

Does Employment Protection Deter FDI? An Empirical Study on OECD countries

Provisional version

Author: Paola Biasi

University of Florence

June 15, 2014

Abstract

Employment Protection (EP) is often cited in public debate as a factor that deter inflows FDI. However, empirical and theoretical results in that respect are ambiguous. This paper contributes to this literature analyzing the impact of Employment Protection Legislation on the ability to attract FDI, using a panel data of OECD and European Countries, from 1985 to 2008 . In the basic specification, our econometric results show that EP does not have a significant impact on FDI inflows, and countries that implemented deregulation policies in labour market not necessarily become more attractive for foreign investors. However, testing for non-linear effect, we find evidences of a negative and significant impact , but only up to a threshold, above which the effect reverses, consistently with previous theoretical literature.

Keywords: Employment Protection, Foreign Direct Investment, OECD

1 Introduction

The process of liberalization and the move towards internationalization of production make the flows of Foreign Direct Investment (FDI) more important in terms of volumes. Also the geographical dispersion of FDI is enlarged. Data show a progressive increase of FDI flows since 1980s: the relevance in terms of volume, sales and employment related to FDI flows is increased with respect to the past. Due to the recent global crisis, this trend is subject to an impressive slowdown. The post-crisis FDI recovery seems to need a longer time span respect to industrial production and trade: in 2010 FDI flows remained a 15 % below the pre-crisis average. In 2011 however the level of FDI inflows increased across all major economic groupings, and Unctad's projections for the long term show an increasing trend, leading to a moderate optimism. Moreover, important changes in the geographical distribution of these flows are in progress. The role of developed economies as host countries is declining, while developing and transition economies are increasingly attracting FDI flows: more than half of global FDI flows is now directed to these countries (UNCTAD, 2011) . These important changes lead to an harder competition between economies in attracting FDI, especially in the developed world; FDI-incentives policies are no longer sufficient. Other kind of arrangements in host countries markets have to be considered, because they can have an important impact on international integration and FDI attractiveness (Nicoletti et al., 2003). In particular, labour market characteristics seems to have increased their strategic importance in this context. This issue is particularly relevant because of the positive impact of FDI inflows on the host economies¹.

The consequences of FDI (for host and source countries) have been studied extensively. (see Lipsey (2004) for a review). Even if conclusions are somewhat mixed (see Narula and Driffield (2012)) it is a common idea that FDI have a positive impact on economic system. FDI inflows stimulate host economies, they make possible the emergence of spillovers and technological transfer process (Haskel et al., 2007) and stimulate high-skilled employment activities. There is large evidence that foreign firms pay higher wages respect to domestic firms, especially (though not exclusively) in developing countries (Aitken et al. (1996); Lipsey and Sjöholm (2004), Girma et al. (2001); see van Klaveren and Tijdens (2011) for an extensive analysis).

There is a strong evidence that foreign-owned firms are more productive than domestic firms; this can lead, under some conditions, to productivity spillovers in host economies (Lipsey (2004); Görg and Greenaway (2004) for a detailed assessment of literature). Other studies claim that these positive effects exist, but are weak and very country or sector-specific (Stehrer

¹For an extensive overview of the empirical analysis about FDI and development of host economies see Moran et al. (2005).

and Woerz, 2009). In order to exploit the positive impact of FDI in host economies, it is crucial to investigate what the determinants of FDI are, and which factors can help in attracting them (Blonigen, 2005; Caves, 1996).

In general, it is argued that the profit maximizing choices of Multinationals (to invest in a specific country) are driven by their strategic motives, as well by characteristics of economic, social and policy framework in the host economy. At least four groups of determinants of FDI are identified in literature, namely Demand factors, (such as market size, growth trends), Cost Factors (inputs, transaction cost ecc), National specific Factors and Risk Factors (related to economic, social and political stability) (Whyman et al., 2006). Interactions between these determinants can reinforce or nullify their particular impact on the degree of attractiveness of an economy. It is clear that there are factors of attraction that can make a country more “appealing” than others; these elements can be related to particular “fixed” country characteristics (such as common language with source countries, distance, cultural proximity, colonial linkages). There are also features that are the outcome of policy decisions, able to influence the attractiveness of a country, even if they are not directly conceived as instruments of incentive for FDI. As long as the possibility to choose where to invest is widened, firms have more chances to react to changes of “business climate” in investment locations. In that respect, labour market characteristics seem to assume an increasing importance as a tool for competition to attract FDI. Labour market arrangements, employment protection, the presence of various kind of rigidities are presented in public debate as one of the most important factor MNEs consider when they decide where to invest, especially in Europe. Nonetheless, academic investigation in that sense is surprisingly recent. Some theoretical models have been developed to stylize the impact of labour market flexibility on FDI flows; empirical contributions are a bit more numerous, but they give ambiguous conclusions. This paper aims at contributing to this literature, investigating if the Employment Protection (EP) has an impact on FDI flows, what is the sign of this impact, and identify the nature of this relationship. The empirical analysis proposed is based on Unctad’s data on FDI inward flows between 1985 to 2009 of OECD countries. The paper is structured as follows. Section 1 contains a review of theoretical and empirical contributions. Section 2 discuss an empirical model, data and variables definition. Section 3 concludes.

