FOREIGN ENTRY THROUGH ACQUISITION. THE IMPACT ON LABOUR PRODUCTIVITY AND EMPLOYMENT

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- Competitive paper -

ABSTRACT

The present paper aims at analysing the impact of foreign acquisition on target firm's labour productivity and employment level. The analysis covers the whole set of foreign acquisitions occurred in Italy in the 90s. Paired T tests have been employed to investigate corporate performance differences in firms that experienced ownership change vs. firms which maintained their ownership. Results show that foreign acquisitions induce productivity improvements not necessarily related to labour downsizing. This result is even more significant when considering smaller target companies and European acquirers.

Keywords: entry mode, acquisition, employment, labour productivity, paired T test.

1. Introduction

Mergers and acquisitions (M&A) are one of the most researched areas in finance and economics. However, the new recent global conditions related to the transformation of markets (e.g. the flourishing of regulatory shifts) and technology (i.e. the emergence of new business and market opportunities, the rise of technological interrelatedness, and the establishment of new communications and cross-border restructuring) engendered an extraordinary M&A wave in terms of both number and value of the deals (UNCTAD, 2000). The magnitude of this phenomenon has stimulated a vigorous debate among policymakers, academics and the public about how M&As have affected the corporate outcomes in terms of value generation, technological performance and R&D productivity, employment and productivity effects. Specifically, as changes in the structure of a firm's employment are often an important factor in achieving gains to M&As, they are typically subject to strong opposition from labour unions, and widespread, often negative, press reports.

Nonetheless, while a large part of the literature measures the gains to stockholders from M&As, or short-run firm performance, mostly suggesting that changes in corporate control generate value increases (e.g. Jensen and Ruback, 1983; Franks et al., 1988), the study of the impact of M&A's on employment and productivity is still far from conclusive. Indeed, the extensive literature on M&As theories does not allow to extract strong predictions about the employment and productivity consequences of M&A activity, and empirical research does not provide systematic evidence on their net effects. However, most of the empirical research analyses the impact of M&A on the acquiring rather than the acquired company (e.g. Dickerson et al., 1997), which is indeed the focus of the present study.

The discussion on the target company's employment effects has been traditionally cast in a broader discussion of the impact of M&A on Human Resource Management. The M&A literature that relates to Human Resource Management mostly focuses on the effects of mergers on a wide range of management issues, beyond the mere number of jobs affected, such as culture (Buono et al.,

1988), structure (Mirvis, 1985), human resource policies (Profusek and Leavitt, 1984), and employee reactions (Wishard, 1985).

However, within the context of economic and managerial literature, most merger theories acknowledge the need of relating the impact of M&As to their underlying motivations, ranging from efficiency improvement to market power. Specifically, the hypothesis that ownership changes are undertaken for managerial discipline reasons has been traditionally evoked to justify the positive association between productivity growth and ownership change. Managerial discipline takeovers are generally associated with poorly performing businesses that can be re-organised and re-structured to make them more productive. Conversely, recent empirical studies suggest that the gains in most ownership changes are associated with efficiencies generated by synergies, resulting from combining operations, thus rejecting the managerial-discipline theory (Ravenscraft and Scherer, 1987; Matsusaka, 1993).

Accordingly, the present paper aims at providing a systematic investigation into the effect of M&As on employment and productivity level of the acquired firms. Specifically, we consider about 300 M&As occurred in Italy in the period 1993-1997. The methodology employed consists of parametric tests (T test on matching pairs) comparing changes in the employment levels for firms that experienced an ownership change, with firms that did not. Furthermore, in order to disentangle the effects of the cross-border acquisitions, we distinguished the changes induced on the target company employment when the acquirer is foreign vs. domestic.

The remainder of the paper is organised as follows. The second section discusses the theoretical framework and develop hypotheses as to the impact of M&A upon the target company's labour productivity and employment level. The third section presents data employed in the empirical study and the methodology adopted. The fourth section illustrates the empirical findings. Some summarising remarks conclude the paper.

