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Abstract

We use a panel of more than 100 countries for the period 1980 to 2002 to analyse the relationship between inward foreign direct investment (FDI) and wage inequality. We particularly check whether this relationship is non-linear, in line with a theoretical discussion. We find that the effect of FDI differs according to the level of development: we depict two different patterns, one for OECD (developed) and one for non-OECD (developing) countries. Results suggest the presence of a non linear effect in developing countries; wage inequality increases with FDI inward stock but this effect diminishes with further increases in FDI. For developed countries, wage inequality decreases with FDI inward stock and there is no robust evidence to show that this effect is non-linear.

Keywords : Foreign Direct Investment, Wage Inequality, Multinational Firms

JEL Classification: O1, F2, J3

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1. Introduction

When investigating the impact of the increasing importance of foreign direct investment (FDI) for host countries, most research concerns itself with effects on efficiency or, more specifically, productivity and economic growth at either the macro or the micro level.[1] While it is generally found that FDI can have positive growth and, hence, efficiency effects, what is generally neglected is the issue of equality. However, not least the publication of books such as Naomi Klein's (2000) *No logo* or Stiglitz's (2002) *Globalization and its discontents* has brought this issue back to the forefront of public and policy attention. While FDI may bring benefits to the economy in which they locate, it is by no means clear whether everyone will benefit to the same extent or indeed whether some will be better off while others will suffer from this.

This paper attempts to tackle this issue by providing a comprehensive analysis of the effect of FDI on inequality in the receiving country. Inequality in this paper is understood as wage inequality. In other words, we attempt to investigate whether FDI benefits everyone in the same way in terms of wages – hence, being neutral with respect to inequality, or whether it helps to alleviate, or actually worsens, inequality in wages.

The increase in income and wage inequality in many countries has been much discussed in the recent economic literature. There is supporting evidence, for both industrialised and developing countries, for the increase in inequality between skilled and unskilled workers, as well as for skill premia for workers with higher education.[2] Wage is the main source of personal income for the great majority of people and its distribution has therefore important implications for income inequality. Two main explanations have been

[1] Borensztein et al. (1998) and Alfaro et al. (2004) are recent examples of the former, Javorcik (2004) and Kugler (2005) of the latter type of research.

[2] Gottschalk and Smeeding (1997) and Acemoglu (2003a) discuss the empirical evidence on the widening inequality in wages.

advanced in the literature for this phenomenon: trade and technological change.[3] Both of these explanations have received much attention, and the evidence is summarised competently by Chennels and van Reenen (1999), Krugman (2000) and Feenstra and Hanson (2001).[4]

Compared to that literature, relatively few papers have instead dealt empirically with the role played by multinational companies and, more generally, FDI for inequality in the host country.[5] Feenstra and Hanson (1997), Figini and Görg (1999) and Taylor and Driffield (2005) use industry level data for Mexico, Ireland and the UK, respectively, and find that there is a link between relative wages and FDI.[6] The latter two papers also find that this effect is non-linear – inward FDI increases wage inequality but at a decreasing rate over time. However, in a similar study for the US, Blonigen and Slaughter (2001) fail to find any significant effects of FDI on wage inequality between skilled and unskilled workers.

In a cross-country framework, Tsai (1995) studies the link between FDI and inequality using a sample of 33 developing countries and finds that FDI increased inequality only in some Asian countries. Gopinath and Chen (2003) find, with a sample of 11 developing countries, that FDI flows widen the skilled – unskilled wage gap (measured as the share of unskilled labour in GNP) for a subset of developing countries although they

[3] A third explanation recently considered in the theoretical literature is based on the reorganisation and decentralisation of decisions in firms. These processes bear particular implications for wage formation: by giving employers and employees more incentives to choose decentralised bargaining, wage dispersion is expected to increase. See Lindbeck and Snower (1996) and, for a review, Aghion *et al*. (1999). Antras *et al.* (2006) present an interesting theoretical model linking the organisation of work and the structure of wages, which can be applied to a North-South model. Their results highlight that outsourcing always increases wage inequality in the South.

[4] Many papers also link trade liberalisation with skill-biased technological progress in models of endogenous innovation (Acemoglu, 2003b; Dinopoulos and Segerstrom, 1999; Neary, 2002). For an empirical test on Mexico, see Esquivel and Rodriguez-Lopez (2003).

[5] There are also a number of recent theoretical contributions, see, e.g., Liang and Mai (2003), Marjit et al. (2004) and Das (2005). For a general discussion of globalisation, FDI and inequality, see Lee and Vivarelli (2006).