2 Related Literature

Early studies about the “FDI-Labour market nexus” are found in a strand of literature that investigate the impact of FDI in host economies. This literature is particularly rich and it investigates the channels through which FDI can benefit host economies. Aside the literature, some authors specifically

focused on labour market impact of FDI. Among them Arnal and Hijzen (2008), review empirical papers on the impact of FDI on wages and working condition in developing countries; Gaston and Nelson (2001) critically assess studies about the impact of globalization (as to say, liberalization of trade and movement of capitals) on labour markets. Currently, the “FDI-Labour market nexus” is studied in the opposite direction, and the main aim is to understand if labour market characteristics actually influence the level of inward FDI in a country. Several papers have analysed this issue, some of them focusing on general features such as labour cost Rasciute and Pentecost (2008). Others compare the importance of labour market flexibility in attracting FDI flows before and after the process of investments liberalization (Hatzius, 1997; Nunnenkamp and Spatz, 2002) .Busse et al. (2011) work is mainly related to the problem of working condition, trying to clarify if it is convenient, especially in developing countries, being lax in the enforcements of such norms. In this context, only recently researchers have devoted a growing attention to an issue that, despite the scarce academic interest received until now, seems to be one of the most considered element for concrete investment decisions. More precisely, it is generally accepted in public debate that the nature of employment protection legislations and the degree of flexibility of labour market (and the differentials between countries) can have an influence on decisions of Multinational. Evidence in that respect is ambiguous. Few theoretical models investigates how labour market flexibility impacts on FDI. Haaland and Wooton (2001) focus on MNE’s (Multinational Enterprises) investment behaviour under uncertainty, considering redundancy payments as a factor of rigidity that firms see as an exit cost. They find that rigidities deter FDI; only in low risk industries the level of labour market flexibility is not relevant compared to other incentives instruments and host economies’ characteristics. In subsequent work, the same authors widen the analytical power of their theoretical framework, (Haaland et al., 2003)) and develop a partial equilibrium model to derive the “optimal policy mix” to attract FDI, considering a trade-off between subsidies and exit costs . Apart from specific configuration of this model, results are unchanged: ”easy come, easy go” countries are more attractive for potential investors, so Labour Market Flexibility is a strategic tools countries can use to become more appealing for foreign investments. Only firms that operate in low risk environment (often low profitability industries) seems to considers others factors (e.g. subsidies) more relevant for their investment location decisions. Obviously, since “firing flexibility” is the (only) dimension of flexibility considered in that model, uncertainty here has a key role. In fact, the higher is the rigidity in firing rules, the higher are the costs MNE have to face with in case of bad economic performance.

Dewit et al. (2003) come to different results, based on a theoretical model in which strategic behaviour of countries and firms is considered. They shows that, under certainty, employment protection acts as an advantage for firms.

In general, rigidities can deter FDI but help to increase the domestic anchorage of investment, discouraging the relocation of investments once they have taken place. Due to the complexity of the link between labour market and investments decisions, there is not a general policy prescription valid worldwide: the optimal level of employment protection depends on the industrial basis dimension and level of development of a country, and Labour Market Flexibility should be used strategically in an intertemporal perspective, to attract and then lock in investments (Dewit et al., 2009). Using Dewit's model as a starting point, Parcon (2008) introduces, a two-way linkage between FDI and Labour market flexibility. More specifically, the hypothesis that underline this formulation is that labour market protection is a cost for firms, but at the same time, it fosters aggregate labour productivity of economies by several channels. Long lasting work relations allow investments in human capital and training, loyalty of workers, and in general labour protection may positively contribute to the level of social stability in the economic system. All these aspects can have significant consequences on FDI attractiveness, and according to the author, have to be explicitly included in the analysis. Empirical results are ambiguous, with specific results depending on countries included, control variables considered, time span etc.

Delbecque et al. (2007) find that labour market characteristics affect French firm investment decisions. They use a large set of indicators for OECD host countries (such as unemployment benefits, employment protection index, union coverage and density, degree of centralization etc), and Doing Business Report indicators for non OECD countries. Firm level data on investment cover the period 1992-2007 and consider 77 host countries. According to the authors, results are mixed: different indicators for dismissal procedures lead to different results; firing cost seem to have no impact at all. Moreover, their simulations show that the impact of labour market institutions is relatively unimportant with respect to other factors, such as market potential. Their conclusion is that French firms investment decisions are mainly related to market size consideration. Görg and Greenaway (2004) and Görg (2003) exclusively considers exit cost as a proxy for the level of flexibility. The fixed effect estimation considers data on FDI flows from US to 33 host countries in 1980s and 1990s. Sectoral disaggregation is also considered. They find that US firms are particularly reactive to firing costs, especially in manufacturing sector. The level of profit taxation (a direct incentives for MNE's FDI) is important to attract investments, but its effectiveness may be reduced by other factors that deteriorate the competitiveness of a host country and worsen the investor's perception of the goodness of business climate. Also Olney (2013) finds a significant impact of Labour Market Flexibility on US FDI. His study has two aims: firstly, to test if MNEs actually invest more in countries with more flexible labour markets arrangements; secondly, if there is a competition between countries in lowering employment protection in order to attract FDI. OECD Employ-