2. The theoretical framework and the hypotheses

One of the most popular view is that M&A's inevitably lead to, and indeed are motivated by, the possibility of drastically downsizing the workforce. Within the economics literature this view has been variously expressed, e.g. through the notion of "breach of trust" (Shleifer and Summers, 1988) which argues that an important reason for merger activity is the opportunity that it offers owners to renege on implicit and explicit labour contracts, and through the well known managerial discipline theory arguing that reorganisation and restructuring are needed actions to improve efficiency and productivity. The same idea (for a review, see Agrawal and Jaffe, 1996), i.e. that the motive for a merger is the improvement of the target's management, has been referred to as the inefficient management hypothesis. For example Brealey and Myers (1991, p. 823) state that "There are always firms with unexploited opportunities to cut costs and increase sales and earnings. Such firms are natural candidates for acquisition by other firms with better management. In some cases 'better management' may simply mean the determination to force painful cuts or realignment of the company's operations". While all firms, even those with good management, can theoretically be improved by better management, the potential for improvement is clearly greater in firms that are performing poorly. Therefore, as Brealey and Myers say "If this motive is important, one would expect that firms that perform poorly tend to be targets for acquisition". In other words, if the transaction is seen as a disciplinary one in which the market for corporate control operates so as to divert assets into the hands of more diligent and talented managers (Manne, 1965), cost economies and labour savings may realistically follow. Nonetheless, these explanations are more likely to hold particularly in case of an hostile acquisition. Bhagat et al. (1990) as well as Conyon et al. (2002c) have reported that hostile mergers do tend to be followed by job losses, particularly among white collar workers. Franks and Mayer (1996) confirm this association for the UK and argue that *friendly* and *hostile* mergers are often differentiated by the incumbent management's opposition to further divestment. Therefore, it seems reasonable to assume that M&As instituted by profit-maximising managers are more likely to be followed by cost savings and employment losses than those

undertaken by managers anxious to empire build or dissipate free cash flow (Jensen, 1986). In other cases, the actual employment outcome would appear to depend also on the complementarities between the merged entities and on the post-merger market position. Specifically, certain conjectures relating post-merger employment to merger type may be advanced: (a) employment losses appear likely to be more substantial in horizontal mergers than in vertical or unrelated cases, particularly where the industry exhibits substantial economies of scale and/or surplus capacity (Dutz, 1989); (b) where vertical mergers are undertaken to reduce transaction costs the result is likely to be employment reducing unless the gains resulting from cost and price reductions are sufficient to offset job losses in the sales function of the upstream firm and the procurement function of the downstream party. Where the transaction involves an unrelated acquisition the outcome is particularly problematic. If an unrelated acquisition is made by managers primarily motivated by the desire for diversified firm earnings and a reluctance to disgorge free cash flow, there will be no presumption of job losses.

Along this line, Lichtemberg and Siegel (1987) analysed productivity and changes in ownership of almost 20,000 US manufacturing plants. Although the effect of ownership change on total factor productivity was the primary emphasis of the study, they also found relative increases in the growth of total labour input after the change in ownership. Likewise, McGuckin et al. (1995), analysing the impact of ownership change on productivity, wages, and employment in US food manufacturing for the period 1977-87 find that: (i) relative labour productivity and wages of acquired plants grew faster than those of plants owned by non-acquiring firms; and that (ii) acquired plants tend to increase their employment faster than that of their counterparts owned by non-acquiring firms. These results suggest that the typical motive for ownership change is improvements in operating efficiency, and that these improvements are not primarily obtained through downsizing and reduced wages. Rather, acquisition typically results in improved productivity and growth for acquired plants[1].

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[1] The Authors find that these results (based on plant level data) are weaker when firms are used as the unit of analysis.

