Università degli Studi di Padova

Department of Economics and Management

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CROSS-BORDER M&AS AND PERFORMANCE: ARE ITALIAN FIRMS BETTER OFF WHEN ACQUIRED BY FOREIGN COMPANIES?

EMPIRICAL EVIDENCE USING A DIFFERENCE-IN-DIFFERENCES APPROACH

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To my family for their love, support, and sacrifice.

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EXECUTIVE SUMMARY

THE PURPOSE OF MY DISSERTATION. The purpose of this work is to assess the impact of foreign mergers and acquisitions (M&As) on Italian acquired companies' performance. The choice of the topic is motivated by the size and quality of the inbound cross-border M&A deals and by the rising "economic nationalism" in our country. In the last months, the extraordinary relevance of the foreign M&A phenomenon has been emphasized by the popular debate observed for the acquisitions of well-known brands like Versace and Candy, and by the peak in media attention due to the possible closure and relocation of a plant of an historical Italian confectionery manufacturer acquired by a Turkish group a few years ago. On the one hand, a huge segment of the population considers the massive acquisition of Italian jewels as a manifestation of the country's industrial decline and of the limits of the Italian economy. On the other hand, a large part of the public opinion sees optimistically the value recognized to the Made in Italy and the opportunities that foreign MNEs can provide to our domestic SMEs.

In this work, we analyze the effects of cross-border M&As concluded between 2011 and 2013 on acquired firms' performance. Unlike many other previous studies, we include in our research both manufacturing and service firms (excluding financial services and real estate). Moreover, we considered only deals in which the foreign investors acquired a majority stake and were therefore potentially able to exercise control and define strategic decisions of the target.

Evidence of "cherry picking" in Italy is provided by Barbaresco et al. (2018) and Benfratello and Sembenelli (2006) while Piscitello and Rabbiosi (2005) find that foreign MNEs do not seem to systematically select lower or higher productive local target companies.

To account for the possibility that performance differences arise from the selection of best-performing firms rather than by the change in ownership, we employ the difference-in-differences (DID) approach in conjunction with coarsened exact matching (CEM). Together, these methods allow us to single out causal foreign ownership effects by focusing on the comparison between foreign-acquired firms (treated group) and remaining domestic companies with a similar ex-ante likelihood of being acquired (control group).

Our results suggest that foreign companies can manage domestic firms better than former local owners and managers. We find that foreign-acquired firms are more likely to outperform control units since they show a significant higher EBITDA margin and positive but not significant effects on sales and ROA. At the end of this empirical research, some advice to manager of foreign companies looking at domestic firms are suggested.

CHAPTER 1. The M&A phenomenon in Italy is unprecedented both for size and quality of the deals. M&As announced in the first nine months of the year, suggest that 2018 is on track to become one of the most valuable years in a long time, at least in terms of number of transactions (KPMG, 2018). The first chapter describes the trends for global M&As, cross-border M&As, and inbound, outbound and domestic Italian deals. M&As trends in Italy (data from Zephyr-Bureau van Dijk) are illustrated and compared in terms of values and volumes, main sectors and main countries involved. The picture that emerges shows an evident disproportion between the inbound and outbound M&A market in our country.

CHAPTER 2. The "Colonization Risk" is an actual and strategic theme of discussion in Italy. In the popular debate, foreign M&As of Italian companies have often been criticized by implying loss of national control and a negative effect on the economy and industrial system. Economic nationalism is rising in the country and in the European Union and these fears are testified by the increasing number of protectionist measures adopted. From the 2014 Spring PEW Global Attitude survey, it emerges that Italy is one of the countries most opposed to foreign investors. Just 23% of the Italians interviewed believe that foreign acquisition of domestic firms is beneficial while the others are opposed to FDI.

Nevertheless, consistently with FDI theory, most of the literature argues that foreign MNEs may have the potential to develop the business of the local target company by bringing new capital from foreign countries (Barbaresco et al., 2018); giving access

opportunities to new markets or better access to its existing markets thanks to MNEs' presence abroad (Chari et al., 2009; ICE & Prometeia, 2014); transferring management practices and superior technological know-how (Bertrand and Zitouna, 2008); bringing brand reputation and a higher bargaining power towards suppliers and customers (Barbaresco et al., 2018). On the other hand, literature also highlights that cross-border M&As can hide dangers and risks such as the closure of domestic manufacturing plants through their relocation abroad or the danger of profit stripping.

CHAPTER 3. In this chapter, twenty-six studies that investigate the impact of cross-border M&As on the performance of the target firm are reviewed. Empirical evidence on post-acquisition performance of acquired companies is mixed. However, most of the studies give no support to the worries that cross-border M&As may lead to performance deterioration.

The bulk of the literature (18 papers) has analysed productivity (total factor productivity and labour productivity) effects. However, many studies investigate also the effects on profitability, efficiency, sales, employment levels, salaries, investments, exports, financial structure and probability of survival. All the 26 studies reviewed use data on manufacturing firms, with only a few including also services companies. Some papers investigate if the effects of foreign acquisitions vary across industries (Fukao et al., 2006; Shiffbauera et al., 2017; Siedschlag et al., 2014) while others measure differences based on the acquirer's country of origin (Chen, 2011) and national cultural distance (Barbaresco et al., 2018; Piscitello and Rabbiosi, 2005).

Previous studies conducted in Italy adopt different methodological approaches to measure the effect of the foreign ownership on the target performance. Two studies combine propensity score matching (PSM) with difference-in-differences approach (Bentivogli and Mirenda, 2017; ICE and Prometeia, 2014). One study calculates for each indicator a four years pre- and post-acquisition value, and after computing the difference both for the treated group and its benchmark, evaluates the significance using a t-test analysis (Barbaresco et al., 2018). Benfratello and Sembenelli (2006) apply the GMM-system estimator by controlling for potential endogeneity sources, while Piscitello and Rabbiosi (2005) run a linear regression model by including controlling variables. Four studies show the positive contribution of foreign ownership on target's performance (Barbaresco et al., 2018; Bentivogli and Mirenda, 2017; ICE & Prometeia, 2004; Piscitello and Rabbiosi,

2005) while one study does not find any significant effect (Benfratello and Sembenelli, 2006).

CHAPTER 4. Our analysis is based on firm-level data from Italy over the period from 2008 until 2016. Since we want to measure the performance of the acquired companies three years before and three years after the takeover, we consider only the M&As concluded between 2011 and 2013. The combination of M&As' data from Thomson Reuters database and balance sheet data from BvD's AIDA, allows us to compare the effects of foreign ownership on the performance of acquired firms on an aggregate value and by differentiating for target size, industry, form of the deal and acquirer's country of origin. Firstly, we show how our outcomes of interest change after the takeover for the treated units. By simply comparing the 3-years average sales for the target firms before and after the cross-border M&As, we can see an improvement of 1.07% in sales for the treated units (Table 17). The change is larger for SMEs, in the services industry or when the acquirer is non-European. Adopting the same approach, we note that return on assets (ROA) decrease by 0.79% in the post-acquisition period (Table 19), although the effects are better in case of SMEs, services sector or European acquirers. Similarly, EBITDA margin decreased by 3.63% after the deal (Table 21). The effects are worst in case of large companies, services industry, and acquisitions (rather than mergers). Nevertheless, the previous results are not useful if not analysed in comparison to what would have happened in case the acquired company had remained under domestic ownership.

A major concern of the existing literature is the possibility of "selection bias" affecting the estimates of the impact of a foreign takeover on target performance. Often it is argued that firms acquired by foreign companies show better performance simply because foreign investors "cherry pick" the best performing local firms. If this is the case, a simple performance comparison between foreign-acquired and domestically-owned firms would lead to an overestimate of the real impact of the M&A. In order to address the potential selection bias problem and measure the causal effect of foreign acquisition, we adopt an empirical strategy that combine difference-in-differences with matching. However, conversely to Bentivogli and Mirenda (2017) and ICE and Prometeia (2014) that combined DID with PSM, we adopt coarsened exact matching (CEM) that it is an intuitive method introduced by Iacus, King and Porro (2009) to improve the estimation of causal effects by reducing the differences in observable characteristics (in our case industry, sales,

ROA, EBITDA margin and debt on equity ratio) between treated and control groups. According to Iacus et al. (2012) CEM dominates commonly used existing matching methods (e.g. propensity score matching) in its ability to reduce imbalance, model dependence, estimation error, bias, variance, mean square error.

After we matched treated with control units, we ran a first-difference regression on the matched sample finding that foreign-owned firms show a positive effect on EBITDA margin (95% level of significance), but no significant effects on sales and ROA. Conversely, Bentivogli and Mirenda (2017) and ICE and Prometeia (2014) had shown a positive effect on sales growth after the M&A, while no previous literature in Italy has analysed ROA and EBITDA margin.

Moreover, we find that performance effects are larger in the manufacturing industry rather than services, in SMEs rather than large companies, and in mergers rather than acquisitions. Moreover, national cultural distance as defined by Ronen and Shenkar (2013) seems to be positively correlated to EBITDA margin. Conversely, the distinction based on the acquirer's geographical distance (European vs non-European) does not show any significant effect.

MANAGERIAL IMPLICATIONS. This work contributes to the international business literature by uncovering important characteristics related to foreign ownership advantages and providing important managerial implications for foreign companies that want to acquire Italian firms. Based on our results, we recommend that foreign acquirers must carefully plan the post-merger integration (PMI) process, especially in the services industry. This is because services companies have usually higher component of human capital and intangible assets and they are more difficult to integrate than manufacturing firms. Moreover, our findings suggest that larger target companies can need more time to fully manifest the positive effects of foreign ownership while SMEs are more likely to benefit from the acquisition in the short term, as argued also by Sinani and Meyer (2004) and Thanos and Papadakis (2012). Managers must take in mind this aspect when evaluating possible M&A synergies. Furthermore, especially in case of acquisitions, foreign investors must be aware that trust and autonomy of the acquired firm's members are two important elements of the PMI process and that tight controls tend to signal the absence of trust and can lead to a worsening of the performance. Acquirers should always find the correct balance between autonomy granted to the target company and set of rules, systems and

performance expectations, typically used to gain control (Datta and Grant, 1990). Finally, our results suggest that foreign investors should never underestimate national cultural differences, even if the acquirer and target country seem to be similar in many aspects. Operations in psychically close countries are not necessarily easy to manage, as suggested by the concept of "psychic distance paradox", because assumptions of similarity can prevent executives from learning about critical differences (O'Grady and Lane, 1996).

CROSS-BORDER M&AS: TRENDS, FACTS AND FIGURES

1.1 Introduction

Foreign merger and acquisitions (M&As) play an important role in the world economy. In the first part of the chapter, recent global trends concerning mergers and acquisitions in general and cross-border takeovers more specifically are briefly described. The topic is particularly relevant in this period, considering that the transactions announced in the first nine months of the year, suggest that 2018 is on track to becoming one of the most valuable years in a long time (KPMG, 2018). In the second part, we analyse data and facts about the Italian M&A market for the period 2008-2017. In particular, the trends of the Italian inbound, outbound[1] and domestic M&As are illustrated and compared in terms of values and volumes, main sectors and main countries (target or acquiring) involved.

The size of the phenomenon of foreign takeovers in the world motivate the analysis of the effects of foreign ownership on the host countries' economies and, in particular, the empirical analysis testing the existence of a higher post-acquisition performance for foreign-controlled firms compared to domestically-owned ones. The topic is of interest for policy makers, as it could give empirical support to the implementation of policies to attract or discourage foreign companies to acquire local firms. Especially in Italy, the relevance of the cross-border M&A phenomenon has been emphasized in the last months by the peak of media attention observed for the acquisitions of well-known brands as Versace and Candy group, to name a few.

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[1]*Foreign takeovers can be divided in two types: inbound (or inward) cross-border M&As involve an inward capital movement due to the sale of a domestic company to a foreign investor; conversely, outbound (or outward) cross-border M&As involve outward capital movement due to purchase of a foreign company.*

Unless otherwise stated in the text, the data and the statistics used in this chapter have been retrieved or calculated from the Zephyr database[2] published by Bureau van Dijk.

1.2 Global M&A trends

1.2.1 Value and volume of M&A deals globally

Global M&A activity in the first nine months of 2018 set a record in terms of deals value. Transactions for a total of $4,1[3] trillion have been announced in the first nine months of the year, representing one of the highest value years on record, except for 2015 ($4,3 trillion) and 2007 ($4,4 trillion) (Zephir published by Bureau van Dijk, 2018). The total deal value has been bolstered by a series of mega-deals (i.e. takeovers worth more than $5 billion) such as the acquisition of Sky by Comcast.

Focusing on the 2012 to 2017 trend, the volume and value of the global M&A market slightly declined in 2017 for the second year in a row (Figure 1). More than 96,000 deals were announced for a total value of $4,7 trillion, resulting in an 8 per cent drop compared to the previous year in terms of volume and a 3 per cent in terms of total deal value.

Figure 1 Global deals by volume and value
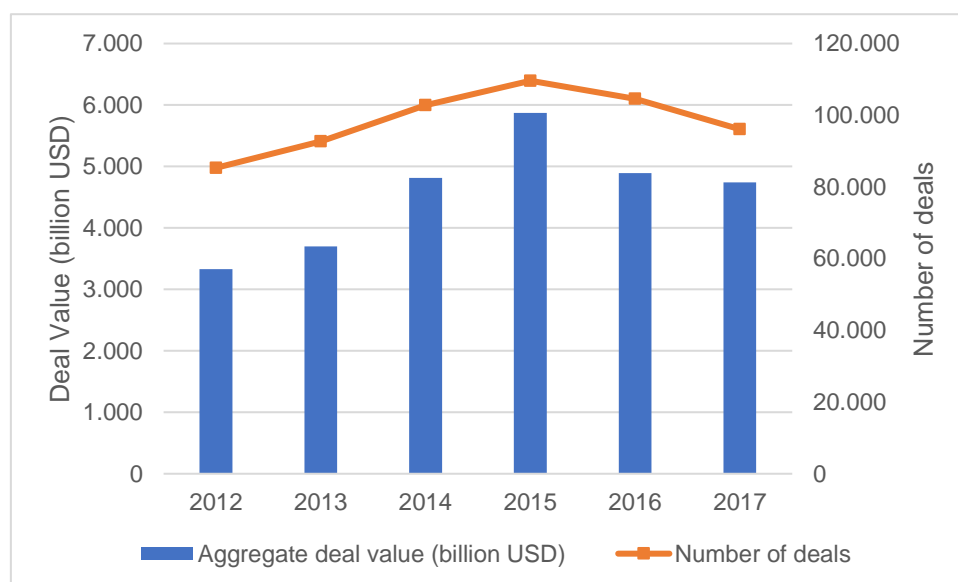
Source: Elaborations on data from Zephyr published by Bureau van Dijk

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[2] *The Zephyr M&A database includes all the deals completed between 01/01/2009 and 31/12/2017. The following deal types are included: Acquisition, Capital increase, Institutional buy-out, Management buy-in, Management buy-out, Merger, Minority Stake. Deal types excluded are: joint ventures, IPOs, planned IPOs and share buybacks.*
[3] *Reference to "dollars" ($) means United States dollars, unless otherwise indicated.*

Although the result represents the second consecutive annual decline by volume and value, it represents an improvement compared with 2012 and 2013 values.

Despite the overall reduction of the global M&A market, in 2017 several world regions attracted more value than in 2016. For example, in Western Europe[4] the total deal value climbed 6 per cent to $1,3 trillion. Similar improvements were registered also in the Far East and Central Asia. However, the United States is still holding the first position in terms of FDI attractiveness index in 2017, ranking first both in terms of deal volume (Figure 2) and value (Figure 3). Companies based in the US were targeted in almost 21,000 deals for a combined value of about $1,5 trillion. Its nearest rival on both fronts was China, which placed second with almost 14,000 deals for a countervalue of $720 billion. The UK ranked third, with about 6,000 deals worth $285 billion, followed by Germany in the fourth position with 4,500 deals worth $175 billion. Italy ranked 12th in terms of total deal value with $92 billion and 18th in terms of volume with 1,213 deals. Focusing on the most active sectors involved in M&A deals, the "machinery, equipment, furniture and recycling" sector topped the industry rankings both in terms of volume and value in 2017 with about 10,000 deals worth $569 billion. The "chemicals, rubber and

Figure 2 Top five global target countries by deal volume in 2017
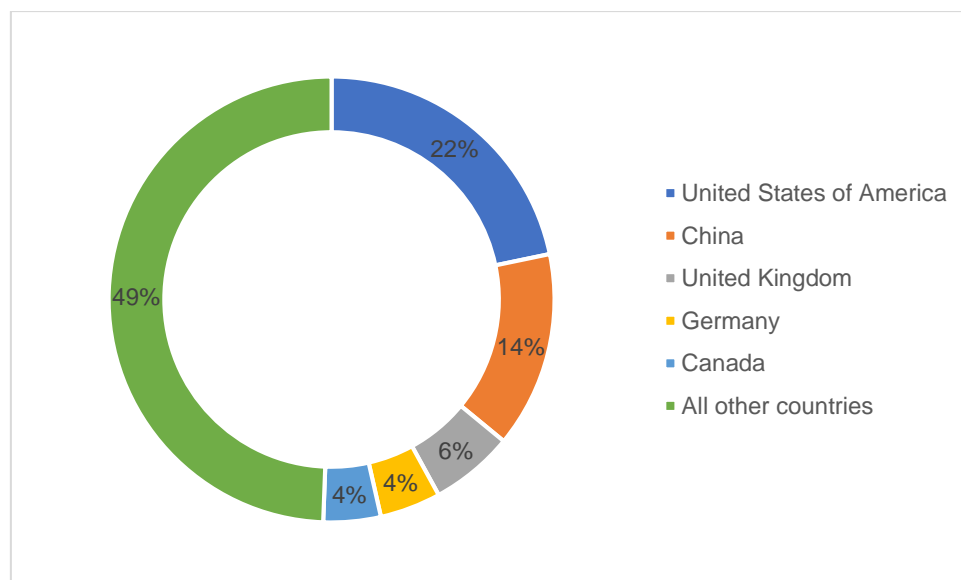
Source: Elaborations on data from Zephyr published by Bureau van Dijk

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[4] *The Western Europe region covers target companies in Andorra, Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Gibraltar, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Malta, Monaco, Netherlands, Norway, Portugal, San Marino, Spain, Sweden, Switzerland, Turkey and the UK.*

Figure 3 Top five global target countries by deal value in 2017
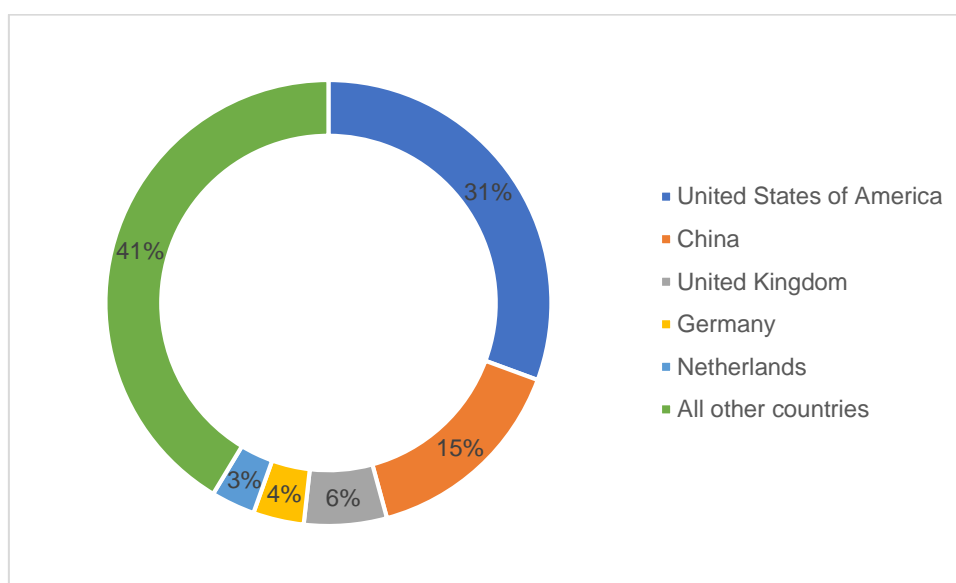
Source: Elaborations on data from Zephyr published by Bureau van Dijk

plastics" industry ranked at the second place by value ($389 billion), placing it ahead of "banks" ($312 billion) and "primary sector" ($298 billion).

Despite the decline in global M&A activity in 2017, a positive trend was recorded in terms of private equity and venture capital (PE and VC) investment that hit its highest value ($753 billion) since the beginning of the global financial crisis in 2007.

1.2.2 Cross-border deals

In 2017 cross-border M&A activity accounted for about 30% of total M&A volume and cross-border deals decreased by 10% compared to 2016 (Thomson Reuters, 2017). On one side, outbound cross-border levels from acquirors based in the United States and intra-Europe increased, but on the other side, the new measures put in place in China to curb foreign investments, resulted in a 35 per cent decline in outbound Chinese M&A activity compared to the record registered in 2016 (ibidem).

Furthermore, as stated in the UNCTAD World Investment Report 2018[5], the value of net cross-border mergers and acquisitions decreased in 2017 compared to the previous year

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[5] *All values and numbers referring to cross-border M&As in the UNCTAD 2018 report are presented on a net basis. Net cross-border M&As are calculated considering sales of companies in a host economy to foreign MNEs. It excludes sales of foreign affiliates (already owned by foreign MNEs) to other foreign MNEs. Divestments (sales of foreign affiliates to domestic firms) are subtracted from the value (number). Calculations for 2016 and 2017 net cross-border M&As are based on information reported by Thomson Reuters Eikon. For previous years, please see WIR17 and its web annex tables.*

from \$887 billion to \$694 billion. This means that although total global M&A activity (both domestic and cross-border deals) has been robust over the past few years, the aggregate value of net cross-border M&As contracted in 2017, after a significant rise year-by-year since 2013. Conversely, the number of net cross-border M&A deals sustained its upward trend to almost 7,000 deals in 2017 (Figure 4).

Figure 4 Value and number of net cross-border M&As 2008-2017

Source: UNCTAD, World Investment Report 2018; http://unctad.org/wir or http://unctad.org/fdistatistics.
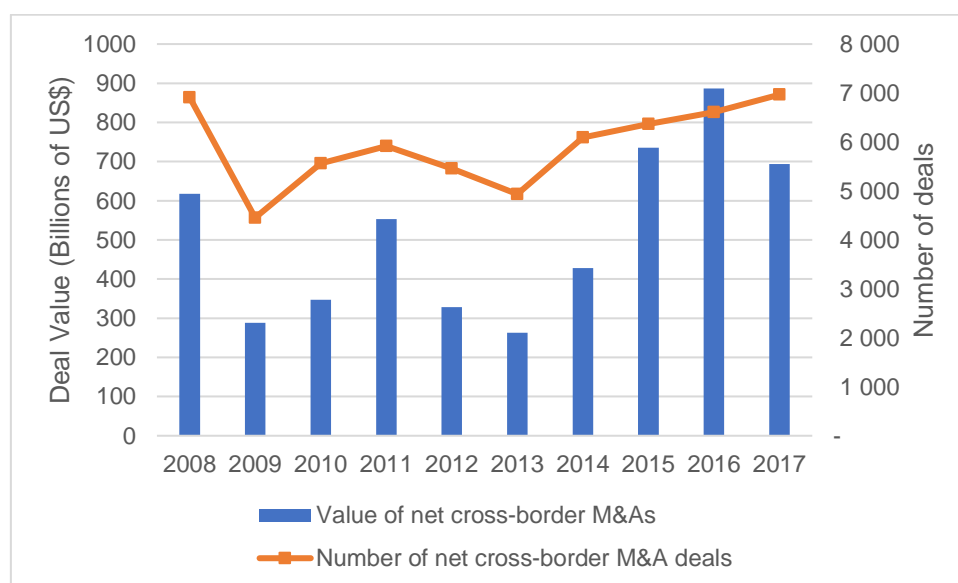
The value of net cross-border M&As in 2017 decreased in all the economic sectors compared to 2016 (Table 1). The value of cross-border M&As in the primary sector decreased by 70 per cent, even if the number of transactions in the sector more than doubled. At the manufacturing level, the value decreased to \$327 billion in 2017 with extractive industries, food and beverages sector, and electronics industry registering the largest decline. In contrast, the value of net transactions in machinery and equipment, business services and information and communication increased considerably compared to the previous year (UNCTAD, 2018).

Table 1 Value and number of net cross-border M&As, by sector, 2013-2017

	VALUE (BILLIONS OF US$)					NUMBER				
	2013	**2014**	**2015**	**2016**	**2017**	**2013**	**2014**	**2015**	**2016**	**2017**
TOTAL	263	428	735	887	694	4 936	6 090	6 364	6 607	6 967
PRIMAY	- 13	37	34	83	24	379	341	240	206	550
MANUFACTURING	135	188	394	406	327	1 440	1 694	1 778	1 745	1 690
SERVICES	140	203	306	398	343	3 117	4 055	4 346	4 656	4 727

Source: UNCTAD, World Investment Report 2018; http://unctad.org/wir or http://unctad.org/fdistatistics.

1.3 Italian M&A market

1.3.1 Inbound Italian M&As

In 2017 the inward Italian M&A activity substantially decreased. Firstly, in terms of deal volume the number of transactions (578 deals in 2017) halved compared to the previous year. It was a nadir not recorded since 2012 when the number of takeovers concluded was lower than 500. Secondly, the total deal value also decreased from a total of €67 billion to €43 billion (Figure 5). A decrease in the number of billionaire transactions contributed to the decrease in the total value since only five deals worth more than €1 billion were completed in 2017.

Figure 5 Inbound Italian deals by volume and value
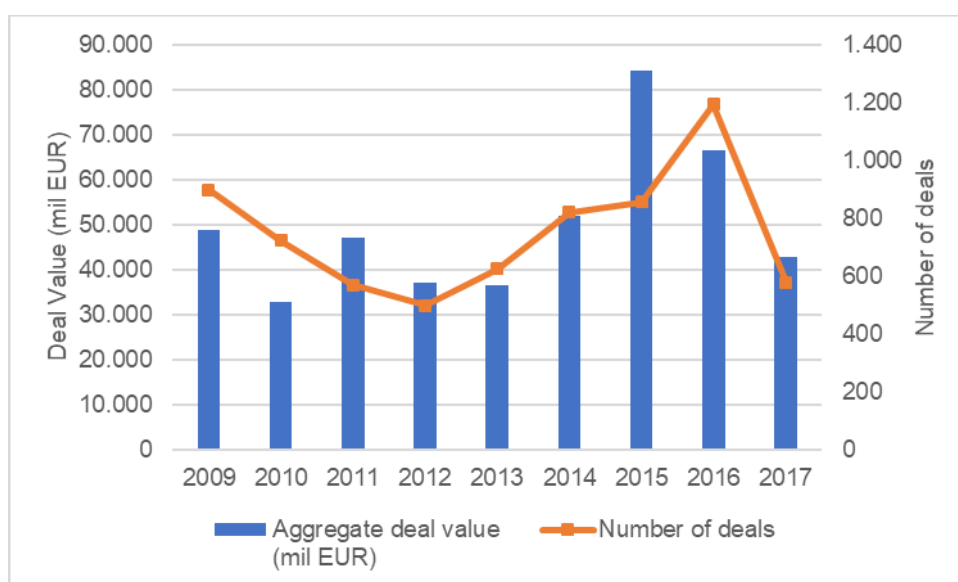
Source: Elaborations on data from Zephyr published by Bureau van Dijk

With respect to the Italian sectors more subject to foreign takeovers, in 2017 (Table 2) "banks" represented alone more than half of the Italian inbound M&A market for countervalue (€19.6 billion), followed by "machinery, equipment, furniture and recycling" (€4.5 billion) and by the "construction" sector ($3.7 billion). However, in terms of volumes Table 3 shows that the sector that has totalled the highest number of transactions in 2017 has been "machinery, equipment, furniture and recycling" with 101 deals, ahead of "banks" (50 deals) and "gas, water and electricity" (44 deals). Obviously, every year some billionaire deal influences the ranking of the most targeted sectors. In 2016, for example, "post and telecommunications" ranked first while in 2015 that position was held by "banks".