ment protection index was used to measure the flexibility of the 26 host countries considered. Results are positive in both cases, and are shown to be robust to several model specification and estimation strategies. Gross and Ryan (2008) focus on Japanese firms investments in affiliates in Europe for two time span, 1985–1990 and 1995–2000, considering separately regular and temporary employment. They analyze FDI labour demand in terms of geographical distribution and size, and how flexibility impacts on them. The Tobit estimation proposed by the authors shows that it is important to distinguish between temporary and regular employment: while Employment protection measures for the former is found to have a negative and heavy impact on FDI, for temporary employment the effect is negligible. This results are particularly clear in some sector, such as transport or communication. All this empirical studies consider only one source countries. Hence, they focus on Labour Market Flexibility impact on the behaviour of MNEs of a specific country. Despite the relevance of the analysis just mentioned, this can be a problem in generalizing the results obtained. To our knowledge, few studies have considered more than one source country.

Leibrecht and Scharler (2009) examine FDI flows from 7 source to 7 host countries of Central and Eastern Europe from 1995 to 2003. The standard gravity model proposed is “enriched” with a set of variables able to capture the dynamics of labour markets of the countries considered (cost and productivity of labour, OECD Employment Protection Legislation index (EPL)). The EPL index is also interacted with a risk variable to test for theoretical hypothesis proposed in Haaland and Wooton (2001). As previously stated, the basic idea is that the riskier the environment, the stronger is the negative impact of rigidities of labour market for FDI attractiveness. While labour cost clearly affect FDI flows, EPL does not. The estimated coefficient is not statistically significant, also when interacted with risks variables. Including considerations on skill-intensity of ten manufacturing sectors in 11 host countries) Bellak and Leibrecht (2011) find opposite results. EPL impacts on FDI stocks, and this effect is particularly strong in low-skill sectors. Javorcik and Spatareanu (2005) focus on FDI inflows in 19 countries (Western and Eastern Europe) between 1998 and 2001. Using the Amadeus database, the authors are able to use information about European firms and foreign subsidies disaggregated on a sectoral basis. The Global Competitiveness Index (GCI) is used to measure the degree of flexibility of labour markets analyzed. They estimate two different models, and separately consider the impact of Labour Market Flexibility on: the probability of investment to take place (Fixed effect logit model), and the size of investment (Tobit model). Differentials of Labour Market Flexibility between host and source countries is also considered. In both specifications they find a positive and significant impact of Labour Market Flexibility on FDI, with a particularly strong effect on service sector (respect to manufacturing). Radulescu and Robson (2013) analyze the relationship between flexibility and FDI inflows

over a longer period (1965-1995) for OECD countries. Despite the negative impact of Labour Market Flexibility on FDI, when non linear relations are tested, the authors find that high levels of employment protection may help an economy to become more attractive for FDI flows. This effect, according to the authors, can be explained by strategic behavior of firms. In some condition can be convenient for firms locate their investments in less flexible countries, consistently with the model of Dewit et al. (2003).

Ambiguities in results are due to several reasons. First of all, flexibility has several facets, and affects economic system in a micro or macro dimension. Wage bargaining mechanisms clearly have a more pervasive impact on the economic system (mainly in terms of flexibility of wage setting) with respect to micro mechanisms that entail the firm-level organization of work. There are at least four different dimension of flexibility (Rodgers, 2007):

- Employment protection or external flexibility, related to the freedom of hiring and firing by firms;
- Wage flexibility, that involves mechanisms and institution that manage wage fixation and variation;
- Internal flexibility, a functional flexibility that permit a reorganization by firms according to their contingent needs
- Supply side flexibility, related to the adjustment of working hours within the firms.

This makes clear that we are facing with a multidimensional phenomenon that, for simplicity, we call “Labour Market Flexibility”. It is worth noting that each of the above mentioned dimension may have differentiated (also contrasting) effects ; as an example, external flexibility seems to be able to “close” the aforementioned channels that generate labour market productivity enhancements, while internal flexibility seems to be less problematic in that respect. This mechanism could explain the ambiguous results of the existing empirical studies. To sum up, both theoretical and empirical analysis of FDI–Labour Market Flexibility nexus are scarce, and the evidence provided is inconclusive. Large part of this literature focus on outflows FDI from one host country; few of them include non-linear combination of this relationship, as well as consideration about the multidimensionality of flexibility of labour.