More recently, Conyon et al. (2002a) provide a systematic empirical analysis of the effects of takeover and merger activity on firm employment and wages amongst a large sample of UK firms for the period 1984-1996, with information on more that 400 mergers. In general their findings do not support the contention that M&A have a rationalising effect on the firms' demand for labour, once controlling for wage and output effects. Indeed, the post-acquisitions firm-level employment figures do not significantly differ from the pre-acquisitions values, which suggests that some of the apparent productivity improvement may have been brought about as a result of a more efficient use of labour rather than through downsizing. However, when less efficient firms are acquired by more efficient firms, an initial lowering of labour productivity prior to re-organisation of the firm which has been taken over is observed, although they find this latter effect being particularly pronounced for related and hostile acquisitions (Conyon et al., 2002b, c).

According with this stream of literature, the present paper argues that the gains in labour productivity associated with most ownership changes may be due to efficiencies generated by synergies, resulting from combining operations, rather than to labour downsizing. Therefore, our first Hypothesis is:

Hypothesis 1: ceteris paribus, M&As induce gains in labour productivity which are not necessarily associated to labour downsizing.

Furthermore, we expect the hypothesis to be truer for smaller target firms. Indeed, when the target company is relatively smaller, it is less likely to present duplications and overlapping redundancies that would certainly need rationalisation. Additionally, takeovers addressed towards smaller target companies are often driven by the wish of constituting launching pads which generally need both additional assets and complementary resources, thus resulting in productivity and employment level improvements. Empirical evidence to that has been already provided, for example by McGuckin e Nguyen (2001). Indeed, with reference to a wide sample of US establishments in 1977-1987, they found that changes in the employment level and labour productivity due to the ownership change is

significantly positive for small and medium plants, while the effect is significantly smaller for large plants.

Whereas M&As considered are cross-border, the issue prompts even more considerable interest because of their effects on host economies. Here the bulk of literature mainly refers to positive effects and efficiency benefits due to the presence of technological externalities related to the transfer of technological innovation, managerial skills and practices (Caves, 1974; Blomstrom, 1991; Wang and Blomstrom, 1992; Perez, 1997) as well as capitals and local development (Blomstrom, 1991; Haddad and Harrison, 1993; Markusen and Venables, 1999) which can lead to productivity spillovers from MNCs to domestic firms in the host country (Driffield, 1996, 1999; Görg and Strobl, 2001).

It is by now a well established empirical fact that foreign-owned plants have substantially higher productivity, investment intensity, and skill intensity than domestic plants (evidence on the UK manufacturing industries has been provided by Girma et al., 2000; Girma and Gorg, 2001; Griffith and Simpson, 2001). According with the theory of the MNE (starting from Hymer, 1960; Vernon, 1966; Caves, 1974), the reasons for performance differences between foreign-owned and domestically-owned companies are generally ascribed to the technological and organisational advantages of MNEs, which have the resources to operate internationally. Therefore, MNEs are more efficient than purely domestic firms, as they are enjoy superior knowledge-based assets and competitive ownership advantages (Buckley and Casson, 1976; Dunning, 1977; Hubert and Pain, 2000; Pain, 2000). Consequently, the affiliates of multinationals typically enjoy higher productivity, pay higher wages and usually enjoy greater profitability than their indigenous counterparts (Caves, 1996; Doms and Jensen, 1998). Additionally, MNEs may normally benefit from spillovers between the parent and affiliates (Fors, 1997) or multiplant economies of scale (e.g. Scherer et al., 1975) thus suggesting the hypothesis of additional benefits if a firm participates in a MNEs' network. Indeed, being part of a global network within the MNEs may provide advantages to the affiliates as

they enjoy better access to foreign markets through inter-firm trade and network economies, such that they can operate more profitably on a large scale, and they can draw on their parent's managerial expertise to manage the complexity of larger scale (Globerman et al., 1994). Accordingly, our hypothesis is:

Hypothesis 2: ceteris paribus, cross border M&As should engender improvement in the labour productivity level of the target company.

Empirical evidence to the hypothesis has been already provided again with reference to the Anglo-American context. Concerning the US, Doms and Jensen (1998) show that the labour productivity of plants owned by purely domestic firms is lower than both foreign-owned plants and plants owned by US multinational companies (the multinationality *per se* matters, see Cantwell and Sanna Randaccio, 1993). With reference to the UK, Davies and Lyons (1991), Driffield (1996) and Girma et al. (2000) find that foreign-owned firms record higher productivity than domestically-owned firms. Griffith and Simpson (2001) confirm such a result as they find that labour productivity, investment per employee and wages further increase over time.

