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DO MULTINATIONAL ENTERPRISES PUSH UP WAGES OF DOMESTIC FIRMS IN THE ITALIAN MANUFACTURING SECTOR?

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Abstract. This paper analyzes the effects of foreign direct investment on wages paid by domestic firms in the Italian manufacturing sector over the period 2002–2007. In particular, the authors investigate the impact of multinational enterprises on wages paid by local firms which operate in the same industry, known and horizontal wage spillovers, or have linkages with multinational enterprises in both downstream and upstream industries, known as vertical wage spillovers. By using a large panel dataset, consisting of 551,000 observations, the authors find evidence of wage spillovers only at inter-industry level and, more specifically, for those firms who supply their goods to multinational enterprises, described as backward wage spillovers. Moreover, findings suggest that the wage spillover effect is strongly affected by the technological gap between local and foreign firms: only workers employed in domestic firms with a low-medium technological absorptive capacity seem to benefit from the presence of multinational enterprises in terms of higher wages.

Keywords: foreign direct investment, multinational enterprises, horizontal wage spillovers, vertical wage spillovers, technological gap.

Jel classification: F21, F23

1. Introduction

During the recent years, the importance of foreign direct investment (FDI) from multinational enterprises (MNEs) across the world economy has increased dramatically. The ongoing liberalisation of trade and investment as well as the radical technological developments in information and communication technologies (ICT) has certainly contributed to the dramatic rise of global FDI stocks. For instance, the global stock of inward FDI as percent of global gross domestic product (GDP), has increased from less than 5 % in 1980 to about 30 % in 2010 (UNCTAD 2011).

Along with the worldwide growing increase of FDI flows, the number of jobs in the foreign affiliates of MNEs has also considerably increased. UNCTAD (2010) estimated that 80 million workers were employed in foreign affiliates firms in 2009, accounting for about 4 % of the global workforce. The distribution of jobs in foreign affiliates of MNEs is generally skewed towards the manufacturing sector, thus suggesting that the activities conducted in MNEs in manufac-

turing tend to be relatively more labour-intensive (Arnal, Hijzen 2008).

At this regard, policy-makers have tended to emphasize the potential benefit that FDI can bring to the host economy, by improving pay and working conditions. Such benefits may be direct or indirect. The former refer to benefits for employees in foreign-owned firms, whereas the latter refer to benefits for workers in domestic firms. MNEs may provide higher wages because of their higher productivity which, in turn, is explained by greater technological know-how and modern management practices that allow them to compete efficiently in foreign markets and to offset the cost of coordinating activities across different countries. Similarly, MNEs may lead to indirect benefits by increasing the productivity of domestic firms when the productivity advantage spills over from foreign affiliates to domestic firms (Hamida, Gugler 2009; Jordaan 2008; Dimelis 2005; Smarzynska 2004; Blomström, Kokko 1998). The increased productivity in domestic firms may consequently lead to higher income and more employment although not automatically. In other words, productivity spill-

overs represent positive externalities to the host economy and this may explain the reason why policy makers have sometimes treated foreign investment more favourably than investment by domestic firms (Görg, Greenaway 2004).

The purpose of this paper is to test the impact of inward FDI on wages in the domestically owned firms by using firm level data for the Italian manufacturing sector from 2002–2007. Italy has recorded, in the last ten years, an increasing flows of inward FDI, whose value passed from 6.911 millions of dollars in 1999 to 9.498 millions of dollars in 2010 (UNCTAD 2011). In 2007, there were 7.605 foreign-controlled firms that employed 923 839 workers: only in the manufacturing sector, the number of foreign firms was 2 456 whereas the number of workers employed amounted at 513 339 (ICE 2010).

Since MNEs have performed better than their domestic counterparts (in terms of productivity, number of workers employed, profitability, etc. (ISTAT 2010), it is worth exploring if Italian firms have been able to exploit the presence of MNEs in terms of positive wage externalities. At this regard, we firstly investigate the presence of both horizontal and vertical wage spillovers by distinguishing the spillover effects due to the presence of foreign firms in the same industry from effects due to vertical linkages between foreign and domestic firms. Secondly, we examine the existence and strength of wage spillovers under different characteristics of firms.

The rest of the paper is organised as follows. Section 2 reports the literature about the impact of FDI on wages. Section 3 depicts our estimation strategy. Section 4 includes some descriptive statistics about the database used. Section 5 describes our findings and, finally, section 6 ends with some concluding remarks.