[6] Girma and Görg (2006) also find that foreign owned multinationals in the UK pay higher wages than comparable domestic firms, and that the magnitude of these wage premia differ between skilled and unskilled workers, hence impacting on wage inequality.

appear to lead to cross-country convergence of wages. Basu and Guariglia (2006) use a panel of around 80 countries to test a theoretical model linking FDI to growth and inequality in human capital and conclude that inward FDI promotes economic inequality.

This paper addresses the question as to whether foreign direct investment has an effect on domestic wage inequality, by using a large panel of countries for a recent period (1980 – 2002). Our empirical approach is inspired by a theoretical framework due to Aghion and Howitt (1998) where wage inequality is examined in a model of a general purpose technology (GPT). The theoretical considerations lead us to expect a non-linear effect of FDI on inequality, and we test for this explicitly in our analysis. As far as we are aware, our study is the first to do so in a cross-country context, and our results show that the non-linearity is borne out by the data. A further novel feature of our paper is that we exploit our large cross-country dimension by allowing for different effects of FDI on inequality for industrialised (OECD) and developing (non-OECD) countries. Again, doing so brings to the fore important differences between these two country groupings. Furthermore, we contribute to the literature by building our own database on wage inequality indices, using data from the *UNIDO Industrial Statistics* database, which allows us to include a large number of countries over a fairly long time period. These data also allow us capture the overall effect of FDI by means of inequality indices built on the whole distribution of wages in the manufacturing sector. Since the theory predicts changes in both wage levels and the number of workers in the two groups, our approach seems more promising in capturing this complex pattern than the simple ratio of skilled and unskilled wages used in many other papers.

The remainder of the paper is organised as follows: Section 2 presents the theoretical background which motivates our empirical analysis. Section 3 introduces the methodology and describes the data. Section 4 presents the main results while Section 5 summarises our findings and concludes.

2. Theoretical Background

The theoretical framework, which we use to motivate our subsequent empirical analysis is based on the endogenous growth model developed by Aghion and Howitt (1998: Chapter 8). They discuss the effect of social learning on economic growth, and the effects of differences in workers' skill levels on aggregate output and wages in the economy. Accordingly, as in Aghion and Howitt (1998), let us assume a production structure

$$Y = \left\{ \int_0^1 A_i^{\alpha} x_i^{\alpha} di \right\}^{1/\alpha}, \; 0 \le \alpha \le 1 \qquad (1)$$

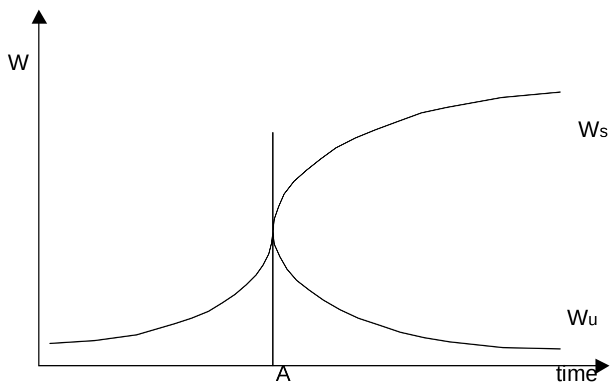
where aggregate output Y is produced using intermediate inputs x in each sector i. Intermediate inputs x are produced using labour as the only factor of production. The production technology is represented by the technology parameter A, where $A = 1$ if the old technology is used, and $A > 1$ if the new technology is used, i.e., the technology parameter A is raised by a constant factor γ in the case of new technology. In the *status quo*, the economy only uses the old technology, and new technologies are introduced through innovation on a general purpose technology (GPT). It is likely that the probability of success in finding a template with the new GPT depends on the ratio of skilled workers (who experiment with the new technology in the innovation sector) to unskilled workers (who are assumed to produce by using the old technology).

This pattern leads to two stages of development and inequality. Firms in stage 1 need a fraction of skilled labour to carry out the research necessary for the discovery of the template of the new GPT and for experimenting with the new technology, as they are unfamiliar with it. While doing so they still produce output using the old technology. The amount of investment in innovation is however too small to absorb the supply of skilled labour-force, which is mainly employed in the old technology-sector. Demand for skilled labour is low, and skilled and unskilled labour is paid the same wage: therefore wage inequality is low.

In stage 2, firms successfully implementing the new technology require only skilled labour to produce with it. By the end of the adjustment process, all firms have made the jump into stage 2 and use the new technology for production purposes.[7] In the transition period, demand for skilled labour steeply increases, thus leading to labour-market segmentation in which skilled labour is paid a higher wage, and wage inequality (i.e., a function of the ratio between skilled and unskilled wages) increases.