Conyon et al. (2002a) provide a systematic empirical analysis of the impact of foreign ownership on productivity in the UK for the period 1989-1994, finding that firms which are acquired by foreign companies exhibit an increase in labour productivity of 13% in the four year period between the year prior to ownership change and three years following the event.

Finally, Pfaffermayr and Bellak (2000) corroborate the evidence with reference to 524 Austrian manufacturing firms from 1997 to 2000[2].

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[2] It is worth acknowledging that some opposite evidence has been provided, e.g. Girma and Görg (2001) recording that the incidence of a foreign takeover reduces employment growth but particularly for unskilled labour.

2. The methodology

The present paper specifically aims at investigating whether the ownership change induces in the target company any significant change in the labour productivity and employment level.

Both theoretical and empirical evidence so far put forward, highlights some caveats:

(1) Acquirers are differentially attracted by some industries, and therefore serious bias might derive from the fact that their superior efficiency might partly be due to their "cherries picking" attitude[3]. That creates a spurious observed relationship between ownership changes and productivity levels of target firms in cross-section studies.

(2) Similarly, the size effect may be important (Lichtenberg and Siegel, 1992; McGuckin and Nguyen, 2001; Conyon *et al.*, 2002a). It is well known that there is a strong negative correlation between the initial size of firms and their subsequent growth rates (Hall, 1987). Since establishments changing owners are smaller than those not changing owners, in the absence of any effect of ownership change on employment growth one would expect the former to exhibit higher employment growth.

The methodology we employ then aims to allow for these two bias. We suggest indeed to evaluate the impact of the change of ownership by investigating what would happen, ceteris paribus, without such a change. In other words, we compare "like with like" (see also, Armington and Robb, 1988; Brown and Medoff, 1988; Lichtenberg and Siegel, 1987, for similar procedures applied to investigate the effects of domestic ownership changes on employment and wages), i.e. firms which (1) have the same dimensional features (dimensional class i); and (2) belong to the same industry (j). The only difference between the two groups of firms is that the first has undergone acquisition, while the other remained the same.

Such a methodology allows us to rule out the critical identification problem related to the fact that

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[3] The issue has been particularly emphasised when the acquirer is a foreign firm (among the most recent studies, see Globerman et al. 1994; Aitken and Harrison, 1999), i.e. foreign-owned firms are attracted to industries with above-average productivity growth rates (Dunning, 1985).

foreign investment might gravitate towards more productive industries or more promising companies (or, viceversa, more devasted firms which need the most serious restructuring).

The empirical analysis described in this paper is based on a firm level panel data set M&As occurred in Italy in the period 1993-1997. Specifically, this data set is the result of the merging of two different databases:

(1) Reprint, which is the most comprehensive source of information on inward (and outward) foreign direct investments in the Italian manufacturing sector, in the period 1986-2000. The database has been developed at Politecnico di Milano in co-operation with the National Council for Economics and Labour (CNEL)[4];

(2) Nomisma M&A, a database developed by a public stock corporation Nomisma, which records more than 19,000 acquisitions undertaken by Italian companies from the 1983;

Operationally, we proceeded in the following way. Each firm $F_{ij}^{t_0}$, belonging to the dimensional class i and to the industry j, which has been acquired (by a foreign or a domestic bidder) at time t_0, has been associated a domestically-owned firm (randomly selected from the set $[I_{ij}^{t_0}]$), which belong to the same dimensional scale and the same industrial sector in the same period, but which did not experience any ownership change. The control group $[I_{ij}^{t_0}]$ was drawn from Aida, a database recording financial and market data for more than 120,000 Italian firms from the 1992, and from La Centrale dei Bilanci which record financial and market data for Italian firms.