3 Empirical strategy

The main aim of this work is to understand if Employment Protection (EP) legislation has a relevant impact on countries attractiveness of FDI. We

focused on selected OECD and European countries ² from 1985 to 2008, using the OECD Employment protection index as a proxy of labour market rigidity. The fixed effect model used is

$$FDI_{it} = \alpha_i + \beta X_{it} + \gamma EP_{it} + u_{it} \quad (1)$$

The dependent variable denotes the volume of FDI inflows in million current US dollars (logarithmic transformation) in country i at time t , X_{it} is a vector of relevant characteristics of country i , EP_{it} is the measure of rigidities in country i 's labour market, and u_{it} the error term. Our strategy is to test a general model of FDI determinants in which Employment Protection legislation is included; then, we control for other factors that can “compete” with labour market flexibility. In a high-income and developed countries framework, the attractiveness for foreign investors is strongly influenced by characteristics such as productivity of labour, public expenditure on Research and Development and so on. Often in public debate the role of these factors is emphasized as more relevant than labour market flexibility itself. So, the basic idea is to test if this hypothesis is confirmed by the data, and to see if Labour market flexibility is less important when these factors are controlled for. According to the literature, FDI inflows are driven by economic determinants (mainly market size determinants and market growth potential), as well as the policy framework for trade and FDI regulations. Hence, our model includes a one year lag of the dependent variable to take into account “path dependency” in FDI. GDP growth rate and the logarithm of GDP per capita in million of US dollars are considered as proxies of demand factors. We also included KOF index of Globalization to control for characteristics of openness of the economies in our study. We expect to find a positive impact on FDI inflows for all these variables. The variable “tax” indicates the annual government corporate tax revenues as percentage of GDP for each country. This variable is included to control for the presence of fiscal incentives relevant for the attractiveness of the country but not specifically related to labour market features. Our main variable of interest is EP (Employment Protection), with EP_a and EP_t as proxies of protection of regular and temporary contracts respectively developed by OECD. The index is on a scale from 0 (least restrictions) to 6 (most restrictions). Figure 1 shows the evolution for selected OECD countries of employment protection in time.

Other explicative variables considered in our analysis are labour productivity, calculated GDP produced per hour worked. Finally, the logarithm of government expenditure in Research and Development for “business en-

²Countries considered in our analyses are the following: Australia Austria Belgium Canada Czech Republic Denmark Finland France Germany Greece Hungary Ireland Italy Japan Netherlands New Zealand Norway Poland Portugal Slovak Republic Spain Sweden Switzerland United Kingdom United States

terprise” sector is considered. This variable is included in the model with a one year lag. In fact, according to the literature, we assume that the positive spillover of public support to business Research and Development, and its impact on foreign investment decisions, is not instantaneous. A list of variables definition and sources of data used is available in Table 1. Table 2 presents descriptive statistics for variables used in our analysis. Due to the longitudinal dimension of our data, and assuming that some time-invariant and unobservable characteristics of countries may affect our estimates, we seek to answer our research question through fixed effect models estimator. An Hausman test for our basic model specification confirms our hypothesis. All the estimates presented in next section are calculated with robust standard error, so we allow for the presence of heteroskedasticity in the error terms.

4 Results and Discussion

Model 1-4 present estimates of our basic specification, considering several control variables that can impact on FDI. All the coefficients have the expected sign. In line with the related literature, past level of FDI inflows and demand factors have a strong influence in determining the level of FDI. GDP per capita has a positive and statistically significant coefficient in model 1 and 2³. This finding is coherent with results in literature that market size is one of the most important factor that influence the allocation of investments. Also the rate of growth of GDP has an important role in this perspective. The coefficient for this explanatory variable is positive and statistically significant. Market potential is hence relevant, but in a weaker way respect to the other proxy of demand we included in our analysis. The KOF index as previously explained, measures the degree of openness of economies, considering several elements: hidden import barriers; mean tariff rate; taxes of international trade (percent of current revenue) capital account restrictions (see Table 1). The higher the KOF index of globalization, the higher the openness of the economic system. As Table 3 shows, the openness has a positive and (weakly) significant impact on inflows FDI. Moreover, the level of public support to business Research and Development has a strong positive impact on country attractiveness, (significant at 5%). On the contrary, coefficient on taxes is not statistically different from zero.

Our variable of interest is EPa. This is a measure of Employment protection, scaled from 1 to 6, calculated for OECD and selected non OECD countries. The higher the value of this index, the higher the degree of employment protection, and thus, the higher the rigidity of labour market⁴.

³In model 3 to 5 the variable ”productivity” capture the effect of per capita GDP because of high correlation of these two measures

⁴The index consider the intensity of employment protection of regular contracts, for