The evolution of wages is shown in Figure 1, adapted from Aghion *et al*. (2002). As can be seen, there is a point in time *(A)* at which, due to the increased demand for skilled labour, the labour market becomes segmented; the wage for skilled workers increases and the wage for unskilled workers falls towards zero.

Figure 1 – Skilled and Unskilled Wages in the transition to the new technology



[7] The speed of adjustment depends, among other factors, upon the probability that a firm learns through imitation, the probability that a firm makse a discovery of a template on its own and the share of R&D in the economy.

Arguably, the described adjustment process leads to an inverted-U shape of wage inequality with respect to the introduction of a GPT. In the early stages wage inequality increases because firms innovate using skilled labour, increasing the demand for and, thus, raising the wage of skilled labour. The higher the innovative output, the faster the speed of adjustment. At the end of the adjustment period, wage inequality decreases since all firms move into stages 1 and 2 and demand for unskilled labour falls towards zero. Eventually, only skilled labour will be employed when all firms are in stage 2.[8]

This model is relevant to the question to be studied in this paper if we re-interpret it in terms of the effect of foreign direct investment on the availability of new technologies in the economy. Specifically, we view foreign direct investment as a vehicle for introducing new technologies in the host country and as providing "role models" for indigenous firms.[9] This gives rise to a two-step process in which first, the multinational introduces new technology into the country, therefore increasing inequality between skilled and unskilled workers. In the second step, as more FDI flows into the economy, domestic firms follow up, by imitating the more advanced production technologies used in multinationals.[10] This, hence reduces the gap yielding an inverted-U pattern for the relationship between FDI and wage inequality.

Some evidence in line with such an inverted U-shape relationship has been found by Figini and Görg (1999) for Ireland. We expand on their paper in the following analysis, using a large panel of developed and developing countries, hence, providing more general evidence.

[8] One should add that the overlapping of new and different GPT might depict a situation in which economies are always in a phase of transition; the overall effect on wage inequality, therefore, would depend on the relative speed of technological innovation with respect to education upgrade.
[9] In this respect, FDI can be seen as a substitute for local R&D, consistent with Dinopoulos and Segerstrom (1999).

3. Methodology and data

We use the theoretical discussion in Section 2 as a motivation for our empirical analysis where we focus on examining the effect of FDI on wage inequality and, specifically, on attempting to identify whether there is indeed an inverted U-shape relationship. Accordingly, the basic specification of our empirical estimation equation is

$$INEQ_{it} = b_0 + b_1 FDI + b_2 FDI^2 + b_3 X + u_i + \lambda_t + e_{it} \qquad (2)$$

where *INEQ* is a measure of wage inequality in country *i* at time *t*, *FDI* measures inward foreign direct investment as a percentage of GDP in the country, *X* is a vector of control variables also assumed to be correlated with inequality, *u* is a country specific effect, *λ* a full set of time dummies and *e* is the remaining white noise error term. We deal with the presence of unobserved heterogeneity across countries by employing a fixed effect (within transformation) estimator which purges the country-specific effect. The quadratic term for FDI is included in order to allow for the non-linearity suggested by the theoretical framework. The model is estimated using an unbalanced panel of 103 countries with yearly data over a more than twenty-year period, 1980 – 2002.

We measure wage inequality (INEQ) by computing both Gini and Theil indices for each country-year. We do both in order to check how robust our results are to the precise measure used. Inequality indices are calculated on the average wages per employee across three digit ISIC manufacturing industries in country *i* at time *t*, weighted by the number of employees in each sector. Data on sectoral average wages are obtained from the *UNIDO*

[10] There is supporting evidence that such involuntary knowledge transfer does indeed take place, for example, through the movement of workers from multinationals to domestic firms. See, for example, Görg and Strobl (2005) for evidence for Ghana.

Industrial Statistics database. These data show substantial variation in wages across countries and sectors.[11]

We decided to measure wage inequality in terms of general wage inequality between sectors and between workers rather than in terms of the gap between wages of skilled and unskilled workers, for a number of reasons. First, the theoretical discussion in Section 2 implies that innovation affects both the wage gap between skilled and unskilled workers and the relative and absolute level of employment of the two groups of workers; by measuring inequality only with a relative wage gap, the second effect would be lost. Second, it can been argued that the complex pattern of interactions between FDI, innovation and labour structure of the firm is hardly caught by the simple wage gap between skilled and unskilled workers: innovations spread their effect on the productivity of all workers, thereby affecting the whole distribution of wages. Third, one important feature is that inequality also increases within both skilled and unskilled groups, for example due to the enhancement of individual abilities and decentralised bargaining (Rubinstein and Tsiddon, 2004). The average wage for each skill group, therefore, does not appropriately capture such dynamics. Fourth, when we apply the GPT model to FDI, it is plausible that multinationals focus their investment not equally across the whole manufacturing sector but primarily in some specific sectors in which the host country has relative advantages. Therefore, if FDI transfers technology, the effect on productivity and wages could be different according to the relative importance of FDI across sectors, and would be better caught by measures of wage inequality between rather than within sectors. Finally, apart from these conceptual reasons our choice is also driven by data availability.