Summarising:

$F_{ij}^{t_0}$ is a firm, belonging to the dimensional scale i and to the industrial j, which has been acquired at time t_0,

i = 1, 2, …, 7 are the dimensional classes (in terms of employees), as indicated by the Italian National Institute for Statistics[5].

j = 1, …. 59 are the three digit industrial sectors ATECO 91

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[4] For further details, see Cominotti *et al.* (1999).

t_0 = 1993, 1994, 1995, 1996, 1997.

In order to isolate the effects of individual acquisitions, and partly to avoid probably presence of measurement error problems, it was necessary to exclude those firms that suffered multiple acquisitions within a period analysed. The final sample consists of 305 acquisitions occurred in the five-year period 1993-1997, which involved the acquisition of control in the target firm by the bidder firm. Accordingly, the control sample concerns 305 Italian firms that have not undergone any acquisition.

Table 1 reports information on our data over the sample period. Of the 305 firms, 176 or approximately 58% show foreign ownership whereas domestic ownership accounts for 42.3%. The most of acquisitions occurred in the 1996 and 1997, roughly 53 percent of domestic deals and 59 percent of foreign. Inspection of Table 2, which shows the distribution of our sample among the seven dimensional classes, reveals that target firms are generally larger for domestic acquisitions than foreign ones. Table 4 where we give the means and standard errors of employment, value added and labour productivity, shows that the average size of firm acquired by domestic bidder is 360 employees compared to about 130 for a firm which has been acquired by foreign bidder. A *t*-test for the difference between the means of domestic and foreign samples ascertain this result to be statistically significant at p<.05. Moreover, firms acquired by domestic bidders exhibit greater value added level at t_0 than foreign-owned firms. Finally, Table 3 presents the share of observations by industry. In order to facilitate analysis of this data, the 59 three-digit industrial sectors ATECO 91 have been consolidated into 22 two-digit classes. It is worth observing that M&As from foreign acquirers are more oriented towards Machinery Products (23.86% vs. 17.83%), Chemicals (13.07% vs. 6.98%), Rubber and Plastics (7.39% vs. 1.55), Electrical Machinery (5.68% vs. 3.88%), than their domestic counterparts, which indeed seem more interested in traditional industries like Food (14.73% vs. 4.55%), Textile (6.20% vs. 1.70%) and Printing and Publishing (10.08% vs. 0.57%).

[Table 1 here]

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[5] The seven classes are the followings: 1-19; 20-49; 50-99; 100-199; 200-499; 500-999; ≥1000 employees.

[Table 2 here]

[Table 3 here]

[Table 4 here]

In order to investigate the impact of the event "acquisition" on the employment level (and labour productivity) of the target firm, we used the analysis of a continuous outcome based on *paired sample*. Specifically, the variables under control are the change in the number of employees and in the labour productivity occurred in the target firm in a T-year interval (after the acquisition), for T = 2, 3, 4. For example, if we consider the number of employees we construct:

$$\Delta EMP_T\_F_{ij} = \{[EMP\_F_{ij}^{t_0+T} - EMP\_F_{ij}^{t_0}]/EMP\_F_{ij}^{t_0}\}*100$$

This variable has been compared with the same change occurred in a national firm (I_{ij}) that has not undergone any ownership change in the same time interval t_0 - t_{0+T}, but that presents a similar (sectoral and dimensional profile) to firm F_{ij}:

$$\Delta EMP_T\_I_{ij} = \{[EMP\_I_{ij}^{t_0+T} - EMP\_I_{ij}^{t_0}]/EMP\_I_{ij}^{t_0}\}*100$$

$\Delta EMP_T\_F_{ij}$ and $\Delta EMP_T\_I_{ij}$ have been compared through a Paired *t*-test.

Denoting with M_D and M_0 the sample mean difference and the population mean difference, respectively, we want to test whether the expected difference under the null hypothesis (M_0) is less or equal than zero ($M_0 = 0$): H_0: $M_D \leq M_0$ vs. H_1: $M_D > M_0$. Reject the null hypothesis means that the employment (labour productivity) rate growth increase more, or decrease less, for national firms that have undergone ownership change, rather than those that have not undergone any ownership change.