2. FDI and wage spillovers: a literature review

Generally speaking, economic literature recognises the potential benefits that FDI from MNEs can bring to workers of (a) foreign and/or (b) domestic firms in terms of higher wages paid to employees with similar characteristics. The existence of possible wage benefits to some workers should not occur in competitive labour market unless firms employ more skilled workers or have to compensate the workforce for undesirable differences in the characteristics of jobs such as lower job security (Arnal, Hijzen 2008). The improved wage paid by MNEs is generally known as ‘direct’ effect of FDI, whereas the impact on wages paid by domestic firms to their workers is known as ‘indirect’ effect.

Regarding the ‘direct’ effect of FDI, the presence of market failures may explain the reason why MNEs could offer better pays to their workers. In particular, MNEs may pay an efficiency wage in order to (i) reduce worker turnover, (ii) minimize the risk of their productivity advantage spilling over to competing firms, and (iii) motivate workers as they may face higher monitoring costs related asymmetric information problems. Moreover, in the context of search frictions, the recognised productivity advantage of MNEs may give rise to rents: insofar as such rents are shared with workers, better firms promote better jobs. Finally, there may be institutional factors that provide incentives for MNEs to go beyond local labour practices. For example, in developing countries where the rule of law is weak, MNEs may be more likely to comply with national labour laws, because of reputational concerns and consumer pressure in their home markets.

As argued earlier, incoming FDI may also have an ‘indirect’ impact on wages, since they can contribute to raise the wages paid to workers employed in domestic firms. Indeed, the presence of MNEs in the local labour market may potentially affect both the labour demand and supply. The entry of foreign firms in the domestic market may increase local labour demand, and consequently the local wages. Moreover, to the extent that MNEs pay higher wages, incoming FDI may reduce the supply of labour towards domestic firms that, consequently, have to pay higher wages to hire workforce. It is worth noting that, along with wage spillovers at intra-industry level (‘horizontal’ wage spillovers), incoming FDI may affect wages also at inter-industry level, i.e. through backward and forward linkages from FDI to local firms (‘backward’ and ‘forward’ wage spillovers).

With specific regard to the ‘indirect’ effect of FDI, it is worth noting that the empirical evidence is not as vast as that on productivity spillovers; moreover the studies on such topic have often produced opposite results. For instance, by using industry level data for manufacturing industries in Mexico, Venezuela and the United States, Aitken *et al.* (1996) find some evidence of positive effects from the presence of foreign firms on domestic firms’ wages in the US, but negative wage spillovers in the case of the first two countries. In foreign investment in South Carolina, Figlio and Blonigen (2000) find evidence that the effect of a large new foreign investment on aggregate wage levels is not the result only of the high wages in the foreign-owned plants but it must involve spillovers to domestically-owned plants. Their study differs from most others in that it concentrates on geographical effects, not on effects within the in-

dustry of the investment. A study by Girma *et al.* (2001), on the UK manufacturing sector for the period 1991 to 1996 finds that, on average, when spillovers are assumed to be identical across industries and firms there is no significant evidence for them. However, when the effects are permitted to vary across industries, wage spillovers are found and are higher in industries where the productivity gap between foreign and domestic firms is lower. Bedi and Cieslik (2002) analyse the Polish manufacturing industries during the period 1994-1996 and find a positive link between wages and foreign presence in an industry. Similarly Faggio (2003) explores the link between FDI and wages in three countries of Central and Eastern Europe: Poland, Bulgaria and Romania. Her results suggest that higher levels of foreign activity are associated with higher local wages in all countries, although FDI effects vary substantially across sectors of the economy; moreover, her findings indicate the existence of positive FDI spillovers from foreign to domestic producers in Poland, but not in Bulgaria and Romania. Using panel data at plant-level for the UK electronics industry, Driffield and Girma (2003) find that FDI has a large positive effect on wages in domestic firms through its impact on labour demand and a small positive effect through its impact on labour supply. Moreover, wage spillovers appear to be larger for skilled than unskilled workers, which may reflect the relative scarcity of skilled labour. Examining a cross-section dataset of Indonesian firms for the year 1996, Lipsey and Sjöholm (2004) find that wages in locally owned firms are higher in industries within provinces with large foreign presence. Also, the spillover effect is the same for blue collar and white collar workers at the national level but, as the definition of the labour market becomes finer (the three digit and five digit levels), spillover effect for white collar workers is higher than that for blue collar workers. Using plant level panel data for Irish manufacturing industry for the period 1990 to 1998 Barry *et al.* (2005) find that, on average, there are unambiguously negative spillovers from foreign presence on wages paid by domestic exporting firms but no effect on wages in domestic non-exporter. The authors attribute this result to the labour market crowding out effect. Hale and Long (2008) use a World Bank survey data set of 1 500 Chinese enterprises conducted in 2002. They find that the presence of FDI has both direct and indirect effects on wages of skilled workers although the indirect effect seems to be limited only to private firms.