Table 2 Inbound Italian target sectors by value

TARGET SECTOR[6]	2015 (MIL EUR)	2016 (MIL EUR)	2017 (MIL EUR)
Banks	17,882	8,736	19,623
Other services	8,093	7,627	6,936
Machinery, equipment, furniture, recycling	16,578	3,424	4,456
Construction	1,980	1,709	3,658
Textiles, wearing apparel, leather	851	2,259	1,693
Wholesale & retail trade	5,998	4,858	1,674
Chemicals, rubber, plastics	2,172	8,797	1,032
Post and telecommunications	10,833	24,659	1,030
Gas, water, electricity	11,547	1,234	867
Food, beverages, tobacco	702	3,238	767
Hotels & restaurants	731	281	464
Insurance companies	1,661	1,199	363
Publishing, printing	28	120	263
Transport	866	780	48
Primary sector	1,640	507	28
Wood, cork, paper	83	289	27
Metals & metal products	1,798	471	14
Education, health	0	170	0
Public administration and defence	-0	0	0

Source: adapted from Zephyr published by Bureau van Dijk

Table 3 Inbound Italian target sectors by volume

TARGET SECTOR	2015	2016	2017
Other services	222	230	156
Machinery, equipment, furniture, recycling	122	148	101
Banks	111	339	50
Gas, water, electricity	72	55	44
Textiles, wearing apparel, leather	26	67	37
Wholesale & retail trade	49	45	32
Chemicals, rubber, plastics	45	58	31
Post and telecommunications	34	81	26
Construction	48	29	26
Publishing, printing	21	21	21
Food, beverages, tobacco	28	15	16
Metals & metal products	20	11	13
Education, health	2	4	8
Transport	12	9	7
Hotels & restaurants	13	17	6
Insurance companies	10	32	5
Primary sector	13	28	4
Wood, cork, paper	8	7	2
Public administration and defence	0	0	0

Source: adapted from Zephyr published by Bureau van Dijk

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[6] *The sector breakdown uses targets' activities as defined to be 'Major Sectors' by Zephyr.*

With respect to the acquirer's country of origin, in Table 4 are listed the main foreign countries that have acquired domestic companies in 2017. French investors were the main acquirors of Italian firms in 2017 in terms of value (€6.7 billion), followed by companies based in the USA (€5.4 billion) and Chinese companies (€3.5 billion). Nevertheless, US acquirors were the most prolific in terms of number of transactions (Table 5) with a total of 72 inbound M&A deals followed by Norway (42 deals) and UK (36 deals). However, in terms of value, in 2016 the most active foreign investors were located in Luxembourg while in 2015 in The Netherlands. Conversely, in terms of volumes the United States have been the most active acquirers since 2015 to 2017.

Table 4 Top 10 inbound Italian acquiror countries by value

ACQUIROR COUNTRY	2015 (MIL EUR)	2016 (MIL EUR)	2017 (MIL EUR)
France	3.821	9.474	6.668
US	10.659	8.513	5.450
China	3.222	230	3.464
Netherlands	12.132	191	3.005
Germany	172	74	2.998
Norway	8.963	1.226	2.992
Luxembourg	192	22.570	1.041
UK	6.142	5.671	1.004
Spain	1.370	1.327	935
Cayman Islands	27	173	400

Source: adapted from Zephyr published by Bureau van Dijk

Table 5 Top 10 inbound Italian acquiror countries by volume

ACQUIROR COUNTRY	2015	2016	2017
United States of America	97	238	72
Norway	64	45	42
United Kingdom	48	207	36
Germany	26	24	31
France	33	66	29
Spain	12	15	19
China	12	9	17
Luxembourg	23	27	15
Switzerland	53	31	13
Netherlands	16	15	9

Source: adapted from Zephyr published by Bureau van Dijk

To conclude, Figure 6 gives a glimpse to the trends of the inbound Italian private equity and venture capital activity by value and volume. In 2017, the value of inbound Italian PE and VC investment reached the highest value recorded since 2006 with a total value of completed deals equal to €6 billion. Looking more closely at the PE and VC trends, in

2017 it was registered the third annual increase by value contrasted with the third consecutive yearly decline by volume to 45 deals, matching that recorded for 2013. French investors were the main inbound PE and VC acquirors by value after signing off deals worth €3 billion in 2017, though US companies led by volume with 13 inbound PE and VC deals compared to the 8 deals concluded by France.

Figure 6 Inbound Italian private equity deals by volume and value
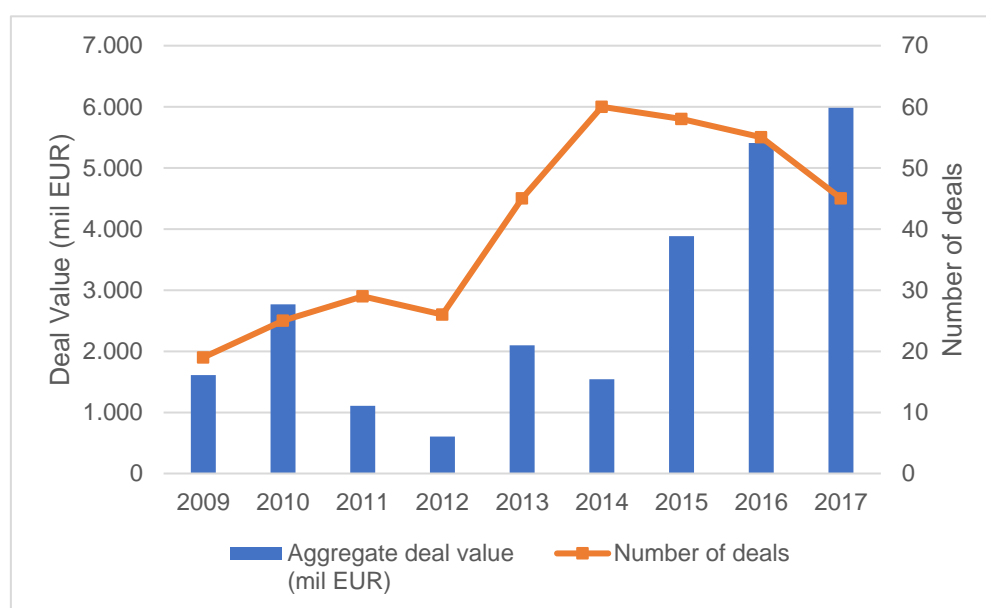
Source: Elaborations on data from Zephyr published by Bureau van Dijk

1.3.2 Outbound Italian M&As

Outbound M&A activity is much smaller than inbound M&A activity in Italy. In Figure 7 is shown the outbound M&A trend in terms of volume and value. In 2017, the number of outward foreign deals concluded by Italian investors fell back for the third consecutive year to 128 deals. Similarly, the total deal value slumped for the second successive period reaching the lowest level at €2.6 billion. This means that in 2017 there were Italian investors that "made shopping" abroad, but altogether they are worth only 40 per cent of what France alone has spent in Italy in the same period (€6,7 billion).

However, it is worth noting that the continuing decline comes after a boom in the outbound Italian M&A market that had resulted in 171 deals in 2014 and a total deal value of almost €12 billion in 2015. The low value and volume registered in 2017 is in part the result of a lack of transactions worth more than €1 billion. Indeed, the largest completed outbound M&A transaction is worth €750 million, and it represents 28 per cent of the total outward Italian M&A market.

Figure 7 Outbound Italian deals by volume and value
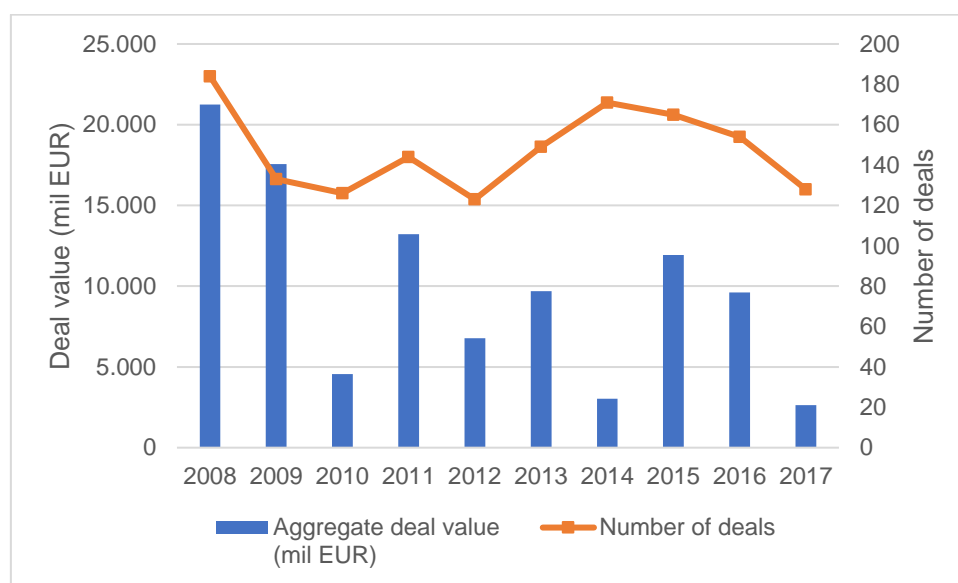
Source: Elaborations on data from Zephyr published by Bureau van Dijk

With regard to the sectors, in 2017 (Table 6) the industries more targeted by Italian companies abroad by value were "gas, water and electricity" (€1.2 billion) that represented alone 45 per cent of the total outbound M&A market, followed by "machinery, equipment, furniture and recycling" (€345 million) and by the "primary sector" (€344 million). However, Table 7 shows that the gas, water and electricity sector was only the 7th sector in terms of number of deals concluded (6 deals). The three most targeted industries in terms of volume in 2017 were "machinery, equipment, furniture and recycling" with 24 deals, "wholesale and retail trade" with 17 deals and "publishing and printing" with 13 deals.

Table 6 Outbound Italian target sectors by value

TARGET SECTOR	2015 (MIL EUR)	2016 (MIL EUR)	2017 (MIL EUR)
Gas, Water, Electricity	489	22	1.203
Machinery, equipment, furniture, recycling	6.204	840	345
Primary Sector (agriculture, mining, etc.)	0	26	344
Other services	251	608	269
Hotels & restaurants	0	0	142
Wholesale & retail trade	18	479	121
Transport	802	112	79
Food, beverages, tobacco	160	918	55
Chemicals, rubber, plastics, non-metallic products	60	173	42
Publishing, printing	400	41	35
Textiles, wearing apparel, leather	1.298	10	1
Metals & metal products	13	124	0

Insurance companies	1.961	5.494	0
Education, Health	0	0	0
Public administration and defence	0	0	0
Construction	21	509	0
Wood, cork, paper	179	6	0
Banks	76	351	0
Post and telecommunications	0	0	0

Source: adapted from Zephyr published by Bureau van Dijk

Table 7 Outbound Italian target sectors by volume

TARGET SECTOR	2015	2016	2017
Other services	44	42	28
Machinery, equipment, furniture, recycling	22	27	24
Wholesale & retail trade	15	19	17
Publishing, printing	9	10	13
Chemicals, rubber, plastics, non-metallic products	14	9	9
Transport	4	3	7
Gas, Water, Electricity	8	6	6
Food, beverages, tobacco	10	3	3
Textiles, wearing apparel, leather	7	6	3
Insurance companies	3	1	2
Wood, cork, paper	5	2	2
Primary Sector (agriculture, mining, etc.)	3	3	2
Education, Health	0	0	2
Construction	8	3	1
Metals & metal products	8	7	1
Hotels & restaurants	0	0	1
Banks	2	2	0
Public administration and defence	1	0	0
Post and telecommunications	1	1	0

Source: adapted from Zephyr published by Bureau van Dijk

With regard to target countries, in 2017 France was the main target country by value with a total deal value equal to €815 million (Table 8), ahead of Spain with €589 million and Romania with €400 million. However, in terms of volume, France (10 deals) was over-taken by the UK since Italian-based companies completed 18 deals in the UK (Table 9), though the combined value was only €81 million compared to the almost ten times higher value registered in France.

In 2017, outbound PE and VC investment resulted in 24 deals for a total value of €247 million (Figure 8). Outbound PE and VC investments brought an end to two consecutive annual increases in value. However, growth was not wholly stripped away as the value of the takeovers concluded in 2017 remained higher than the levels registered in 2015 and 2014. Similarly, volume may have slipped yearly but, with the exception of 2016, in 2017 PE and VC transactions have been the highest recorded since 2001. Canadian companies

Table 8 Top 10 outbound Italian target countries by value

TARGET COUNTRY	2015 (MIL EUR)	2016 (MIL EUR)	2017 (MIL EUR)
France	848	337	815
Spain	45	204	589
Romania	1	95	400
Canada	4	14	227
United States of America	6.247	948	149
Brazil	109	58	110
Germany	1.365	252	99
United Kingdom	480	278	81
Greece	0	0	49
Netherlands	1.246	1	35

Source: adapted from Zephyr published by Bureau van Dijk

Table 9 Top 10 outbound Italian target countries by volume

TARGET COUNTRY	2015	2016	2017
United Kingdom	15	17	18
Spain	9	15	14
United States of America	18	15	13
France	15	11	10
Germany	14	19	9
Czech Republic	2	12	9
Netherlands	4	4	7
Switzerland	4	10	5
Canada	4	3	3
Hong Kong	0	0	3

Source: adapted from Zephyr published by Bureau van Dijk

Figure 8 Outbound Italian private equity deals by volume and value
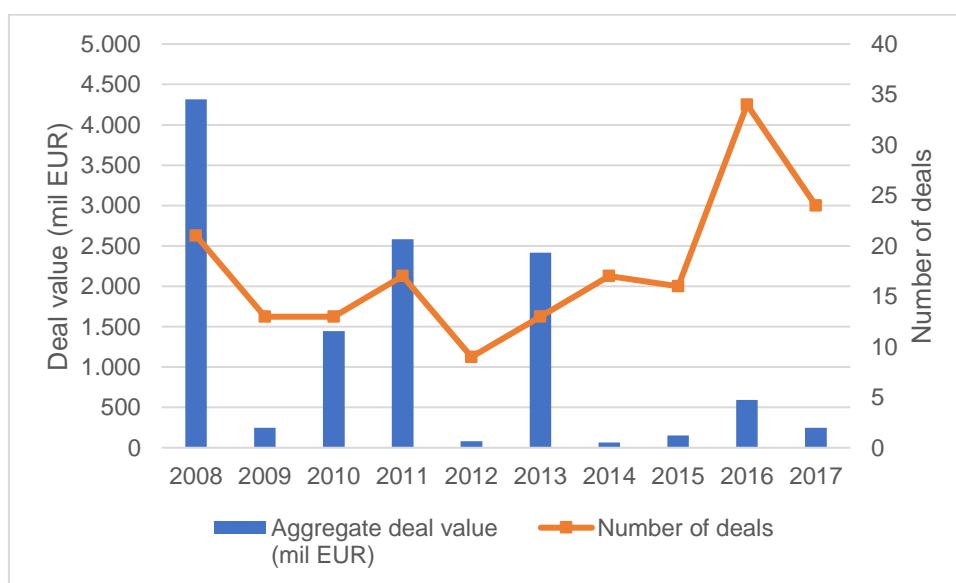
Source: Elaborations on data from Zephyr published by Bureau van Dijk

were the main targets of outbound Italian PE and VC investment by value with €85 million, followed by Spain (€69 million) and the United States (€54 million). In terms of volume, PE and VC transactions targeted companies based mainly in the UK (7 deals) and Spain (6 deals).

1.3.3 Domestic Italian M&As

In 2017, the aggregate value of domestic Italian M&As fell by 31 per cent to €19 billion, compared to the €27 billion recorded the previous year (Figure 9). Volume also dropped from 642 deals in 2016 to 583 in 2017, the lowest result since 2010. This outcome marked the third consecutive annual decline in volume and the first in value after three consecutive years of growth.

Figure 9 Domestic Italian deals by volume and value
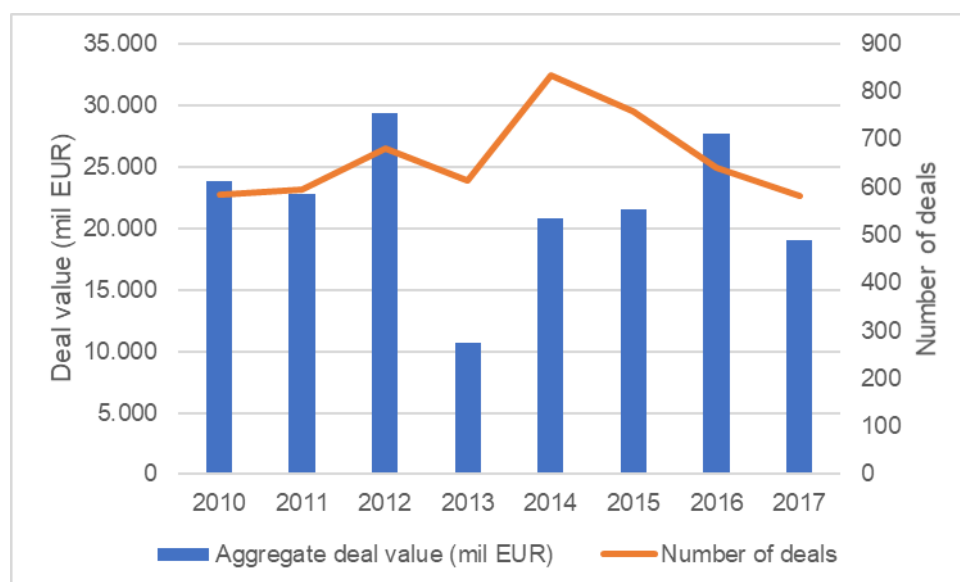
Source: Elaborations on data from Zephyr published by Bureau van Dijk

 "Banks" topped the sector rankings in 2017 (Table 10), with deals completed for €7.5 billion, nearly half of which can be attributed to the acquisition of Banca Popolare di Milano by Banco BPM S.p.A. Other valuable sectors include "insurance companies" (€1.4 billion) and "machinery, equipment, furniture, and recycling" (€1.1 billion). In terms of volume. the sector (Table 11) that totalled the highest number of deals in 2017 was "machinery, equipment, furniture and recycling" (69 deals) followed by "gas, water and electricity" (50 deals) and "publishing and printing" (37 deals).

In line with the decline in the M&A activity, both the volume and value of domestic Italian PE and VC investments fell in 2017. 116 deals for a countervalue of €1.2 billion

were concluded, compared to 125 transactions worth € 4.4 billion in the previous year. In terms of value, this outcome represents the worst result since 2010. The year's top sector by value was "transport" worth €435 million, followed by "machinery, equipment, furniture, and recycling" worth €151 million and "metals and metal products" worth € 82 million.

Table 10 Domestic Italian target sectors by value

TARGET SECTOR	2015 (MIL EUR)	2016 (MIL EUR)	2017 (MIL EUR)
Banks	1.134	6.194	7.514
Other services	2.183	7.499	5.110
Insurance companies	74	778	1.443
Machinery, equipment, furniture, recycling	1.582	452	1.093
Transport	851	1.648	1.003
Gas, Water, Electricity	2.707	5.900	819
Chemicals, rubber, plastics, non-metallic products	7.667	511	510
Wholesale & retail trade	2.065	33	314
Wood, cork, paper	0	20	313
Construction	1.337	492	275
Primary Sector (agriculture, mining, etc.)	1	524	244
Publishing, printing	148	1.625	181
Post and telecommunications	39	923	161
Metals & metal products	207	798	97
Hotels & restaurants	34	23	62
Food, beverages, tobacco	404	265	34
Textiles, wearing apparel, leather	450	573	28
Education, Health	1	0	4
Public administration and defence	0	0	0

Source: adapted from Zephyr published by Bureau van Dijk

Table 11 Domestic Italian target sectors by volume

TARGET SECTOR	2015	2016	2017
Other services	322	248	196
Machinery, equipment, furniture, recycling	78	70	69
Gas, Water, Electricity	44	43	50
Publishing, printing	31	48	37
Chemicals, rubber, plastics, non-metallic products	23	29	33
Wholesale & retail trade	38	27	33
Banks	26	34	26
Food, beverages, tobacco	26	27	23
Metals & metal products	20	19	20
Transport	19	17	20
Textiles, wearing apparel, leather	23	18	16
Construction	19	18	14
Insurance companies	3	24	13
Primary Sector (agriculture, mining, etc.)	4	3	9
Education, Health	79	1	8
Hotels & restaurants	8	7	7

Wood, cork, paper	2	3	5
Post and telecommunications	6	6	4
Public administration and defence	1	2	0

Source: adapted from Zephyr published by Bureau van Dijk

Figure 10 Domestic Italian Private equity deals by volume and value
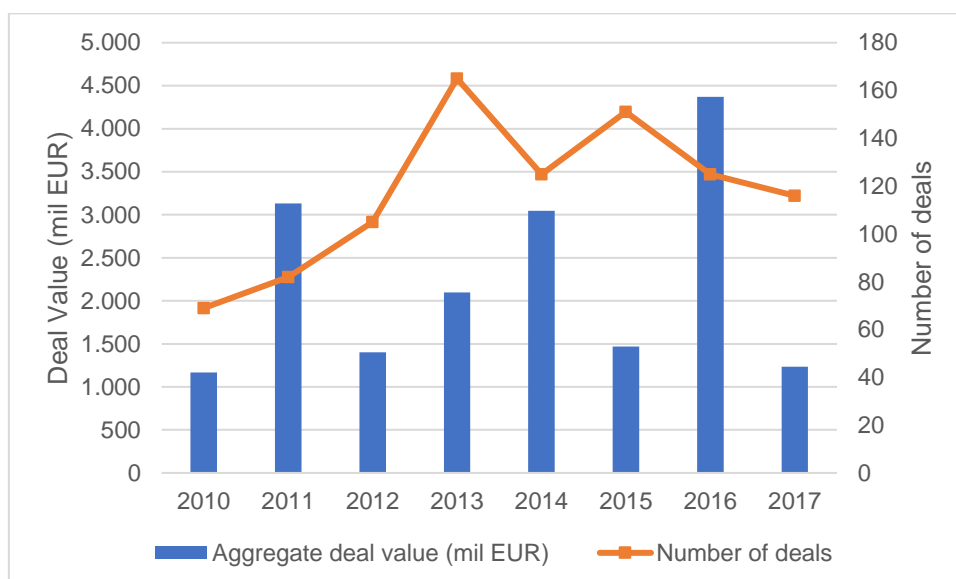
Source: Elaborations on data from Zephyr published by Bureau van Dijk

1.4 Conclusions

What emerges from the analysis of the Italian M&A market (Zephyr published by Bureau van Dijk) is the considerable disproportion between the inbound and outbound market. If on the one hand, in 2017 foreign companies concluded 578 deals in Italy for a value of €43 billion, on the other hand Italian investors concluded abroad 128 deals for a value of €2,6 billion. This disproportion is particularly evident in the comparison between Italy and other industrial countries. For example, in 2017 French investors acquired Italian companies for a value of €6,7 billion compared to the €815 million spent by Italian investors in France. Similarly, US investors concluded 72 deals in Italy worth €5,4 billion compared to 13 deals worth €149 million concluded by Italian investors in the US.

The high number of inbound cross-border M&As in Italy can be explained by the success of Italian products on foreign markets, the effect of the recognition of the qualitative and technical value of the Made in Italy, the pull capacity of the brands rather than the push capacity of the commercial channels and the undisputed design and productive know-how in our territory. The result is a sui generis process whereby success on foreign markets ends up leading to acquisitions by foreign investors or, to put it another way, leads

from the export of products to the sale of companies (Barbaresco et al., 2018). Considering the relevance of the topic, we think that Italy is called to investigate the composite effects that foreign M&As can have on its economy, industry and on the performance and survival probabilities of the local companies acquired.

Foreign Mergers and Acquisitions and Economic Nationalism

2.1 Introduction

The topic of inbound cross-border M&As is particularly relevant in Italy, considering both the dimension of the phenomenon analysed in the previous chapter and the effects that foreign ownership can have on the Italian economy and on the acquired companies' performance. If on the one hand, cross-border M&As are considered a great accelerator for the economic growth of the target country, on the other hand they are perceived also as a source of political risk, foreign influence and strategic dependence (Ourvoie, 2016). The risks mentioned above are often referred using the term "national interest" in the M&A literature. However, it is difficult to find a precise definition of "national interest", which is a discretionary term deliberately left vague to allow the rejection of foreign take-overs consider contrary to it. What interests should the government protect and prioritize? If on the one hand the topic of national security is surely important, equally important should be the theme of performance and survival of the domestic-acquired companies. Are domestic companies better off when acquired by foreign investors? Or the alternative to foreign acquisition is the exit from the market because of the increasing global competition of MNEs?

In this chapter, firstly we document how the economic nationalism is rising in Italy and in the European Union because of the increasing number of protectionist measures adopted. Then, we show how the public opinion has reacted to cross-border deals during the last years, through a review of some articles of the most popular national and international newspapers (e.g. Il sole 24 ore, Financial Times) and through the Spring PEW Global Attitude survey. Then, we analyse the reasons why the relationship between cross-

border M&As and national interest is ambivalent, with a particular focus on the perspective of the target country. Finally, since the focus of this study is to analyse the post-acquisition performance of the target firms, we summarise the risks and opportunities that domestic target companies face due to cross-border deals.

2.2 The rise of "economic nationalism"

2.2.1 Definition of "economic nationalism"

Foreign takeovers are an important part of the global economy. On the one hand, large firms can enter into a new market through the acquisition of a local firm. On the other hand, if there is excess capacity in an industry, weak firms can leave the market by being acquired by another company instead of filing for bankruptcy. In addition, when cross-border mergers and acquisitions take place, national economies become more integrated and this increasing integration among countries rise several concerns. Sometimes governments react negatively to takeover bids motivated by concerns different from anti-competition reasons as when nationalist actions seem to be motivated by the 'nationality' of the bidder.

All measures politicians implement to prevent inbound foreign acquisitions give rise to the so-called "economic nationalism", term broadly used to refer to the preference for natives over foreign investors in economic activities. Dinc and Erel (2013) show that nationalist actions are more frequent where and when preferences[7] for natives against foreigners are stronger in both social and economic dimensions. Additionally, nationalist reactions are stronger in case of weak governments and against countries for which the public opinion in the target country has little trust or affinity (ibidem). Conversely, no significant effect was found for variables like GDP growth, unemployment, or the target country prime minister's ideology (ibidem).

Nationalist measures by domestic governments do not just take form as opposition to foreign investors. Dinc and Erel (2013), reviewing most common methods used by individual countries in implementing their nationalist policies in issues related to foreign takeovers, provide a list of methods that are often used simultaneously:

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[7] *Dinc and Erel (2013) measure the importance of such preferences both by survey evidence and by the vote share of extreme right parties, for which preference for the native and against the foreigner is a defining issue in Europe.*

- Public interest: the EU Merger Regulation allows domestic governments to oppose a merger or an acquisition in order to protect the domestic country's national interests.

- Moral persuasion: this practice is especially common when policy makers try to stop a foreign takeover of a domestic firm at the rumour stage by simply stating that they are against it. Although governments may have no legal power to stop the takeover, the implicit threat that the acquirer will deal with a hostile domestic government if the acquisition goes through could be a deterrent powerful enough to not invest anymore. This implicit threat is still more strong if the government is also a major customer of the target or acquiring company, as for example can happen in the pharmaceutical sector.

- Golden shares: in many privatized companies, domestic governments still hold "golden shares" or the right to veto important corporate changes (e.g. the decision to merge or to be acquired by a foreign company).

- Prudential rules for financial companies: the EU's Merger Regulation allows governments to oppose to the acquisition of a bank on the basis of prudential rules.

- Playing for time: since any delay or uncertainty represents often a disadvantage for the potential acquirer, this method allows the domestic government to find and/or fund a friendly bidder for the target firm. For example, policy makers can gain time thanks to the requirements that the stock market regulator need to approve any tender offer or through the approvals necessary from different commissions, such as energy boards to clear potential mergers and acquisitions.

- Providing financing to domestic bidders: local governments can support domestic bidders by providing funds to complete the acquisition. Nevertheless, direct aid from the government budget is not so common while it is more frequent that public pension funds and government-owned banks lend to the bidder and/or invest in the combined company.

- Finding "white knights": this is one of the most effective methods to block an unwanted foreign takeover. While adopting other methods to gain time, the policy makers and/or the target managers look for a friendly acquirer (i.e. "white knight") or a friendly blocking minority holder (i.e. "white squire").

- Creating "National Champions": since target size is often a good deterrent for cross-border acquisitions, this protectionist action involves supporting the merger of two

domestic companies with the goal of creating a new company that is "too big to be taken over" by a foreign acquirer.

2.2.2 New anti-takeover measures in Italy and Europe

The pressures of foreign investors have engendered the responses of developed countries' governments, who have both welcomed and resisted intrusions on national sovereignty according to their national implications. As stated in the 2018 UNCTAD World Investment report, last year 65 countries adopted 126 changes in national investment policies of which 93 liberalized, encouraged or facilitated investment, 18 introduced restrictions or regulations and the remaining 15 were neutral. Despite the 2017 global trend in favour of liberalization with numerous countries promoting investment by simplifying administrative procedures or providing incentives, the share of restrictive and regulatory investment policy measures increased significantly in the last months. From October 2017 to April 2018, about 30 per cent of new investment measures were of a restrictive or regulatory nature (UNCTAD, 2018). This means that some countries are taking a more critical stance towards cross-border deals, particularly when they relate on matters such as public order, national security, local producers' competitiveness, foreign ownership of land and natural resources and the sale of strategic domestic assets and technology firms.

In October 2017, the Italian Government approved the law decree n. 148/2017 to protect companies from hostile takeovers after French media group Vivendi sharply increased its holding in broadcasting firm Mediaset and Telecom Italia. The new rules on takeovers signals protectionist sentiment is on the rise in Italy after years of relatively open approach to foreign acquisitions which French companies in particular, have taken advantage of (Vagnoni, 2017). An event that contributed to inflame economic nationalism and the anti-French feeling in Italy was last year move of the French President Macron to block the acquisition of the French shipyard Stx by the Italian Fincantieri, even if subsequently Mr Macron did a U-turn on his initial decision. The aforementioned decree introduced new provisions on disclosure requirements on stakes detained in Italian listed companies and it extended the government's so-called "golden powers" to block takeovers by non-EU companies to high technology sectors. Exactly, foreign investors acquiring a stake exceeding 10 per cent of the target's voting capital are now required to render a statement disclosing their goals for the forthcoming six months specifying:

- how the acquisition will be financed;

- whether they are acting alone or in agreement with other investors;
- whether they plan to acquire additional stakes in the company, take over the control or influence the management of the company, and its strategy;
- their intentions in respect of shareholders agreement they are party to;
- whether they intend to propose to increase or revoke members of the board of directors or board of statutory auditors.