The test statistic is the paired *t*-test statistics:

$$T = \frac{M_D - M_0}{\frac{S_D}{\sqrt{N}}}$$

where $S_D/\sqrt{N}$ is the estimated standard error of the mean differences. The appropriate P-value are in the right tail for T.

Operationally, we tested our null hypothesis for both the total paired sample and then distinguishing domestic from foreign paired sample data.

4. Empirical findings and conclusive remarks

Table 5 reports the results for the employment and labour productivity rate growth in the medium term after the acquisition (t_{0+2}, t_{0+3}, t_{0+4}). They show that, according with our first hypothesis, that the null hypothesis, i.e. that acquired companies' labour productivity is lower than their counterparts' one, can be actually rejected at $p<.01$; and that, importantly, the null hypothesis can be significantly (at $p<.05$) rejected also for the employment level in the three intervals considered. Importantly, the values obtained for the tests allow to accept the alternative hypothesis, i.e we can state that target companies enjoy an increase in their employment level. Table 6 confirms that such results hold especially for smaller firms (1-49 employees); conversely, the labour productivity increase recorded for medium sized target companies (50-249 employees) can not be associated to a contemporaneous increase in the employment level, thus suggesting that the former may well be obtained also through labour-downsizing. The same result comes out for larger companies (more than 250 employees). In this case, even labour productivity does not show persistent improvements, as from t_{0+3} on the null hypothesis (acquired companies' labour productivity lower than their counterparts) can not be rejected. Hypothesis 2 is also supported by the empirical testing as companies acquired by foreign MNEs show a contemporaneous increase both in labour productivity and employment level (the null hypothesis can be always rejected at least at $p<.05$ and the alternative one can be accepted). These results hold particularly for smaller companies, while they become weaker for medium and larger ones. When considering acquisitions undertaken by domestic companies, the test values for labour productivity allow to reject the null hypothesis but not to accept the alternative one. In other words, it can be ruled out the chance that increase in labour productivity, if any, has to be ascribed to labour downsizing. This is truer whatever is the dimensional scale of the target company (see Table 6).

According with other empirical studies (e.g. Conyon et al., 2002 a) we distinguish foreign acquisitions by the acquirer's country of origin, as we expect MNEs of some nationalities to be more strongly associated with the transfer of work practices and intangible proprietary assets. Specifically, we discriminated between acquisitions by firms from the US, EU and Other foreign countries[6]. The results of this exercise are given in Table 7. The increase in productivity is observed for both US and EU acquisitions, while the null hypothesis (labour productivity for the acquired companies is lower than that for non acquired companies) can not be rejected (at p<.01) for the other acquisitions. Nonetheless, while for the EU acquisitions it is possible to argue that increases in productivity are not likely to stem from labour downsizing, the null hypothesis can not be rejected in the other two cases.

[Table 5 here]

[Table 6 here]

[Table 7 here]

The present paper aims at providing some evidence about the impact of cross-border M&A on the employment level of the target firm. Therefore, we considered M&As undertaken in Italian manufacturing industry in the period 1993-1997. Preliminary results from a descriptive-statistical analysis show that the impact in the medium term (within a two-, three- and four-year interval after the acquisition) is mainly positive, i.e. the variation in the employment level (as well as in the productivity) of the target firm is higher than the same variation recorded in a similar firm which has not undertaken any ownership change. Such a performance is even more likely when: (i) the *target* firm is smaller (less than 50 employees), and (ii) the acquiring company is a foreign MNEs.

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[6] As in Conyon et al. (2002a) this tricotomisation of foreign acquisitions was essentially driven by the preponderance of EU and US acquirers. Unfortunately, the number of acquirers from Japan, the country most obviously associated with distinctively different work practices, was too small for meaningful analyses.

Such results might stem from the fact that multinational firms normally enjoy superior efficiency not necessarily stemming from restructuring processes and rationalisation in the target firms.