Our results show that the impact of Employment Protection doesn't constitute a relevant factor to attract FDI. Consistently with studies previously mentioned, we hypothesize the presence of a more complex non linear relationship between FDI and labour market flexibility. To test for non-linear combination of the two variables, we included a quadratic form, through the regressor EPasq (model 5 in Table 3). The theoretical background for this is to be found in Dewitt model (2003); in fact, according to the author, under some circumstances firms can prefer a certain degree of employment protection for strategic motives. We find evidences of a strong non-linearity. Employment Protection (EPa) in model 5 has a negative and strong impact on FDI inflows; the quadratic term (EPasq) has a positive sign. This confirm the idea that there exist a treshold effect: labour market flexibility can help in attract FDI, but only up to a certain level, above which the effect reverses. Table 4 consider the same specification of model 5, with the inclusion of variable EPt, namely, the level of Employment Protection of temporary contract provided by OECD. In this case, the coefficient for EPt is negative and significant at 1 % level, signalling that an increase of protection in dismissal procedure for temporary contract has a negative relationship with inflows FDI ⁵. We test our results with variation in the sample considered excluding driver countries, (such as United States and/or Portugal , that experiment high (low) level of FDI inflows and low (high) level of Employment Protection) or groups of countries (United States with Canada and United Kingdom, or Spain, Italy, Greece, Portugal). Results are robust both in terms of magnitude of coefficient and statistical significance. Moreover, we include in our specification a dummy variable (dummy) to test for the impact of employment protection variation. Then, more than levels, we want to test for the impact of an *increase* or *reduction* in Employment Protection measure. Then *dummy* variable is created as follow: we create a new variable, *variation*

$$Variation = EPa_{it} - EPa_{it-1}$$

and then the dummy variable that assumes value equal to 1 if variation;0 and zero otherwise. Consistently with previous finding, the impact of a negative variation of Employment Protection is not statistically significant; then, countries that implemented deregulation reforms in labour market protection don't seems to be more attractive for FDI inflows with respect to other countries in our sample. Same results are obtained if we consider another variablethat include the level *and* the reduction in Ep, that assumes value equal to *Variation* if *Variation* is lower than zero, and zero otherwise.

individual and collective dismissal procedures. The EPa variable is included in logarithmic form to interpret the coefficient in terms of elasticity

⁵We test for the presence of non-linear relationship including a variable EPtsquared; however, the coefficient on the quadratic term is not statistically different from zero.

This partial contradiction with results on model 5 (Table 3) are easily explained: a reduction in Employment Protection is ineffective if the country is above the threshold previously mentioned; or alternatively there are other (omitted) factors that deter FDI, that employment protection reduction is not able to counterbalance (such as corruption). The results previously presented suggest that Employment Protection has not a significant role in attracting FDI. At best, it exists a strong non linear relationship between FDI and EP, then the effect of deregulation of labour market not necessarily leads to an increase in country attractiveness for foreign investors. We test this hypothesis also introducing an interaction term between the measure of Employment protection (EPa) and the dummy variable (dummy =1 if there is a negative variation of the index EPa with respect to previous year). As Table 5 shows, both the variables are not statistically significant; then, nor level, neither slope difference arises in our relationship⁶ Obviously, the analyses has several shortcomings: among others, we remind that the study considers a limited number of countries and only one dimension of flexibility, that is dismissal procedures. As OECD itself claims "The OECD indicators of employment protection legislation measure the procedures and costs involved in dismissing individuals or groups of workers and the procedures involved in hiring workers on fixed-term or temporary work agency contracts. It is important to note that employment protection refers to only one dimension of the complex set of factors that influence labour market flexibility" (OECD, 2014). The others dimension of flexibility, mentioned in Section 2 should be included in the analyses and will be object of further research. However, the main result of this study highlight that reducing Employment Protection to attract FDI is not always a good idea. Despite the existence of a negative relationship between the two variables, our data suggests that it exists a strong non linearity in this relationship; then, the effect of a deregulation in the labour market can help in attracting FDI or deter them, depending on specific situation of the country. Moreover, we find no evidence of an increase of FDI associated to the implementation of deregulation policies.

5 Conclusion

Despite the idea of a negative relationship between FDI inflows and Employment Protection is widespread in public debate, results provided by the literature are ambiguous. This study investigates the relationship between FDI inflows and Employment Protection in a panel of OECD and EU coun-

⁶We test also for the same interaction based on the quadratic form of our variable of interest, and we obtained similar results: EPa and EPa-squared had the same sign and significance as in model 5 Table 3, while dummy and interaction terms are not statistically different from zero.

tries from 1985 to 2008. Our econometric results, through a Fixed Effect model, show that there is no evidence of a linear relationship between EP and FDI. However, with the inclusion of the quadratic form of EPa, evidences of a strong non linearity arises. More specifically, the positive coefficient on the quadratic terms signal that it exist a threshold effect: reducing Employment protection can help in attract FDI, but up to a threshold, the effect reverses. This result is robust to several specification, subsample and interaction terms between variable. Then, these results suggest that the interaction between these two variables is more complex than previously thought and that the topic deserves further analyses, especially for the relevance of its policy prescription.

