals relationship between rate of return on foreign investment income and ELP in the host country. The study found robust evidence that ELP has no significant effect on rate of return on investment income; however, market size, GDP growth rate, openness, investment profile and inflation do indeed have a positive effect. The important implication is that the reductions in employment protection rules do not affect the location choice of foreign investors through the cost-benefit analysis on their investments.

**Subjects:** Labour Economics; Employment & Unemployment; International Economics; International Trade (incl. trade agreements & tariffs)

### ABOUT THE AUTHOR

Burçak Polat is an Assistant Professor Doctor in the Department of Economics in Antalya International University. She is also head of the Economics Department of AIU. She earned her BS and master degree in Business Administration from the Cukurova University and Saint Leo University, respectively. She earned her PhD degree in Economics field from Eastern Mediterranean University.

### PUBLIC INTEREST STATEMENT

The race to the bottom hypothesis claims that multinational firms (MNFs) prefer to invest in countries with less restrictive labour standards. The belief is that, in an environment of uncertainty, MNFs are likely to consider future exit costs when deciding on the location of a new investment, and a higher degree of employee labour protection (ELP) is expected to contribute to the scale of future exit costs for these firms. On the other hand, a handful of studies found positive relation between ELP and foreign direct investment (FDI) inflows or no relation at all. Even though there is a mixed evidence regarding the real effect of ELP on FDI inflows, previous studies have overwhelmingly neglected to capture any possible cost effect of ELP on the profitability of investors. Thus, it induced me to concentrate on the cost effect of ELP on rate of return on FDI inflows for OECD countries where labour rights are mostly respected.

**Keywords:** foreign direct investment; foreign investment income; employment labour protection; labour market rigidity; labour standards; dynamic panel data

**JEL classification:** C23; F21; F23; F24; F29

## 1. Introduction

International trade and activities of multinational firms (MNFs) have gained deserved attention from scholars since the 1990s due to the rapid liberalization of developing and least developed (LD) countries. The perception of foreign direct investment (FDI) has changed, and it is now considered an important part of the driving force behind globalization. However, along with its growing importance, criticism has often been directed towards FDI. It is known as ‘the race to the bottom’.

The race to the bottom hypothesis embraces two assumptions that play an important role in the investment decision of foreign investors to relocate their resources abroad. First, it assumes that MNFs prefer to invest in countries with less restrictive labour standards. Second, it assumes that foreign countries race against each other to undercut each other’s labour standards to establish themselves as host countries that are the ideal destinations for potential FDI.

The current study does not deal with the second assumption of whether countries set up and adjust their labour standards in response to other countries’ labour policies. Instead, the study addresses the first proposition of whether or not MNFs choose to invest in a location that has less restrictive labour market regulations. Although popular belief suggests that effective employee labour protection (ELP) has a deterrent effect on potential investments in a country, some studies have found that ELP has positive effects or no effects at all on FDI inflows.

A popularly held belief explains the negative linkage between FDI and ELP. The belief is that, in an environment of uncertainty, MNFs are likely to consider future exit costs when deciding on the location of a new investment, and a higher degree of ELP is expected to contribute to the scale of future exit costs for these firms. On the other hand, a positive linkage between ELP and FDI has been argued. If firms have a strategic commitment to maintain a particular output, they may prefer to invest in a market where there is a high degree of ELP because that raises the cost of adjustment to increase the scale of production.

As the previous literature reveals that there is mixed evidence regarding the real impact of ELP on FDI inflows, the debate is ongoing and requires further research in this field. Thus, the main purpose of this study is to investigate whether the strict host countries’ ELPs affected the location choice of foreign investors in thirty countries of the Organization for Economic Co-operation and Development (OECD) for the period 2006–2013. The contribution of the study can be elaborated as follows: First, unlike the previous studies, this study employs the rate of return on FDI income earned by foreign investors as a dependent variable. Since strict ELP affects location choice of investments through the profit maximization appetite of foreign investors, taking account of rate of return on FDI income rather than FDI inflows, may provide more precise results. Second, the study employs the one-step generalized method of moments (GMM) system to deal with the problem of simultaneous causation between rate of return on FDI income and ELP index.