However, such findings offer some suggestions to policy makers as far as attraction measures towards multinational enterprises are concerned. Those measures should be addressed not only towards greenfield initiatives (that, in fact, recently play only a very marginal role), but especially towards M&As. In fact, although such foreign operations seem to cause positive effects (in terms of employment creation and labour productivity as well) as they foster the participation of the target firm within international networks thus increasing their competitiveness even in a longer term perspective.

The results here obtained suggest possible extensions for the future research agenda. First of all, the effects induced by a foreign MNE could be different according with the timing of the investment. In other words, the first MNE's entry in a foreign country is less likely to lead rationalisation and restructuring than an initiative representing an expansion of an already consolidated presence in the country. Therefore, disentangling the effects of foreign acquisitions representing first entries ranks high in the research agenda. Additionally, as we state that it is not the foreign ownership per se that matters, rather benefits of participation in a multinational network, we expect similar findings for domestic acquisition undertaken by Italian MNEs. In other words, it is necessary to differentiate between domestically-owned MNEs and non MNEs (Doms and Jensen, 1998).

Finally, the empirical investigation of longer term effects on the employment level would allow to corroborate results about positive perspectives induced by cross-border M&As. Methodological issues as well as data constraints currently hinder such a goal.

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Table 1 – The sample, breakdown by acquisition's year

	Total Sample		Domestic		Foreign	
	No. M&As	Frequency (%)	No. M&As	Frequency (%)	No. M&As	Frequency (%)
1993	29	9.51	13	10.08	16	9.09
1994	46	15.08	18	13.95	28	15.91
1995	58	19.02	30	23.26	28	15.91
1996	98	32.13	30	23.26	68	38.64
1997	74	24.26	38	29.46	36	20.45
Total	305	100	129	100	176	100

Table 2 – The sample, breakdown by dimensional classes (No. employees)

	Total Sample		Domestic		Foreign	
	No. M&As	Frequency (%)	No. M&As	Frequency (%)	No. M&As	Frequency (%)
1-19	21	6.89	10	7.75	11	6.25
20-49	61	20.00	20	15.50	41	23.30
50-99	70	22.95	27	20.93	43	24.43
100-199	79	25.90	31	24.03	48	27.27
200-499	57	18.69	29	22.48	28	15.91
500-999	14	4.59	9	6.98	5	2.84
>999	3	0.98	3	2.33	0	0.00
Total	305	100	129	100	176	100

Table 3 – The sample, breakdown by industry classes (2-digit)

	Total Sample		Domestic		Foreign	
	No. M&As	Frequency (%)	No. M&As	Frequency (%)	No. M&As	Frequency (%)
Food	27	8.85	19	14.73	8	4.55
Tobacco	0	0	0	0	0	0
Textile	11	3.61	8	6.20	3	1.70
Clothing	5	1.64	1	0.78	4	2.27
Leather and Leather Goods	5	1.64	3	2.33	2	1.14
Wood Products	2	0.66	2	1.55	0	0.00
Paper and Paper Products	8	2.62	0	0.00	8	4.55
Printing and Publishing	14	4.59	13	10.08	1	0.57
Coke and Petroleum Products	3	0.98	2	1.55	1	0.57
Chemical Products	32	10.49	9	6.98	23	13.07
Rubber and Plastics	15	4.92	2	1.55	13	7.39
Non-ferrous Production	22	7.21	10	7.75	12	6.82
Ferrous Production	14	4.59	7	5.43	7	3.98
Ferrous Products (exc. Machinery)	33	10.82	9	6.98	24	13.64
Machinery Products	65	21.31	23	17.83	42	23.86
Office Machinery and Computers	1	0.33	0	0.00	1	0.57
Electrical Machinery	15	4.92	5	3.88	10	5.68
Radio, TV and TLC Equipments	6	1.97	5	3.88	1	0.57
Medical Equipment, Meas. Instrum.	9	2.95	5	3.88	4	2.27
Motor Vehicles	6	1.97	0	0.00	6	3.41
Other Transportation Equipments	3	0.98	1	0.78	2	1.14
Other Manufacturing Industries	9	2.95	5	3.88	4	2.27
Total	305	100	129	100	176	100