References

- Aitken, B., Harrison, A., and Lipsey, R. E. (1996). Wages and foreign ownership a comparative study of mexico, venezuela, and the united states. *Journal of international Economics*, 40(3):345–371.
- Arnal, E. and Hijzen, A. (2008). The impact of foreign direct investment on wages and working conditions. Technical report, OECD Publishing.
- Bellak, C. and 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(10):1726–1744.
- Blonigen, B. A. (2005). A review of the empirical literature on fdi determinants. *Atlantic Economic Journal*, 33(4):383–403.
- Busse, M., Nunnenkamp, P., and Spatareanu, M. (2011). Foreign direct investment and labour rights: a panel analysis of bilateral fdi flows. *Applied Economics Letters*, 18(2):149–152.
- Caves, R. E. (1996). *Multinational enterprise and economic analysis*. Cambridge university press.
- Delbecque, V., Méjean, I., and Patureau, L. (2007). What impact of labor market institutions on fdi decisions? an investigation using french-firm data. *Centre D’études Prospectives Et d’informations Internationales (CEPII) Working Paper*, 12.
- Dewit, G., Görg, H., and Montagna, C. (2009). Should i stay or should i go? foreign direct investment, employment protection and domestic anchorage. *Review of world Economics*, 145(1):93–110.
- Dewit, G., Leahy, D., and Montagna, C. (2003). Employment protection and globalisation in dynamic oligopoly. *Department of Economic Studies, University of Dundee Working Paper N.137*.
- Gaston, N. and Nelson, D. (2001). *Integration, FDI and Labour Markets: Microeconomic Perspectives*. Leverhulme Centre for Globalisation and Economic Policy.
- Girma, S., Greenaway, D., and Wakelin, K. (2001). Who benefits from foreign direct investment in the uk? *Scottish Journal of Political Economy*, 48(2):119–133.
- Görg, H. (2003). Foreign direct investment, investment incentives, and firing costs: A disadvantage for” inflexible europe”? Technical report, European Economy Group.

- Görg, H. and Greenaway, D. (2004). Much ado about nothing? do domestic firms really benefit from foreign direct investment? *The World Bank Research Observer*, 19(2):171–197.
- Gross, D. M. and Ryan, M. (2008). Fdi location and size: Does employment protection legislation matter? *Regional Science and Urban Economics*, 38(6):590–605.
- Haaland, J. I., Wooton, I., and Faggio, G. (2003). Multinational firms: Easy come, easy go? *FinanzArchiv: Public Finance Analysis*, 59(1):3–26.
- Haaland, J. I. M. and Wooton, I. (2001). Multinational investment, industry risk, and policy competition.
- Haskel, J. E., Pereira, S. C., and Slaughter, M. J. (2007). Does inward foreign direct investment boost the productivity of domestic firms? *The Review of Economics and Statistics*, 89(3):482–496.
- Hatzius, J. (1997). Foreign direct investment. Cep discussion papers, Centre for Economic Performance, LSE.
- Javorcik, B. S. and Spatareanu, M. (2005). Do foreign investors care about labor market regulations? *Review of World Economics*, 141(3):375–403.
- Leibrecht, M. and Scharler, J. (2009). How important is employment protection legislation for foreign direct investment flows in central and eastern european countries? 1. *Economics of Transition*, 17(2):275–295.
- Lipsey, R. E. (2004). Home-and host-country effects of foreign direct investment. In *Challenges to globalization: Analyzing the economics*, pages 333–382. University of Chicago Press.
- Lipsey, R. E. and Sjöholm, F. (2004). Foreign direct investment, education and wages in indonesian manufacturing. *Journal of Development Economics*, 73(1):415–422.
- Moran, T. H., Graham, E. M., and Blomström, M. (2005). *Does foreign direct investment promote development?* Peterson Institute.
- Narula, R. and Driffield, N. (2012). Does fdi cause development? the ambiguity of the evidence and why it matters. *European Journal of Development Research*, 24(1):1.
- Nicoletti, G., Golub, S., Hajkova, D., Mirza, D., and Yoo, K.-Y. (2003). Policies and international integration: influences on trade and foreign direct investment. Technical report, OECD Publishing.

- Nunnenkamp, P. and Spatz, J. (2002). Determinants of fdi in developing countries: Has globalization changed the rules of the game? Open access publications from kiel institute for the world economy, Kiel Institute for the World Economy (IfW).
- OECD (2014). Oecd indicators of employment protection.
- Olney, W. W. (2013). A race to the bottom? employment protection and foreign direct investment. *Journal of International Economics*, 91(2):191–203.
- Radulescu, R. and Robson, M. (2013). Does labour market flexibility matter for investment? a study of manufacturing in the oecd. *Applied Economics*, 45(5):581–592.
- Rasciute, S. and Pentecost, E. J. (2008). A meta-analysis of the robustness of market size and labour cost determinants of fdi. Technical report.
- Rodgers, G. (2007). Labour market flexibility and decent work. *UN-DESA Working Paper*, 47.
- Stehrer, R. and Woerz, J. (2009). ‘attract fdi!’—a universal golden rule?; empirical evidence for oecd and selected non-oecd countries. *European Journal of Development Research*, 21(1):95–111.
- UNCTAD, G. (2011). World investment report. towards a new generation of investment policies.
- van Klaveren, M. and Tijdens, K. (2011). Multinationals versus domestic firms: wages, working hours and industrial relations. *Amsterdam Institute for Advanced labour Studies, University of Amsterdam*.
- Whyman, P., Baimbridge, M., and Britain, G. (2006). *Labour market flexibility and foreign direct investment*. DTI.