The remainder of the paper is organized as follows. In the second section, a brief summary of theoretical background and a literature review are presented. This section is followed by a description of the methodology and data employed in the study. Empirical results are given in the third section. The fourth section consists of the summary and concluding remarks along with some important implications.

## 2. Theoretical considerations and literature review

There are sound theoretical reasons for believing that ELP has a significant, though ambiguous, effect on FDI inflows. Countries may be too poor or too small to attract FDI except for their abundant and cheap labour. The main question that remains unanswered is if a low level of labour protection really plays an important role in attracting FDI.

ELP may have a twofold effect on prospective FDI inflows. First, MNCs seek to invest in countries with flexible labour markets. The reason for believing that ELPs have a negative effect is that, in an uncertain economy, labour market rigidity may lead foreign firms to pay higher remuneration costs for labour, which then increases exit costs from the market in case of an unforeseen event. Second, foreign investors may not only seek low labour costs but also qualified workers; thus, a flexible labour market may help the firm to align its labour force with more productive techniques. The studies of Keller and Levinson (2002), Harms and Ursprung (2002), Kucera (2002), Busse (2003), Dewit, Görg, and Montagna (2003), Gorg (2005), Javorcik and Spatareanu (2005), Drezner (2006), Delbecque, Méjean, and Patureau (2007), Ham and Kleiner (2007), Olney (2011), Bellak and Leibrecht (2011), Radulescu and Robson (2013) and Duanmu (2014), Fournier (2015) have argued that MNCs may tend to increase their profits by investing in countries with less restrictive standards. Additionally, a hand full of study has argued that deterring effect of ELP on foreign investments may change with respect to the sectoral differences where FDI directed. Bellak and Leibrecht (2011) have claimed that the deterrent effect of rigid labour markets depend on the skill intensity of an industry. Furthermore, Krzywdzinski (2014) analysed the determinants of capital flows into European countries and compared the German and USA FDI in the automotive and chemical industry. He argued that FDI is influenced by labour standards negatively. However, there are differences according to the industries and the home countries of investors.

Looking at the other side of the coin, ELP may have a positive effect on FDI as well. MNCs may search out countries that have high labour standards if the foreign firms have a commitment to achieving a certain level of output in the market. Since a dynamic production orientation requires additional labour inputs, this consequently raises the labour cost as the qualified workers are more in demand due to the large scale of production and industrialization. This has been thoroughly explained in the studies of Bognanno, Keane, and Yang (2005) and Busse, Nunnenkamp, and Spatareanu (2011).

A recent study by Busse et al. (2011) examined the impact of labour rights on bilateral FDI flows to 82 developing countries. It proved that MNCs prefer to invest in countries where labour rights are respected because investors are concerned about their reputations regarding corporate conduct, and it is believed that cost savings cannot be realized by violating labour rights.

Moreover, there are some studies that found no or varying effects of ELP on FDI flows. A recent study by Biasi (2014) analysed the impact of ELP on FDI flows into the OECD and other European countries. In the end, he did not find any evidence regarding a significant effect of ELP on FDI inflows. Also, Kucera (2002) could not find evidence to support that MNCs favour countries with lower labour standards. The study by Delbecque et al. (2007) analysed French firms' decisions to expand abroad, and they found that, while a strict ELP may discourage French investors, the estimated effect depends on the type of ELP and the country coverage.

Furthermore, Mogab, Ruby, and Diego (2013) examined the relationship between labour market rigidity and FDI location decisions by European MNCs. They argued that, after controlling for country classifications, FDI in transition countries is positively correlated to the rigidity of hours index. In addition, Duanmu (2014) investigated the effect of labour standards on outward greenfield investments in a range of countries from Brazil, Russia and China to developing and other developed countries. He explained that the impact of ELP varies by the development stage of host countries so that outward investments in developed countries are attracted by lower level labour standards, while this tendency is not true for developing countries.