[11] In order to mitigate the distorting impact of measurement error and outliers we keep the more plausible data, i.e., we drop observations where the industry average wage exceeds $100,000, or where total employment is less than 50 employees, or where annual wage growth is less than –50% or higher than 50%.

Disaggregated data on wages by skill groups are available for very few countries, and are not necessarily comparable among them.[12]

In the econometric estimation we are mainly concerned with identifying the effect of inward FDI on wage inequality.[13] As a proxy, we use FDI inward stocks as a percentage of GDP. Data on FDI are obtained from the *UN World Investment Report*. This data source provides information on total inward investment, measured in both flows and stocks. We use data on FDI stocks rather than flows because our assumption is that FDI contributes to the stock of general-purpose technology available in the economy. We allow for a non-linear relationship between FDI and inequality, by introducing also the squared term of FDI into equation (2).

According to the literature on wage inequality, we introduce three basic control variables in equation (2), namely openness to trade, level of development and level of education. With respect to trade openness, the basic H-O theorem suggests that with increased trade, wage inequality in countries relatively abundant with unskilled labour should decrease, while it should increase in countries relatively abundant with skilled labour. The more open a country is to international trade, the more evident would be the effect on wage inequality. Trade openness is defined and measured as total imports plus total exports over GDP. This measure is similar to the one used by Francois and Nelson (2003) and allows us to control for the effect of increased trade volumes on wage inequality. Data for this variable come from the *World Development Indicators* available from the World Bank.

Second, we introduce the level of development as a control as wage inequality depends on the economic structure of the country, which is linked to the level of

[12] On data issues and comparability, see Freeman and Oostendorp (2000); Forbes (2001).
[13] It can be argued, however, that also outward FDI has an effect, since they are related with technology transfers abroad; therefore they should bring, in the host country, the opposite effect of inward FDI. Developing this argument and testing for it empirically is beyond the scope of this paper.

development. We include GDP per capita in the empirical model in order to make sure that inward FDI does not merely pick up the impact of the level of economic development on inequality. Data for the construction of this variable come from the *World Development Indicators*.

Finally, the level of education mainly attempts to control for the supply side of the labour market, which should counteract the effects of FDI and trade, coherent with the theoretical model in section 2. Clearly, the higher is wage inequality, the higher the skill premium for workers and the higher the pressure on education to produce more skilled workers. As discussed in the introduction, effects on wage inequality happen because there is no one to one change in demand and supply of skilled labour. The level of education in the country is computed as the total number of students enrolled in secondary education as a percentage of the total population. We would expect that, the higher the enrolment ratio, the higher the supply of skilled labour. This, in turn, should reduce wage inequality by increasing the relative supply of skilled labour. Data to construct this variable come from the *World Development Indicators*.

Arugably, the model could also include other factors likely to affect inequality. For example, according to Acemoglu (2003a), institutions matter, as a more stringent legislation on minimum wage and on workers rights can affect the overall level of inequality. However, reliable measures of labour legislation are difficult to come by. In some specifications of the model we tried to proxy labour legislation with the component of the Economic Freedom Index related to the labour market; however, results are disappointing due to the poor coverage of data. Arguably, the country fixed effects included in equation (2) capture at least the time invariant components of such institutions, which go a long way in such a large panel as ours with very heterogeneous countries. Some papers also try to measure the effect of relative price changes (Beyer et *al*., 1999) on wage inequality. We do not take this into account mainly for two reasons. Firstly, we do not have detailed price data available and, secondly, these effects should at least be partially captured by both trade and FDI variables.

The descriptive statistics of the variables used are presented in Table 1, while the list of countries in the database, together with the average value of the Gini index of wage inequality over the period under investigation, is in Table 2.

[Tables 1 and 2 here]

4. Estimation results

Table 3 presents the results of estimating equation (2) in its basic form. Columns (1) and (2) show results for regressions respectively including the simple FDI term, and the quadratic specification, with the Gini coefficient as dependant variable. It is notable that none of the coefficients on the FDI variables are statistically significant in these estimations. This is also the case in columns (3) and (4) where the Theil coefficient, as an alternative measure of inequality, is the dependent variable. These unsatisfactory results may be due to pooling data for countries that are at different levels of development (Blonigen and Wang, 2005). Arguably, developed countries may react differently to an inflow of new technology from foreign direct investment than developing countries, which are at a lower level of technological development. Specifically, the theoretical arguments discussed in Section 2 may particularly apply to developing countries rather than developed economies, as the latter are already at relatively high levels of technological sophistication.