Breaches of the disclosure obligations trigger relevant administrative and pecuniary sanctions (and in extreme circumstances of market manipulation, criminal sanctions) as well as freezing of the voting rights concerning the relevant stake. These new requirements are intended to guarantee the transparency of the market and allow target companies to react against hostile takeovers. The Italian Government has a veto right to stop investments in the defence and national security sector and in networks, plants, assets and relationships deemed strategic for the national interest in the fields of energy, transportation and communications. The Decree has broadened the Government's golden powers by extension to "highly intensive technology" services and assets and they could be exercised also in case of danger for the national security and public order. This entails a higher discretion by the Government in the evaluation of the situation that may trigger the golden powers enforcement.

In a statement after the cabinet meeting the Minister of Economic Development declared:

> "Italy is a country that is open to international investments, but it demands that investors respect the rules and we safeguard our national interests like all the world's large economies," [Carlo Calenda, Minister of the Economic Development in 2017 (as cited in Vagnoni, 2017)].

Italy is not the only country that has discussed additional ways and means to strengthen investment screening mechanisms.

In July 2017, Germany was the first European Union country to tighten its rules concerning cross-border deals as a reaction to the acquisition of Kuka, the Germany's largest maker of industrial robotics, by the Chinese appliance maker Midea (Chazan, 2017). The acquisition raised fears about Germany technical expertise ending up in Chinese hands, so that the government approved a measure to make it easier for the state to ward off foreign takeovers that could endanger the country's control on its more strategic industries and to protect also software firms that work with banks, airports and hospitals, managing cloud data or telecommunications (Hall, 2017).

In 2018, the Government of the United Kingdom published a white paper on national security and investment to better scrutiny foreign takeovers (Pickard, 2018). With the new proposal, sellers will be expected to notify the authorities when they sell more than 50 per cent of one asset or more than 25 per cent of shares in their company and both sellers and bidders will be encouraged to inform the government on a voluntary basis about every transaction that could give rise to security risks (Pickard, 2018).

The French government is currently discussing a proposal that aims to preserve FDI and at the same time to prevent its technology falling into the hands of foreign powers like China and the United States. In the proposed anti-takeover legislation that is expected to be approved by a majority in parliament when it comes to vote in early 2019, President Emmanuel Macron's government is proposing to widen the scope for state intervention and substantially increase the use of "golden shares" to protect national interests (Rosemain, Barzic & Rose, 2018). The move comes after several national champions such as train-maker Alstom and telecoms equipment maker Alcatel-Lucent changed flags in recent years under deals that many prominent political deemed unfair and detrimental for the country. In July 2017 the President Macron, that is a former investment banker and advocate of free trade, has already shown willingness to ward off foreign takeovers when national interests may be at stake, temporarily nationalizing French shipyard STX to prevent it falling into Italian hands (although he later approved its acquisition by Italy's Fincantieri).

In addition to their own national initiatives, the protectionist debate led Germany, France and Italy to call for a Europe-wide mechanism for more rigorous examination of foreign takeovers (Alderman, 2018). The president of the European Commission, Jean-Claude Juncker, in September 2017 proposed to create a framework to screen cross-border deals (Rosemain, Barzic & Rose, 2018). Thanks to this measure the EU governments would have the power to block Chinese and other foreign takeovers even if they were carried out via European shell companies (Brunsden, 2017).

According to the text of the European Commission proposal[8], while the EU does not want to change its openness to FDI, it wants to set up "vigorous and effective policies to, on the one hand, open up other economies and ensure that everyone plays by the same rules,

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[8] *Proposal for a Regulation of the European parliament and of the council establishing a framework for screening of foreign direct investments into the European Union, COM(17) 487 final.*

and, on the other hand, to protect critical European assets against investment that would be detrimental to legitimate interests of the Union or its Member States". The objective of the draft regulation is to establish a framework for the Member States, and in certain cases the Commission, to screen foreign direct investments in the European Union, while allowing Member States to take into account their individual situations and national factors. The framework would require governments to share information on sensitive takeovers with each other and with Brussels, and to say which acquisitions they intend to screen. The commission would be able to give a non-binding opinion if it felt a takeover is "likely to affect security or public order in one or more Member States" (ibidem). Although, Brussels' position on such deals would still be non-binding, "the Member States concerned shall take utmost account of the Commission's opinion and provide an explanation to the Commission in case its opinion is not followed" (ibidem).

In addition, under the proposals the Commission should be able to issue an advisory opinion to the Member States concerned if it considers that FDI may affect security or public order in relation to projects or programmes of Union interest, such as Galileo, Horizon 2020, Ten-T or Ten-E.

2.3 The ambivalent relation between foreign takeovers and national interest

2.3.1 Historical brands in foreign hands

The "Colonization Risk" is an actual and strategic theme of discussion in Italy. After the financial crisis, Italy has been a land of raids and the share of foreign ownerships in the total population of firms has considerably grown. As a target country, Italy has witnessed a rapid increase in inward FDI, mainly through M&As. 5866 deals[9] were concluded from January 2010 to December 2017, for a value of almost €400 billion (Zephir published by Bureau van Dijk, 2017b). These data testify that Made in Italy appeals to foreign investors, as evidenced also by the climb of three positions that Italy obtained in the 2018 A.T. Kearney Foreign Direct Investment Confidence Index where the country ranked 10th (Figure 11).

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[9] *Deal types included are: Acquisition, Capital increase, Institutional buy-out, Management buy-in, Management buy-out, Merger, Minority Stake. Deal types excluded are: joint ventures, IPOs, planned IPOs and share buybacks.*

Figure 11 2018 A.T. Kearney FDI Confidence Index

2018 A.T. Kearney FDI Confidence Index®

Ranking				Score
2016	2017	**2018**		

2016	2017	2018	Country	Score
1	1	1	United States	2.09
3	5	2	Canada	1.82
4	2	3	Germany	1.81
5	4	4	United Kingdom	1.77
2	3	5	China	1.76
6	6	6	Japan	1.72
8	7	7	France	1.70
7	9	8	Australia	1.66
11	12	9	Switzerland	1.58
16	13	10	Italy	1.57
9	8	11	India	1.56
10	10	12	Singapore	1.53
14	14	13	Netherlands	1.51
22	15	14	Sweden	1.48
13	11	15	Spain	1.48
–	23	16	New Zealand	1.48
18	17	17	Mexico	1.47
17	18	18	South Korea	1.46
23	20	19	Ireland	1.46
20	–	20	Denmark	1.45
19	22	21	Belgium	1.43
–	–	22	Portugal	1.43
25	–	23	Norway	1.42
24	24	24	Austria	1.42
12	16	25	Brazil	1.37

Low confidence · High confidence

Maintained ranking · + Moved up · – Moved down

Note: values are calculated on a 0 to 3 scale, with 3 being the highest level of confidence in a market as a future destination for FDI.
Source: A.T. Kearney Foreign Direct Investment Confidence Index (2018)

According to Resciniti et al. (2015), Italian medium-sized firms appeal to foreign investors, because the gap between their positive performances and their small size (and capitals) make their acquisition particularly convenient.

Well-known former Italian-owned firms have changed ownership and are currently foreign-owned. According to Guido Nola, co-senior country office at JP Morgan Italy, there is not a single sector that is not appealing to foreign investors (Romei, 2016). The fashion and luxury sector, for example, is dominated by the acquisitions of the French groups Lvmh and Kering: the first detains Fendi (1999), Pucci (2000), Bulgari (2001), Loro Piana

(2013) and the historic Milanese pastry shop Cova (2013) while the latter detains, among the others, Gucci (2004) and Bottega Veneta (2013). Moreover, Versace was acquired by the US Michael Kors (2018), Pal Zileri and Valentino were acquired by the Qatari royal family's investment fund Mayhoola for Investments respectively in 2014 and 2012 and Krizia was acquired by the Chinese Shenzhen Marisfrolg Fashion in 2014.

In the food and beverage sector the situation does not differ. Campari sold Freeza (that include the brand Lemonsoda) to the Danish Royal Unibrew (2017); the Japanese Asahi acquired Peroni (2016) that actually was already in foreign hands; the Anglo-Dutch group Unilever acquired the premium ice-cream brand Grom (2015) and the Turkish group Toksoz acquired Pernigotti (2013).

In the household appliances sector, after the acquisition of Candy by the Chinese multi-national Haier in 2018 and the acquisition of Indesit by the US Whirpool in 2015, Italy has lost the last two Italian manufacturers of home appliances.

Within other manufacturing sectors, well-known former Italian-owned firms that are currently foreign-owned include Atala, Ducati, Edison, Gruppo Ferretti, Italecementi Italo-Ntv, Lamborghini, Pirelli and Poltrona Frau, to name a few. Football, national pride, lost the tricolour passport too: top soccer clubs as AC Milan and FC Internazionale Milano are now in Chinese hands while AS Roma is American.

Even if a traveller obviously does not realise if Italo Ntv is Italian or American as long as the trains work the same as before, the loss of national-owned companies can entail several risks in terms of social, economic and political costs for the local government. Having too many "Italo" entails the risk of creating a nation of consumers where companies are all foreign-owned. The government has the duty to intervene on the rules governing investments to manage risks and distortions of a mass landing of foreign investors and policy makers should ensure that investors take into consideration the interests of the country and the citizens, since the "power" and the strategic decisions could be taken elsewhere after the acquisition and profits, if any, could go abroad.

Looking at the high-profile companies sold to foreign investors, Il Sole 24 Ore rose the following question: "Analysing the massive cross-border M&A phenomenon, is the real risk the predilection of foreign investors for healthy companies and solid assets and the possibility that they buy the best Italian jewels, leaving everything else adrift?" (Filippetti, 2018). In the literature this process is called "cherry picking" approach as opposed to the

"lemon picking" approach, to indicate the case when foreign MNEs choose "preys" with the best performances rather than distressed firms. According to this view, the acquisition purpose is not so much a matter of restructuring firms in crisis, as to control firms already well-structured, both on a commercial and managerial level, and sometimes even financially solid (Resciniti et al., 2015).

In chapter 3, analysing the existing literature on the topic we will try to answer to the following questions: What kind of targets do foreign companies prefer within the Italian economy? Do they pick the best-performing "cherries", the underperforming "lemons" or both? Moreover, as we will see, when evaluating the causality of foreign ownership, a comparison of foreign-controlled firms with a domestically-owned control group may suffer from a selection bias. This selection problem arises since the takeover decision is not random but can depend on several variables like for example industry, profitability, productivity or intangible assets. Several recent studies adopt specific statistical techniques that we will discuss later to cope with this problem.

2.3.2 Mixed feelings in the public opinion

Looking at the general's public opinion, the 2014 Spring PEW Global Attitude survey measures and compares the views of foreign investment in advanced, emerging and developing countries and the perception people have about inbound foreign acquisitions. From the survey on a sample of over 48,000 people in 44 countries, two opposite blocks emerged regarding the subject of FDI. A global median of 74% approve greenfield investments, because these can mean new jobs and greater economic activity. But people are divided (45% good, 47% bad) about inward cross-border acquisitions, which can involve a new management, a new business culture and possible company consolidation resulting in job losses. In particular, in developing countries 57% of people say inward foreign acquisitions are a good thing, followed by emerging markets (44%) and advanced economies (31%). African countries are the most supportive of foreigners investing in their economies and roughly half or more hold the view that inward foreign M&As are beneficial. The Germans and Japanese are among the most opposed to foreigners investing in their countries despite the fact that the two countries are two of the largest suppliers of outward investment flows: 79% of Germans and 76% of Japanese say foreign takeovers of national companies are bad for the local economy. Along with Germany and Japan, Italy is one of the countries most opposed to foreign investors too. Just 23% of the

Italians interviewed believe that foreign acquisition of domestic firms is beneficial while the others are opposed to FDI.

In the Italian debate about the effects of cross-border M&As on the national industrial system, the observers place themselves between two opposing extreme visions. On the one hand, there is who sees optimistically the value recognized to the Made in Italy and to the manufacturing traditions and technical and creative skills that permeate the Italian industrial system, witnessed also by the high EBITDA multiple that characterized several foreign takeovers. According to the optimistic supporters of this vision, the high counter-values of the foreign business disposals feed the trust in the interest of the acquiring companies to preserve on the territory the production (especially the high-quality one) and to confirm the management if it has proved to be successful. Barbaresco et al. (2018) claims that Italy needs FDI and that their lack would have worse effects than the sales of domestic firms, in an industrial system financially asphyxiated by the under-capitalization of SMEs and by the too much indebted public budget.

On the other hand, there is a huge segment of the population who consider the massive acquisition of Italian jewels as a manifestation of the country's industrial decline and as a demonstration of the limits of the Italian system. They emphasize the contrast between the entrepreneurial and industrial quality of the Made in Italy recognized worldwide and the lack of teamwork able to value the best productions through "sector poles"[10], for example around national champions in the leading-edge sectors (ibidem). Instead, the few historical MNEs able to compete on the global markets and remained under Italian hands (e.g. Luxottica, Barilla, Ferrero, Prada) act mainly individually and often move abroad the administrative and legal addresses since the costs of running a business in Italy are too high and undermine their competitiveness with other foreign companies in the same sector. According to this negative vision, the inbound FDI in Italy are not due to the Country's attractiveness[11], that should be founded on the better conditions comparatively offered to the investors, but it rather depends on the national weaknesses to create alternatives. These weaknesses are caused by the scarce relationships among companies and

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[10] *As was the case, for example, for the big fashion groups in France, automotive in Germany, food and entertainment in USA, finance and insurance in UK, namely all the Coutnries able to attract lots of investments in that sectors.*
[11] *According to the 2018 World Bank's "ease doing business" rank, Italy occupies the 46th position, that goes down to the 66th position for the specific voice "starting a business", 105th for the voice "getting credit" and 112th for the voice "paying taxes".*

among companies and governments that would be useful to "anticipate the open market", and by a certain reluctance of the domestic capitalism to invest and risk (ibidem).

2.3.3 Italian companies: preys and predators

Data from the Zephyr database published by Bureau van Dijk (2017b), show that there is a considerable disproportion between the inbound and the outbound M&A market in Italy, as already mentioned in chapter 1. In fact, the \$2.6 billion spent in 2017 (128 deals) by local companies abroad seem to be very little compared to the approximately \$43 billion (578 deals) invested by foreigners to grab the best of Made in Italy.

Additionally, foreign multinational companies usually "make noise" on the public Italian press when they buy Italian brands, as argued by the report "Italia Multinazionale 2017" promoted by ICE (Mariotti & Mutinelli).

On the other side, Italian companies "make less noise" when entering foreign markets usually through smaller acquisitions and participations, joint ventures or other agreements. Unfortunately, the major Italian companies that invest abroad include the big multinational companies, which are only a fraction of the national industrial system.

Nevertheless, according to the President of the ICE Agency Michele Scannavini, Italy is less prey for foreigners than we think since large international investors are attracted by "Made in Italy" but they are often chasing big deals and Italy is mainly composed by familiar and undercapitalized SMEs (Cavestri, 2017). The results of the research "Le aziende italiane alla conquista dei mercati esteri" conducted by the University of Padova-CMR and HSBC bank in 2018 (as cited in Carnevale, 2018), show that only 13% of large Italian companies were acquired by foreign investors. The research beats the cliché according to which there will be no more Italian companies because they will be all acquired by foreign investors. The cliché is incomplete and misleading also because over 40 per cent of the 800 medium and large interviewed Italian firms made at least an acquisition and, Italian companies acquired foreign targets in 81 per cent of the cases (ibidem). Well-known transactions include but are not limited to the acquisition of the Nestlè candy business in the US by Ferrero (2018), the acquisition of the Brazilian Eletropaulo by Enel (2018), the acquisition of the French shipyard Stx by Fincantieri (2017), of PartnerRe by Exor (2016), Grand Marnier by Campari (2016) and Carte Noire by Lavazza (2016).

2.4 Risks and opportunities for the target companies

In a "macro" perspective, the effects of cross-border acquisitions can be very relevant for the target country's economy and industrial system. Besides the problems concerning the national security, foreign influence and strategic dependence, equally relevant for policy makers should be the effects of cross-border M&As on target firms. The existing literature that estimate the performance of the firms acquired by foreign companies show contrasting results. On one hand, consistently with FDI theory, most of the literature argue that MNEs may have the potential to develop the business of the target by:

- Bringing new capital from foreign markets (Barbaresco et al., 2018);

- Giving access opportunities to new markets or better access to its existing markets (Chari et al., 2009; ICE & Prometeia, 2014), thanks to MNEs' presence abroad. Specifically, considering the relatively small size of Italian manufacturing firms, "Made in Italy" products can particularly benefit from their inclusion in the MNEs' wider portfolio of products and services, distribution channels and global network, especially when it comes to attractive but less accessible markets;

- Transferring management practices and superior technological know-how. The transfer of these capabilities can enhance the performance of the target firm through a sort of "disciplinary" effect which can improve or eliminate management inefficiencies in the acquired firm, or increase their productivity, R&D investments, workers' wages and export capacity (Bertrand and Zitouna, 2008);

- Bringing brand reputation (Barbaresco et al., 2018) and a higher bargaining power towards suppliers and customers, thanks to the new owner's better market potential, which can turn useful in trade relations also in terms of payment periods.

On the other hand, literature also highlight the dangers and risks that cross-border mergers and acquisitions hide and the detrimental effect these risks can provoke on target firms' performance.

The impact on employment, for example, is ambiguous. There are some studies that document positive effects on the employment levels after the acquisition (Arnold and Javorcik, 2009) and others (Chen et al., 2011) that provide evidence of a decline of the labour demand due to a more efficient use of the workforce and to the improvement of the labour productivity. Ourvoie (2016) point out that if strategic decisions are not taken in the domestic country after the acquisition, cutbacks in employment levels could result

since foreign managements would probably be more focus on performance than on human-related elements, especially if the expected synergies do not materialize. Beyond the risk of potential job losses for the motivations illustrated before, the target country faces the risk of closing or marginalizing domestic manufacturing plants through their relocation abroad, mostly to areas with low cost of labour and other production factors (Resciniti et al., 2015) and the risk of finding itself with an impoverished national industrial heritage, in cases acquired firms, fully integrated by the acquirer, "disappear" as autonomous entity immediately or in a few years (Bodner & Capron, 2018). The possibility of becoming mere branches of foreign groups, hides also the danger of profit stripping, as very often the profits of local subsidiaries are transferred to the headquarter or used to compensate losses incurred in other subsidiaries of the group (Hopkins, 1999). From an economical point of view, consideration should be given to the risk that foreign acquisitions impoverish the local supply chains because of the replacement of suppliers, local partners and funding banks with foreign ones (Barbaresco et al., 2018) while from a cultural point of view, to the risk of weakening the entrepreneurial spirit in the national economy in the event that family members do not keep their roles in the company or whenever foreign capitals are simply reinvested by the former family owners in non-productive assets and not entirely in new businesses (Resciniti et al., 2015).

For all the aforementioned reasons, even if takeovers are friendly and can generate positive effects on the performance of the acquired domestic company, they may attract the attention of the governments that may obstruct the takeover (Morresi and Pezzi, 2014).

2.5 Conclusions

Foreign shopping in Italy is a relevant topic of discussion in the country and the cross-border M&A phenomenon will surely continue to be relevant for at least three reasons. Firstly, capitals of the Italian system are limited and inadequate to compete on the global markets and the country needs foreign investments. Secondly, foreign MNEs recognise the value of the Italian brands as well as the technical and creative skills of the Italian industrial system. Thirdly, there is a mountain of liquidity around the World since it is calculated that private equity funds have $1,000 billion uninvested cash (Mittleman, 2017).

Surely, "national interest" is an important topic of discussion and it should be considered by the government in its choices related to cross-border M&As. Nevertheless, policy

makers and the public opinion should reflect also on other fundamental question for the future of the Italian industry. Do foreign acquisitions increase the performance of domestic firms through their inclusion into a multinational group that could improve their management, elevate their operational scale and enhance their market power? Do foreign-owned companies outperform local firms that in the acquisition year had the same probability of being a target but that have remained in Italian hands? Is the foreign acquisition a necessary step to guarantee the survival and the success of the target company? In the next two chapters we will face these arguments firstly reviewing the existing literature on the topic and then by conducting an empirical analysis on the Italian market.

FOREIGN M&AS AND PERFORMANCE EFFECTS ON THE LOCAL TARGET COMPANY: THE STATE OF THE ART

3.1 Introduction

The existing literature on M&A post-acquisition performance has explored the effects of foreign takeovers on the different stakeholders involved. Researchers have analysed, for example, the effects on the host country competitiveness, the repercussions on the performance of the acquiring, the acquired and the combined firm and have documented the wealth effects for both the acquiring and the acquired firms' shareholders. In all the cases, results are mixed.

In this chapter, we review the main contributions on the topic of post-acquisition performance of domestic firms acquired in cross-border M&As. How do local firms perform after being acquired by a foreign company? Do they outperform domestically-owned firms, based on the ownership advantages of the MNE, or underperform them, owing to inherent "liabilities of foreignness" (Hymer, 1976)? These conflicting hypotheses regarding foreign subsidiary post-entry performance have stimulated numerous empirical studies that has shown different results. We summarise the main results that the literature has observed in terms of productivity, profitability, employment, financial structure, and other relevant variables after the takeover and if in general foreign ownership is associated with a competitive advantage. Twenty-six studies, mainly from influential international business and economics journals, have been reviewed and summarized, with particular emphasis on the strategic implications related to the cross-border M&As.

3.2 Relevant empirical literature

One of the most debated questions raised by the international business literature is whether firms acquired by foreign companies outperform domestically-owned firms with comparable pre-acquisition probability of becoming a foreign takeover target. A large number of contributions tried to answer this question with mixed results.

According to the 'internalization theory' (e.g. Dunning, 1980), acquired companies would enjoy higher productivity compared to their domestic counterparts because of the transfer from the acquiring company of a well-established brand name, superior technological knowledge and managerial know-how. However, empirical evidence on post-acquisition performance of the target firm is inconsistent: while some research findings support the expectations of the 'internalization theory' (Buckley et al., 2002; Chang et al., 2013), others are more sceptical on the positive effects that such theory generally attributes to foreign M&As (Schiffbauer et al., 2017).

In order to summarize the state of the art on the topic of post-acquisition performance of target firms, we have reviewed twenty-six studies that investigate the impact of cross-border M&As on the performance of the target firm. The studies are different in terms of acquiring and target countries analysed, industries, other characteristics of both target and acquiring companies, time periods, performance indicators, empirical methodologies, database consulted, etc. However, all of them focus exclusively on the performance of foreign takeovers on the acquired firm. This means that the large portion of literature that investigate the effects on the acquirer and on the combined firms' performance was not taken into consideration into our research.

The analysed time period starts in 1895 (Kronborg, D. & Thomsen, D., 2009) and ends in 2011 (Chen et al., 2017; ICE & Prometeia, 2014). Target countries investigated are Italy (Barbaresco et al., 2018; Benfratello and Sembenelli, 2006; Bentivogli and Mirenda, 2017; ICE & Prometeia, 2014; Piscitello and Rabbiosi, 2005); UK (Conyon et al., 2002; Harris and Robinson, 2003; Schiffbauer et al., 2017); United States (Chari et al., 2009; Chen, 2011; Li, J. & Guisinger, S., 1991); China (Buckley et al., 2002; Chang et al., 2013; Chen et al., 2017; Liu et al., 2017); Indonesia (Arnold and Javorcik, 2009); Japan (Fukao et al., 2006); France (Bertrand and Zitouna, 2005); Belgium (Feys and Manigart, 2010); Sweden (Karpaty, 2007); Slovenia (Salis, 2008); Portugal (Mata, J. & Portugal, P., 2002); Denmark (Kronborg, D. & Thomsen, D., 2009); developed countries (Buckley et al.,

2014); Bulgaria, Estonia, Czech Republic, Poland, Romania, Slovenia and Slovakia (Damijan, 2015) and Austria, Belgium, Denmark, Finland, the Netherlands and Sweden (Siedschlag et al., 2014).

Concerning the acquirer's country of origin, a large part of the literature does not put any restrictions while a portion focus, for example, on acquirers from developed or emerging countries (Chari et al., 2009; Buckley et al., 2014). Most of the previous empirical studies focus on the manufacturing industry, while the literature concerning the effects of foreign M&As on service firms is more limited. All the 26 studies reviewed use data on manufacturing firms with only 11 including also service firms.

As already mentioned, some of the studies narrow down the analysis focusing on some particular characteristics of the acquiring or acquired companies. Barbaresco et al. (2018), for example, examine medium size target companies; Bertrand and Zitouna (2008) focus on cross-border horizontal acquisitions; Chang et al. (2013) investigate the performance of Chinese firms acquired only by MNEs; Chen (2011) focus on public companies and; Feys and Manigart (2010) investigate the effects of cross-border M&As on entrepreneurial firms.

3.3 Empirical methodologies and performance measures

The analysed empirical studies have adopted different statistical approaches to measure the effects of foreign ownership on target companies' performance. Moreover, the authors have analysed the post-acquisition performance looking at different accounting and non-accounting variables. The choice of the statistical methods adopted as well as the choice of the variables that capture the performance of the targets have important repercussion on the results achieved.

With respect to empirical methodologies, early analyses of effects of foreign acquisitions on firm performance have used Ordinary Least Square (OLS) estimators (Buckley et al., 2002; Chen et al., 2017; Conyon et al., 2002; Damijan et al., 2015; Piscitello and Rabbiosi, 2005) or system GMM (Benfratello and Sembenelli, 2006; Harris and Robinson, 2003). Nevertheless, most of the analysed studies adopt a change model comparing mean or median pre- and post-acquisition performance (both raw measures of operating performance and growth rates are used) to verify whether the change is statistically significant (Buckley et al., 2014; Feys and Manigart, 2010). However, these studies do not take into consideration the possibility that acquired companies outperform domestically-owned

companies just because foreign investors have acquired better performing firms ("selection bias" problem). More recent studies combine two econometric techniques, propensity score matching (PSM) and difference-in-difference (DID) estimators, to address this "selection bias" problem. These studies include: Arnold and Javorcik (2009), Barbaresco et al. (2018), Bentivogli and Mirenda (2017), Bertrand and Zitouna (2008), Chang et al. (2013), Chari et al. (2009), Chen (2011), Fukao et al. (2006), ICE Prometeia (2014), Karpaty (2007), Liu et al. (2017), Salis (2008), Schiffbauer et al. (2017) and Siedschlag et al. (2014).

The credibility of the DID estimator crucially relies on the assumption that in absence of the cross-border M&A (i.e. the treatment), the performance indicators for treated and the control firms would have followed similar trends over time. For this reason, in order to select a more appropriate control sample, the aforementioned studies adopt PSM combined with DID. PSM[12] is a statistical method that provides a way to match each foreign-acquired company (i.e., treatment group) with a local firm not acquired by foreign companies and with similar characteristics in the acquisition year or in the previous years (i.e., control group). The first step to build an appropriate counterfactual is to estimate a logit to derive the probability for a target of being acquired by a foreign investor on the basis of some specific characteristics of the target. Some of the most common variables used to estimate the logit in the reviewed literature include: sector (Arnold and Javorcik, 2009; Feys and Manigart, 2010; Karpaty, 2007); location (Arnold and Javorcik, 2009; Feys and Manigart, 2010); firm size[13] (Arnold and Javorcik, 2009; Chang et al., 2013; Chen, 2011; Feys and Manigart, 2010; Karpaty, 2007; Schiffbauer et al., 2017); firm age (Chang et al., 2013, Chen, 2011; Schiffbauer et al., 2017; Siedschlag et al., 2014); productivity measured for example by the multilateral productivity index (Chang et al., 2013) or turnover per employee (Siedschlag et al., 2014); profitability measured for example by the added value per employee (ICE and Prometeia, 2014) or by return on capital (Schiffbauer et al., 2017); financial variables such as the debt-to-assets ratio (Chang et al., 2013; ICE

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[12] *The validity of PSM relies on the conditional independence assumption. The conditional independence assumption holds whenever, conditional on the observed covariates used in the PSM, assignment to treatment is independent of the outcome. This assumption is not directly testable, but we can assume it if include all the relevant variables (e.g. size, industry, region, performance indicators etc.) in the PSM.*

[13] *Arnold and Javorcik (2009) measure firm size using turnover; Chang et.al (2013) using the log of assets; Chen (2011) using assets, employment and sales; Feys and Manigart (2010) using assets and sales; ICE and Prometeia (2014) using employment; Karpaty (2007) and Siedschlag et al. (2014) using sales and employment*

and Prometeia, 2014; Siedschlag et al., 2014) and the cash flow-to-debt ratio (ICE and Prometeia, 2014); the interest expenses-to-total assets ratio, a proxy of perceived trust-worthiness by financial institutions (Schiffbauer et al., 2017); the export ratio (i.e. export sales divided by total sales); the intangible assets ratio measured as book value of intan-gible assets divided by total assets (Chang et al., 2013; ICE and Prometia, 2014); the fixed assets ratio measured as book value of fixed assets divided by total assets (Chang et al., 2013); variables that capture the ownership status[14] of a firm (Chang et al., 2013; Schiff-bauer et al., 2017) or that indicate firm's solvency variable (Schiffbauer et al., 2017).