### 3. Data and methodology

#### 3.1. Data

Rate of return<sup>1</sup> on FDI incomes in thirty OECD countries<sup>2</sup> is defined as the dependent variable in measuring the causal impact of labour rigidity on the profitability of investors. As the main variable of interest, the ELP index is taken as an indicator of the labour market rigidity in the host country. ELP index is estimated by OECD statistics to assess job protection of workers with regular contracts. This index is estimated by evaluating three main areas: (1) difficulty of dismissal of individuals or groups; (2) procedural inconveniences that the employer may face when starting the dismissal process; and (3) notice and severance pay provisions. Thus, higher ELP index means higher procedures and costs involved in dismissing individuals or groups of workers and the heavy procedures and cost involved in hiring workers on fixed-term or temporary work agency contracts. Since, higher regulated markets do not only cause extra cost factors reducing the profitability of investors, but also they may lead inefficiency for the practicing managers. Heavy bureaucratic procedures add to operational burden among practicing managers and leads control problems between parent company and its' subsidiary in the foreign market. Thus, ELP index can be viewed as a good proxy for labour rights that may create and extra cost for investors to protect the existing worker in the market.

The study also employs other control variables which are fairly standard in the literature of FDI determinants: host country gross domestic product (GDP), GDP growth, labour cost, inflation, openness, exchange rate, corporate tax rate on profits and alternative indicators of country risks, which include composite index of economic, financial and political risk indices of the host country and a separate index for each component of the composite index and investment profile. The investment profile index involves other factors that remain outside of the composite risks and that affect the ease of doing business as an investor in the host country. The data points of the CR index, the separate indices of each subcomponent and the investment profile range from very high to very low risk; that is, as the points get higher, the risks get lower. All variables are expressed in millions of US dollars. While FDI income in year  $t$  and FDI stocks at the end of year  $t - 1$  in the host country have been attained from International Monetary Fund (n.d.) statistics ([www.imf.org](http://www.imf.org)), ELP indices have been taken from the Organization for the Economic Co-operation and Development (n.d.) data server ([www.oecd.org](http://www.oecd.org)). The rest of the control variables (GDP, GDP growth, openness, inflation, exchange rate and corporate tax rate) have been obtained from the World Bank Data (n.d.) dissemination tool ([www.data.worldbank.org](http://www.data.worldbank.org)). The country risk indices have been obtained from the Political Risk Service (n.d.) data retrieval tool ([www.prsgroup.com](http://www.prsgroup.com)).

Descriptive statistics on the rate of return on FDI income and ELP, along with other control variables within the analysis, are presented in Table 1. The variables take on values that are within the expected ranges.

As seen in Table 1, although REX has some missing values (24 observations); other variables do not have any missing values. From the standard deviation of the variables, it is obvious that while ELP and *Invstprf* are the least volatile variables, openness, *Lcost* and GDP are the most volatile variables. In addition, it is observable from the mean of the subcomponents of composite risk ratings that political risk ratings constitute the largest part at about 74%.

Furthermore, testing for the pairwise correlation matrices among the variables indicated strong multicollinearity problems among certain variables. The results of correlation matrices of these variables are presented in Table 2. Since, the inclusion of highly correlated variables in the same specification may reduce the unbiasedness of the estimators; this study will employ four different one-step GMM system specifications (Model 1, Model 2, Model 3 and Model 4) to avoid multicollinearity problems.