The empirical evidence looking at the effects of *vertical* linkages from MNEs on wages in do-

mestic firms is even poorer. Using firm level data for Vietnam from 2000 to 2004, Quoc Le (2007) finds that wage levels in domestic firms are higher in sectors where there is higher presence of foreign firms (horizontal wage spillovers), and domestic firms with backward linkages to foreign firms can gain productivity spillovers and pay higher wages to their employers (vertical wage spillovers). Moreover wage spillovers (particularly the vertical ones) vary across sectors and firms. In particular: (i) horizontal wage spillovers affect firms by all ownership types whereas vertical wage spillovers only affect private firms; (ii) horizontal spillovers affect firms in low and medium technology industries, whereas vertical spillovers affect firms only in low technology industries; finally (iii) horizontal spillovers affect firms in all size groups, whereas vertical spillovers affect only small and medium firms.

3. Methodology

In order to investigate the effects of FDI for the wages paid by domestic firms, we start from the neoclassical equilibrium condition in the labour market:

$$L^S = L^D m^*, \quad (1)$$

where L^S represents the labour supply and L^D the labour demand. Algebraically, condition (1) becomes:

$$W = P * MP_L m^*, \quad (2)$$

where W represents the wage rate, P the prices in each industry, and MP_L the marginal product of labour.

Following Aitken *et al.* (1996) and Bedi and Cieslik (2002), we assume that the production function for the domestic firms and industry has the following form:

$$Y = A(FDI) * F(X, L) m^*, \quad (3)$$

where Y is the output, L the labour and X all other factors. A denotes the total factor productivity (TFP), which, in presence of spillovers, will be influenced by external investments.

On the basis of equation (3), condition (2) becomes:

$$W = P * A(FDI) * F_L(X, L(W)) m^*, \quad (4)$$

where the subscript denotes the partial derivative with respect to the indicated argument and $L(W)$ the labour supply curve.

By log-linearizing equation (4) we obtain:

$$\ln(W) = c + a_1 \ln(P) + a_2 FDI + a_3 \ln(W) + a_4 \ln(X) \quad (5)$$

Assuming a Cobb-Douglas specification for production, X can be considered as the capital so that a_3 and a_4 represent the input shares of capital and labour respectively.

Re-arranging equation (5) gives:

$$\ln(W) = d + b_1 \ln(P) + b_2 \text{FDI} + b_3 \ln(X), \quad (6)$$

where:

$$d = c / (1 - a_3 v)$$

$$b_1 = a_1 / (1 - a_3 v)$$

$$b_2 = a_2 / (1 - a_3 v)$$

$$b_3 = a_4 / (1 - a_3 v)$$

In order to consider the wage spillover at both intra and inter industry level, we add the horizontal (*HSPILL*), the backward (*BACKSPILL*) and the forward (*FORSPILL*) spillovers defined, respectively, as follows:

$$HSPILL_{jt} = \frac{\sum_{i \in j, i=MNEs} OUTPUT_{ijt}}{\sum_{i \in j} OUTPUT_{ijt}} \quad (7)$$

$$BACKSPILL_{jt} = \sum_{k, k \neq j} \gamma_{jkt} HSPILL_{kt} \quad (8)$$

$$FORSPILL_{jt} = \sum_{l, l \neq j} \delta_{ljt} HSPILL_{lt} \quad (9)$$

Specifically, variable (7) represents the share of foreign firms' output in total sector output, thus accounting for the foreign presence in the same sector; variable (8) represents the foreign presence in linked downstream sectors, to which a local company supplies its inputs (γ_{jkt} is the proportion of the or j 's output supplied to sourcing sectors k obtained from the input-output table for domestic intermediate consumption – i.e., excluding imports); finally, variable (9) represents the forward vertical spillovers to local firms that buy inputs from foreign firms (where δ_{ljt} is the proportion of sector j 's inputs purchased from upstream sectors l) (see Pittiglio *et al.* 2008 and Pittiglio *et al.* 2011 for details).