After constructing the control group, the DID approach is applied to compare the treated and control groups' performance variables and to measure whether firms acquired by for-eigners show a greater improvement in performance than firms remained domestically-owned for the whole period taken into consideration.

In most cases, target firms' performance indicators were analysed for at least two years before and after the acquisition. However, in some studies (e.g. Chen, 2011), acquisition effects are found only five years after the entry, suggesting that it could be reasonable to increase the analysed post-acquisition period. Nevertheless, choosing an appropriate time period is not an easy task since it is difficult to know a priori how many years the owner-ship change takes to fully manifest its possible effects and because it is difficult to retrieve balance sheet and income statement data for long periods from databases.

With respect to the choice of variables to measure the post-acquisition performance ef-fects, the authors of the reviewed literature adopted a large set of variables to capture different aspects of performance as financial, operational, market and labour effects. Of course, no single variable is perfect and different metrics are appropriate depending on the circumstances, but we should be aware that the choice of different variables to meas-ure the same aspect (e.g. profitability, productivity) can lead to different conclusions and their derivations (e.g. the derivation of TFP) can involve several measurement issues.

Most of the studies, estimate the effects of inward cross-border M&As on total factor productivity (TFP) or labour productivity. Others compute profitability ratios (both mar-gin ratios and return ratios) to compare pre- and post-acquisition performance of acquired firms. Chang et al. (2013), Chari et al. (2009), Chen (2011), Feys and Manigart (2010)

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[14] *Schiffbauer et al. (2017) created two dummy variables: state and quoted; Chang et al. (2013) created three dummy variables: collective firm, private firm, and incorporated firm*

and Fukao et al. (2006) use the return on assets[15] (ROA). Bentivogli and Mirenda (2017) measure the return on equity (ROE) while Feys and Manigart (2010) the net margin. Finally, Barbaresco et al. (2018) compare the pre- and post-acquisition return on investments (ROI). Other authors measure the growth of accounting measures such as total sales[16] (Bentivogli and Mirenda, 2017; ICE & Prometeia, 2014; Buckley et al., 2014), net income before taxes (Buckley et al., 2014), EBITDA[17] (Bertrand and Zitouna, 2008), R&D expenditures (Chen et al., 2017), share of exports and accounts receivable days (Barbaresco et al., 2018). Some studies compute operating performance ratios as value added per employee (Barbaresco et al., 2018), asset turnover (Feys and Manigart, 2010) and fixed asset investment (Liu et al., 2017).

Many empirical studies also monitor the employment and capital intensity trends of acquired firms before and after the acquisition (Siedschlag, 2014, Damijan et al., 2015). Finally, 3 out of 26 studies (Kronborg, D. & Thomsen, D., 2009; Mata, J. & Portugal, P., 2002, Li, J. & Guisinger, S., 1991) investigate if foreign-owned companies have a survival advantage compared to domestically-owned comparable companies.

Table 12 Summary of the results of empirical studies on post-acquisition performance of companies subject to cross-border M&As

AUTHORS	YEAR	PERFORMANCE INDICATORS	DATA/TARGET COUNTRY	MANUFACTURING (M) OR SERVICES (S)	CHERRY PICKING
Arnold, J.M. & Javorcik, B.S.	2009	Total factor productivity (TFP) and employment	Indonesia	M	Yes
Barbaresco, G., Matarazzo, M. & Resciniti, R.	2018	ROI, value added per employee, labor cost per employee, employment, share of exports and accounts receivable days	Italy	M	Yes
Benfratello, L. & Sembenelli, A.	2006	TFP	Italy	M	Yes
Bentivogli, C. & Mirenda, L.	2017	Sales, ROE and financial debt to assets ratio	Italy	M and S	/
Bertrand, O. & Zitouna, H.	2008	EBITDA and TFP	France (horizontal acquisitions)	M	No

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[15]Chari et al. (2009) computed ROA as OIBD (operating income before depreciation) scaled by total assets
[16] Feys and Manigart (2010) analyse the sales growth.
[17] EBITDA is an indicator that gives information on the company's operating profit before non-operating expenses (such as interest) and non-cash charges (depreciation and amortization) and it constitutes a good way of assessing profits since it eliminates the influence of financing and accounting decisions.

Buckley, P., Elia, S. & Kafouros, M.	2014	Net income before taxes, total revenues and labour productivity	developed countries (target); developing countries (acquiring)	M and S	No
Buckley, P.J., Clegg, J. & Wang, C.	2002	Labour productivity	China	M	/
Chang, S., Chung, J. & Moon, J.J.	2013	ROA	China	M	/
Chari, A., Chen, W. & Dominguez, K.	2009	ROA, employment and sales	U.S.A. (publicly traded companies and acquirers in emerging markets)	M and S	Yes
Chen, W.	2011	ROA, employment, sales and labour productivity	U.S.A.	M	/
Chen, Y., Hua, X. & Boateng, A:	2017	R&D expenditures, investment-cash flow sensitivity and labour productivity	China	M and S	/
Conyon, M., Girma, S., Thompson, S., & Wright, P.	2002	Employment, wages and labour productivity	U.K.	M	No
Damijan, J., Kostevc, C. & Rojec, M.	2015	Employment and labour productivity	Bulgaria, Estonia, Czech Republic, Poland, Romania, Slovenia & Slovakia	M and S	No
Feys, C. & Manigart, S.	2010	Net margin, asset turnover, ROA and growth in sales	Flanders (Belgium)	M and S	No
Fukao, K., Ito, K., Kwon, H.U. & Takizawa, M.	2006	ROA and TFP	Japan	M and S	Yes
Harris, R. & Robinson, C.	2003	TFP	U.K.	M	Yes
Karpaty, P.	2007	TFP	Sweden	M	No
Kronborg, D. & Thomsen, D.	2009	Survival of the firm	Denmark	M	/
ICE & Prometeia	2014	sales, employment and labour productivity	Italy	M and S	/
Li, J. & Guisinger, S.	1991	Survival of the firm	U.S.A.	M	/
Liu, Q., Lu, R. & Qiu, L.D.	2017	Sales, fixed asset investment and TFP	China	M	Yes
Mata, J. & Portugal P.	2002	Survival of the firm	Portugal	M and S	/

Piscitello, L. & Rabbiosi, L.	2005	labour productivity	Italy	M	No
Salis, S.	2008	TFP	Slovenia	M	Yes
Schiffbauer, M., Siedsclagb, I. & Ruane, F.	2017	TFP	U.K.	M and S	No
Siedschlag, I., Kaitila, V., Mcquinn, J. & Zhang, X.	2014	employment growth and labour productivity growth	Austria (AT), Belgium (BE), Denmark (DK), Finland (FI), The Netherlands (NL) & Sweden (SE)	M and S	Yes in BE (S), DK (S) & FI (M). No in AT (S) & NL (M)

Source: Personal elaboration

3.4 Foreign takeovers and ex ante target performance

3.4.1 Picking "cherries" or grabbing "lemons"?

The theoretical literature has come up with several reasons that push companies to acquire a firm or to merge with it. The different motivations for mergers and acquisitions may have different implications on how companies are expected to perform pre- and post-acquisition. In this paragraph, we briefly illustrate three general hypotheses of motivations for M&As:

- Managerial hubris: This motivation arises when managers of the acquiring company, certain of their superior skills in the face of clear evidence of the contrary, convince themselves that they can manage the business of the target firm more efficiently than the former management. A related problem is the principal-agent problem according to which managers may have incentives to grow their firms through M&As just to fulfil their desire to build a larger empire, which is positively correlated with power, prestige and pay (Rothaermel, 2015). If efficiency considerations are of secondary order in such decisions, no clear predictions can be made as to whether the target firm is more likely to be a "lemon" (i.e. a low-productive firm) or a "cherry" (i.e. a high productivity firm) before the deal. Furthermore, plant performance after acquisition may not change, and could even deteriorate if managerial hubris is not combined with managerial expertise.

- Synergy effects: This view argues that bidders are looking to acquire targets so that synergies between the firms can improve efficiency of the combined entity. This argument claims that 'cherries' are more likely to be acquired in order to achieve a

greater market power, internalize specific knowledge, superior production techniques or patents right and to access to foreign markets with lower risks. In fact, the survival in such new markets can be assumed to be more likely by choosing leading firms.

- Management's comparative advantage: The idea behind this view is that poor performing "lemons" may suffer a mismatch between management and operations, and thus are not efficient. Therefore, this argument suggests that acquiring companies prefer "lemons" in order to increase the target firm's efficiency through a "disciplining effect" or "efficiency-enhancing restructuring", therefore exploiting this comparative management advantage. The ability to increase a "lemon" efficiency can be expected to be especially a trait of MNEs. Indeed, already Dunning's (1981) OLI paradigm stipulates that MNE need a specific ownership advantage in order to overcome the lack of information and additional costs associated with entering in a foreign country. Along with the hypothesis that lemons are selected in order to exploit their assets, Gioia and Thomsen (2004) argue that foreign investor may prefer to buy poor performers in order to avoid the risks connected with information asymmetries (i.e. double market-for-lemons effect). Normally, there are information asymmetries about the real value of a company between the bidder and the target, to the disadvantage of the bidder and they are still more marked if the investor is located abroad and suffers a "liability of foreignness" (Hymer, 1976).

Both in case of synergy effects and management's comparative advantage, the performance of the acquired firms is expected to rise after the M&A because of the transfer of superior specific advantages (technical know-how and management expertise) from the acquiring to the acquired firm (Fukao et al., 2008). Nevertheless, target firms can exhibit a higher post-acquisition performance just because acquiring companies "cherry-pick" domestic firms that already have a superior performance before the change of ownership. If foreign companies acquire domestic firms, a simple comparison of domestic and foreign companies can suffer from a selection bias, since foreign takeovers can "cherry-pick" domestic firms. Such a selection bias can have severe implications when causality is in focus.

Two conflicting hypotheses emerge from the literature of foreign acquisitions: on the one hand, some studies argue that acquisition targets outperform their domestic competitors already in the pre-takeover period; on the other hand, other studies claim that acquisition

targets underperform comparable domestic firms before the takeover. Nevertheless, it is possible that both the "cherry-picking" and the "lemon-picking" hypotheses need to be rejected since motives for M&As could be much more shaped by managers' own interests in increasing the size of their firm (empire building). Moreover, in a world of heterogeneous strategies another highly plausible result could be the support for both hypotheses. In the reviewed literature on cross-border M&As (Table 12), evidence of "cherry picking" is provided by Barbaresco et al. (2018) and Benfratello and Sembenelli (2006) in Italy, Harris and Robinson (2002) in the UK, Chari et al. (2009) in the United States, Fukao et al. (2006) in Japan, Liu et al. (2017) in China, Arnold and Javorcik (2009) in Indonesia and Salis (2008) in Slovenia. Contradictory results that do not support the "cherry picking" hypothesis are presented by Piscitello and Rabbiosi (2005) for Italy, Bertrand and Zitouna (2008) for France, Buckley et al. (2014) for developed countries, Conyon et al. (2002) and Schiffbauer et al. (2017) for the UK, Damijan et al. (2014) in the Eastern Europe, Feys and Manigart (2019) in the Flanders and Karpaty (2007) in Sweden. Mixed results are given by Siedschlag et al. (2014). Evidence of `lemon-grabbing' is relatively scarce as opposed to `cherry-picking'. An example is given in the work of Damijan et al (2015), which interpret their evidence from acquisitions in the Eastern Europe as supporting the management's comparative advantage hypothesis, both finding that the acquisition targets in their sample are "lemons" and observing an improvement in productivity after the acquisition.

3.4.2 Pre-acquisition performance in Italy

Previous research in Italy on the pre-takeover performance of foreign acquisitions is scarce. A recent study conducted by Barbaresco et al. (2018), using data from the Italian Mediobanca Research Department, find that Italian medium manufacturing firms achieve at least results not lower in the five years pre-acquisition compared to the benchmark of companies destined to remain domestically-owned. Moreover, with reference to some indicators (i.e. ROI, export share and growth rate of cross-border sales), acquisition targets show on average a higher pre-acquisition performance (ibidem). Conversely, Piscitello and Rabbiosi (2005) using data from the Reprint and Aida-Bureau van Dijk databases conclude that multinational enterprises do not seem to systematically select lower or higher productive local target companies.

Foreign-owned and purely domestic firms may be different in many ways, most of which are difficult to observe and may be correlated with the probability of being subject to an inward cross-border M&A. For example, it may be argued that performance gaps between foreign- and domestically-owned companies can arise just because MNEs are concentrated in industries more productive than the average. Benfratello and Sembenelli (2006), using data from the Centro Studi Luca d'Agliano and the Reprint database, show that the average foreign firm in Italy is more likely to operate in high-tech industries and is more labour-productive than the average domestic counterpart.

3.5 Main results

Most of the reviewed literature gives no support to the worries that foreign acquisitions may lead to sudden disinvestments or performance deterioration of the acquired companies.

3.5.1 Post-acquisition performance of Italian firms

With reference to Italy, Piscitello and Rabbiosi (2005) provide evidence that inward cross-border M&As improve the target company's labour productivity in the medium term after the acquisition. The results of the econometric analysis carried out by ICE & Prometeia (2004) confirm such a result finding that, beyond the cyclical aspects, foreign-owned firms in Italy record higher labour productivity (+1.4% per year) than domestically-owned firms, higher total sales (+2.8% per year) and employment (+2% per year) in the time horizon analysed (1998-2011). Similarly, the analysis of Bentivogli and Mirenda (2017) shows the positive contribution of foreign ownership in all the aspects considered: size, profitability, and financial soundness. Additionally, they highlight that only 'true' acquisitions generate a foreign ownership premium, while shell companies with parent companies located in tax havens do not affect the post-acquisition performance of the target firm. Barbaresco et al. (2018), focusing on medium Italian manufacturing firms, document that in the four-year period after the acquisition they improve their performance (ROI), increase their workers' wages, consolidate their employment base recomposing it in favour of more qualified employees (white collars), strengthen their presence abroad both in terms of export share and cross-border sales and significantly reduce the accounts receivable days. However, the evidence that inward cross-border M&As lead to a higher performance of Italian acquired firms is not shared by all studies:

Benfratello and Sembenelli (2006), for example, do not find a significant effect of foreign ownership on productivity.

3.5.2 Effects on productivity in countries different from Italy

The studies that aim to measure the effects of foreign M&As on target firm performance in countries different from Italy have mixed results too.

On one side, Arnold and Javorcik (2009), Bertrand and Zitouna (2008), Fukao et al. (2006), Harris and Robinson (2003), Karpaty (2007) and Liu et al. (2017) show that foreign ownership leads to significant TFP improvements in the acquired firm. Arnold and Javorcik (2009), using data from Indonesia, find that the TFP improvements occur already in the acquisition year and continue in the following years, showing a productivity 13.5% higher than the control group after three years. They argue that the rise in productivity is the result of two distinct phenomena: the better integration of the target into the global market through greater exports and imports and the restructuring process of the acquired firms that increase investment outlays, number of employees and workers' wages. Similarly, Fukao et al. (2006) find positive effects on target firms' performance in Japan, but the magnitude of the improvement is much smaller than the one observed by Arnold and Javorcik. This result is not surprising because the difference in technological and managerial capabilities between domestic and foreign firms is more marked in Indonesia than in Japan and technology transfer effects from foreign acquiring companies to domestic targets may be less relevant in Japan. Fukao et al. (2006) highlight also that cross-border acquisitions improve target firms' productivity significantly more and quicker than acquisitions by domestic firms and that the positive effects of foreign acquisitions tend to be much larger in the case of services sector than in the case of manufacturing industry. Harris and Robinson (2003) provide robust empirical support for the view that in general foreign-owned plants have higher TFP, with certain exceptions largely explained by the nature of branch plants and by the likelihood for foreign acquirers to experience cultural problems of assimilation. Karpaty (2007) finds that inward cross-border acquisitions increase the productivity of the acquired firms in Sweden by a percentage between 3 per cent and 11 per cent depending on the estimator chosen and that this productivity difference does not occur immediately but starts one to five years after the M&A effective date. Similarly, Liu et al. (2017)'s results suggest that foreign ownership significantly enhances the productivity as well as sales and fixed asset investment of Chinese firms acquired by

foreign investors and that these effects are stronger in acquisitions in which the acquirer and the target company have a large technological gap. Bertrand and Zitouna (2008), studying the effects of horizontal acquisitions on the performance of French target firms in the 1990s, find that cross-border M&As do not rise the profit of the acquired companies but increase their productivity. This result suggests a probable redistribution of efficiency gains upstream and/or downstream of the production process. Moreover, efficiency gains are stronger for cross-border takeovers than domestic ones, even if this conclusion is true only for extra-EU transactions[18] (ibidem).

However, the evidence of positive effects on TFP is not shared by all studies. Salis (2008) does not find any significant effect of foreign ownership on TFP of the acquired firms in Slovenia and Schiffbauer et al. (2017) find that on average foreign-acquired firms have a 5.1% lower TFP-growth in the acquisition year than domestic firms that have a comparable pre-acquisition probability of becoming a foreign M&A target. The negative initial impact of the acquisition suggests the presence of restructuring costs that reduce the TFP in the acquisition year. A relevant result found by Shiffbauer et al. (2017) is the significant heterogeneity in TFP effects of foreign M&A at the industry level. This finding is consistent with the theoretical predictions of Nocke and Yeaple (2007)'s model that show how foreign acquirers, in comparison to domestic acquirers, are the most productive in industries with mobile capabilities (e.g. R&D intensive industries) and the least productive in industries where the source of firm heterogeneity is not internationally mobile (e.g. market expertise, advertising).

With regard to labour productivity, many studies (Buckely et al., 2002; Buckley et al., 2014; Chen, 2011; Chen et al., 2017; Conyon et al., 2002; Damijan et al., 2015) agree that labour productivity increases when domestic firms are acquired by foreign companies. Chen (2011)'s contribution is particularly relevant because his paper provides one of the first evidence that acquirer country has repercussions on the target post-acquisition productivity. Chen (2011) argues that U.S. targets acquired by firms based in foreign industrial countries exhibit the best post-acquisition performance with an increase in labour productivity greater than 13% compared to targets acquired by domestic firms. Conversely, acquirers from developing countries lead to 23% lower labour productivity gains

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[18] *Europe's economic integration certainly partly explains the absence of significant difference between European and domestic acquisitions.*

in the acquired firms compared to domestic acquisitions. Finally, in contrast to acquisitions by foreign industrial country firms, acquisitions by firms based in developing countries result in lower labour productivity in domestic U.S. targets (ibidem). In contrast to the studies previously listed, Siedschlag et al. (2014) find that no general pattern in labour productivity emerges across the six investigated countries (i.e. Austria, Belgium, Denmark, Finland, the Netherlands and Sweden); however, they show that the effects on performance is stronger in the services sector than in the manufacturing industry. Their results support the hypothesis that effects of foreign investment on firm performance are likely to be conditioned by economic, social and institutional country-specific characteristics.

3.5.3 Effects on other performance measures in countries different from Italy

With regard to other performance measures different from TFP and labour productivity, results are mixed too. As mentioned before, Bertrand and Zitouna (2008) document that foreign takeovers do not raise the profitability of French companies, even on the long run. In contrast, Fukao et al. (2006) show that cross-border acquisitions improve target firms' profitability (measured by ROA) significantly more and quicker than domestic acquisitions and that the magnitude of the improvement of foreign acquisitions tend to be larger in the services industry than in the manufacturing sector. Chari et al. (2009), focusing on cross-border M&As with acquiring firms based in emerging markets, find that profits rise while sales and employment levels decline. The time-series pattern in the ROA numbers calculated by Chari et al. (2009) suggests that U.S. target firms undergo significant restructuring in the early years following the acquisition leading to higher profitability in later years. Similarly, Chen (2011) finds that targets acquired by firms based in developing countries show a profitability 8 per cent higher than targets acquired by domestic companies. The conclusion is similar for the case of acquirers located in developed countries which lead to a 10 per cent improvement in the post-acquisition profit compared to what domestic acquirers do (ibidem). Additionally, in contrast to acquisitions by countries based in developed country, acquisitions by firms based in developing countries result in lower sales in U.S. targets. Instead, Buckley et al. (2014) show that MNEs based in emerging countries do not significantly increase the profitability of target firms based in developed countries, although they raise their productivity and sales.

If on the one hand, there are numerous papers exploring the post-acquisition performance of targets in developed countries, the evidence about the effects of foreign acquisitions in emerging countries is limited (Chang et al., 2013; Chen et al., 2017; Liu et al., 2017). As mentioned before, Liu et al. (2017) find that foreign ownership increases both sales and fixed asset investment in Chinese targets. Chang et al. (2013) find that foreign subsidiaries created through the acquisition of domestic firms outperform domestically-owned firms, with an average increase in ROA 0.608 per cent higher than domestic firms in the acquisition year, 1.11 per cent higher the following year and 0.786 per cent higher two years later. Furthermore, Chang et al. (2013) find that that private and incorporated local firms, that manifest a greater absorptive capacity, are more able to fully exploit the foreign ownership advantage and are more likely to be acquired than state-owned enterprises. This means that private domestic firms may benefit more from the foreign takeover if they are able to recognize, assimilate, and apply to commercial ends the value of the technological and managerial know-how offered by the acquiring MNE while state-owned enterprises may not possess strong motivation to learn from the acquirer after the M&A. One of the most recent studies conducted by Chen et al. (2017), exploring the effects of foreign acquisitions in China, shows that cross-border acquisitions lead to an increase in R&D expenditure and productivity of the acquired companies. The positive impact of foreign acquisitions on R&D investments and productivity can be the result of the alleviation of financial constraints (ibidem).

Focusing on entrepreneurial companies, Feys and Manigart (2010) do not measure any positive revenue-related synergies after the M&A (sales decline in the acquisition year and in the two years later, to grow at the same level as domestically-owned companies in subsequent years) but they find an almost immediate and consistent improvement in targets' margins, making them more cost efficient than domestic companies. This outcome suggest that acquired entrepreneurial companies need time before the new foreign ownership fully manifest its effects.

3.5.4 Employment effects in countries different from Italy

Most of the empirical studies that investigate the impact of foreign presence on the host country's labour or TFP, provide most of the time evidence that foreign-owned firms engender improvement in productivity levels. In comparison to the evidence on effects on productivity, the evidence on the employment effects of foreign acquisitions is less

conclusive. Faster employment growth is found by Arnold and Javorcik (2009) for Indonesia; Barbaresco et al. (2018) and ICE & Prometeia (2014) for Italy and Conyon et al. (2002) for the UK. Conversely, Chari et al. (2009) and Chen et al. (2011) find that US firms acquired by investors from foreign markets experience a decline in the employment levels, Damijan et al. (2015) find that the impact on employment is uncertain and Siedschlag et al. (2014) find different results in terms of employment growth in the different countries and industries analysed. Additionally, Conyon et al. (2002) and Piscitello and Rabbiosi (2005) have identified that the significant labor productivity differential between foreign and domestic companies, it is partly translated into higher wage levels in foreign owned companies. Similarly, Barbaresco et al. (2018) register that wages increase due also to a rise in the share of highly-skilled workers (white collars) in the post-acquisition period.

3.5.5 Foreign ownership and survival probabilities of target companies

A portion of the literature, questions if exit decisions are significantly different between foreign- and domestically-owned companies. In one of the first study analysing this topic, on a small sample (consisting of 81 foreign business failures) without control variables, Li and Guisinger (1991) find that domestic manufacturing firms fail almost four times as frequently as foreign-owned companies. Similar evidence has been found by Kronbor, D. and Thomsen, S. (2008), that analysing the relative survival of foreign and domestically owned companies in Denmark over more than a century, find evidence of a significant survival premium for foreign-owned companies (i.e. domestic companies have an exit rate two times higher than foreign subsidiaries). However, the premium declines over time and disappears entirely in the last decade leading up to 2005 (ibidem). In contrast, Mata and Portugal (2002) do not find a strong basis for supporting the hypothesis that foreign ownership by itself implies significant changes in the chances of survival experienced by firms. They compared the survival of newly established firms in Portugal over the period 1983-1989 and do not find a significant survival differential among foreign- and domestically-owned companies when controlling for a relatively limited number of firm and industry characteristics.

Table 13 Literature review: main results

VARIABLES		POSITIVE EFFECT	NEGATIVE EFFECT	NO SIGNIFICANT EFFECT
PRODUCTIVITY	Total Factor Productivity	Arnold & Javorcik (2009); Bertrand & Zitouna (2008); Fukao et al. (2006); Harris & Robinson (2003); Karpaty (2007); Liu et al. (2017)	Schiffbauer et al. (2017)	**Benfratello & Sembenelli (2016)**; Salis (2008)
	Labour Productivity	Buckley et al. (2002); Buckley et al. (2014); Chen et al. (2017); Conyon et al. (2002); Damijan et al. (2015); **ICE & Prometeia (2014)**; **Piscitello & Rabbiosi (2005)**		Chen (2011); Siedschlag et al (2014)
PROFITABILITY	ROA	Chang et al. (2013); Chari et al. (2009); Chen (2011); Feys and Manigart (2010); Fukao et al. (2006).		
	ROI	**Barbaresco et al. (2018)**		
	ROE	**Bentivogli & Mirenda (2017)**		
	EBITDA		Bertrand & Zitouna (2008)	
	Net Margin	Feys & Manigart (2010)		
	Cash flow-to-assets	**Bentivogli & Mirenda (2017)**		
	Net Income Before Taxes			Buckley et al. (2014)
EFFICIENCY	Asset Turnover	Feys & Manigart (2010)		
	Accounts Receivable Days	**Barbaresco et al. (2018)**		
	Value Added Per Employee	**Barbaresco et al. (2018)**		
	Labour Cost Per Employee	**Barbaresco et al. (2018)**		
SIZE/GROWTH	Sales	**Bentivogli & Mirenda (2017)**; Buckley et al. (2014); **ICE & Prometeia (2014)**; Liu et al. (2017)	Chari et al. (2009); Feys & Manigart (2010)	Chen (2011)
	Employment	Arnold & Javorcik (2009); **Barbaresco et al. (2018)**; Conyon et al. (2002); **ICE & Prometeia (2014)**;	Chari et al. (2009); Chen (2011)	Damijan et al. (2015); Siedschlag et al (2014)
SALARIES	Wages	**Barbaresco et al. (2018)**; Conyon et al. (2002); **Piscitello & Rabbiosi (2005)**		
INVESTMENTS	Fixed Asset Investment	Liu et al. (2017)		

	R&D expenses	Chen et al. (2017)		
INTERNATIONALIZATION	Share of exports	**Barbaresco et al. (2018)**		
	Cross-border sales	**Barbaresco et al. (2018)**		
FINANCIAL HEALTH	Debt-to-Assets	**Bentivogli and Mirenda (2017)**		
	Investment-Cash Flow Sensitivity	Chen et al. (2017)		
SURVIVAL	Exit Rate	Kronborg & Thomsen (2009); Li & Guisinger (1991)		Mata & Portugal (2002)

Source: Personal elaboration

Note: studies in bold refer to Italy

3.6 Summary and final considerations

Out of twenty-six studies, most of the economics studies have analysed labour productivity or total factor productivity (TFP) which also accounts for the efficiency of the capital stock use. On the other side, business studies focused more on profitability ratios (e.g. ROA, ROE, net margin, ROI), accounting measures (e.g. EBITDA, sales, net income before taxes, R&D expenditures, share of exports), operating performance ratios (e.g. value added per employee, asset turnover, fixed asset investment), employment levels and probability of survival compared to domestically-owned companies. All the studies reviewed use data on manufacturing firms, with only a few including also services firms. With respect to empirical methodologies adopted to measure if there is an improvement in the performance of the target firms after the deal, some studies have used Ordinary Least Square (OLS) estimators or system GMM. Early studies compare the mean or median pre- and post-acquisition without taking into consideration the endogeneity inherent to the foreign firm entry decision. Pre-acquisition performance of the target firm matters for the entry choice of the foreign investor: eight of the studies analysed (Table 12) show that foreign companies "cherry pick" the best-performing firms while eight studies find no evidence of cherry-picking or find that foreign firms prefer "lemons". In order to account for the selection bias problem just like for the possibility that performance differences arise from the selection of superior target firms in an industry rather than by the change in ownership, a widely used approach consists in combining propensity score matching and difference-in-differences estimators (e.g. Schiffbauer et al., 2017). In most cases, performance was analysed for at least two years before and after the acquisition. However, in some studies (Chen, 2011), foreign acquisition effects are found only five

years following the deal. This aspect suggests the need to extend the analysed period, although it is difficult to assess a priori how many years it takes for the possible effects of an ownership change to manifest completely.

Many studies give no support to the worries that cross-border M&As may lead to sudden disinvestments or performance deterioration of the acquired companies. With reference to Italy, Bentivogli and Mirenda (2017), ICE & Prometeia (2004) and Piscitello and Rabbiosi (2005) show the positive contribution of foreign ownership in terms of labour productivity and sales. Barbaresco et al (2018) confirm such a result as they find that in the four-year period after the acquisition, medium Italian manufacturing firms improve their performance, strengthening their presence abroad both in terms of export share and cross-border sales and considerably reducing the accounts receivable days. In contrast, Benfratello and Sembenelli (2006) do not find a significant effect of foreign ownership on productivity.