**Table 1. Summary and descriptive statistics**

Variable	Observation	Mean	Std. dev.	Min	Max
Rate of return (%)	228	11.76137	12.87303	-11.98328	118.9426
ELP	228	2.144945	0.7329843	0.2566666	4.416666
Lcost	228	44100.53	21.85024	9.054	93.968
Inflation (%)	228	1.978988	2.15793	-5.204966	11.34764
GDP	228	14.6754	28.74547	0.1695898	167.6805
Growth (%)	228	1.372821	3.469171	-14.73756	10.68113
Openness (%)	228	101.1338	61.26717	24.76583	371.4397
REX	204	99.66028	5.724738	80.15833	125.7275
Tax rate (%)	228	43.98289	11.71419	19.8	75.4
Composite	228	77.73319	6.800358	56.625	92
Financial	228	38.06031	4.264806	27.29167	47.625
Political	228	73.75493	6.257086	56.875	85.83333
Economic	228	38.42891	4.285495	26.5	48
Invstprf	228	10.70852	1.361804	6.5	12

Notes: Abbreviations for the variables: employment labour protection (ELP), labour cost (Lcost), GDP growth (Growth), exchange rate (REX), composite risk ratings (Composite), financial risk ratings (Financial), political risk ratings (Political), economic risk ratings (Economic), investment profile risk ratings (Invstprf).

**Table 2. Correlation matrices**

	Composite	Economic	Financial	Political	InvstPrf	Lcost
Composite	1.00	0.8000	0.7046	0.8055	0.6957	0.6341
Economic		1.00	0.6301	0.5286	0.5156	0.5093
Financial			1.00	0.3473	0.3449	0.4507
Political				1.00	0.6504	0.6691
InvstPrf					1.00	0.3294
Lcost						1.00

### 3.2. Model specification

The Arellano and Bond (1991) method is generally considered the appropriate method of estimation for dynamic panel specification. There are at least two reasons for choosing this estimator. The first is to control for country-specific effects, which cannot be done using country-specific dummies due to the dynamic structure of the regression equation. The second is that the estimator is capable of handling the simultaneity bias associated with the possible endogeneity of some of the explanatory variables. Arellano and Bond (1991) argued that there might be a GMM procedure that is both unbiased and efficient.

A dynamic panel model is specified separately for each specification (Model 1, Model 2, Model 3 and Model 4) with  $i$  indexing countries and  $t$  indexing time.

The basic specification is:

$$y_{i,t} = \alpha_{0t} + \alpha y_{i,t-1} + \sum_{k=1}^{11} \delta_k X_{kit} + \eta_i + \varepsilon_{it}$$

where  $y_{i,t}$  stands for rate of return on FDI income in each host country. The second term,  $y_{i,t-1}$ , following the time-varying  $\alpha_{0t}$  in the equation, is the lagged dependent variable.  $X_k$  represents a set of macroeconomic variables and risk factors that affect the rate of return on FDI.  $\eta_i$  and  $\varepsilon_{it}$  represent host country effects and the error term, respectively.

**Table 3. Rate of return on FDI and ELP: one-step system GMM estimates**

Variables	Model 1	Model 2	Model 3	Model 4
Constant	-12.5169 (0.098)	-12.3070 (0.069)	-13.9209 (0.089)	-5.4589 (0.357)
Rate of return <sub>t-1</sub>	0.5792 (0.000)**	0.5482 (0.000)**	0.5942 (0.000)**	0.5661 (0.000)**
ELP	1.1602 (0.108)	1.2875 (0.079)	1.1566 (0.095)	1.1315 (0.125)
GDP	0.0519 (0.003)**	0.0391 (0.014)**	0.0493 (0.004)**	0.0532 (0.004)**
Growth	0.3604 (0.006)**	0.2295 (0.021)**	0.3871 (0.002)**	0.3760 (0.016)**
REX	-0.0219 (0.654)	-0.0437 (0.337)	-0.0190 (0.679)	-0.0104 (0.838)
Tax	-0.0401 (0.478)	-0.0348 (0.548)	-0.0368 (0.521)	-0.0521 (0.350)
Lcost	-	0.0153 (0.599)	-	-
Composite	0.1369 (0.101)	-	-	-
Economic	-	-	-	0.0803 (0.543)
Financial	-	-	0.0640 (0.612)	-
Political	-	-	0.1252 (0.100)	-
InvstPrf	-	1.2130 (0.022)**	-	-
Openness	0.0816 (0.000)**	0.0875 (0.000)**	0.0784 (0.000)**	0.0851 (0.000)**
Inflation	0.3729 (0.008)**	0.3892 (0.009)**	0.3761 (0.010)**	0.3544 (0.010)**
Wald test	4,680.08	2,596.75	7,804.65	2,929.87
$p > \chi^2(16)$	(0.000)**	(0.000)**	(0.000)**	(0.000)**
Arellano Bond test for AR (2)	0.91 (0.361)	0.92 (0.357)	0.91 (0.363)	0.93 (0.355)
Hansen overid. Rest. test	9.52 (0.146)	8.83 (0.183)	9.69 (0.138)	9.46 (0.149)
Instruments	22	23	23	22
Observations	178	178	178	178
OLS	0.8462	0.8290	0.8486	0.8537
Fixed effect	0.5433	0.5396	0.5461	0.5634