We therefore split our sample into OECD and non-OECD countries, assuming that the latter forms the group of developing countries, and separately estimate equation (2). Estimates support the assumption of inappropriate pooling and show different evidence for the two groups of countries. From column (2) of Table 4 we find that there is evidence of a concave relationship between FDI and inequality for developing countries, in line with the theoretical discussion. The comparison between columns (1) and (2) allows us to underline that the inclusion of the quadratic term is necessary, thus showing that the link between FDI and wage inequality is indeed non linear. For developed countries, we find in columns (1) and (2) of Table 5 that inward FDI has a different impact on domestic wage inequality. There is evidence of a different quadratic relationship between FDI and inequality: inequality seems to be negatively linked to FDI, but this effect diminishes as the FDI inward stock increases. In line with our theoretical framework, this may suggest that developed countries are already at high levels of technological development and use mature technology. Further inflow of technology through FDI implies that technologies become more widespread and easier to use, so that more workers are able to reap the benefits in terms of increased wage premium.

A further interesting difference between OECD and non-OECD countries stems from the coefficients of the three other covariates. Increases in GDP per capita are associated with reductions in wage inequality for developing countries, but for developed countries we find an insignificant, although positive, relationship. The trade coefficient is not statistically significant in any of the regressions. Furthermore, the impact of education also seems to differ across the two groups of countries; whereas the coefficients are statistically insignificant for OECD countries, there is evidence of a positive relationship between level of education and wage inequality in developing countries.[14]

As a first robustness check we replicate the estimates of equation (2) by using the Theil index of inequality rather than the more commonly used Gini index. The results of these estimations, using the same covariates, are reported in columns (3) and (4) of Table 4 (for non OECD countries) and columns (5) and (6) of Table 5 (for OECD countries).

[14] However, there might be an endogeneity problem, since education can be enhanced by the increase in wage inequality following the influx of multinational firms.

Overall, the coefficients look very similar in terms of magnitude and statistical significance to the results based on the Gini index. However, the only difference relates to the coefficient of education for non-OECD countries, which is no longer statistically significant when using the Theil index of wage inequality (Table 4, columns 3 and 4).

The results so far suggest that the link between inward FDI and wage inequality depends on the level of economic (and presumably technological) development in the host country. In order to investigate this complex link further, and to investigate the role played by education, we generate interaction terms of the FDI variables with education and include them in the estimation equation. The results are reported in Table 6, columns (1) and (2) for OECD countries and columns (3) and (4) for non-OECD countries. Such a specification improves the estimates for OECD countries only; the F-test reported at the bottom of Table 6 indicates that interaction terms are appropriate for OECD countries but not for non OECD countries, underlying once again that the structure is different for the two groups of countries. For non OECD countries we reject this specification and prefer the one without interaction terms, stated in equation (2) and estimated in Table 4.

One possible objection to this specification is the lack of any lag structure in the model. It is hardly conceivable that FDI has an immediate effect on wages in the host countries. In Table 7 we attempt to deal with this issue by imposing a lag structure of one period to FDI variables. Such a specification suits very well the sample of non OECD countries (columns (3) and (4)), by improving the significance of the estimates. However, the squared term of FDI in columns (1) and (2) relating to OECD countries is now no longer statistically significant.

The regressions thus far assume that FDI is strictly exogenous to inequality. This may be a strong assumption, if FDI were correlated with other observables or unobservables that affect inequality and that are not controlled for in the estimation, or if

FDI is a function of inequality rather than a determinant of it. Under the assumption that the correlation of FDI with the error term is fixed over time controlling for country fixed effects, as done in our estimations thus far, alleviates this problem. However, in order to take account of potential endogeneity more formally we resort to using the now popular GMM systems estimator developed by Blundell and Bond (1998). Accordingly, one simultaneously estimates first differenced and level versions of the equation, where for the former appropriately lagged values and for the latter appropriately lagged differences of the endogenous variables can serve as valid instruments. The validity of these instruments can be tested using a Sargan-type test.[15]

We employ this estimator to our regression. In order to avoid problems of relatively small sample size in the application of the GMM systems estimator we revert to pooling the data and including interaction terms of the FDI variables with a dummy variable for OECD countries. Results are reported in Table 8. The Hansen J-statistic supports the use of instruments. Estimates of the coefficients are in line with our previous results. For non-OECD countries we find that inward FDI has a positive effect on inequality and that this relationship is non-linear, in line with the theoretical expectation. For OECD countries, the interaction term indicates that the effect of FDI is negative, as found in the previous estimations. The interaction term on the FDI squared variable is not statistically significant, indicating that there is no non-linearity for the effect of FDI in OECD countries, in line with our findings in Table 7.[16]

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[15] As instruments for the lagged FDI variables we use all values from t-3 onwards.