Studies investigating the effects of foreign ownership on countries different from Italy have mixed results too. Arnold and Javorcik (2009), Bertrand and Zitouna (2008), Fukao et al. (2006), Harris and Robinson (2003), Karpaty (2007), Liu et al. (2017) provide evidence for the view that foreign-owned plants have higher TFP than comparable domestically-owned companies. In contrast, Salis (2008) does not find any significant effect of foreign ownership on TFP of the acquired firms while Schiffbauer et al. (2017) find that on average foreign-acquired firms have lower TFP-growth.

Studies investigating the effects on labour productivity (Buckely et al., 2002, Buckley et al., 2014; Chen et al., 2017; Conyon et al., 2002; Damijan et al., 2015 and Schiffbauer et al., 2017) agree that it increases when domestic firms are acquired by foreign companies. Additionally, Fukao et al. (2006) and Siedschlag et al. (2014) show that the effect on productivity is stronger in the case of non-manufacturing sector than in the manufacturing industry and Chen (2011) finds that when the foreign acquirer is based in a developed country, the effects on labour productivity is higher.

The rise in productivity can be the result of two phenomena according to Arnold and Javorcik (2009): the better integration of firms into the global market through greater exports and imports and the restructuring process of the target firms. As to the latter, Chari et al. (2009) and Schiffbauer et al. (2017) find that domestic firms acquired by foreign investors experience decline of employment and sales but increase in labour

profitability, suggesting significant restructuring of the target firms and the downsizing of divisions to improve overall profitability as a percent of assets. In particular, Schiffbauer et al. (2017) suggest that overall labour productivity gains are likely to be linked to capital deepening following firm restructuring through employment reduction rather than diffusion of advanced technology and knowledge. Moreover, Shiffbauera et al. (2017) find that the effects of foreign acquisitions vary across industries. Their results are consistent with the theoretical predictions of Nocke and Yeaple (2007) which argue that foreign acquirers are the most productive in industries in which the source of firm heterogeneity is linked to internationally mobile capabilities (e.g. R&D intensive industries) and the least productive in industries with low or non-mobile capabilities (e.g. advertising). It has also been suggested that a marked technological gap between the acquiring and the target company may generate a larger increase in productivity and sales in the target (Liu et al., 2017).

The effects of cross-border M&As on other performing measures is mixed too. According to Chang et al. (2013) and Chari et al. (2009), firms acquired by foreign companies outperform comparable domestic firms in terms of ROA. Moreover, Fukao et al. (2006) document that foreign acquisitions in Japan improve the ROA of the target firms significantly more and quicker than domestic acquisitions. In contrast, Bertrand and Zitouna (2008) find a decline in profits of French companies that changed flag compared to domestically-owned companies. With respect to change in sales, Liu et al. (2017) find a significant increase in sales of domestic firms acquired by foreign investors and Buckley et al. (2014) confirm such a result for targets acquired by emerging countries' firms. In contrast, Chen (2011) finds that targets acquired by firms located in emerging countries experience a decrease in revenues compared to domestic acquisitions while targets acquired by firms based in developed countries experience an increase in revenues. Finally, Chari et al. (2009) and Feys and Manigart (2010) find evidence of a decline in sales post-acquisition; however, Feys and Manigart (2010) find an almost immediate and consistent improvement in targets' margins, meaning that they become more cost efficient than domestically-owned companies.

In comparison to the evidence on effects on productivity, the evidence with respect to the employment levels is less conclusive. Faster employment growth after the acquisition is found by Arnold and Javorcik (2009), Barbaresco et al. (2018), ICE & Prometeia (2014)

and Conyon et al. (2002) while negative employment effects have been found by Chari et al. (2009) and Chen et al. (2011).

Another relevant aspect investigated by some of the reviewed studies concerns the possibility that exit decisions are significantly different between foreign- and domestically-owned companies. Li and Guisinger (1991) and Kronbor, D. & Thomsen, S. (2008) find that domestic manufacturing firms fail more frequently than foreign-owned companies while Mata and Portugal (2002) do not find evidence for supporting the hypothesis that foreign ownership by itself implies significant changes in the chances of survival.

3.7 Conclusions

The review of the literature suggests that on average cross-border M&As tend to result in higher productivity and profitability post-acquisition, while the effects on employment appear to be more mixed. However, results on the post-acquisition performance of the target firms are not conclusive. Further research on factors driving investors' choices to enter foreign markets and on the performance effects of the target would improve our knowledge of the motivations and repercussions of foreign takeovers in host countries. In particular, future research should better investigate the effects on profitability, efficiency and financial structure since most of the studies mainly focus on productivity changes after the foreign M&A. Moreover, it would be interesting to better analyse also the effects on investments (R&D, fixed assets, human capital) and internationalization (export share and cross-border sales) to understand the strategic actions that foreign investors put forward. This evidence would be also useful for providing recommendations for policy makers aimed at maximizing the benefits associated with cross-border takeovers and minimizing related costs.

MEASURING THE POST-ACQUISITION PERFORMANCE OF ACQUIRED FIRMS USING A DIFFERENCE-IN-DIFFERENCES MATCHING APPROACH

4.1 Introduction

The underlying question of this work is whether the cross-border M&As can strengthen the performance and competitiveness of Italian companies or, if conversely, these acquisitions lead to a worst performance and foster a depletion process of our industrial and entrepreneurial system. Such question has been firstly analysed from an aggregate point of view in these terms: "Do foreign acquirers improve the financial performance of the target firms in the three years after the deal closure"? Later, we measured if the effects of foreign ownership change based on the acquirer's country of origin: both geographical distance (Europe vs non-Europe) and "national cultural distance" were considered in the analysis. Furthermore, we verified if there are different effects based on the target macro-industry (services vs manufacturing), form of the deal (mergers vs acquisitions), size of the target (SMEs vs large companies).

We try to answer to these questions by combined a difference-in-differences approach with coarsened exact matching. This empirical methodology enables us to measure the effect of foreign ownership on the target performance and to account for the possibility that performance differences arise due to the selection of superior target firms rather than to the change in ownership. Through the matching procedure, for each acquired company, we find a non-acquired domestic company with a similar ex-ante probability of being acquired measured by some pre-takeover characteristics such as size, profitability and financial structure. Our treated sample include deals acquired between 2011 and 2013 and

the outcomes of interest we chose are a measure of size (i.e. sales) and two measures of profitability (i.e. ROA and EBITDA margin).

4.2 Data and Descriptive Statistics

4.2.1 The "treated" group

Testing the effects of inward cross-border mergers and acquisitions on the target companies is more demanding in Italy compared to other countries (e.g. USA, UK), as there is no ready-to-use data set for such a study. On the one hand, financial software like Factset Mergers, S&P Capital IQ and Thomson Reuters Eikon do not provide financial variables and indexes for all the foreign deals concluded in Italy. On the other hand, other financial software and databases report M&A data at firm level, but they have some shortcomings for our purposes. For example, the ICE-Reprint database has the limitation that only report data on foreign-owned firms, thus limiting the possibility of identifying a control sample, provide few performance variables and exclude some industries. Other sources that contain information on both domestic and foreign-owned firms are either small panels (e.g. the EFIGE dataset) or cross sections that only contain information on internationalization issues (e.g. the Bank of Italy's INVIND survey). The only financial software that report information on Italian M&As along with detailed balance sheet data is Bureau van Dick through the combination of the two databases Aida and Zephyr. Since we do not have access to Zephyr database, we have overcome these shortcomings combining two different panels of data. The first one is Thomson Reuters M&A database[19] that covers over one million deals and, compared to other financial software, has complete information about the target and acquirer ultimate parent region.

The second dataset is extracted from AIDA, a company accounts data system provided by the Bureau van Dijk that contains detailed income statement and balance sheet data on about one million companies in Italy, with up to ten years of history.

Our goal is to analyse if target companies' performance change before and after the acquisition due to the foreign ownership. Similarly to other previous studies that analyse the performance of the target firms in the three-years period or four-years period after the acquisition (e.g. Barbaresco et al., 2018), we want to performance a difference-in-

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[19] *The content of the Thomson Reuters database is highly reliable since it is directly sourced by global banking bond legal contributors and by a team of dedicated analysts who examine thousands of sources and all types of deals, from smaller, undisclosed value transactions to large mega deals.*

differences estimation based on the average of the 3-years period before the M&A with the average of the 3-years period after the M&A for two reasons. Firstly, focusing on only one year before the M&A can entails the risk of dealing with distorted balance sheet data (e.g. the former managers of the target could for example stop investing in R&D in order to increase the profitability and the valuation of the company). Secondly, the foreign ownership can need time to manifest completely its positive (or negative) effects, as suggested by the existing literature. Since in AIDA we have balance sheet and income statement data for no more than 10 years (2008-2017) and since in the period we built the M&A dataset only a small portion of companies had data available for 2017, we focus on M&A completed between 2011 and 2013. In this way, for the deals concluded in 2011 we observe balance sheet data from 2008 to 2010 and from 2012 to 2014; for the deals concluded in 2012 we have data from 2009 to 2011 and from 2013 to 2015; and for deals concluded in 2013 we compared data between 2010 to 2012 with data between 2014 to 2016. The year of completion of the deal is not included neither in the pre-acquisition nor in the post-acquisition years.

To build our treated group, we started extract all the inward foreign M&As (329 deals) concluded between 01/01/2011 and 31/12/2013 from the Thomson Reuters M&A database. More specifically, we identified the deals with the following characteristics:

- deal status completed;
- deal form: acquisitions, acquisitions of assets, acquisitions of majority interest and mergers;
- the foreign investor acquires a controlling share (i.e. percent acquired greater than 50%) in order to be sure that he can influence the company strategies and decisions;
- both the acquiror nation and the acquiror parent nation are foreign.

Then, we have narrowed the listed down to 172 deals by excluding the deals in which the target ultimate parent nation is not Italy. This constraint assures that both the first direct investor and the ultimate control along the property chain are domestic before the foreign takeover. In this way we are confident to analyse the impact of foreign ownership on previously domestically owned company that were not already subsidiaries of foreign MNEs.

We have excluded targets that operate in the "financial" or "real estate" macro industry, since our research want to analyse the industries in which a change of ownership (and

supposedly of the management) can be more evident, such in the manufacturing sector and (other) services. For the same reasons, we also did not consider deals in which the acquirers' macro industry is "financials", "government and agencies" or "real estate"[20]. The latter constraint was added because we are interested in analysing foreign acquirers that can influence the strategic decisions of the target company.

The resulting dataset composed by 172 cross-border deals was then merged with the AIDA database in order to match each firm with its annual balance-sheet information for the whole period 2011-2013. Transactions have been checked one by one to be sure they respected all the characteristics necessary for the analysis.

Firstly, 3 deals were delated since the target companies were not recorded in the Aida database and 18 deals were excluded since there were no enough balance sheet data on AIDA for the analysis (i.e. seven consecutive years of which 3 before and 3 after the takeover). Moreover, we do not have post-acquisition balance sheet data for 16 companies because they were ceased and incorporated within three years from the M&A and for 6 companies that failed during that time frame. Conversely, for 23 companies we do not have pre-acquisition balance sheet data because the foreign investor acquired only a business unit, a branch, certain assets or some operations for which there are no balance sheet data. Additionally, since target companies must remain under foreign control in the three years following the M&A to measure the causal effect of foreign ownership, we did not consider 1 deal in which the company was sold to another acquirer within three years from the takeover. Similarly, we delated 1 transaction in which the target was reacquired by the former Italian owner in that time frame. Additionally, 1 deal was excluded since it resulted as M&A in Thomson Reuters but not in AIDA or in other sources (i.e. company website, newspapers, other financial databases); and 1 deal was delated since it was actually a Joint Venture and not a M&A as reported in Thomson Reuters. Finally, 1 deal was delated since the acquirer (Ferrero Trading Lux SA) cannot be considered foreign even if its legal address is in Luxembourg because the operational headquarter is still in Italy and the ownership is still in Italian hands.

After the applied changes, we come up with a final dataset consisting of 100 deals completed between 2010 and 2013, that represents our "treated" group.

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[20] *Thomson Reuters classification.*

4.2.2 The "control" group

Since our goal is to match the foreign-acquired target firms included in the "treated group" with the most similar local firm not acquired by a foreign investor, we extracted from AIDA database a "control" group composed by purely domestic firms. The control group includes 84.452 companies with at least seven consecutive balance sheet data available (i.e. from 2008 to 2014, from 2009 to 2015 and/or from 2010 to 2016).

Companies in the control group have the following characteristics:

- they are not subsidiaries with foreign shareholders;

- they have a national and a global controlling shareholder (and ultimate owner) based in Italy and belonging to one of the following categories: industrial companies, individuals, families or listed companies. This means that banks, financial services, insurances, private equity and venture capital companies, hedge funds, mutual and pension funds, foundations, governments are excluded by the sample.

- the control group include only companies operating in one of the 67 ATECO 2007 3-digit codes in which the treated groups are engaged. This constraint was added to manage a lightweight dataset more similar to the treated group in terms of industries.

We compared the control group and the treated group to check that no companies were included in more than one group.

The control group amounts to 181.660 observations. More specifically, 65.042 companies are used as control group for the 38 M&A concluded in 2011; 65.455 companies form the control for the 25 M&As concluded in 2012 and 51.163 companies are the control for the 37 M&As realized in 2013. If in the treated group each company is present only once and it represents a single observation that has data for the three years before and three years after the takeover, in the control group it is not the same. Companies in the control group can be present one, two or three times in the dataset. For example, a domestically-owned company that has accounting data from 2008 to 2016 can be used as control for acquisition concluded in the 2011, 2012 and 2013. Therefore, that company will be repeated three times and a variable called "M&A effective year" will indicate if we have balance sheet data to perform the match for that specific year. It is worth to highlight that for each company only the average of the three years prior to the M&A and of the three years after the M&A are indicated for each variable.

4.2.3 Treated group: descriptive statistics

Conversely to other recent studies conducted in Italy (Barbaresco et al, 2018; Bentivogli and Mirenda, 2017), our research investigates the effects of foreign acquisitions both in the manufacturing and in the services industry. Figure 12 plots the distributions by sector of the 100 cross-border M&As of our treated group. The data sample contains almost the same percentage of industries in manufacturing and services, showing how foreign investors are attracted by companies in both sectors and not only in the manufacturing sector as it often emphasized in the local newspapers. See *Appendix I* (Table 49) for a comparison of companies by industry in both treated and control groups.

Figure 12 Treated group: target main industry
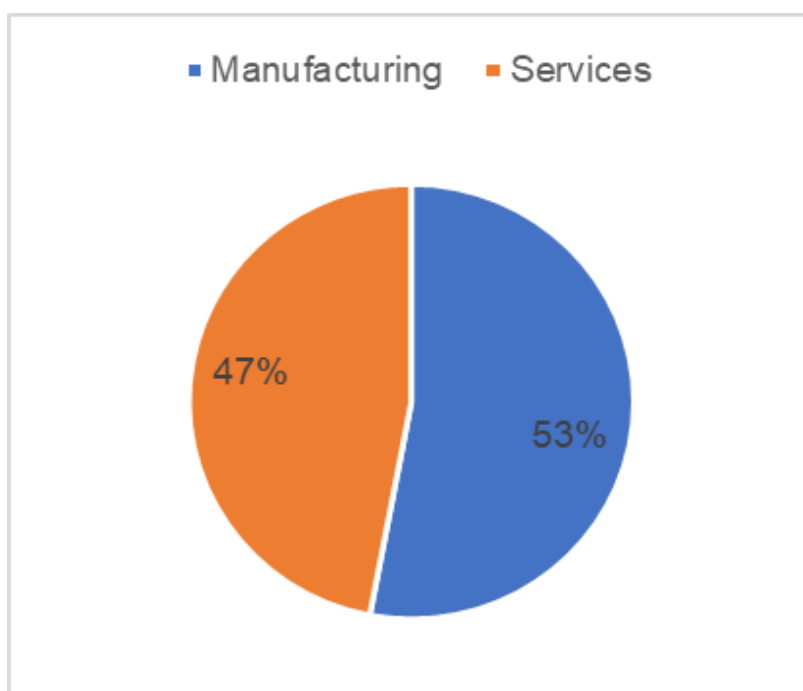
Source: Elaboration of the author on Thomson Reuters data (the treated group include n=100 acquired companies)

Table 14 and Figure 13 provide information on the nation of the foreign companies. First of all, most of the acquiring companies are based in Europe (66%) while a smaller percentage (34%) is located in countries outside the European continent. The most active investors are Germany, United States and France, followed by UK and Switzerland.

Table 14 Treated group: acquirer's country of origin

ACQUIRER'S NATION	FREQ.	PERCENT.
Belgium	4	4%
Canada	4	4%
China	1	1%
Denmark	3	3%
Finland	1	1%
France	12	12%
Germany	18	18%
Hong Kong	1	1%
India	2	2%
Israel	1	1%
Japan	4	4%
Luxembourg	4	4%
Netherlands	2	2%
Republic of Ireland	2	2%
Reunion(France)	1	1%
Russian Federation	1	1%
South Korea	2	2%
Spain	2	2%
Sweden	1	1%
Switzerland	5	5%
Thailand	1	1%
Turkey	4	4%
United Kingdom	7	7%
United States of America	17	17%
Total	*100*	*100%*

Source: Elaboration of the author.

Figure 13 Treated group: acquirer's nation
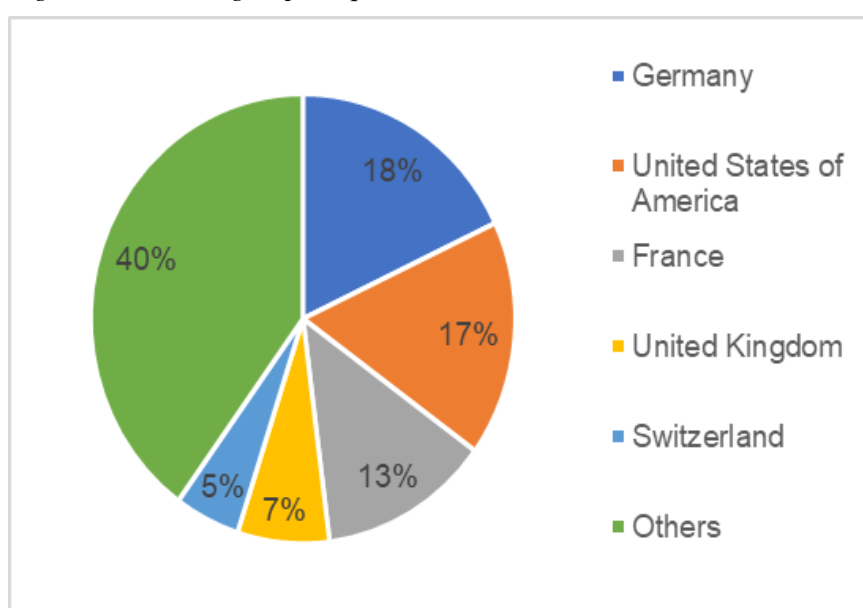
Source: Elaboration of the author on Thomson Reuters data (the treated group include n=100 acquired companies)

As mentioned in paragraph 4.2.1., we focus on three types of FDI (acquisitions of assets, acquisitions of majority interest, mergers) where the stake acquired was higher than 50%. The latter aspect was included to be sure that we select only the foreign M&As that could potentially lead to a change in the management practices and corporate strategy. Figure 14 shows the forms of the deal included in our treated group. Almost half of the transactions in the treated group consists of acquisition of assets (49%), followed by mergers (29%) and acquisition of majority interests (22%).

Figure 14 Treated group: form of the deal
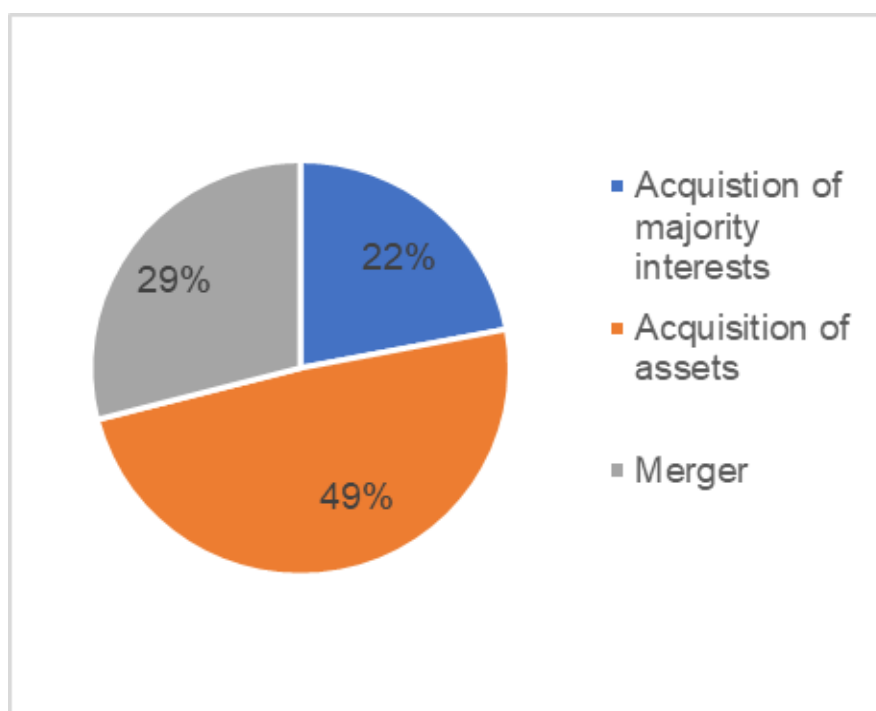
Source: Elaboration of the author on Thomson Reuters data (the treated group include n=100 acquired companies)

In our research, we investigate the effects of the foreign ownership on the average performance of the domestic Italian targets in the three years after the acquisition. Our outcome of interest are sales, return on assets (ROA) and EBITDA margin. In order to get primary insights on the company performance the data on net sales, ROA, EBITDA margin and D/E are provided in Table 15 for both treated and control groups. From this table it can be seen that treated companies have a lower D/E ratio in the pre-acquisition period compared to non-acquired firms and that the financial structure improves for both groups in the post-acquisition period. Moreover, on average, target companies have higher sales than companies in the control sample. Nonetheless, all maximum (and minimum) values are obtained in the sample of the non-acquired domestic firms, since balance sheet data for the control units are

highly skewed. Profitability ratios (ROA and EBITDA margin) are on average lower (and negative) in the three years before the acquisition for the treated companies, while unmatched control units have positive values. This result suggest that foreign companies do not always cherry-pick the best-performing companies in Italy, but they probably also grab the low-performing lemons in order to restructure them. Nevertheless, after the M&A profitability improves for the treated companies and get worst for the units in the control group, although ROA and EBITDA margin remain still negative for the treated units. However, it does not mean that results will necessarily indicate that targets will be more profitable after the M&A as these are just indicative numbers and much more advanced analysis is needed.

Table 15 Descriptive statistics for acquired and non-acquired companies (data for sales in thousands of euro)

TREATED GROUP	OBS	MEAN	STD. DEV.	MIN	MAX
Avg Sales Pre	100	41.013	73.424	0	407.989
Avg Sales Post	100	41.453	83.446	70	507.599
Avg ROA Pre	100	-0,05	0,43	-4,17	0,22
Avg ROA Post	100	-0,01	0,13	-0,41	0,48
Avg EBITDA Margin Pre	99	-0,34	4,08	-40,20	0,87
Avg EBITDA Margin Post	100	-0,08	0,96	-7,69	0,85
Avg D/E Pre	99	2,56	6,44	-2,88	45,36
Avg D/E Post	100	1,71	6,90	-4,78	65,71
CONTROL GROUP	OBS	MEAN	STD. DEV.	MIN	MAX
Avg Sales Pre	181.660	4.840	102.090	0	20.204.808
Avg Sales Post	181.660	5.285	109.581	-26	21.788.564
Avg ROA Pre	181.653	0,01	0,61	-108,50	15,25
Avg ROA Post	181.645	0,00	1,25	-366,66	95,44
Avg EBITDA Margin Pre	172.458	0,11	11,39	-3919,36	1650,00
Avg EBITDA Margin Post	172.605	0,05	5,59	-910,40	643,20
Avg D/E Pre	181.655	3,00	19,96	-830,91	961,87
Avg D/E Post	181.655	2,43	16,49	-605,50	818,89

Note: for each outcome of interest, "Avg Pre" stands for the average of the values between t-3 and t-1; "Avg Post" stands for the avergae of the values between t+1 and t+3, where t is the M&A year.

Finally, an interesting aspect that could be analysed in further studies is related to the survival of the target company after the post-acquisition period taken into consideration. Even if we did not deepen this matter, we provide a general framework of the actual situation of the treated companies in our sample in Figure 15. Out of 100 treated company, at the end of December 2018, 83 firms are still active, 1 firm is active but in state of

insolvency, 8 firms have been ceased or incorporated, 5 firms are actually in the process of liquidation and 3 firms have failed.

Figure 15 Legal status (today) of the target companies acquired between 2011 and 2013
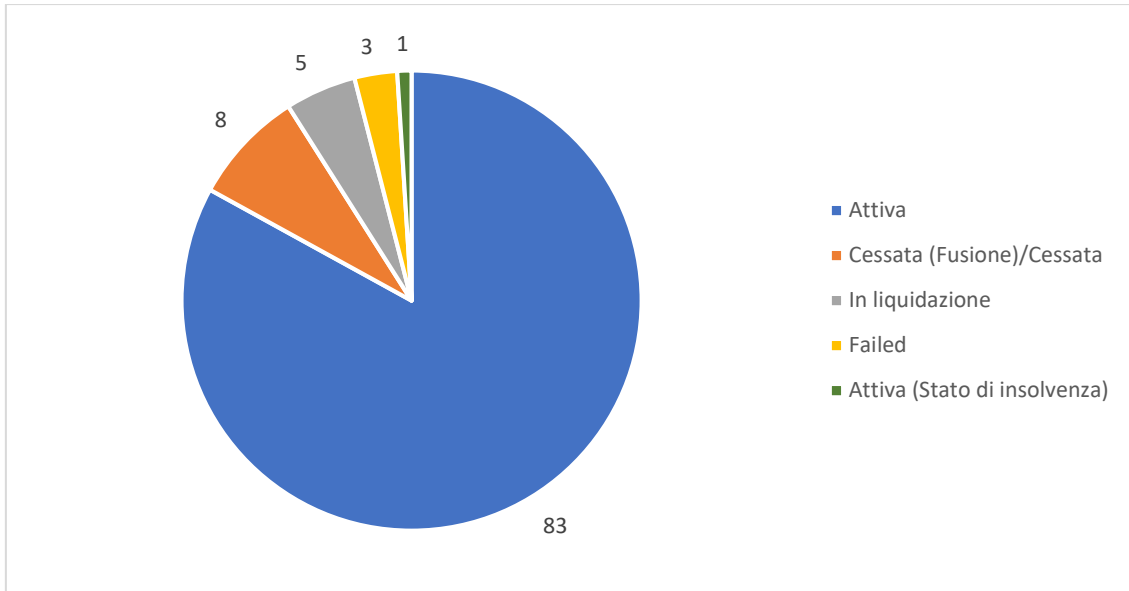
Source: Elaboration of the author on AIDA data (the treated group include n=100 acquired companies)

4.2.4 Treated group: trend for Sales

Sales are one of the outcomes of interest we are measuring pre- and post-acquisition. Figure 16 show the average trends for sales for the treated group, from 3 years before the M&A to 3 years after. Results are mixed based on the M&A year analysed. For instance,

Figure 16 Treated group: Average pre- and post- M&A sales (data in millions of Euro)
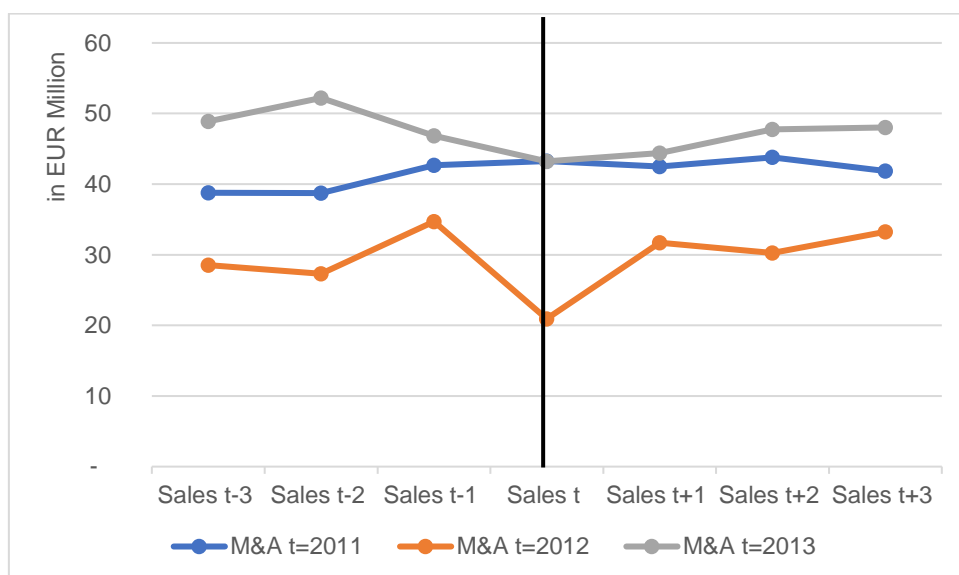
Source: Elaboration of the author on AIDA data (N=100)

for M&As concluded in 2011 sales remain quite stable from 2008 to 2014. M&As concluded in 2012 and 2013 show on average a downward trend before the acquisition year and an upward trend in the 3 years after. Furthermore, foreign companies have acquired on average larger domestic companies (average sales higher than €40 million) in 2011 and 2013 and smaller firms (average sales equal to €20 million) in 2012.