Notes: The probability values of the coefficients are in the parentheses. Time dummies between 2006 and 2013 have been included in the estimated equations but not reported in order to conserve space.

\*\*Significance level at 1%.

The study employs one-step GMM system<sup>3</sup> estimations proposed by Blundell and Bond (1998) to account for potential endogeneity. Arellano and Bond (1991) suggested using the lagged levels of the regressors as instruments. This is valid as long as the error term is serially uncorrelated and the lags of the explanatory variables are weakly exogenous. Arellano and Bover (1995) and Blundell and Bond (1998) showed that the Arellano and Bond estimator can perform poorly if the autoregressive parameters are too large or if the explanatory variables are persistent. In this case, the lagged levels of the variables become weak instruments. To compensate, both papers propose implementing additional moment conditions using lagged first differences (LFD) as instruments for the level equation.

#### 4. Empirical results and discussion

The study employs yearly data from 2006 to 2013 to estimate the causal relationship between rate of return on FDI income and ELP. Time dummies have also been included in each one-step GMM system model to capture the year effect. Furthermore, to ensure the robustness of our estimates, the estimate for the coefficient of a lagged dependent variable should lie between the fixed effect (FE) and ordinary least squares (OLS) estimates. These are provided in the bottom part of Table 3, and the values of the coefficients of the lagged dependent variables for each model do, indeed, fall between the FE and OLS estimates.

According to the empirical results, the study could not find any evidence supporting the effect of labour market rigidity on the profitability of foreign investors in the host country.<sup>4</sup> The main purpose of foreign investors is to gain a high rate of profit in a foreign market. And, an appetite for profit makes investors adjust (drop or rise) the volume of FDI inflows to avoid the aggravating the impact of ELP, if any, on return. Yet, this study found no effect of ELP on rate of return on FDI income, and this finding can be used to argue that foreign investors do not react to the labour market rigidity in the host country.

On the other hand, the study found robust results regarding the effect of control variables on the profitability of investors. Host county GDP, GDP growth, openness and inflation correlated positively with rate of return on FDI income in whatever specification was used. It is important to keep in mind that a high rate of return on FDI income is the impetus by which foreign investors are driven to relocate more of their capital investments abroad. Not surprisingly, a high volume of sales sustainable with larger host market size and high GDP growth rates may also encourage investors to direct their investments into the OECD countries. In addition, the positive effect of openness and inflation on rate of return on FDI income is a significant factor that should be considered. It should also be noted that, even though export oriented operations may require costly capital inputs, they are high yielding investments as well. Thus, to the extent that investors become more involved with international trade in the foreign market, this may induce other investors to relocate their investments into that market. With regard to the latter one, the inflating effect on returns may be a natural consequence of inflation.