[16] To conclude the sensitivity check, we try the Gini coefficient of income, rather than wage, inequality as dependant variable. In such specification, the link between inequality and FDI disappears. This is not surprising for two reasons. Firstly, the sample size is reduced immensely due to unavailability of data. Secondly, although it has been asserted that there is a strict relationship between wage and income inequality (Galbraith and Kum, 2005), data on income inequality are more scattered, less reliable and less theoretically linked to FDI to provide any robust test of model (2). We also attempt to control for institutional matters, measuring the “degree of liberalisation” in the labour market by means of the fifth component of the Economic Freedom Index. We expect that a more “institutionally constrained” economy, due to collective bargaining and minimum wage legislation, has a lower wage inequality. However, the inclusion of this index in the model reduces the size of the sample too much, and results are not reliable.

5. Conclusion

We use a panel of more than 100 developing and developed countries for the period 1980 to 2002 to analyse the relationship between Foreign Direct Investment (FDI) and wage inequality. We particularly check whether this relationship is non-linear, in line with a theoretical discussion based on Aghion and Howitt's (1998) model of GPT, and whether there are differences between developed and developing countries. We measure total wage inequality in the manufacturing sector by means of Gini and Theil inequality indices, while FDI is measured through the total stock of foreign investment accumulated into the host country. We find that the effect of FDI differs according to the level of development by showing two different patterns, one for OECD (developed) countries and one for non-OECD (developing countries). Results for developing countries suggest the presence of a non linear effect; wage inequality increases with FDI inward stock but this effect diminishes with further increases in FDI. For developed countries, wage inequality decreases with FDI inward stock and there is no robust evidence to show that this effect is non-linear.

These results might lead to some tentative policy considerations. Our findings suggest that disentangling the different dimensions of globalisation and their social effects is important. It is likely that globalisation affects differently the wage distribution in countries according to their stage of development and to the education level of its workforce. Negative social effects are more likely to be linked to financial rather than commercial integration, and FDI inflows seem to be associated with more domestic wage inequality, although this effect decreases over time. These results are consistent with Santarelli and Figini (2004) on the effects of globalisation on poverty and stimulates the policy debate. While on one hand there is evidence that FDI increases wages in host countries and, hence, people may be better off in absolute terms (e.g., Lipsey and Sjöholm, 2001; Girma and Görg, 2006), the "happiness" literature states that people care about relative incomes (e.g., Clark and Oswald, 1996), so an increase in inequality stemming from FDI is perceived negatively. Equity considerations do not have to be underestimated by economists and policy makers when evaluating globalisation processes.

Our approach produces some interesting results but also opens the door for further research, mainly in two directions. First, at the theoretical level, more effort has to be put into the investigation of FDI as a channel for technology transfer, and hence, as a globalisation factor impacting on inequality. Second, at the empirical level, more care has to be dedicated to wage inequality measurement, not only in terms of total distribution of wages across sectors, but also in terms of the skilled to unskilled wage ratio.

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Table 1 – Descriptive Statistics of the variables used

Variable	Obs	Mean	Std.Dev.
Gini	606	15.78	6.91
Theil	606	5.60	5.54
FDI	606	17.29	26.95
GDP per capita	606	9888.9	10981.14
Education	606	7.76	3.13
Trade	606	68.77	36.21

Table 2 – Gini index of inequality for the countries included in the database

1. Albania	7.36
2. Argentina	17.18
3. Australia	8.75
4. Austria	11.55
5. Bahrain	47.94
6. Bangladesh	13.34
7. Belgium	22.22
8. Bolivia	21.78
9. Brazil	23.91
10. Bulgaria	19.00
11. Burundi	26.12
12. Cameroon	34.12
13. Canada	11.58
14. Central African Rep.	20.16
15. Chile	20.37
16. China	4.98
17. China, Hong Kong	8.58
18. China, Macao	2.80
19. Colombia	16.21
20. Congo	27.01
21. Costa	13.85
22. Croatia	9.51
23. Cyprus	13.09
24. Czech Republic	8.53
25. Denmark	6.48
26. Ecuador	19.66
27. Egypt	17.22
28. El Salvador	20.74
29. Ethiopia	12.81
30. Fiji	21.89
31. Finland	8.01
32. France	9.30
33. Gabon	26.28
34. Germany	8.41
35. Ghana	23.56
36. Greece	15.87