Interesting trends emerge by breaking down the treated sample in macro-groups. From Table 16 it is clear that, on average, sales increase in the three years after the M&A, though they remained lower than the value reached in the year prior to the deal $(t-1)$. Moreover, Table 16 show that manufacturing firms have higher average sales compared to firms operating in the services industry over the whole period considered. Additionally, acquisitions of majority interests involve larger companies (€65,2 million in $t-1$)

Table 16 Sales trend: segmentation by target macro-industry, acquirer's region and form of the deal (data expressed in thousands of €)

	TREATED FIRMS	AVG SALES T-3	AVG SALES T-2	AVG SALES T-1	AVG SALES T	AVG SALES T+1	AVG SALES T+2	AVG SALES T+3
TOTAL	100	39.954 (72.751)	40.857 (75.022)	42.227 (77.497)	37.665 (73.297)	40.511 (80.871)	41.870 (83.835)	41.979 (86.518)
MACRO-INDUSTRY								
MANUFACT-URING	53	52.990 (83.515)	54.419 (88.908)	54.746 (92.163)	45.833 (85.086)	50.763 (95.879)	52.457 (98.663)	52.722 (101.765)
SERVICES	47	25.254 (55.584)	25.563 (52.216)	28.109 (54.216)	28.453 (56.699)	28.951 (58.531)	29.931 (62.026)	29.863 (64.188)
ACQUIRER'S REGION								
EUROPEAN COUNTRIES	66	32.972 (59.009)	34.334 (63.981)	34.084 (62.689)	31.952 (64.473)	31.399 (66.937)	31.361 (68.107)	30.827 (65.998)
NON EUROPEAN COUNTRIES	34	53.508 (93.448)	53.518 (92.583)	58.034 (99.431)	48.754 (87.964)	58.200 (101.520)	62.270 (106.294)	63.625 (114.653)
FORM OF THE DEAL								
ACQ. MAJ. INT.	22	48.837 (86.443)	51.701 (94.684)	65.234 (116.762)	52.708 (100.858)	64.345 (117.912)	63.729 (114.761)	64.782 (117.167)
ACQ. OF ASSETS	49	36.706 (67.618)	37.490 (70.450)	34.766 (60.437)	31.726 (60.489)	31.724 (63.384)	34.148 (70.690)	33.508 (73.854)
MERGER	29	38.703 (72.034)	38.319 (67.448)	37.380 (64.887)	36.286 (69.656)	37.278 (72.229)	38.333 (76.896)	38.991 (79.224)

Note: The figures shown above are the mean and standard deviation (in parenthesis) of the sales of the treated companies.

compared to mergers (€37,3 million in $t-1$) or acquisitions of assets (€34,7 million in $t-1$), and non-European companies acquire larger companies (€58 million in $t-1$) than European investors (€34 million in $t-1$). Furthermore, when the acquirer is non-European, sales increase considerably more in the three years after the deal.

Out of 100 treated companies, 31% of the firms in our sample had a negative trend for sales before the M&A, measured by a 3-years compound annual growth rate (CAGR), and 69% a positive (or stable trend). More specifically, from Figure 17 it is clear that 17% of the targets had a negative 3-years CAGR for sales both before and after the M&A while 14% improved the trend after the change of ownership. Conversely, 28% of the targets that had a positive (or stable) CAGR prior to the deal, got worst after the M&A. Lastly, a large part of the targets (41%) showed an upward trend in both periods.

49 of the treated firms showed a worsening in the CAGR for sales three years after the M&A compared to the pre-acquisition value, while 51 showed an improvement.

Figure 17 Percentage of treated companies with positive and negative trend for sales (3 years CAGR) pre- and post-M&A

Pre-M&A period: 3-years CAGR for sales
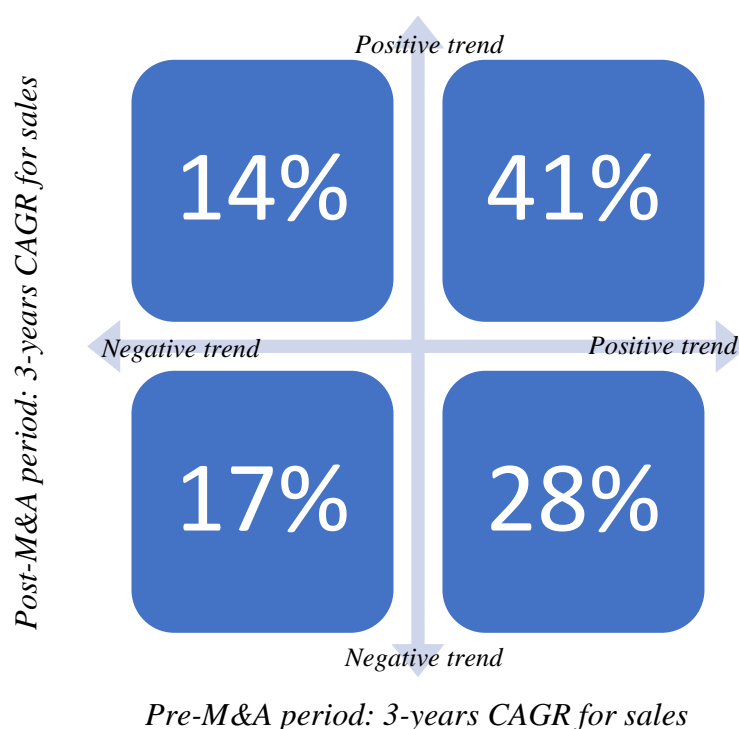
Source: elaboration of the author. "Positive" refers to CAGR >= 0 and "Negative" refers to CAGR<0.

Figure 18 show the sales 3-years CAGR for sales pre- and post-acquisition, without considering the observation with extreme values (for a better graphical representation). In the upper right dial of the scatter chart, all the companies below the bisector have a higher 3-

years CAGR for sales in the pre-acquisition period while companies above the bisector growth at a higher rate after the change of ownership. Similarly, companies below the bisector in the lower left dial have a worst CAGR after the M&A, while companies above the bisector have an improvement.

Figure 18 Sales 3-years CAGR pre- and post-M&A (N=88)
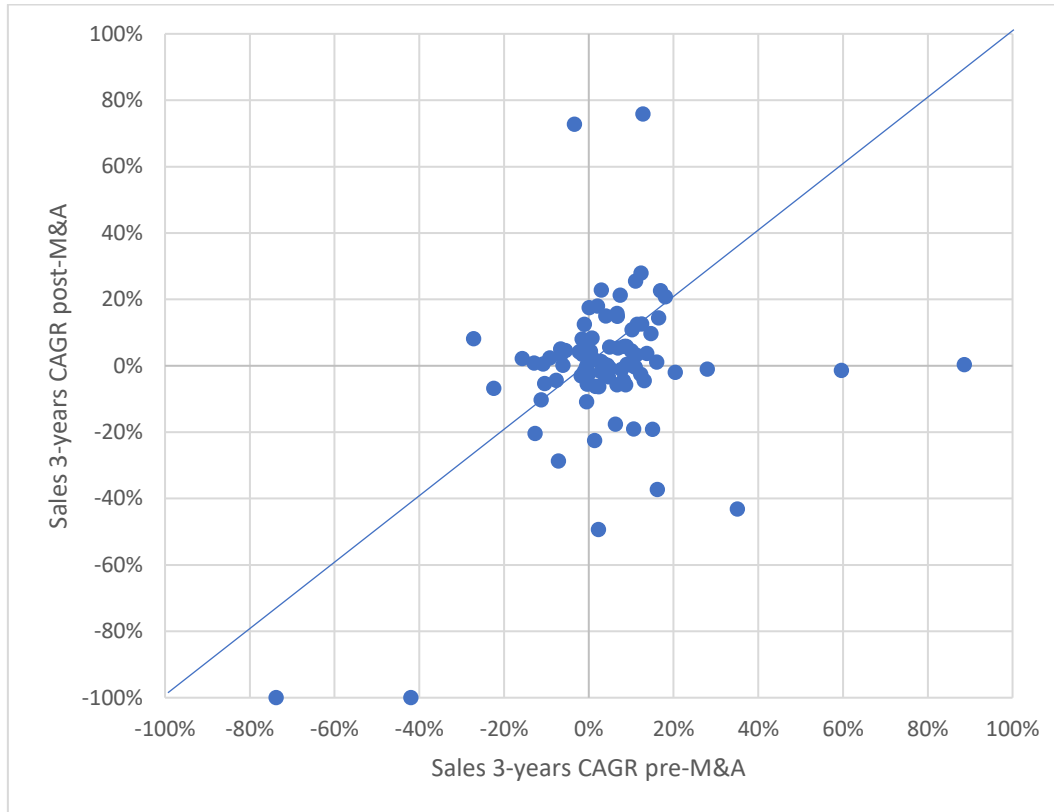
Source: elaboration of the author

Table 17 indicates that the 3-years sales average is 1.07% higher in the post-acquisition period, but the effect is positive and considerably higher in case of SMEs (+17,41%) and negative (-4,39%) when the target is a large firm[21]. Furthermore, effects are opposite in the manufacturing (-3,83%) and services (+12,44%) industry; positive when the acquirer is non-European (+11,53%) and negative when it is based in Europe (-7,70%). Lastly, the increase in sales is on average higher in case of acquisition of majority interests (+16,34%) compared to acquisitions of assets (-8,79%) and mergers (+0,18%).

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[21] *SMEs are defines as companies with 3-years pre-acquisition average sales lower than €50 million; large firms have 3-years pre-acquisition average sales higher than €50 million.*

Table 17 3-years average sales for the target firms before and after the M&A by a foreign company (data in thousands of euro)

	AVG SALES PRE-M&A (3 YEARS)	AVG SALES POST-M&A (3 YEARS)	DIFFERENCE	DIFFERENCE (PERCENTAGE)
TOTAL FIRMS (TREATED)	41.013	41.453	441	+1,07%
LARGE FIRMS	139.691	133.557	-6.134	-4,39%
SMES	13.180	15.475	2.295	+17,41%
MANUFACTURING	54.052	51.981	-2.071	-3,83%
SERVICES	26.309	29.582	3.273	+12,44%
EUROPEAN	33.797	31.196	-2.601	-7,70%
NON-EUROPEAN	55.020	61.365	6.345	+11,53%
ACQ. MAJ. INT.	55.257	64.285	9.028	+16,34%
ACQ. OF ASSETS	36.321	33.127	-3.194	-8,79%
MERGER	38.134	38.201	67	+0,18%

Source: elaboration of the author

4.2.5 Treated group: trend for ROA

Return on asset (ROA) is one of the profitability ratios we are comparing pre- and pro-acquisition. Figure 19 indicates that, on average, foreign investors acquire profitable targets with an average ROA between 1% and 3% and that profitability decrease immediately after the deal. Nevertheless, both for M&As concluded in 2011 and 2013, the ratio shows an upward trend between $t+2$ and $t+3$. The peak in ROA is reached, in all the three sub-groups, in the acquisition year t or in the year before $t-1$.

Figure 19 Treated group: pre- and post-M&A ROA
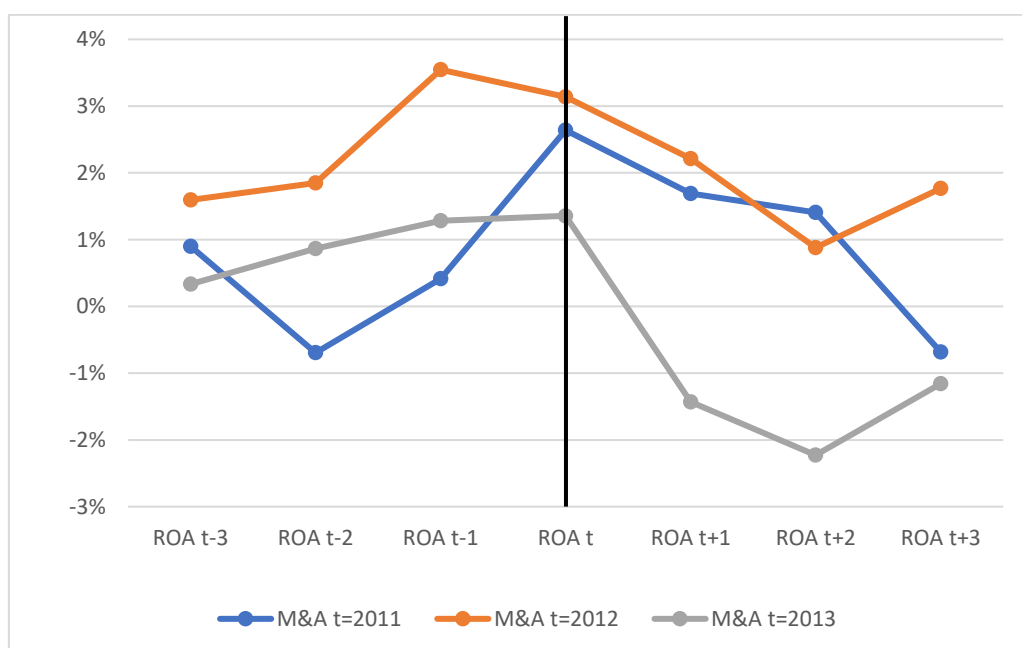
Source: Elaboration of the author on AIDA data (N=84. Outliers were excluded)

Table 18 show the average trend for ROA in the 3 years before and after the M&A, included the acquisition year. It clearly shows that, on average, ROA decline after the change in ownership. Nevertheless, there are differences in the sub-groups analysed. For example, the decline is more evident in manufacturing than in services or when the acquirer is non-European. From Table 18 it is also clear that firms in the services sector have, on average, higher ROA than manufacturing firms; European companies acquire targets with higher profitability (3.96%) compared to non-European investors (-0,97%); and targets of acquisitions have higher ROA at time t compared to targets that merge with foreign investors.

Table 18 ROA trend: segmentation by target macro-industry, acquirer's region and form of the deal

	TREATED FIRMS	AVG ROA T-3	AVG ROA T-2	AVG ROA T-1	AVG ROA T	AVG ROA T+1	AVG ROA T+2	AVG ROA T+3
TOTAL	100	0,84% (8,02%)	0,42% (9,63%)	1,41% (11,30%)	2,28% (12,51%)	0,67% (9,83%)	-0,03% (10,34%)	-0,33% (10,95%)
MACRO-INDUSTRY								
MANUFACTURING	53	0,89% (7,56%)	-0,21% (11,57%)	0,09% (11,29%)	1,94% (14,23%)	-0,89% (10,02%)	-1,10% (11,45%)	-1,40% (10,98%)
SERVICES	47	0,79% (8,63%)	1,18% (6,67%)	2,98% (11,24%)	2,69% (10,25%)	2,54% (9,38%)	1,26% (8,82%)	0,96% (10,91%)
ACQUIRER'S REGION								
EUROPEAN COUNTRIES	66	1,05% (8,91%)	0,14% (10,04%)	2,04% (11,99%)	3,96% (10,82%)	1,40% (8,27%)	1,17% (10,03%)	0,71% (10,22%)
NON-EUROPEAN COUNTRIES	34	0,45% (6,03%)	0,97% (8,92%)	0,18% (9,90%)	-0,97% (14,94%)	-0,75% (12,34%)	-2,34% (10,72%)	-2,32% (12,17%)
FORM OF THE DEAL								
ACQ. MAJ. INT.	22	2,85% (8,41%)	2,83% (6,10%)	3,13% (5,89%)	2,50% (7,67%)	1,98% (7,70%)	2,69% (8,21%)	2,16% (6,60%)
ACQ. OF ASSETS	49	0,42% (8,82%)	0,76% (12,00%)	1,74% (11,08%)	3,59% (13,79%)	1,15% (11,47%)	-0,14% (9,58%)	-0,65% (13,26%)
MERGER	29	-0,01% (6,16%)	-1,97% (6,87%)	-0,46% (14,50%)	0,00% (13,41%)	-1,12% (8,40%)	-1,94% (12,69%)	-1,72% (9,42%)

Note: The figures shown above are the mean and standard deviation (in parenthesis) of the ROA of the treated companies.

With regard to the 3-years ROA trend, 46% of the treated units have a negative trend before the M&A and 54% a positive trend. More specifically, 21% of the companies have a negative ROA 3-years trend in both periods; 25% have a negative trend prior to the takeover but a positive trend after; 28% a positive trend pre-acquisition and a negative trend after; 26% positive trends in both periods. Moreover, out of 100 treated units, 51

firms had a worsening in ROA in the third year after the M&A compared to the year prior to the takeover, while 49 showed an improvement in profitability measure by ROA.

Figure 20 Percentage of treated companies with a positive and negative 3-years trend in ROA pre- and post-M&A
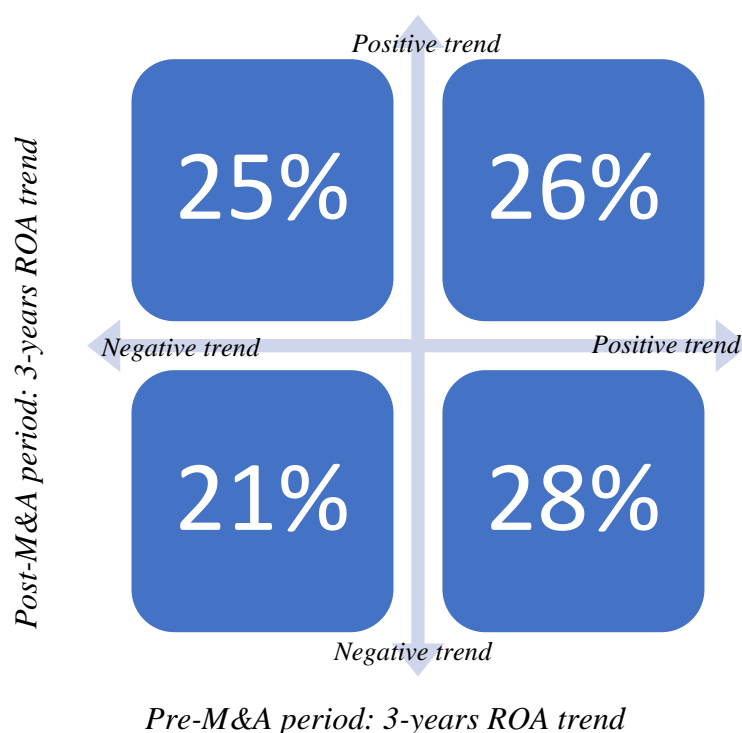
Source: elaboration of the author. "Positive" refers to a positive (>0) or stable (=0) trend. "Negative" refers to a negative trend (<0).

Figure 21 illustrates graphically the percentages shown in Figure 20. For each firm, the 3-years ROA trends before and after the takeover are depicted, providing a graphical representation of the size of the changes occurred. Companies below the bisector have a better trend in the pre-acquisition period than after the M&A. Conversely, companies above the bisector, have an improvement in the ROA trend after the deal.

Table 19 illustrates the change in the 3-years average of ROA before and after the acquisition year. Overall, ROA decline on average from 0.89% to 0.10%, equal to a percentage of 0.79%. The decline is more rapid for large companies (-3.04%) than for SMEs (-0.17%). The manufacturing industry records a sharp decrease of almost 1.40% while companies operating in the services sector show on average a slight decline of 0.06%. If on one hand, targets acquired by European investors do not show significant change in ROA values after the M&A, companies acquired by non-European show a decline by 2.34%. The table also show that the form of the deal does not involve significant differences in the size of the ROA decline after the M&A.

Figure 21 ROA trend 3-years pre-M&A and 3-years post-M&A (N=100)
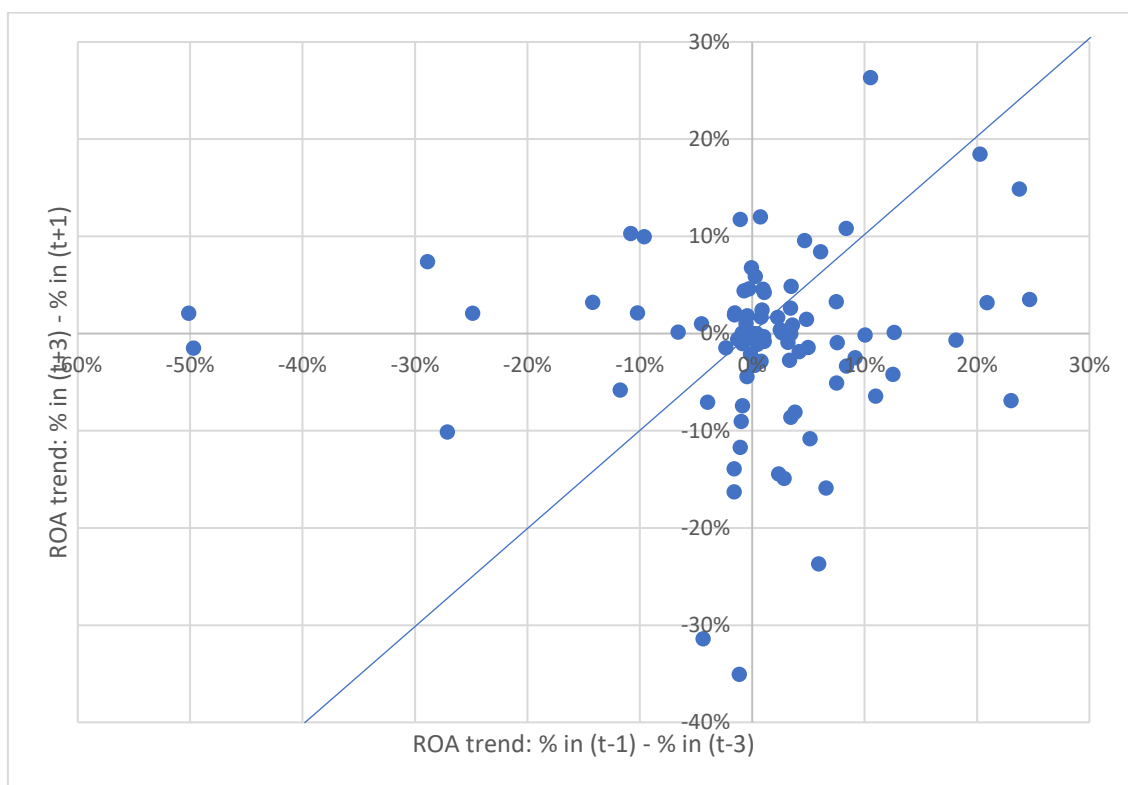
Source: Elaboration of the author.

Table 19 3-years average ROA for the target firms before and after the M&A by a foreign company

	Avg ROA Pre-M&A (3 years)	Avg ROA Post-M&A (3 years)	Difference
Treated group (tot.)	0,89%	0,10%	-0,79%
Large company	0,28%	-2,76%	-3,04%
SMEs	1,06%	0,89%	-0,17%
Manufacturing	0,26%	-1,13%	-1,39%
Services	1,65%	1,58%	-0,06%
European	1,07%	1,09%	0,02%
Non-European	0,53%	-1,81%	-2,34%
Acq. Maj. Int.	2,94%	2,27%	-0,66%
Acq. of Assets	0,97%	0,12%	-0,85%
Merger	-0,81%	-1,59%	-0,78%

Source: elaboration of the author

4.2.6 Treated group: trend for EBITDA margin

EBITDA margin is the other profitability measure we want to compare before and after the M&A. Figure 22 clearly shows an increase in EBITDA margin from $t-3$ to $t-1$ and a downward trend in the year prior to the M&A. After the deal, trends are mixed based on the acquisition year. Targets acquired in 2012 show an upward trend and they

have, on average, a margin higher than in the acquisition year t, although lower than in the year prior to the change of ownership $(t-1)$.

Figure 22 Treated group: pre- and post-EBITDA margin

Source: Elaboration of the author on AIDA data (N=84. Outliers were excluded)

Table 20 clearly shows that in our treated sample EBITDA margin trends before the M&A are similar, on average, for companies in the manufacturing and services. Nevertheless, after the deal the ratio get worst for companies in the services sector compared to manufacturing industry. Table 20 also suggests that the acquirer's origin does not seem to influence the EBITDA margin of the target, since the post-acquisition trends are similar for companies acquired by European and non-European countries. Moreover, the EBITDA margin does not seem to change considerably based on the form of the deal, even if targets of acquisitions of assets show worst ratio in all the three year after the deal (compared to mergers and acquisitions of majority interest).

Figure 23 depicts the trends in EBITDA margin for our treated companies both before and after the M&A. 38% of the targets had a negative trend prior to the acquisition while 62% a positive trend. In particular, 14% of the targets had a negative trend in both periods, 24% of the companies had a negative trend before the deal and a positive trend after; 37%

Table 20 EBITDA margin trend: segmentation by target macro-industry, acquirer's region and form of the deal

	TREA- TED FIRMS	AVG EBITDA MARGIN T-3	AVG EBITDA MARGIN T-2	AVG EBITDA MARGIN T-1	AVG EBITDA MARGIN T	AVG EBITDA MARGIN T+1	AVG EBITDA MARGIN T+2	AVG EBITDA MARGIN T+3
TOTAL	100	7,69% (7,92%)	8,36% (8,42%)	9,24% (12,25%)	5,08% (14,19%)	4,35% (15,58%)	4,78% (12,38%)	5,49% (12,11%)
MACRO-INDUSTRY								
MANUFACT-URING	53	7,55% (8,04%)	8,35% (8,28%)	9,53% (14,43%)	4,53% (16,08%)	5,01% (14,90%)	5,85% (12,46%)	6,05% (12,37%)
SERVICES	47	7,86% (7,87%)	8,36% (8,67%)	8,91% (9,38%)	5,70% (11,87%)	3,61% (16,47%)	3,57% (12,34%)	4,86% (11,94%)
ACQUIRER'S REGION								
EUROPEAN COUNTRIES	66	8,20% (7,76%)	8,70% (7,32%)	9,10% (13,39%)	7,88% (11,54%)	4,25% (14,15%)	4,96% (12,41%)	5,74% (12,68%)
NON EUROPEAN COUNTRIES	34	6,77% (8,24%)	7,78% (10,09%)	9,47% (10,26%)	0,38% (16,96%)	4,53% (17,97%)	4,49% (12,54%)	5,07% (11,29%)
FORM OF THE DEAL								
ACQ. MAJ. INT.	22	7,20% (6,48%)	8,62% (7,66%)	10,38% (7,95%)	5,08% (16,78%)	4,59% (15,57%)	6,16% (10,34%)	6,19% (10,16%)
ACQ. OF ASSETS	49	9,33% (8,16%)	9,71% (8,91%)	8,42% (14,45%)	5,76% (12,94%)	3,21% (16,80%)	3,66% (13,34%)	5,02% (13,65%)
MERGER	29	4,36% (7,82%)	4,88% (7,24%)	10,03% (10,34%)	3,46% (14,91%)	6,84% (12,79%)	6,06% (12,24%)	5,90% (10,42%)

Note: The figures shown above are the mean and standard deviation (in parenthesis) of the EBITDA margin of the treated companies.

Figure 24 shows the EBITDA margin trend pre-acquisition (computed as the value in $t - 1$ minus the value in $t - 3$) and the same 3-years trend post-acquisition (value in $t + 3$ minus the value in $t + 1$). All the companies below the bisector have better trends pre-acquisition rather than post-acquisition. The opposite is true for companies above the bi-sector.

Figure 23 Percentage of treated companies with a positive and negative 3-years trend in EBITDA margin pre- and post-M&A
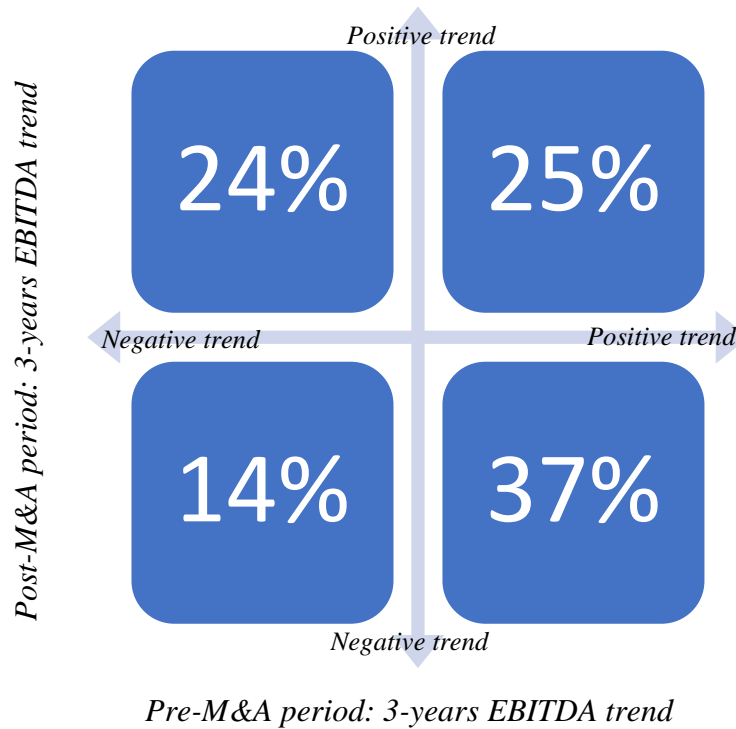
Source: elaboration of the author. "Positive" refers to a positive (>0) or stable (=0) trend. "Negative" refers to a negative trend (<0).