Additionally, due to the high multicollinearity among some certain variables, the potential incorporation of the investment profile in Model 2 releases that investment profile has a strong positive and significant effect on rate of return on FDI income, as well. In other words, as the ease of doing business improves in the host country, the likelihood of gaining a higher return on foreign investments increases, which then prompts investors to expand their operations in the host country.

#### 5. Conclusions

Despite the popularly held belief supporting a negative linkage between FDI inflows and ELP, results provided by the literature remain inconclusive and ambiguous. This study addresses the relationship between rate of return on FDI income and ELP indices from panel data of 30 OECD countries for the period of 2006–2013.



The decision to invest abroad by MNFs usually emanates from the desire to gain a high return on investment income. In this respect, the presence of strict labour rights protections may escalate the anxiety of investors concerning exit costs in an uncertain market exposed to unexpected shocks. Thus, the study employs the rate of return on FDI income as a dependent variable rather than FDI inflows in order to have more precise estimation results. Furthermore, to deal with the simultaneous causation between rate of return on FDI and ELP, a one-step GMM system is employed allowing the lagged values of the explanatory variables to serve as instruments.

GMM system estimations indicate that the ELP index appears not to have any significant effect on rate of return on investment. The moral of the story is that investors may still see the OECD countries, where strict labour standards are respected, as ideal investment destinations because those standards are not perceived as potential future costs that will reduce the return on income. The possible interpretation of this result can be explained as: OECD market is already well-established with productive labour or sectors in which that foreign investors do not need to wipe out the least productive factors of resources and replace them by more productive ones. Conversely, return on investment income is positively correlated with market size, GDP growth rate, openness, investment profile and inflation. This simply means that, although an exaggerated amount of return in hand might be just the result of an inflation effect, greater market size, growth rates, openness and a better investment profile increase the attractiveness of OECD countries due to their contributions to the rate of return on foreign income.

Although, the study fails to find any effect of ELP on rate of return on foreign investment income, strict labour rights protections may have a varying effect on the profitability of foreign investors serving in different sectors. The limitation of this study is that unavailable statistical data on foreign investment income earned in different sectors prevents us to explore the relationship between rate of return on sectoral FDI income and ELP. Thus, there is still room in this field for the future researches.

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#### Notes

1. Rate of return on FDI income is calculated as FDI income in year  $t$ /FDI stocks at the end of year  $t - 1$ .
2. OECD country list: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Korea, Luxemburg, Mexico, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States and Japan.
3. When the orthogonality conditions for the first-difference equation and for the level equation are both valid, then the GMM system is to be preferred to first-difference GMM since it uses more information from the instruments. Moreover, the GMM system is more efficient, especially with weak instruments.
4. All estimations pass the Hansen Statistic Test for overidentifying restrictions demonstrating that all instruments are valid. The Arellano-Bond test shows that the null hypothesis of no second-order serial correlation can not be rejected.

#### References

- Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies*, 58, 277–297. <http://dx.doi.org/10.2307/2297968>
- Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics*, 68, 29–51. [http://dx.doi.org/10.1016/0304-4076\(94\)01642-D](http://dx.doi.org/10.1016/0304-4076(94)01642-D)
- Bellak, C., & Leibrecht, M. (2011). Does the impact of employment protection legislation on foreign direct investment differ by the skill intensity of industries? An Empirical Note *The World Economy*, 34, 1726–1744.
- Biasi, P. (2014). *Does employment protection deter FDI? An empirical study on OECD countries* (Working Paper). Retrieved February 15, 2016, from [www.aiel.it](http://www.aiel.it)
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87, 115–143. [http://dx.doi.org/10.1016/S0304-4076\(98\)00009-8](http://dx.doi.org/10.1016/S0304-4076(98)00009-8)
- Bognanno, M. F., Keane, M., & Yang, D. (2005). The Influence of wages and industrial relations environment on the production location decision of the U.S. multinational corporations. *ILR Review*, 58, 171–200. <http://dx.doi.org/10.1177/001979390505800201>
- Busse, M. (2003). Do transnational corporations care about labor standards? *The Journal of Developing Areas*, 36, 39–57.
- Busse, M., Nunnenkamp, P., & Spatareanu, M. (2011). Foreign direct investment and labour rights: A panel analysis of bilateral FDI flows. *Applied Economics Letters*, 18, 149–152. <http://dx.doi.org/10.1080/13504850903559500>
- Delbecque, V., Méjean, I., & Patureau, L. (2007). *What impact of Labor Market Institutions on FDI decisions? An Investigation Using French-firm Data*. Euroframe.