Figure 1: Employment Protection Index

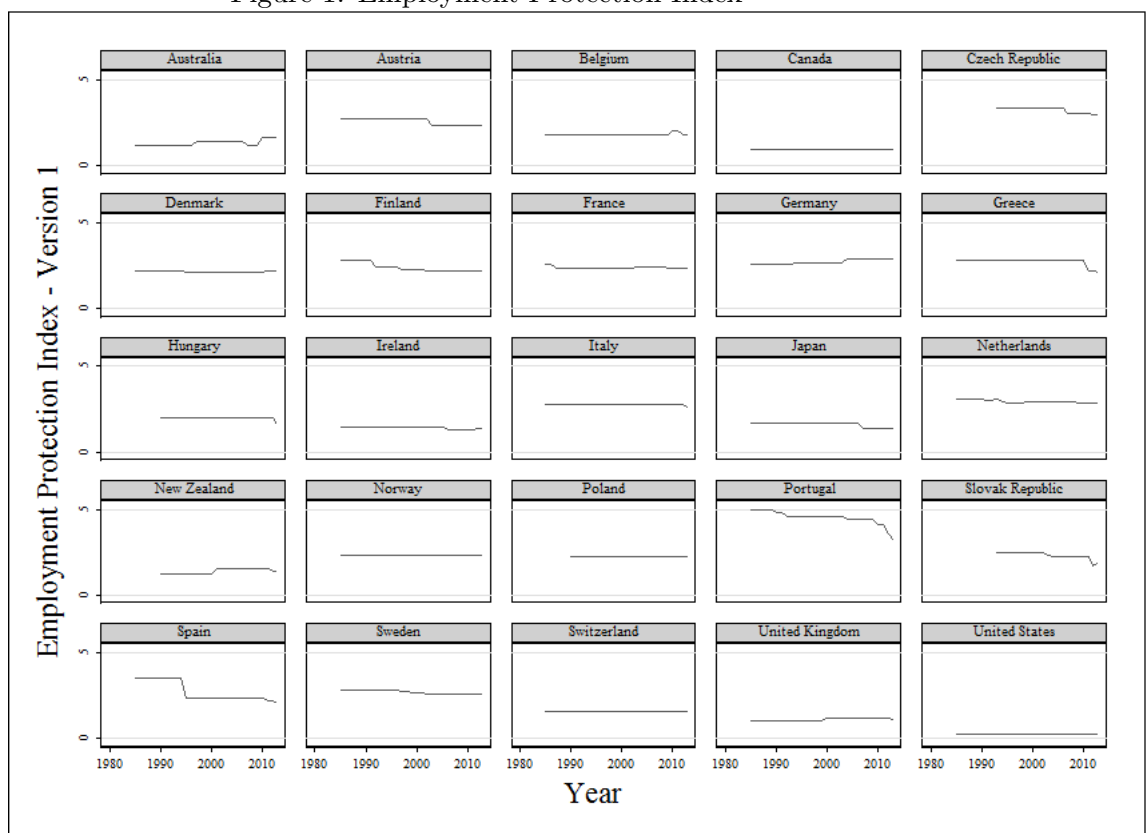


Table 1: Variables definition and sources

Variables	Definition and source
$\log FDI_{it}$	OECD data: Annual FDI inflows expressed in millions of dollars, current prices and current exchange rates. Data available at unctadstat.unctad.org CEEC data: annual FDI inflows in millions of Euro (Wiiw database on Central and Eastern European Countries)
EPa_{it}/EPt_{it}	OECD indicator of employment protection for regular and temporary contracts; the index is on a scale from 0 (least restrictions) to 6 (most restrictions). Data available on Oecd.stats.org
Gdp_growth_{it}	Annual percentage growth rate of GDP; World Bank data Catalog
Gdp_pc_{it}	GDP per capita, current US dollars; (data are converted in Euro, current prices, using Eurostat exchange rate time series). World Bank data Catalog
KOF_{it}	KOF Index of globalization; data used are that of the sub index of Economic globalization and specifically related to data on restrictions (subindex A.ii). They include: Hidden import barriers; Mean tariff rate; Taxes of international trade (percent of current revenue) Capital account restrictions. All these informations are transformed to an overall index on a scale from one to hundred. Higher values denote higher degree of globalization, as to say, less restrictions. Source: Dreher, Axel; Noel Gaston and Pim Martens, 2008, Measuring Globalization - Gauging its onsequences, New York: Springer.
$Prod_{it}$	Labour productivity is defined as GDP per hour worked. GDP data are expressed in US dollars, current prices, in million. Hours worked for total economy are expressed in million. Both the series are available at oecd.stat.org
$govR\&D_{it}$	Gross domestic government expenditure in R&D in “business enterprises” sector, in millions of dollar. Source: oecd.stat.org
Tax_{it}	Total corporate tax revenues as percentage of GDP. Source: Revenue Statistics, Comparative Tables, available at oecd.stat.org