Moreover, we add the following four variables to our regression:

- (i) the Herfindahl index of turnover (*HERFI*), used as a proxy for the level of concentration and thus competition within the sector and year. It is constructed as $\sum_{i=1}^N \left[\frac{sales_{ijt}}{sales_{jt}} \right]^2$ and is bound between 0 and 1: higher level of this variable indicates greater market concentration, i.e. less competition.
- (ii) the minimum efficient scale of the industry (*MES*), measured as the ratio between firms' sales above the average sales for the industry, divided by total industry sales. It is employed as a proxy for economies of scale (Comanor and Wilson 1967);

- (iii) the size of the sector (*ES*), i.e. the external spillovers, measured as $\sum_{i=1}^n VA_{ijt}$, where VA denotes the value added (Castellani, Zanfei 2007).

- (iv) the technological gap (*GAP*) defined in terms of TFP gap, i.e. as the difference between the productivity of the average foreign firms in the sector and each firm in the same sector (Jabbour and Mucchielli 2007; Flores *et al.* 2007). It accounts for the relative productivity performance of domestic companies vis-à-vis foreign companies in the same sector.

- (v) Finally, we include year dummy variables to control for possible unobserved factors.

All in all, we estimate the following regression:

$$\begin{aligned} \ln(W) = & f + e_1 \ln(P)_{jt} + e_2 \ln(X)_{ijt} + \\ & + e_3 HSPILL_{jt} + e_4 BACKSPILL_{jt} + \\ & + e_5 FORSPILL_{jt} + e_6 HERFI_{jt} + e_7 MES_{jt} + \\ & + e_8 ES_{jt} + e_9 GAP_{ijt} + e_{10} D_t + \varepsilon_{it} \end{aligned} \quad (10)$$

where the subscript i denotes firms, j industries, and t time, while the error term $\varepsilon_{it} \sim \text{IID}(0, \sigma^2)$ accounts for possible stochastic shocks at a firm level which may affect the dependent variable.

4. Descriptive statistics and database used

The empirical analysis has been conducted by using manufacturing firm-level data from the AIDA database (*Analisi Informatizzata Delle Aziende*) provided by the Bureau Van Dijk. The AIDA database collects annual accounts of Italian corporate enterprises and contains information on a wide set of economic and financial variables, such as sales, costs and number of employees, value added, fixed tangible assets, R&D, start-up year, as well as the sector of activity and the ownership status. In order to study the spillover effects of foreign firms on domestic firms, we have identified all Italian firms whose Global Ultimate owner is foreign. Although the AIDA database offers a flexible definition of ultimate ownership (over 25 % or over 50 %), in our analysis we consider only a share of 25 %. Moreover, as the data were collected year by year, the ownership status variable is time-variant. By omitting all observations for which the necessary data are incomplete, we obtained an unbalanced panel of about 551 000 observations, over the period 2002–2007.

The advantage of using such a dataset is two-fold. Firstly, it is highly representative of the entire

universe of corporate companies (e.g., in 2007, our sample covers about 87 % of total employees declared by the Italian National Institute of Statistics – ISTAT 2008). Secondly, our dataset reflects quite well the actual size distribution of firms in the Italian economy characterized by a large weight of micro and small enterprises.

In order to measure vertical spillovers (both backward and forward) Input-Output matrix provided by ISTAT was adopted.

Each variable included in the database was deflated through the price index provided by ISTAT (Italian Institute of Statistics).

Table 1 compares the distribution of Italian firms by ownership status and size (small, medium and large firms), the latter measured by the number of employees (where small firms have 1–49 employees, medium firms 50–249, and large firms more than 250 employees). According to the figures, domestic firms represent the largest percentage of Italian firms, and are mainly of smaller size, while the share of foreign firms is very small.

Table 1. Distribution of Italian firms by size and ownership status (percentages, sample average)

	Foreign Firms	Domestic Firms	TOTAL
1≤SIZE≤49	0.3	99.7	89.4
50≤SIZE≤249	3.3	96.7	9.3
SIZE≥250	11.7	88.3	1.4
TOTAL	0.8	99.2	100.0

(Source: Authors' elaborations based on the AIDA database)

Table 2 contains the mean of the variables for the whole sample distinguished by ownership type as well as tests of comparison of means for the two groups of firms (domestic *versus* foreign firms).