Figure 24 EBITDA margin trend 3-years pre-M&A and 3-years post-M&A (N=100)
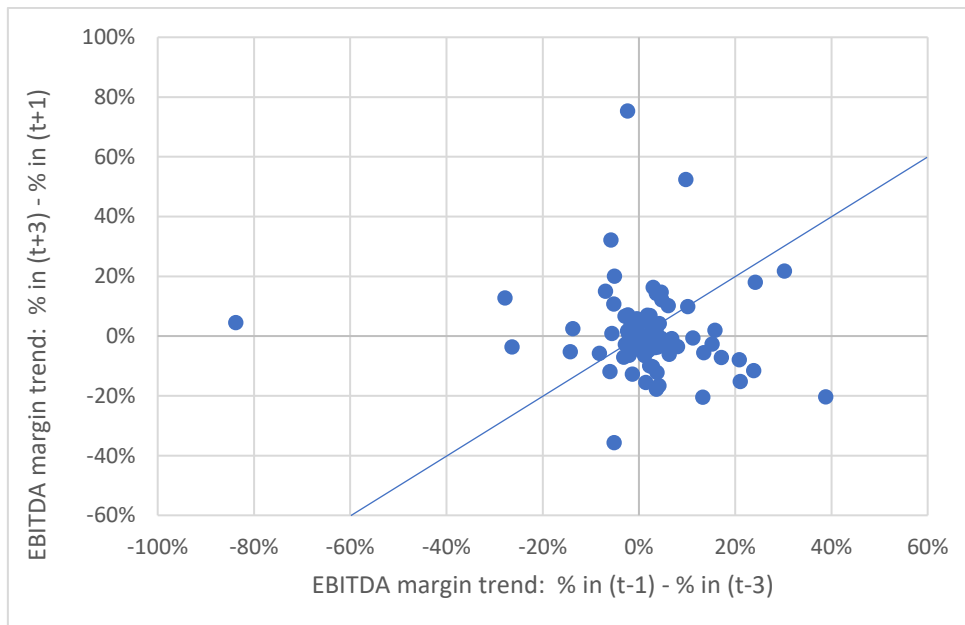
Source: Elaboration of the author.

Table 21 illustrates that the average of the EBITDA margin in the three years after the M&A decrease (-3,63%) compared to the 3-years average pre-acquisition. The deterioration of the margin is worst for large companies (-5,09%) rather than SMEs (-3.16%), for targets operating in services (-4,45%) rather than in the manufacturing industry (-2,90%). In addition, with regard to the form of the deal, the effects are worst in case of acquisitions of assets (-5,24%) and almost no effect in case of mergers (-0,16%).

Table 21 3-years average EBITDA margin for the target firms before and after the M&A by a foreign company

	AVG EBITDA MARGIN PRE-M&A (3 YEARS)	AVG EBITDA MARGIN POST-M&A (3 YEARS)	DIFFERENCE
Treated group (tot.)	8,50%	4,87%	-3,63%
Large company	7,71%	2,62%	-5,09%
SMEs	8,75%	5,59%	-3,16%
Manufacturing	8,53%	5,64%	-2,90%
Services	8,47%	4,01%	-4,45%
European	8,67%	4,98%	-3,69%
Non-European	8,22%	4,70%	-3,53%
Acq. Maj. Int.	8,93%	5,65%	-3,29%
Acq. of Assets	9,20%	3,96%	-5,24%
Merger	6,42%	6,26%	-0,16%

Source: elaboration of the author

4.3 The empirical methodology

A major concern of the existing literature is the possibility of "selection bias" affecting the estimates of the impact of foreign takeover. Often it is argued that firms acquired by foreign companies show better performance simply because foreign investors "cherry pick" the best performing local firms. If this is the case, a simple performance comparison between foreign-acquired and domestically-owned firms would lead to an overestimate of the real impact of the M&A. In order to address the potential selection bias problem and measure the causal effect of the foreign acquisition, we adopt an empirical strategy consisting of two steps:

- Coarsened exact matching (CEM), applied to obtain a balanced sample of treated and control units with respect to a vector of observable pre-acquisition characteristics of the companies X_{it-1};

- Difference-in-differences (DID) approach, to estimate the causal effect of the foreign ownership.

4.3.1 Variables

Using the data available on AIDA and Thomson Reuters Eikon, we identified for each company some outcomes of interest Y_i and some pre-treatment characteristics X_{it-1}. The latter are both covariates[22], used in the matching procedure to find matches as close as possible between the treated and control groups, and nominal variables used to measure any difference among sub-groups.

International business (IB) literature that covers the topic of post-acquisition performance of the target companies have mainly relied on accounting-based measures due to three reasons. First, accounting-based indicators of M&A performance measure actual and realized performance as reported in the annual financial statements of the companies. This is an advantage over and above other ways of assessing M&A performance (i.e., cumulative abnormal returns), which measure investors' expectations for the future (Thanos and Papadakis, 2012). A second advantage is that they can measure multiple aspects of M&A performance (i.e. firm's profitability, efficiency and effectiveness) and can provide a more integrated view of M&A performance. Third, by using accounting-based measures, researchers can evaluate the realization of synergies that, if existent, will be reflected in long-term accounting performance improvements (Harrison et al., 1991).

The arbitrary selection of the accounting-based measures has an impact on the results and the use of multiple variables is a mean for obtaining more robust results. For example, Thanos and Papadakis (2012) find that IB studies using ROA report on average negative outcomes while the opposite is true for cash flows. For these reasons, we choose three output variables: net sales; return on assets (ROA)[23]; EBITDA margin[24].

Net sales are a common variable to measure the size of a company. 7 out of 26 studies analysed in Chapter 3 measure the effect of foreign ownership on sales.

ROA appears to be by far the most widely used accounting ratio in the M&A literature to measure profitability. Our review (Table 12) indicates that it has been used by five of the studies of the core list of 26 studies. The reason for this is that ROA is less influenced by potential biases than other types of ratios such as ROE and ROS suffer from (Thanos and

---

[22] *Covariates are the analysis variables that can affect the relationship between the outcome variable and the independent variable of interest (i.e. foreign ownership).*

[23] *ROA is defined as net income divided by total assets, similarly to Chang et al. (2013) and Feys and Manigart (2010).*

[24] *EBITDA margin is defined as earnings before interest tax depreciation and amortization on sales.*

Papadakis, 2012). Thanos and Papadakis (2012), evaluating the accounting-based measures in measuring M&A performance, find that usually this ratio calculated by dividing income or net income by total assets. As well as other IB studies (Chang et al., 2013; Feys and Manigart, 2010), we decided to compute ROA as net income on total assets.

EBITDA margin is a variable not common in the IB literature on this argument. Nevertheless, we include this ratio since excluding interest, depreciation, amortization and taxes, EBITDA margin can provide a clear view of a company's operating profitability and cash flow.

Variables for matching (X_{iPre}) include both continuous variables and variables that proxy for some structural characteristics of the companies. They are:

- industry, identified by the 3-digit ATECO 2007 code;
- debt on equity ratio as a measure of financial leverage and proxy for the company's ability to pay off its debts;
- net sales, to control for size-related factors that may lead to acquisition;
- ROA and EBITDA margin as measures of financial performance and profitability;

The dataset contains also a dummy variable (F) equal to 1 if the company is acquired by a foreign investor between 2011 and 2013 and equal to 0 otherwise.

Unlike many other longitudinal matching studies where treatment occurs at one point in time, the companies in our data set are targets of acquisition at varying periods (i.e. 2011, 2012 or 2013). This variation in treatment timing raised the issue of how to assign counterfactual treatment dates to the firms that are not acquired by foreign investors. In order to overcome this problem, we built our dataset by including a variable called MAE[25]) ∈ {2011,2012,2013} and by repeating each control company once, twice or three times according to the availability of balance sheet data we have for that company. For example, *Company A* (belonging to the control group) that has available balance sheet data on AIDA from 2009 to 2016 was repeated twice into the dataset. One observation refers to $MAE = 2012$ and the other to $MAE = 2013$. In this way *Company A* is used as comparison for M&A concluded in both years. This approach allowed us to have a larger control group compared, for example, to Chari et al. (2009) who faced this problem adopting a

---

[25] *MAE stands for "Merger and Acquisition effective date"*

proportional-random acquisition time assignment. Chari et al. (2009) determine the fraction of the total number of acquisitions that occur in each calendar year during their sample period, and then assigned the hypothetical treatment year to the firms in the control group in the same proportion as their occurrences in the acquisition group (ibidem). Table 22 provides a detailed description for each variable. It also includes the variables macro-industry, acquirer's nation and form of the deal that will be used to analyse post-acquisition performance in different sub-groups.

Table 22 Variables description

VARIABLE NAME	DESCRIPTION [SOURCE]
Foreign takeover	Dummy equal to 1 if a domestic firm is acquired between 01/01/2010 and 31/12/2013 (treated) and 0 if it is domestically-owned between 2007 and 2016 [Thomson Reuters + AIDA]
Sector	Defined by the 3-digit ATECO 2007 code
Sales*	Revenues [AIDA]
D/E	Debt/equity [AIDA]
ROA*	Net income/total assets [AIDA]
Ebitda margin*	Ebitda/revenues [AIDA]
Acquirer nation	Country where the acquirer is located (registered office) [Thomson Reuters]
Form of the deal	Acq. Maj. Interest; Acq. of Assets; Merger [Thomson Reuters]
Macro-industry	Manufacturing or Services [Thomson Reuters]

Source: elaboration of the author (* in case of variables that are both outcomes and covariates)

No consensus has emerged over to the proper time period that a researcher should choose to evaluate the performance implications on M&As' targets (Thanos and Papadakis, 2012). However, since balance sheet data on AIDA are available from 2008 to 2016 and we have a sample of M&As concluded between 2011 and 2014, for each unit i in the dataset we have seven consecutive balance sheet data. Therefore, for each company i we can construct a 3-years average pre-acquisition and a 3-years average post-acquisition. The acquisition year t is excluded from the calculation since it is a particular year in which the acquired company does not result treated from January to December.

4.3.2 Difference-in-differences method

Difference-in-Differences (DID) is one of the most widely applied methods for estimating causal effects of a treatment when the treatment is not implemented as a randomized controlled experiment. In our case, outcomes are observed for two groups (treatment and control) for two time periods (pre- and post- acquisition). The treated group is exposed to a treatment in the second period but not in the first period. The control group is not exposed to the treatment in neither of the two periods.

A graphical representation of the DID estimator is illustrated in Figure 25, where it is assumed that the causal effect is constant across the treated. The observed outcomes of Figure 25 can be written as:

$$Y_{it} = \alpha_i + \lambda_t + \beta F_{it} + \varepsilon_{it} \tag{1}$$

For each observed unit i, the outcome variable is denoted Y_{it}; $t \in \{Pre, Post\}$ indicates the 3 years average after the foreign acquisition ("$Post$") or the 3 years average prior the foreign acquisition ("Pre"); the coefficient α_i capture all the characteristics typical of the company constant over time, included the acquisition year; λ_t indicates the full set of time effects of the model; $F_{it} \in \{0,1\}$ is a dummy variable equal to 1 if unit i is treated in that period (i.e. it was acquired in 2011, 2012 or 2013 and is foreign-owned for at least three years after the M&A) and equal to 0 if it does not (and is therefore domestically-owned) and; and ε_{it} are company-specific errors .

Assuming that $E[\varepsilon_{it}|i, t] = 0$, the DID estimator is equal to:

$$[E(Y_{1iPost}) - E(Y_{1iPre})] - [E(Y_{0iPost}) - E(Y_{0iPre})] =$$

$$= [\lambda_{Post} - \lambda_{Pre} + \beta] - [\lambda_{Post} - \lambda_{Pre}] = \beta \tag{2}$$

where the first term in brackets refers to the average difference in the outcome of interest for the treated group and the second term to the average difference for the control group.

Figure 25 Graphic illustration of the Difference-in-differences estimator (DID)
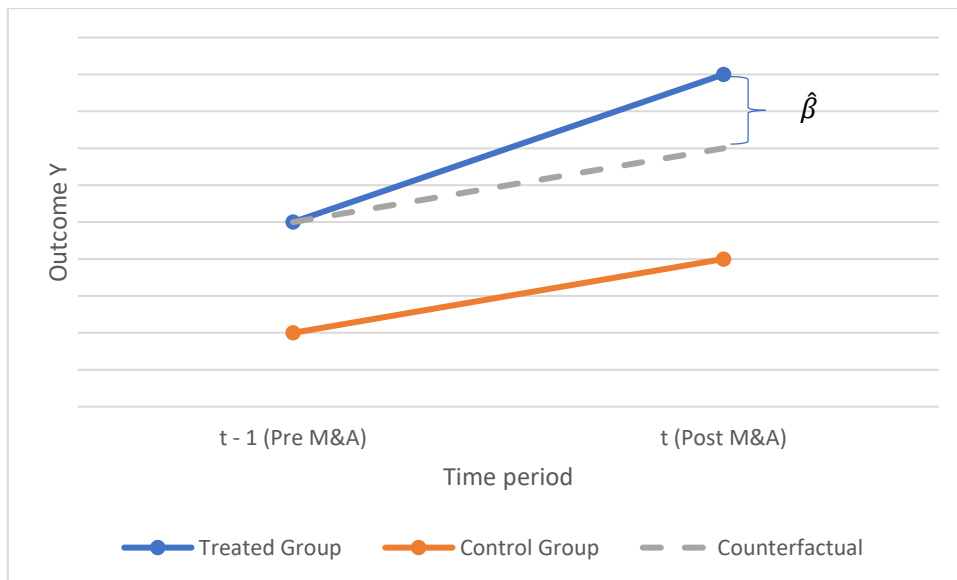
Source: elaboration of the author

In Figure 25, $\hat{\beta}$ represents the effect of the new foreign ownership on the target companies' outcomes of interest, taking into account pre-existing differences between treated and control groups and general time trend.

Before proceeding with the explanation of the DID regression adopted in this chapter, it is essential to underline that our empirical strategy is based on a strong identifying assumption. The identifying assumption states that the trend in Y for the control group (between $t = Post$ and $t = Pre$) approximates what would have happened in the treatment group in the absence of treatment (i.e. we assume that the observed trend in Y is a good "counterfactual" for the trend that companies would have faced in absence of foreign acquisition). This means that, in the absence of treatment, outcomes depend additively on a common trend and a company fixed effect:

$$E[Y_{0it}] = \alpha_i + \lambda_t \qquad (3)$$

The previous formula contains two central assumptions. Firstly, selection bias relates to fixed characteristics of individuals (α_i) and the magnitude of the selection bias term isn't changing over time. Secondly, time trend (λ_t) is the same for the treated and control groups. These two necessary conditions for identification in DID estimation are referred to as common trend assumption. Common trend assumption can be summed up by the following equality:

$$E[Y_0(Post) - Y_0(Pre)|\, F = 1] = E[Y_0(Post) - Y_0(Pre)|\, F = 0] \qquad (4)$$

The identifying assumption is not valid even though, all $\boldsymbol{X}_{iPre}$ being equal after CEM, treated and control units would have had non-parallel trends in the absence of treatment. This means that pre-existing differences between treatment and control groups are not a threat to validity per se and do not result necessarily in an unbiased estimate of the causal effect. Counterfactual levels for treated and non-treated can be different, but their time variation must be similar. Researchers often match units from the treatment and control groups on pre-treatment measures of the outcome or other variables to attempt to correct for confounding bias by balancing on variables that are different in the treatment and control group. Pre-processing via matching is a statistical method that can greatly reduce the degree of modelling necessary and, consequently, also the degree of model dependence (Iacus et al., 2012).

Although we cannot empirically support the parallel trend assumption for a long period due to a lack of balance sheet data before the acquisition (i.e. we do not have data prior to 2008), we verified the assumption for each outcome of interest since 2008 to 2011 (see Appendix II). Since the first cross-border deals in our sample have been concluded in 2011, we are sure that all the units in the treated group are not foreign-owned before 2011. For all the outcome variables the trend of the treated and control groups is parallel from 2010 to 2011; for sales it is parallel for the whole period 2008-2011 while for EBITDA margin and ROA it is similar but not parallel in the period 2008-2010. However, trends are similar enough to confidently support the parallel trend assumption and are more similar than in case of the original unmatched groups. From a theoretical point of view, evidence in favour of this assumption can be found in the fact that foreign investors do not always acquire the high-performing companies. The existing literature provide contrasting evidence on the cherry-picking approach of foreign investors in Italy. If on one hand, Barbaresco et al. (2018) and Benfratello and Sembenelli (2006) state that foreign investors acquire the best-performing firms, Piscitello and Rabbiosi (2005) provide evidence against the cherry-picking approach. Therefore, we can assume that the treated group and the control group have on average a similar trend before the takeover.

To estimate the DID through a regression, we use an equation in first differences. Given the outcome variables of interest before and after the M&A:

$$Y_{iPost} = \alpha_i + \lambda_{Post} + \beta F_{iPost} + \varepsilon_{iPost} \tag{5}$$

$$Y_{iPre} = \alpha_i + \lambda_{Pre} + \varepsilon_{iPre} \tag{6}$$

The DID estimation came from the following equation in first-differences where: ΔY_i is the change (pre vs post) in the outcome of interest; β is the coefficient of interest (the treatment effect); and λ' the:

$$\Delta Y_i = \lambda' + \beta F_{iPost} + \Delta \varepsilon_i \tag{7}$$

We estimate, using the statistical software Stata, the effect attributable to the foreign M&A for each outcome of interest, by simply including in Equation 7 the *cem_weights* generated through the CEM algorithm. We did not include any covariate ΔX_{it} in the regression to control for the remaining imbalance, since we do not have any time-varying

X_{iPost} that is not influenced by the treatment. Nevertheless, we already accounted for the most important covariates through the matching procedure.

Robust standard errors are estimated to account for heteroskedasticity and provide unbiased results.

Besides the general regression illustrated in equation 7, we performed additional regressions accounting separately for: acquirer's region (European vs Non-European), macro-industry (manufacturing vs services), form of the deal (acquisition vs merger) and size (SMEs vs large companies). To test for these additional characteristics, we added some interaction terms to the equation 7, as illustrated in the paragraph 4.4.

4.3.3 Basic evaluation and analysis of unmatched data

We start our analysis by providing a DID estimation of unmatched data. First, we recap the size of the unmatched treated and control groups (Table 1Table 23).

Table 23 Size of the unmatched treated and control groups

Treated	Freq.
0	181.660
1	100

Source: elaboration of the data

The (unadjusted and therefore likely biased) DID can be found by a simple linear regression of ΔY_i on treatment. Results show that foreign ownership has a non-significant effect on all the outcomes of interest. From Table 24 we can see that the effect of foreign acquisition on sales are nonsignificant and negative (B= -12.7617; t= -0.00; p>0.1).

Table 25 shows that the effect on ROA is non-significant and positive (B=0.0549; t=1.33; p>0.1). From

Table 26 we can see that the effect on EBITDA margin is non-significant and positive (B=0.4888; t=1.12; p>0.1).

Nevertheless, without matching treated and control units are highly different and pre-treatment covariates differ between the two groups.

The overall imbalance is given by the $\mathcal{L}_1$ statistic introduced by Iacus, King, and Porro (2012) as a comprehensive measure of global imbalance. It is based on the L1 differences between the multidimensional histogram of all pre-treatment covariates in the treated group and the same in the control group. Perfect global balance is indicated by $\mathcal{L}_1 = 0$, and larger values indicate larger imbalance between the treated and control groups, with a maximum imbalance of $\mathcal{L}_1 = 1$, which indicates complete separation. A good matching

Table 24 DID estimation on unmatched data through a regression model: output variable Sales

```
. reg dsales treated, robust

Linear regression                               Number of obs   =     181,760
                                                F(1, 181758)    =        0.00
                                                Prob > F        =      0.9965
                                                R-squared       =      0.0000
                                                Root MSE        =       19074

-------------------------------------------------------------------------------
             |               Robust
      dsales |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+-----------------------------------------------------------------
     treated |  -12.76178   2945.053    -0.00   0.997    -5784.998    5759.475
       _cons |   445.3329   44.73482     9.95   0.000     357.6537    533.0122
-------------------------------------------------------------------------------
```

Table 25 DID estimation on unmatched data through a regression model: output variable ROA

```
. reg droa treated, robust

Linear regression                               Number of obs   =     181,742
                                                F(1, 181740)    =        1.78
                                                Prob > F        =      0.1822
                                                R-squared       =      0.0000
                                                Root MSE        =      1.3478

-------------------------------------------------------------------------------
             |               Robust
        droa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+-----------------------------------------------------------------
     treated |   .0549405   .0411847     1.33   0.182    -.0257806    .1356615
       _cons |  -.0117778   .0031632    -3.72   0.000    -.0179776   -.0055781
-------------------------------------------------------------------------------
```

Table 26 DID estimation on unmatched data through a regression model: output variable EBITDA margin

```
. reg debitdam treated, robust

Linear regression                               Number of obs   =     169,401
                                                F(1, 169399)    =        1.26
                                                Prob > F        =      0.2614
                                                R-squared       =      0.0000
                                                Root MSE        =      11.607

-------------------------------------------------------------------------------
             |               Robust
    debitdam |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+-----------------------------------------------------------------
     treated |   .4888655   .4352822     1.12   0.261     -.364278    1.342009
       _cons |  -.0498378   .0282158    -1.77   0.077    -.1051401    .0054645
-------------------------------------------------------------------------------
```

solution should produce a reduction in the $\mathcal{L}_1$ statistic (Blackwell et al., 2009).

We compute the $\mathcal{L}_1$ statistic, as well as several unidimensional measures of imbalance in Stata through the following command:

```
. imb mean_sales_pre mean_roa_pre mean_ebitdam_pre mean_debt_on_equity_pre ateco073digit maeffectivedateyear,
> treatment(treated)
```

where *mean_sales_pre* indicates average sales from t-3 to t-1, *mean_roa_pre* stands for average ROA from t-3 to t-1, mean_ebitdam_pre is the average EBITDA margin from t-3 to t-1, *mean_debt_on_equity_pre* is the average D/E for the period t-3 to t-1, *ateco073digit* is the 3-digit ATECO 2007 code, and *maeffectivedateyear* indicate the acquisition year (for the treated units) and the availability of balance sheet data for the analysis (for control units):

Table 27 Imbalance of the unmatched data

```
Multivariate L1 distance: .99294893

Univariate imbalance:
```

	L1	mean	min	25%	50%	75%	max
mean_sales_pre	.55991	36712	147.26	2913.4	13179	44239	-2.0e+07
mean_roa_pre	.21898	-.06919	67.97	-.02185	-.00891	-.00887	-15.03
mean_ebitdam_pre	.10213	-.45722	3879.2	-.00601	-.00459	-.03143	-1649.1
mean_debt_on_equity_pre	.22649	-.19496	498.72	.1934	.2333	.0334	-859.13
ateco073digit	.43302	-87.528	0	-125	-126	-61	0
maeffectivedateyear	.11383	.05009	0	0	0	0	0

The overall $\mathcal{L}_1$ statistic measure (L1 = 0.9929) includes imbalance with respect to the full joint distribution, including all interactions, of the covariates. The L1 value in Table 27 is not valuable on its own, but rather as a point of comparison between matching solutions. The value 0.9929 is a baseline reference for the unmatched data. Once we have a matching solution, we will compare its $\mathcal{L}_1$ value to 0.9929 and gauge the increase in balance due to the CEM solution from that difference. The unidimensional measures Table 27 are all computed for each variable separately.

The first column, labelled "L1", reports the $\mathcal{L}_i^j$ measure, which is L1 computed for the *j*th variable separately (which of course does not include interactions). The second column in the table of unidimensional measures, labelled "mean", reports the difference in means. The remaining columns in the table report the difference in the empirical quantiles of the distributions of the two groups for the 0th (min), 25th, 50th, 75th, and 100th (max) percentiles for each variable (Blackwell et al., 2009).

Table 27 shows that variable *mean_sales_pre,* for example, is imbalanced in the raw data in many ways. This table also illustrates the point that balancing only the means between the treated and the control groups does not necessarily guarantee balance in the rest of the distribution. Most important, of course, is the overall $\mathcal{L}_1$ measure, because even if the marginal distribution of every variable is perfectly balanced, the joint distribution can still be highly imbalanced (Blackwell et al., 2009).

4.3.4 Coarsened Exact Matching

Matching is a nonparametric method of controlling for some or all the cofounding influence of pre-treatment control variables in observational data. The key goal of matching methods is to prune observations from the dataset so that the remaining observations have better balance between the treated and the control groups. This means that the empirical distributions of the covariates (X_{it-1}) in the matched groups are more similar than in the original groups.

The most common matching methods involve finding, for each treated unit i, at least one control unit that is "similar" on the covariates X_{it-1}. The distinction between methods is how to define this similarity. For example, exact matching simply matches a treated unit to all the control units with the same covariate values by ensuring perfect balance but a few matches, especially when there are several continuous variables as in our case. Conversely, approximate matching methods specify a metric to find control units that are close to the1 treated unit. This metric, in similar studies on the post-acquisition performance of target acquired by foreign investors, is often the propensity score (i.e. the probability of being treated, conditional on the covariates).

CEM is a relatively new method introduced by Iacus, King and Porro (2009) to improve the estimation of causal effects by reducing imbalance in covariates between the treated and the control group. CEM is a monotonic imbalance-reducing method. It means that reducing the maximum imbalance on one variable has no effect on the other variables and that the balance between the treated and the control group is chosen ex ante by the user rather than being discovered through the usual laborious process of checking after the fact, tweaking the method and repeatedly reestimating it.

The basic idea of CEM is to look for domestic firms that were not acquired by foreign investors but had similar pre-takeover characteristics to become a foreign target in the acquisition year.

From a practical point of view, the CEM algorithm works in the following manner (Black-well et al., 2009):

- make a copy of the covariates X_{it-1}, which we denote as X_{it-1}^*;

- each variable is temporarily coarsened into substantively meaningful groups (i.e. the algorithm coarsens X_{it-1}^* according to user-defined cut points or according to the CEM's automatic binning algorithm);

- create one stratum for each observation of X_{it-1}^* and place each observation in a unique stratum;

- assign these strata to the original data, X_{it-1}, and drop any observation whose stratum does not contain at least one treated and one control unit (i.e. CEM makes exact match on the coarsened data, and then retain only the original uncoarsened values of the matched data).

Once completed, these strata are the foundations for calculating the treatment effect. Because coarsening is a process at the heart of measurement, it is extremely important to coarsen a variable into groups that preserve information. Larger bins (more coarsening) used to generate X_{it-1}^* will result in fewer strata and more matches. Nevertheless, fewer strata will result in more diverse observations within the same strata and consequently in higher imbalance.

An advantage of CEM, is that in contrast to other approximate matching methods, it does not require a separate step prior to matching, where the data are restricted to the region of common empirical support of the treated and control units. Iacus et al. (2012) show that CEM dominates commonly used existing matching methods (e.g. propensity score and Mahalanobis matching) in its ability to reduce imbalance, model dependence, estimation error, bias, variance, mean square error, and other criteria.

The first step of CEM analysis requires to choose a reasonable coarsening for each variable X_{PRE}. In general, we want to set the coarsening for each variable such that substantively indistinguishable values are grouped and assigned the same numerical value[26]. Obviously, coarsened values must be chosen in a customized way based on substantive knowledge of the measurement scale of each variable. The more coarsening we allow,

---

[26] *Note: any coarsening during the CEM procedure is used only for matching. Afterwards, the original values of the variables are passed on the analysis stage for all matched observations.*

the more matches we have, but larger the bound on model dependence and estimation error (Blackwell et al., 2009).

In the CEM procedure, variables "sector" (*ateco073digit*) and "MAE" (abbreviation for *maeeffectivedateyear*) are not coarsened. In this way, companies are matched only if they operate in the same industry identified by the ATECO 2007 three-digits code. Moreover, companies acquired at time t are matched with control units that have data from $t - 3$ to $t + 3$. Continuous variables are usually coarsened according to the distribution of the variable, in a way that ensure the closest matches possible without losing a large proportion of the sample. The goal in this phase is to increase the number of matches and decrease the multivariate imbalance measure $\mathcal{L}_1$. With regards to sales we coarsened data based on the ISTAT classification in small firms (sales< €10 million), medium firms (€10 million<sales<€50 million) and large companies (sales>€50 million). ROA and EBITDA margin were coarsened based on their distribution among the two groups and trying to preserve relevant information (distinguish for example negative ratios by positive ones). Debt on equity ratio was coarsened based on its distribution in the sample and based on Moody's (2006) report about the distribution of common financial ratios by assigning the following cutpoints: negative values (from -5 to 0), values between 0 and 1, and values higher than 5.

```
. cem mae(#0) ateco073(#0) mean_roa_pre (-5 0 0.03 0.08 0.2 0.4) mean_ebitdam_pre(
> -20 -2 0 0.08 0.15 0.25 0.5 0.7) mean_sales_pre(0 10000 50000) mean_debt_on_equi
> ty_pre(-5 0 1 5), treatment(treated) k2k
```

We can see from the matching summary (Table 28) the combinations of coarsened response choices for all matching variables specified in the command. In this case, there are 19917 combinations, but among them only 72 have at least one treated company and one untreated company (i.e. matched strata). From Table 28 we see that 75 out of 100 treated companies are matched with as many control observations. The multivariate L1 distance with a value of 0.3866 show a significant reduction in imbalance compared to the unmatched solution we obteined in parahraph 4.5 (L1 = 0.9929).