- Dewit, G., Görg, H., & Montagna, C. (2003). *Should i stay or should i go? A note on employment protection, domestic anchorage, and FDI* (The Institute for the Study of Labour (IZA) Discussion Paper No. 48) Bonn. Retrieved February 15, 2016, from [www.iza.org](http://www.iza.org)
- Drezner, D. W. (2006). *The race to the bottom hypothesis: An empirical and theoretical review*. Medford, MA: The Fletcher School, Tufts University.
- Duanmu, J. (2014). A race to lower standards? *Labour standards and location choice of outward FDI from the BRIC countries*, *International Business Review*, 23, 620–634.
- Fournier, J. (2015). *The negative effect of regulatory divergence on foreign direct investment* (OECD Economics Department Working Papers, No. 1268). Paris: OECD Publishing. Retrieved April 9, 2016, from <http://dx.doi.org/10.1787/5jrqqvg0dw27-en>  
<http://dx.doi.org/10.1787/18151973>
- Görg, H. (2005). Fancy a stay at the 'Hotel California'? *Foreign Direct Investment, Taxation and Firing Cost*. *KYKLOS*, 58, 519–535.
- Ham, H., & Kleiner, M. (2007). Do industrial relations institutions influence foreign direct investment? *Evidence from OECD nations*, *Industrial Relations*, 46, 305–328.
- Harms, P., & Ursprung, H. (2002). Do civil and political repression really boost foreign direct investment? *Economic Inquiry*, 40, 651–663.
- International Monetary Fund. (n.d.). Retrieved February 16, 2016, from [www.img.org](http://www.img.org)
- Javorcik, B. S., & Spatareanu, M. (2005). Do foreign investors care about labour market regulations? *Review of World Economics*, 141, 375–403.  
<http://dx.doi.org/10.1007/s10290-005-0035-7>
- Keller, W., & Levinson, A. (2002). Pollution abatement cost and foreign direct investment inflows to U.S. states. *Review of Economics and Statistics*, 84, 691–703.  
<http://dx.doi.org/10.1162/003465302760556503>
- Krzywdzinski, M. (2014). Do investors avoid strong trade unions and labour regulation? Social dumping in the European automotive and chemical industries *Work, Employment & Society*, 28, 926–945.  
<http://dx.doi.org/10.1177/0950017013516692>
- Kucera, D. (2002). Core labour standards and foreign direct investment. *International Labour Review*, 141, 31–69.  
<http://dx.doi.org/10.1111/ilr.2002.141.issue-1-2>
- Mogab, J., Ruby, K., & Diego, E. V. (2013). Labour market rigidity and foreign direct investment: The case of Europe. *Applied Econometrics and International Development*, 13, 36–51.
- Olney, W. W. (2011). *A race to the bottom? Employment protection and foreign direct investment* (Working Paper). William College. Retrieved February 16, 2016.
- Organization for the Economic Co-operation and Development. (n.d.). Retrieved February 11, 2016, from [www.oecd.org](http://www.oecd.org)
- Political Risk Service. (n.d.). Retrieved February 10, 2016, from [www.prsigroup.com](http://www.prsigroup.com)
- Radulescu, R., & Robson, M. (2013). Does labour market flexibility matter for investment? A study of manufacturing in the OECD. *Applied Economics*, 45, 581–592.
- World Bank Data. (n.d.). Retrieved February 11, 2016, from <http://data.worldbank.org/>



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