Table 4 – The sample, descriptive statistics at t_0

	Size (No employees)	Value Added (Thousands of Euro)	Productivity (Value added per employee)
Total Sample			
Mean	227.36	14724	56
Std.dev	911.34	94674	63
Min	3	-3862	-18
Max	11806	1419826	812
Foreign			
Mean	130.05	5914	54
Std.dev	123.46	5922	43
Min	5	-1994	-12
Max	744	31091	346
Domestic			
Mean	360.12	26745	59
Std.dev	1385.96	144869	83
Min	3	-3862	-18
Max	11806	1419826	812

Table 5 – Results of tests on employment and labour productivity rate growth. (Paired t test values)

	$t_0 +2$	$t_0 +3$	$t_0 +4$
Total Sample			
Observations	291	261	154
Employment	1.782**	2.040**	1.937**
Labour productivity	2.995***	3.180***	3.132***
Foreign			
Observations	167	153	96
Employment	1.819**	2.289**	2.159**
Labour productivity	3.038***	2.734***	2.974***
Domestic			
Observations	124	108	58
Employment	0.777	0.601	0.326
Labour productivity	1.702**	1.790**	1.488*

Notes:
* H_0 can be rejected at p<.10
** H_0 can be rejected at p<.05
*** H_0 can be rejected at p<.01

Table 6 – Results of tests on employment and labour productivity rate growth, breakdown by dimensional classes. (Paired *t* test values)

		$t_0 +2$	$t_0 +3$	$t_0 +4$
Total Sample				
1-49				
	Observations	76	69	40
	Employment	2.904 ***	2.725 ***	2.659 ***
	Labour productivity	1.536 *	1.959 **	1.522 *
50-249				
	Observations	159	140	79
	Employment	-0.093	0.321	0.850
	Labour productivity	2.453 ***	2.332 ***	2.659 ***
>249				
	Observations	56	52	35
	Employment	-0.012	-0.528	-1.141
	Labour productivity	1.697 **	1.232	1.194
Foreign				
1-49				
	Observations	48	44	28
	Employment	3.053 ***	3.187 ***	2.544 ***
	Labour productivity	1.375 *	2.227 **	1.434 *
50-249				
	Observations	93	84	53
	Employment	-0.339	0.009	1.109
	Labour productivity	2.327 ***	2.261 **	2.421 ***
>249				
	Observations	26	25	16
	Employment	0.483	-0.123	-0.811
	Labour productivity	1.457 *	1.313 *	1.163
Domestic				
1-49				
	Observations	28	25	12
	Employment	1.190	0.676	0.991
	Labour productivity	1.133	1.478 *	1.241 *
50-249				
	Observations	66	56	26
	Employment	-0.582	0.423	-0.154
	Labour productivity	1.253	1.127	1.150
>249				
	Observations	30	27	20
	Employment	-0.341	-0.581	-0.741
	Labour productivity	0.955	-0.633	-0.171

Notes:

* H_0 can be rejected at p<.10

** H_0 can be rejected at p<.05

*** H_0 can be rejected at p<.01

Table 7 – Results of tests on employment and labour productivity rate growth, breakdown by the acquirer's country of origin (Paired *t* test values)

	$t_0 +2$	$t_0 +3$	$t_0 +4$
Foreign Sample			
EU Acquisitions			
Observations	113	106	65
Employment	2.454 ***	1.939 **	2.472 ***
Labour productivity	2.674 ***	2.366 ***	2.507 ***
US Acquisitions			
Observations	47	40	27
Employment	-1.052	0.836	-0.303
Labour productivity	2.429 ***	2.048 **	2.687 ***
Other Acquisitions			
Observations	7	7	4
Employment	1.079	1.243	1.706 **
Labour productivity	-0.046	0.168	-0.724

Notes:
* H_0 can be rejected at p<.10
** H_0 can be rejected at p<.05
*** H_0 can be rejected at p<.01