Table 2. Mean statistics by ownership status and t-test of comparison of means for the distributions (domestic versus foreign firms)

	Mean		Diff	t
	Domestic Firms	Foreign Firms		
SIZE	28.63	220.22	-191.59	-39.35***
WAGE	25617.12	35112.60	-9495.5	-0.18
MES	0.01	0.01	-0.01	-20.11***
HERFI	233.09	345.21	-112.12	-12.72***
ES	25.67	25.19	0.49	29.86***
X	12.12	14.21	-2.09	-65.51***

All figures presented in the table are averages over the sample period. Focusing our attention on some firm and industry level variables, we observe that Foreign Multinationals are on average larger,

more capital intensive compared to the domestic firms. They also tend to operate in industries that are more concentrated and with a higher minimum efficient scale.

5. Results

In order to fit a linear regression absorbing one categorical factor, equation (10) was estimated by the Areg estimator. Results obtained are summarised in table 3.

Table 3. Results from estimation of equation (10)

Dependent variable: $\ln(W)$		
Regressors	Coefficient	Robust Stand. Err.
Cons	4.628***	0.323
$\ln(P)$	0.190***	0.024
$\ln(X)$	0.279***	0.004
HSPIL	-0.114	0.169
BACKSPILL	1.104*	0.670
FORSPILL	0.022	0.088
HERFI	-0.001***	0.001
MES	-0.856***	0.329
ES	0.136***	0.012
GAP	-0.002***	0.001
D	Yes	
Adjusted R ²	0.918	
n OBS	475,041	

Notes:

Areg estimation

*** = statistically significant at 1 per cent level.

** = statistically significant at 5 per cent level.

* = statistically significant at 10 per cent level.

Results from table 3 show that the majority of coefficients estimated are statistically significant at 1 per cent level; the adjusted R squared (just below 92 per cent) suggests the goodness of fit of our model.

In general terms, our findings show the lack of wage spillovers at horizontal level. In other words, the presence of MNEs in the Italian manufacturing sector does not contribute to raise the wages paid by local firms to their workers at the intra-industry level. Similarly, the not-significant coefficient of 'FORSPILL' highlights the lack of any wage spillover at forward level, i.e. from MNEs to their local customers. On the opposite the positive and significant coefficient of 'BACKSPILL' suggests the presence of wage spillovers at backward level, i.e. from MNEs to their local suppliers. Summing up, our findings show that only being a supplier of foreign companies has a beneficial effect on wages paid by local firms to their workers. Such results seem broadly to confirm the lack of horizontal spillovers as in the works of Reganati and Sica (2007) and Imbriani and Reganati (2004) who find evidence of positive but

not statistically significant intra-industry spillovers.

Regarding the other variables, both price and capital ($\ln(P)$ and $\ln(X)$, respectively) are positive and statistically significant at 1 per cent level; the ‘concentration level’ - measured by the Herfindahl index - is negative and significant, thus suggesting that less concentrated sectors (i.e. sectors with more competition) benefit more in terms of wage increases spilled-out from foreign enterprises; similarly, the ‘economies of scale’ - measured by the Minimum Efficient Scale – is negative and significant, whereas the ‘size of sector’ is positive and significant.

Finally, the negative and significant coefficient of the ‘GAP’ variable suggests that negative wage spillovers occur in those firms technologically less advanced: in other words, when the technological gap between local and foreign firms is high, then the workers employed in domestic firms seem to suffer for the presence of foreign enterprises in terms of lower wages.

5.1. Conditional wage spillovers

With the aim of exploring the possible differences in the pattern of wage spillovers across different groups of firms (so-called conditional spillovers), we split our sample by (i) different level of technological gap and (ii) different firm’s size.

To test the sensitivity of model (10) to alternative gap-ranges, we split our sample into three groups according to the technological absorptive capability of domestic firms. In other words, we select some ad hoc values from the observations to divide the sample into three sub-samples (low, medium, and high gap). Specifically, the group with low technological absorptive capability consists of firms below the 25th percentile; the medium technological absorptive capability group contains firms between the 25th and 75th percentile; the high technological absorptive capability group includes firms with above the 75th percentile (Imbriani et al. 2011). Results of our estimation are reported in table 4.

Our findings suggest the presence of wage spillovers at both intra- and inter-industry level only for firms characterized by low-medium technological absorptive capacity. In particular, wage spillovers at vertical level (backward and forward) are positive (not significant only for the low-gap group) while horizontal wage spillovers are significant and negative. This implies that workers employed in domestic firms operating in both upstream and downstream sectors, with at least a basic level of technology, benefit from the presence of MNEs in terms of higher wages.