37. Guatemala	28.89
38. Haiti	17.58
39. Honduras	23.13
40. Hungary	13.15
41. Iceland	9.00
42. India	22.31
43. Indonesia	17.81
44. Iran	9.91
45. Ireland	13.73
46. Israel	21.09
47. Italy	10.24
48. Jamaica	37.15
49. Japan	15.20
50. Jordan	18.84
51. Kenya	19.28
52. Korea, Republic of	11.11
53. Kuwait	36.38
54. Latvia	8.80
55. Lithuania	17.75
56. Malawi	25.55
57. Malta	8.45
58. Mauritius	16.66
59. Mexico	14.53
60. Mongolia	29.77
61. Morocco	21.68
62. Mozambique	22.66
63. Namibia	11.42
64. Nepal	17.37
65. Netherlands	7.31
66. New Zealand	11.96
67. Nicaragua	12.90
68. Nigeria	15.18
69. Norway	7.89
70. Oman	22.60
71. Pakistan	19.40
72. Panama	17.27

73. Peru	23.34
74. Philippines	19.27
75. Poland	11.52
76. Portugal	17.78
77. Rep. of Moldova	22.50
78. Romania	8.40
79. Russian Federation	16.39
80. Senegal	15.97
81. Serbia and Montenegro	28.26
82. Slovakia	10.30
83. Slovenia	10.91
84. South Africa	20.51
85. Spain	13.94
86. Sri Lanka	14.60
87. Suriname	13.35
88. Sweden	4.41
89. TFYR of Macedonia	16.99
90. Thailand	17.45
91. Trinidad & Tobago	27.30
92. Tunisia	28.55
93. Turkey	18.99
94. Ukraine	16.20
95. United Arab Emir.	18.08
96. United Kingdom	10.19
97. United Rep. of Tanzania	14.62
98. United States of America	13.02
99. Uruguay	16.99
100. Venezuela	18.34
101. Viet Nam	13.47
102. Zambia	21.87
103. Zimbabwe	17.75

Table 3 – Fixed effect regressions, pooled sample
(dependent variable is Gini or Theil coefficient)

	(1 - Gini)	(2 - Gini)	(3 - Theil)	(4 - Theil)
Inward FDI stock	-0.012	0.001	-0.006	-0.007
	[-1.54]	[0.05]	[-0.98]	[-0.42]
Inward FDI stock		-0.000		0.000
squared		[-0.72]		[0.03]
GDP per capita	-5.502	-5.490	-5.000	-5.000
	[-5.53]***	[-5.51]***	[-6.22]***	[-6.21]***
Education	0.141	0.135	0.026	0.026
	[1.63]	[1.56]	[0.36]	[0.37]
Trade	-2.230	-2.530	-4.947	-4.937
	[-0.42]	[-0.47]	[-1.14]	[-1.13]
Constant	-28.059	-28.219	-33.947	-37.395
	[-3.51]***	[-3.52]***	[-5.25]***	[-5.73]***
Observations	664	664	664	664
Countries	107	107	107	107
R-squared	0.19	0.19	0.18	0.18

t-statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
regressions include a full set of time dummies

Table 4 - Fixed effect regressions, Non OECD countries
(dependent variable is Gini or Theil coefficient)

	(1 - Gini)	(2 - Gini)	(3 - Theil)	(4 - Theil)
Inward FDI stock	-0.004	0.085	0.001	0.048
	[-0.41]	[2.49]**	[0.16]	[1.67]*
Inward FDI stock		-0.000		-0.000
squared		[-2.76]***		[-1.70]*
GDP per capita	-3.137	-3.211	-2.641	-2.680
	[-2.01]**	[-2.08]**	[-2.02]**	[-2.05]**
Education	0.274	0.223	0.040	0.013
	[2.42]**	[1.96]**	[0.42]	[0.14]
Trade	-1.876	-3.434	-3.739	-4.552
	[-0.34]	[-0.62]	[-0.80]	[-0.97]
Constant	-13.310	-14.495	-18.009	-18.627
	[-0.96]	[-1.06]	[-1.55]	[-1.61]
Observations	397	397	397	397
Countries	81	81	81	81
R-squared	0.11	0.14	0.09	0.10

t-statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
regressions include a full set of time dummies

Table 5 - Fixed effect regressions, OECD countries
(dependent variable is Gini or Theil coefficient)