Table 2: Descriptive Statistics

Variable		Mean	Std. Dev.	Min	Max	Observations
Ifdi	overall	17149,62	36939,84	-31689,3	313997,2	N = 579 n = 25 T = 23.16
	between		24410,21	1289,286	113999,1	
	within		27892,21	-77627,43	217147,8	
EPa	overall	2,157618	0,8808603	0,2566667	5	N = 694 n = 25 T-bar = 27.76
	between		0,8696226	0,2566667	4,523194	
	within		0,1836478	0,8189484	2,958111	
Gdp_pc	overall	22576,81	13459,66	1128,881	95189,87	N = 595 n = 25 T = 23.8
	between		9858,614	4604,923	40122,08	
	within		9415,982	-2070,984	77644,6	
Gdp_growth	overall	2,547556	2,341787	-14,5738	10,49394	N = 572 n = 25 T = 22.88
	between		0,6495317	1,330533	4,024314	
	within		2,267092	-14,69084	10,3769	
KOFindex	overall	82,19493	10,29213	44,63	98,26	N = 659 n = 25 T = 26.36
	between		7,258778	60,75259	90,57667	
	within		7,369065	59,08641	107,6164	
GovR&D	overall	1813,928	5528,904	2,063	39573	N = 555 n = 25 T = 22.2
	between		4909,643	18,96553	24784,82	
	within		1374,667	-6569,894	16602,11	
Prod	overall	29,09309	11,42703	8,137105	78,29018	N = 556 n = 25 T = 22.24
	between		7,375743	14,65401	40,62736	
	within		9,125203	7,358213	66,75591	
Tax	overall	3,074148	1,459634	0,267	12,881	N = 566 n = 25 T = 22.64
	between		1,028861	1,618125	6,336792	
	within		1,041207	-1,066643	9,618356	

Table 3: Employment protection impact on FDI inflows

	(1)	(2)	(3)	(4)	(5)
	logifdi	logifdi	logifdi	logifdi	logifdi
L.logifdi	0.481*** (0.0429)	0.508*** (0.0389)	0.384*** (0.0470)	0.370*** (0.0493)	0.359*** (0.0515)
loggdp_pc	0.681*** (0.139)	0.432** (0.167)	-0.264 (0.262)	-0.345 (0.269)	-0.330 (0.262)
gdp_growth	0.0311* (0.0168)	0.0587** (0.0171)	0.0589*** (0.0146)	0.0681*** (0.0123)	0.0679*** (0.0126)
KOFindex	0.0159* (0.00793)	0.0153 (0.00971)	0.0192* (0.0102)	0.0178* (0.0103)	0.0192* (0.0105)
logEPa	-0.826 (0.489)	-0.188 (0.359)	-0.330 (0.483)	-0.333 (0.470)	-2.242* (1.245)
L.loggovrd		0.286** (0.106)	0.302** (0.0995)	0.325** (0.116)	0.359** (0.118)
prod			0.0435*** (0.0110)	0.0515*** (0.0129)	0.0536*** (0.0130)
tax				-0.0695 (0.0648)	-0.0693 (0.0647)
logepasq					1.206* (0.634)
_cons	-2.983** (1.225)	-2.681** (1.294)	3.687* (2.010)	4.546* (2.220)	4.391* (2.227)
<i>N</i>	488	406	402	399	399
adj. <i>R</i> ²	0.552	0.575	0.584	0.578	0.580

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$

Dependent variable is logarithm of inflows FDI in million current US dollars

Table 4: Employment protection on temporary contracts: impact on FDI inflows ,

	(1)
	logifdi
L.logifdi	0.326*** (0.0504)
EPa	-2.402** (0.908)
loggdp_pc	-0.155 (0.265)
gdp_growth	0.0572*** (0.0141)
KOFindex	0.0202* (0.0105)
L.loggovrd	0.347** (0.111)
prod	0.0433** (0.0121)
tax	-0.0384 (0.0622)
EPasq	0.434** (0.152)
EPt	-0.212*** (0.0564)
_cons	5.866** (2.721)
N	399
adj. R^2	0.592

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$

Dependent variable is logarithm of inflows FDI in million current US dollars

Table 5: Employment protection impact on FDI inflows: interaction

	(1)	(2)
	logifdi	logifdi
L.logifdi	0.370*** (0.0493)	0.372*** (0.0488)
logEPa	-0.333 (0.470)	-0.290 (0.464)
loggdp_pc	-0.345 (0.269)	-0.346 (0.269)
gdp_growth	0.0681*** (0.0123)	0.0689*** (0.0126)
KOFindex	0.0178* (0.0103)	0.0178* (0.0103)
L.loggovrd	0.325** (0.116)	0.318** (0.116)
prod	0.0515*** (0.0129)	0.0517*** (0.0130)
tax	-0.0695 (0.0648)	-0.0701 (0.0650)
dummy		0.258 (0.225)
dummy*logEPa		-0.138 (0.150)
_cons	4.546* (2.220)	4.543* (2.224)
<i>N</i>	399	399
adj. R^2	0.578	0.577

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$

Dependent variable is logarithm of inflows FDI in million current US dollars