Table 4. Group estimation according to the technological gap.

Regressors	Dependent variable: $\ln(W)$		
	High Gap	Medium Gap	Low Gap
Cons	1.260 (0.933)	4.091*** (0.530)	7.209*** (0.545)
$\ln(P)$	0.101 (0.071)	0.287*** (0.046)	0.233*** (0.043)
$\ln(X)$	0.354*** (0.011)	0.239*** (0.007)	0.168*** (0.007)
HSPIL	-0.403 (0.333)	-0.456* (0.243)	-0.701*** (0.398)
BACKSPILL	1.655 (1.335)	1.634* (0.951)	5.162*** (1.440)
FORSPILL	0.123 (0.158)	0.367*** (0.127)	0.081 (0.228)
HERFI	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
MES	0.497 (0.551)	-1.29** (0.474)	-0.383 (0.664)
ES	0.237*** (0.033)	0.155*** (0.019)	0.107*** (0.0195)
D	Yes	Yes	Yes
Adjusted R ²	0.886	0.927	0.966
n OBS	148,159	242,712	109,766

Notes:

Areg estimation

Robust standard errors in brackets

*** = statistically significant at 1 per cent level.

** = statistically significant at 5 per cent level.

* = statistically significant at 10 per cent level.

On the opposite, the presence of negative horizontal wage externalities suggests that domestic firms operating in the same sectors of foreign affiliates pay lower salaries to their workers. The lack of any kind of wage spillover for high-gap firms highlights that workers employed in technologically less advanced domestic firms do not suffer or benefit from the presence of MNEs.

Finally, to test the sensitivity of our model to different firm sizes, we estimate regression (10) for small, medium and large firms according to the table 1. Results are reported in table 5.

Results suggests broadly the lack of wage spillovers with the exception of medium sized firms that seem to benefit, in terms of positive wage spillovers, from the presence of foreign enterprises at upstream sectors.

Table 5. Group estimation according to the firm size

Regressors	Dependent variable: $\ln(W)$		
	Small firms	Medium firms	Large Firms
Cons	4.398*** (0.360)	9.124*** 0.456	11.244*** (1.354)
$\ln(P)$	0.183*** (0.028)	0.223*** (0.034)	0.111 (0.091)
$\ln(X)$	0.258*** (.005)	0.122*** (0.006)	0.273*** (0.054)
HSPIL	-0.078 (0.184)	-0.483 (0.326)	-0.467 (0.661)
BACKSPILL	1.131 (0.733)	1.699 1.182	-0.09 (2.893)
FORSPILL	-0.043 (0.096)	0.295* (0.155)	0.355 (0.316)
HERFI	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
MES	-0.744** (0.352)	-0.226 (0.358)	2.574** (1.095)
ES	0.148*** (0.013)	0.105*** (0.016)	0.007 (0.049)
GAP	-0.002** (0.0009)	-0.002 (0.001)	0.0004 (0.005)
D	Yes	Yes	Yes
Adjusted R ²	0.877	0.896	0.941
n OBS	422,721	46,258	6,062

Notes:

Robust standard errors in brackets

Areg estimation was performed to fit a linear regression absorbing one categorical factor.

*** = statistically significant at 1 per cent level.

** = statistically significant at 5 per cent level.

* = statistically significant at 10 per cent level.

6. Conclusions

This paper analyzes the effects of foreign direct investment (FDI) on wages paid by domestic firms in the Italian manufacturing sector over the period 2002-2007. Our findings can be summarized as follows:

1. our empirical investigation suggest the lack of wage spillovers at intra-industry level (horizontal wage spillovers and at forward level. In other words, the presence of MNEs in the Italian manufacturing sector does not contribute to rise the wages paid by local firms to their workers at the intra-industry level and in downstream sectors (from MNEs to their local customers).
2. On the opposite our data suggest the presence of wage spillovers at backward level, i.e. from MNEs to their local suppliers. This means that only being a supplier of foreign companies has a beneficial effect on wages paid by local firms to their workers.
3. The wage spillover is strongly affected by the technological gap between local and foreign

firms: only workers employed in domestic firms with a low-medium technological absorptive capacity seem to benefit from the presence of MNEs in terms of higher wages. Finally, the domestic firm size seem not affecting the chance of higher wages for workers employed in domestic firms spilled-out from MNEs.

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