	(1 - Gini)	(2 - Gini)	(3 - Theil)	(4 - Theil)
Inward FDI stock	-0.058	-0.145	-0.039	-0.107
	[-2.34]**	[-2.49]**	[-2.21]**	[-2.59]**
Inward FDI stock		0.001		0.001
squared		[1.65]*		[1.82]*
GDP per capita	2.821	4.418	2.634	3.887
	[0.54]	[0.83]	[0.71]	[1.03]
Education	-0.229	-0.196	-0.118	-0.093
	[-1.43]	[-1.23]	[-1.04]	[-0.82]
Trade	-49.004	-59.530	20.160	11.894
	[-0.12]	[-0.15]	[0.07]	[0.04]
Constant	34.934	43.796	22.519	30.397
	[1.04]	[1.24]	[0.94]	[1.21]
Observations	200	200	200	200
Countries	22	22	22	22
R-squared	0.10	0.12	0.08	0.10

t-statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
regressions include a full set of time dummies

Table 6 - Fixed effect regressions, education interaction terms
(dependent variable is Gini or Theil coefficient)

	(1 – Gini, OECD countries)	(2 – Theil, OECD countries)	(3 – Gini, non OECD countries)	(4 – Theil, non OECD countries)
Inward FDI stock	-1.017	-0.556	0.241	0.108
	[-2.52]**	[-1.95]*	[1.85]*	[0.97]
Inward FDI stock	0.021	0.014	-0.003	-0.001
squared	[3.09]***	[2.80]***	[-1.26]	[-0.60]
Inward FDI stock *	0.098	0.052	-0.019	-0.007
education	[2.25]**	[1.68]*	[-1.23]	[-0.55]
Inward FDI stock	-0.002	-0.001	0.000	0.000
squared * education	[-3.03]***	[-2.73]***	[1.21]	[0.56]
GDP per capita	3.267	3.253	-3.113	-2.645
	[0.63]	[0.88]	[-2.01]**	[-2.02]**
Education	-1.138	-0.465	0.379	0.070
	[-1.86]*	[-1.07]	[2.01]**	[0.44]
Trade	-19.426	10.663	-3.496	-4.549
	[-0.05]	[0.04]	[-0.63]	[-0.96]
Constant	46.944	30.588	-14.843	-18.764
	[1.40]	[1.20]	[-1.09]	[-1.62]
Observations	200	200	397	397
Countries	22	22	81	81
F test (p-value)	0.00	0.00	0.79	0.85
R-squared	0.17	0.16	0.14	0.10

t-statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
F test for joint significance of interaction terms
regressions include a full set of time dummies

Table 7- Fixed effect regressions, lagged FDI
(dependent variable is Gini or Theil coefficient)

	(1 – Gini, OECD countries)	(2 – Theil, OECD countries)	(3 – Gini, non OECD countries)	(4 – Theil, non OECD countries)
Inward FDI stock lagged	-0.125	-0.083	0.116	0.066
	[-2.03]**	[-1.90]*	[3.35]***	[2.28]**
Inward FDI stock squared lagged	0.000	0.000	-0.000	-0.000
	[1.49]	[1.47]	[-3.56]***	[-2.28]**
GDP per capita	5.211	4.496	-3.269	-2.824
	[0.97]	[1.18]	[-2.08]**	[-2.13]**
Education	-0.207	-0.104	0.213	0.024
	[-1.28]	[-0.91]	[1.85]*	[0.24]
Trade	-32.812	34.461	-6.919	-5.747
	[-0.08]	[0.12]	[-1.16]	[-1.14]
Constant	48.808	34.186	-15.163	-20.447
	[1.36]	[1.34]	[-1.08]	[-1.73]*
Observations	200	200	377	377
Countries	22	22	77	77
R-squared	0.10	0.08	0.15	0.13

t-statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
regressions include a full set of time dummies

Table 8 - GMM regressions
(dependent variable is Gini or Theil coefficient)

	(1 – Gini)	(2 – Theil)
Inward FDI stock lagged	0.102	0.064
	[1.93]*	[1.67]*
Inward FDI stock squared lagged	-0.0002	-0.0001
	[-2.24]**	[-1.84]*
Inward FDI stock lagged * OECD	-0.189	-0.097
	[-2.12]**	[-1.71]*
Inward FDI stock squared lagged * OECD	0.001	0.0004
	[1.49]	[1.03]
GDP per capita	-0.950	-0.539
	[-2.04]**	[-1.58]
Education	-0.169	-0.122
	[-0.91]	[-0.55]
Trade	5.483	8.336
	[0.69]	[1.84]*
Hansen J statistic (p-value)	1.00	1.00
Observations	554	554
Countries	96	96

Constant and full set of time dummies included
Robust t statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
regressions include a full set of time dummies

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