Table 28 Matching summary (CEM)

```
Matching Summary:
-----------------
Number of strata: 19917
Number of matched strata: 72

              0      1
    All  181660    100
Matched      75     75
Unmatched 181585    25


Multivariate L1 distance: .38666667

Univariate imbalance:

                          L1    mean     min     25%     50%     75%     max
                 mae        0       0       0       0       0       0       0
             ateco073       0       0       0       0       0       0       0
         mean_roa_pre     .08  -.06341 -3.7079 -.00691   -.003 -.00279  .00581
      mean_ebitdam_pre     .08  -.14097 -1.1881  .00329 -.00431 -.01191       .
        mean_sales_pre     .04   14384       0  1793.1  4350.4   11080  1.7e+05
  mean_debt_on_equity_pre .05333 -.05298   -2.09     .06  -.0033    -.22 -36.907
```

4.4 Empirical results: matched sample

In this chapter are stated and tested 3 hypotheses based on the aggregate matched data. In the following paragraphs will be tested other 15 hypotheses based on relevant distinctive characteristics of the target or the acquirer. The outcomes of interest are in all cases sales, ROA and EBITDA margin, but the effect of foreign ownership on these outcomes is tested both for the aggregate matched sample and for five different sub-groups of the matched sample: European vs non-European acquirers, acquirers based in Latin Europe vs acquirers not based in Latin Europe; manufacturing vs services, mergers vs acquisitions, and SMEs vs large companies.

4.4.1 Sales

Out of 26 studies analysed in Chapter 3, 4 studies (Bentivogli & Mirenda, 2017; Buckley et al., 2014; ICE & Prometeia, 2014; Liu et al., 2017) find positive effects of foreign ownership on the sales of the target, 2 studies (Chari et al., 2009; Feys & Manigart, 2010) find negative effects, and 1 paper (Chen, 2011) finds no significant effect.

We performed a first-difference regression analysis in Stata (Table 29) in order to analyse the relationship between foreign ownership and sales (where $dsales = \Delta sales$). The p-value of the model is higher than 0.05, so the relationship between sales and foreign ownership is not statistically significant. The results show that foreign ownership has a positive but not significant effect on sales (B=2259.872; t=0.66; p>0.1).

Table 29 DID estimation through a first-difference regression model: output variable Sales

```
. reg dsales treated [iweight = cem_we], robust
(sum of wgt is   1.5000e+02)

Linear regression                               Number of obs   =        150
                                                F(1, 148)       =       0.44
                                                Prob > F        =     0.5082
                                                R-squared       =     0.0030
                                                Root MSE        =      20866


             |               Robust
      dsales |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     treated |   2259.872     3407.41    0.66   0.508    -4473.588    8993.332
       _cons |   3383.525    2594.348    1.30   0.194    -1743.225    8510.274
```

Previous studies in Italy, show a statistically significant growth for sales after the M&A. Bentivogli and Mirenda (2017) find that after the deal, net sales of acquired firms improve by 7% compared to counterfactuals, even if the greater effects emerge three years after the acquisition. ICE and Prometeia (2014) find that target companies, after being incorporated by foreign MNEs, have grown on average in terms of sales (+2.8% per year). Conversely to previous studies, we find that there are no significant effects on sales growth. This result is extremely interesting because it indicates that foreign owners are not better (but not even worse) than Italian owners in the short term. Or maybe, it can indicate that foreign investors do not want to make the firm grow by reinvesting profits. Or maybe, considering that Bentivogli and Mirenda (2017) find that the greatest effects in net sales emerge three years after the takeover, to find sales growth we should extend the period analyzed to more than 3 years. After all, there are really positive cases such as Gucci that in 2017 reached a turnover of €6.2 billion (+44.6% compared to the previous year) (Zanzi, 2008).

4.4.2 ROA

5 out of 26 studies reviewed in Chapter 3 (Chang et al., 2013; Chari et al., 2009; Chen, 2011; Feys and Manigart, 2010; Fukao et al., 2006) find a positive effect of foreign ownership on the target company. Conversely, Thanos and Papadakis (2012)'s review of studies using ROA as a measure of M&A performance indicate that acquisitions on average deteriorate financial performance for both the acquiring and target firms.

We performed a first-difference regression analysis in Stata (Table 30) in order to analyse the relationship between foreign ownership and ROA (where $droa = \Delta roa$). The results

show that foreign ownership predicts ROA positively but not significantly (B=0.0337; t=0.62; p>0.1). After the M&A, target companies experience an increase in profitability, measured by EBITDA margin, higher than comparable domestically-owned companies.

Table 30 DID estimation through a first-difference regression model: output variable ROA

```
. reg droa treated [iweight = cem_we], robust
(sum of wgt is   1.5000e+02)

Linear regression                               Number of obs   =        150
                                                F(1, 148)       =       0.39
                                                Prob > F        =     0.5346
                                                R-squared       =     0.0026
                                                Root MSE        =     .33168

             |               Robust
       droa  |     Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     treated |   .0337157   .0541631     0.62   0.535    -.0733171    .1407486
       _cons |   .0165954   .0103621     1.60   0.111    -.0038813    .0370722
```

4.4.3 EBITDA margin

The studies analized in chapter 3 do not investigate the foreign ownership effects on the EBITDA margin. However, given the relevance of this ratio we performed a first-difference regression analysis in Stata (On the one hand, this improvement in EBITDA margin can be considered as an increase in the cash operating profit margin of the targets before capital expenditures, taxes, and capital structure are taken into account. The ratio indicates that for every euro of revenue

Table 31) in order to analyse the relationship between foreign ownership and EBITDA margin (where $debitdam = \Delta$EBITDA margin). The model in this case has a p-value<0.05 and show a statistically significant relationship between foreign ownership and EBITDA margin (debitdam = Δebitdamargin). Our empirical results suggests that foreign ownership explains 2,86% of the variance in EBITDA margin and that foreign acquirers have a positive and significant effect on EBITDA margin (B=0.4504, t=2.07, p<0.05). These findings suggest that after the M&A, target companies experience an increase in profitability, measured by EBITDA margin, higher than comparable domestically-owned companies.

On the one hand, this improvement in EBITDA margin can be considered as an increase in the cash operating profit margin[27] of the targets before capital expenditures, taxes, and capital structure are taken into account. The ratio indicates that for every euro of revenue

Table 31 DID estimation through a first-difference regression model: output variable EBITDA margin

```
. reg debitdam treated [iweight = cem_we], robust
(sum of wgt is   1.4800e+02)

Linear regression                              Number of obs   =        148
                                               F(1, 146)       =       4.31
                                               Prob > F        =     0.0397
                                               R-squared       =     0.0286
                                               Root MSE        =     1.3205

-----------------------------------------------------------------------------
             |               Robust
    debitdam |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+---------------------------------------------------------------
     treated |   .4504516   .2170916     2.07   0.040     .0214035    .8794997
       _cons |  -.2025107   .1901077    -1.07   0.289    -.5782293    .1732079
-----------------------------------------------------------------------------
```

earned is generated more cash. However, EBITDA margin has some limitations. For example, it ignores changes in working capital, which is usually needed in growing a business and it does not take into account capital expenditures which are needed to replace assets on the balance sheet. Moreover, EBITDA margin can improve in the short term just because the new foreign owner does not invest in R&D expenses or in advertising, or because of downsizing (e.g. when a foreign investor acquires a retailer, it can close some stores) that results in lower costs of personnel in the short term but that can be negative in the long term if highly-skilled employees are fired. If we had balance sheet data for a longer time horizon, we could investigate the long-term performance of the target companies. However, since we just have data till 2016, we can only analyse how many acquired companies are still active today.

4.5   Empirical results based on acquirer's region of origin

Numerous are the constructs of "distance" applied in the studies related to the internationalization of the firms. The mostly applied construct is surely the "national cultural distance", defined by Kogut and Singh (1988) as the degree to which the cultural norms

---

[27] *EBITDA margin eliminates the effects of non-cash expenses such as depreciation and amortization.*

in one country are different from those in another country. Recognized as a crucial organizational variable, culture is an elusive construct, a complex product of different elements, such as geographical, historical, economic, religious, and ideological (Ronen and Shenkar, 2013). The first study that has considered cultural differences in organizations based on their geographical origin was conducted by Hofstede (1980), which define culture as "the collective programming of the mind which distinguishes the members of one human group from another" (Hofstede, 1980, p.25).

Cultural differences play a predominant role in the post-merger integration (PMI) phase. The bulk of the literature argues that national cultural distance hinders cross-border M&A performance by increasing the costs of integration. Barbaresco et al. (2018) find that higher the "cultural distance" between the target and acquiring company's country, lower the growth of sales and lower the EBITDA post-acquisition. Larger the differences in values (à la Hofstede) between the acquirer and the target, higher the probability that post-acquisition performance is not aligned to the expectations. This means that the incompatibility of the organizational and managerial models can has negative effects that prevail on the positive ones that should arise from the contamination among different cultures. Piscitello and Rabbiosi (2005) argue that the beneficial effects from inward FDI through acquisition in Italy are higher when the acquirer is a European-based MNE and positive as well, although weaker, when it is a US or a UK company.

As well as Barbaresco et al. (2018), Meyer and Altenborg (2008) argue that the stronger the national cultural distance, the higher the difficulty in predicting to what extent the knowledge transfer will be effective after the M&A. Similarly, House et al. (2014) state that cultural misunderstandings are often the cause of cross-border acquisition failures. Nevertheless, some studies argue that certain conditions allow for cultural distance to be a potential success factor in cross-border M&As. Morosini et al. (1998) provided empirical support for the notion that national cultural distance enhances cross-border acquisition performance. They highlight the fact that cross-border acquisitions that perform better are those in which the routines and repertoires of the target's country of origin are, on average, more distant than those of the acquirer. Some of these routines and repertoires, such as those related to inventiveness, innovation, entrepreneurship, and decision-making practices, have been found to be relevant to performance, and also difficult to develop and imitate across different national cultures (ibidem).

Obviously, the target post-acquisition performance depends on the degree to which the acquirer manages to integrate the target. Slangen (2006) argues that cultural distance has negative effects on the post-acquisition performance of the target in case of high integration between the acquirer and the target, while it improves the performance in case of a low degree of integration. In other words, cultural distance produces negative effects when the target company has a little autonomy left after the M&A (ibidem).

For the aforementioned reasons, by including Equation 7 a variable based on the concept of national cultural distance, it can provide meaningful insights related to the effects of acquirer's country of origin on the post-M&A performance. We perform two different regressions. The first one is based on the purely concept of geographical distance as in Barbaresco et al. (2018) and Piscitello and Rabbiosi (2005), by distinguish European acquirers by non-European acquirers. The second one is based on Ronen and Shenkar (2013)'s cluster map (Figure 26). This classification considers other aspects apart from geographic distance and it has the goal to give an answer to the large portion of the literature (e.g. Barbaresco et al., 2018) that argue that argue that cultural distance is more relevant than the geographic distance. Ronen and Shenkar (2013) have identified countries relatively similar on relevant dimensions and their cluster map shows where practices affirmed in one country can be diffused, a vital challenge for MNEs.

Figure 26 The new world map represented in a tree-like form (Ronen and Shenkar)
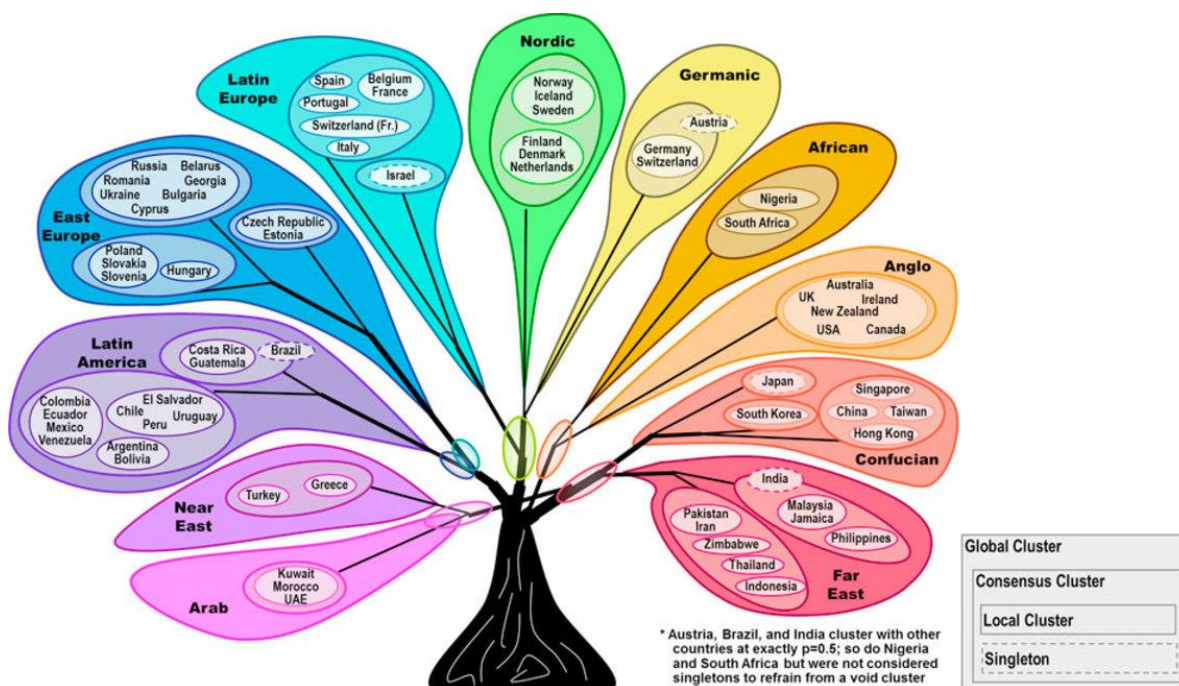
Source: Ronen, S. & Shenkar, O. (2013)

4.5.1 European acquirers vs non-European acquirers

The classification European vs non-European acquirers, based on the geographical distance notion adopted by Barbaresco et al. (2018) and Piscitello and Rabbiosi (2005), can provide interesting insights given the EU debate summarized in Chapter 2 concerning the efforts of the EU to protect critical European assets against cross-border deals. Despite our goal is not to give considerations about the risks connected to foreign influence and strategic dependence, by comparing M&As concluded by European and Non-European acquirers we could measure the effects on the performance of Italian targets when the acquirer is European or not.

Out of 75 matched treated companies, 48 have been acquired by European companies and 27 by non-European companies. Among the latter, United States acquirers are prevailing. Given EU_i equal to 1 if the acquirer is European and equal to 0 if the acquirer is non-European, the equation used to estimate the effect of the foreign M&A on the outcome of interests i:

$$\Delta Y_i = \lambda' + \beta F_{iPost} + \delta(F_{iPost} \times EU_i) + \Delta\varepsilon_i \qquad (9)$$

We performed a first-difference regression analysis in Stata (Table 32) in order to analyse the relationship between foreign ownership and Sales (where $dsales = \Delta$sales) in case of European and non-European acquirer. The model does not show a statistically significant relationship between foreign European ownership and sales. Indeed, foreign M&As by a European investor[28] has a positive but not significant effect (B=861.629, t=0.24, p>0.1) on the sales of the target. M&As by non-European investors show also a positive but non-significant effect (B=4745.637, t=0.94, p>0.1).

---

[28] *Note: the command "lincom" that we use in this paragraph and in the following ones, test hypotheses on linear combination of regression coefficients. With interactions effects, it is necessary to construct hypotheses tests and confidence intervals on linear combinations of regression coefficients. In this specific case, the estimated effect of foreign acquisition by a European acquirer is given by the combination of β and δ.*

Table 32 DID estimation through a first-difference regression model: output variable Sales (European vs non-European Acquirers)

```
.  reg dsales treated treat_eu [iweight = cem_we], robust
(sum of wgt is    1.5000e+02)

Linear regression                                  Number of obs   =        150
                                                   F(2, 147)       =       0.45
                                                   Prob > F        =     0.6363
                                                   R-squared       =     0.0070
                                                   Root MSE        =      20895

-------------------------------------------------------------------------------
             |               Robust
      dsales |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+-----------------------------------------------------------------
     treated |   4745.637   5026.018     0.94   0.347    -5186.946    14678.22
    treat_eu |  -3884.008   4951.264    -0.78   0.434    -13668.86    5900.843
       _cons |   3383.525   2603.158     1.30   0.196    -1760.922    8527.971
-------------------------------------------------------------------------------

.  lincom treated+treat_eu

 ( 1)  treated + treat_eu = 0

-------------------------------------------------------------------------------
      dsales |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+-----------------------------------------------------------------
         (1) |   861.629   3578.689     0.24   0.810    -6210.696    7933.954
-------------------------------------------------------------------------------
```

We performed a first-difference regression analysis in Stata (Table 33) in order to analyse the relationship between foreign ownership and ROA (where $droa = \Delta$ROA) in case of European and non-European acquirer. The model does not show a statistically significant relationship between foreign ownership and ROA. Indeed, foreign M&As by a European investor has a positive but not significant effect (B=0.0628, t=0.76, p>0.1). Conversely, M&As by a non-European investor show a negative but non-significant effect (B= -0.0181, t= -0.90, p>0.1).

We also run a first-difference regression analysis in Stata (Table 34) in order to analyse the relationship between foreign ownership and EBITDA margin (where $debitdam = \Delta$EBITDAmargin) in case of European and non-European acquirer. The model has a p-value>0.1 and does not show a statistically significant relationship between the dependent and the independent variables. Nevertheless, without considering the low quality of the model, targets acquired by European companies show a positive and significant effect on EBITDA margin (B=0.4407; t=1.89; p<0.1). Similarly, targets of non-European companies show a positive and significant effect (B=0.4673; t=1.83; p<0.1).

Table 33 DID estimation through a first-difference regression model: output variable ROA (European vs non-European Acquirers)

```
.  reg droa treated treat_eu [iweight = cem_we], robust
(sum of wgt is   1.5000e+02)

Linear regression                               Number of obs   =        150
                                                F(2, 147)       =       0.74
                                                Prob > F        =     0.4793
                                                R-squared       =     0.0096
                                                Root MSE        =     .33165

------------------------------------------------------------------------------
             |               Robust
        droa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     treated |   -.018109   .0200966    -0.90   0.369    -.0578246    .0216066
    treat_eu |   .0809762   .0842556     0.96   0.338    -.0855325    .2474849
       _cons |   .0165954   .0103973     1.60   0.113     -.003952    .0371429
------------------------------------------------------------------------------


lincom treated+treat_eu

 ( 1)  treated + treat_eu = 0

------------------------------------------------------------------------------
        droa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0628672   .0831345     0.76   0.451    -.1014259    .2271603
------------------------------------------------------------------------------
```

Table 34 DID estimation through a first-difference regression model: output variable EBITDA margin (European vs non-European Acquirers)

```
.  reg debitdam treated treat_eu [iweight = cem_we], robust
(sum of wgt is   1.4800e+02)

Linear regression                               Number of obs   =        148
                                                F(2, 145)       =       2.15
                                                Prob > F        =     0.1200
                                                R-squared       =     0.0287
                                                Root MSE        =      1.325

------------------------------------------------------------------------------
             |               Robust
    debitdam |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     treated |    .467372   .2550292     1.83   0.069    -.0366829    .9714269
    treat_eu |  -.0266406    .215906    -0.12   0.902    -.4533701    .4000889
       _cons |  -.2025107   .1907621    -1.06   0.290    -.5795444     .174523
------------------------------------------------------------------------------

.  lincom treated+treat_eu

 ( 1)  treated + treat_eu = 0

------------------------------------------------------------------------------
    debitdam |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .4407314   .2331435     1.89   0.061    -.0200673    .9015301
------------------------------------------------------------------------------
```

4.5.2 Acquirers based in Latin Europe vs Other countries

Based on the cluster map developed by Ronen and Shenkar (2013), we distinguish Latin Europe from the other regions. This classification, apart from geographical distance, include also other economic, linguistic, religious and cultural dimensions, and can be considered a better proxy for national cultural distance. Given LE_i equal to 1 if the acquirer is based in Latin Europe (i.e. Belgium, France, Israel, Portugal, Spain, Switzerland (Fr)) and equal to 0 if the acquirer is not based in Latin Europe, the equation used to estimate the effect of the foreign M&A on the outcome of interests is:

$$\Delta Y_i = \lambda' + \beta F_{iPost} + \delta(F_{iPost} \times LE_i) + \Delta \varepsilon_i \qquad (10)$$

Out of 75 matched treated companies, 27 have been acquired by Latin-European companies and 58 by firms based in other countries.

We performed a first-difference regression analysis in Stata (Table 35) in order to analyse the relationship between foreign ownership and sales (where $dsales = \Delta$sales) in case of

Table 35 DID estimation through a first-difference regression model: output variable Sales (Latin European vs Other Acquirers)

```
 reg dsales treated treat_lat_eu [iweight = cem_we], robust
(sum of wgt is   1.5000e+02)

Linear regression                               Number of obs   =        150
                                                F(2, 147)       =       0.22
                                                Prob > F        =     0.8003
                                                R-squared       =     0.0036
                                                Root MSE        =      20930


-----------------------------------------------------------------------------
             |               Robust
      dsales |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+---------------------------------------------------------------
     treated |   1862.887   3378.071     0.55   0.582     -4812.97    8538.743
 treat_lat_eu|   1751.406   6794.573     0.26   0.797    -11676.26    15179.07
       _cons |   3383.525   2603.158     1.30   0.196    -1760.922    8527.971
-----------------------------------------------------------------------------


 lincom treated+treat_lat_eu

 ( 1)   treated + treat_lat_eu = 0


-----------------------------------------------------------------------------
      dsales |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+---------------------------------------------------------------
         (1) |   3614.293   6950.375     0.52   0.604    -10121.27    17349.86
-----------------------------------------------------------------------------
```

acquirers based in Latin Europe and others acquired. The p-value of the model (p-value>0.1) does not indicate the reliability of foreign ownership to predict sales. Nevertheless, both acquirers based in Latin Europe and outside this area, show a positive (respectively B=3614.293 and B=1862.887) but not significant effect on sales compared to purely domestic firms.

We performed a first-difference regression analysis in Stata (Table 36) in order to analyse the relationship between foreign ownership and sales (where $droa = \Delta$ROA) in case of acquirers based in Latin Europe and others acquired. The model (p-value>0.1) do not show statistically significant relationship between X and Y. If on the one hand, acquiring companies based in Latin Europe have a negative non significant effect on the ROA of the target (B= -0.0319; t=-0.93; p>0.1), acquirers based outside this ragion have a non significant positive effect on ROA (B=0.0529; t=0.77; p>0.1).

Table 36 DID estimation through a first-difference regression model: output variable ROA (Latin European vs Other Acquirers)

```
.  reg droa treated treat_lat_eu [iweight = cem_we], robust
(sum of wgt is   1.5000e+02)

Linear regression                               Number of obs   =        150
                                                F(2, 147)       =       0.76
                                                Prob > F        =     0.4701
                                                R-squared       =     0.0084
                                                Root MSE        =     .33183

-----------------------------------------------------------------------------
             |               Robust
        droa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+---------------------------------------------------------------
     treated |   .0529769   .0688771     0.77   0.443    -.0831403    .1890941
treat_lat_eu |  -.0849759   .0756398    -1.12   0.263    -.2344578    .0645061
       _cons |   .0165954   .0103973     1.60   0.113     -.003952    .0371429
-----------------------------------------------------------------------------

.  lincom treated+treat_lat_eu

 ( 1)  treated + treat_lat_eu = 0

-----------------------------------------------------------------------------
        droa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+---------------------------------------------------------------
         (1) |  -.0319989   .0345476    -0.93   0.356    -.1002731    .0362753
-----------------------------------------------------------------------------
```

We performed a first-difference regression analysis in Stata (Table 37) in order to analyse the relationship between foreign ownership and EBITDA margin (where $debitdam = \Delta$EBITDAmargin) in case of acquirers based in Latin Europe and others acquired. Results

empirically support the argument that national cultural distance enhances cross-border acquisition performance. The acquired companies demonstrate higher EBITDA margin (debitdam = Δebitdamargin) when the bidder is not based in Latin Europe (B=0.5398, t=2.32, p<0.05). This finding is not in line with the large portion of the literature that argue that larger the differences in values (à la Hofstede) between the acquirer and the acquired company, higher the probability that post-acquisition performance gets worse. Nevertheless, the result is consistent with the arguments proposed by Morosini et al., (1998) and by O'Grady and Lane (1996). On the one hand, Morosini et al., (1998) debate that the best-performing acquisitions are those in which the routines and repertoires of the target's country of origin are, on average, more distant than those of the acquirer's country. On the other hand, O'Grady and Lane (1996) introduced the concept of "psychic distance paradox"[29]. They argue that operations in psychically close countries are not

Table 37 DID estimation through a first-difference regression model: output variable EBITDA margin (Latin European vs Other Acquirers)

```
.  reg debitdam treated treat_lat_eu [iweight = cem_we], robust
   (sum of wgt is   1.4800e+02)

   Linear regression                              Number of obs   =         148
                                                  F(2, 145)       =        4.40
                                                  Prob > F        =      0.0140
                                                  R-squared       =      0.0362
                                                  Root MSE        =      1.3199

   -------------------------------------------------------------------------------
                 |               Robust
        debitdam |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
   --------------+----------------------------------------------------------------
         treated |   .5398436   .2330937     2.32   0.022     .0791433    1.000544
    treat_lat_eu |  -.3891181   .1373356    -2.83   0.005    -.6605563   -.1176799
           _cons |  -.2025107   .1907621    -1.06   0.290    -.5795444     .174523
   -------------------------------------------------------------------------------

.  lincom treated+treat_lat_eu

 ( 1)   treated + treat_lat_eu = 0

   -------------------------------------------------------------------------------
        debitdam |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
   --------------+----------------------------------------------------------------
             (1) |   .1507255   .1931548     0.78   0.436    -.2310371    .5324882
   -------------------------------------------------------------------------------
```

---

[29] *Psychic distance is a larger, more encompassing, concept than simply cultural difference. When conceptualizing distance in the internationalization process. O'Grady and Lane (1996) include business factors, such as legal and competitive environments in the definition of psychic distance.*

necessarily easy to manage, because assumptions of similarity can prevent executives from learning about critical differences (ibidem).

4.6 Empirical results based on target macro-industry

Most of the existing literature on the post-acquisition performance of the target distinguish manufacturing industry from services sector. Schiffbauer et al. (2017) emphasize the importance of introducing industry differences in the analysis. Their research on foreign acquisitions of UK manufacturing companies acquired between 1999 and 2008 suggests that cross-border acquisition have different effects across industries, leading to higher productivity in ICT manufacturing industries, but not in ICT service industries. Their result is consistent with the theoretical predictions of Nocke and Yeaple (2007), that argue that firms in R&D-intensive sectors have positive results while firms in marketing-intensive industries show negative results.

Based on our sample and on the data available, we differentiate the macro-industry in two groups: manufacturing industry and services sector, who have different dynamics, different average financial performance and different post-merger integration strategies. Out of 75 matched treated companies, 38 operate in the manufacturing industry and 37 in the services sector.

Let $Manufact_i$ a dummy variable equal to 1 if the target is operating in the manufacturing industry and equal to 0 if it is operating in the services industry:

$$\Delta Y_i = \lambda' + \beta F_{iPost} + \delta(F_{iPost} \times Manufact_i) + \Delta\varepsilon_i \qquad (11)$$

We performed a first-difference regression analysis in Stata (Table 38) in order to analyse the relationship between foreign ownership and sales (where $dsales = \Delta$sales), differentiating targets by macro-sectors. Both acquired companies operating in the manufacturing sector (B=3698.949; t=0.79; p>0.1) and services (B=781.9007; t=0.24; p>0.1) show a non-significant positive effect on sales. These empirical results are consistent with the aggregate results.

We performed a first-difference regression analysis in Stata (Table 39) in order to analyse the relationship between foreign ownership and ROA (where $droa = \Delta$ROA), differentiating targets by macro-sectors. Target companies operating in manufacturing sector have a negative non-significant effect (B= -0.0139; t=-0.68; p>0.1) while targets in the services sector a positive non-significant result (B=0.0826; t=0.78; p>0.1).

Table 38 DID estimation through a first-difference regression model: output variable Sales (Manufacturing vs Services)

```
.  reg dsales treated treat_manufacturing [iweight = cem_we], robust
(sum of wgt is    1.5000e+02)

Linear regression                               Number of obs   =        150
                                                F(2, 147)       =       0.32
                                                Prob > F        =     0.7298
                                                R-squared       =     0.0054
                                                Root MSE        =      20911

--------------------------------------------------------------------------------
                    |               Robust
             dsales |     Coef.    Std. Err.      t    P>|t|    [95% Conf. Interval]
--------------------+-----------------------------------------------------------
            treated |   781.9007   3256.196     0.24   0.811    -5653.103    7216.904
treat_manufacturing |   2917.049   4384.547     0.67   0.507    -5747.839    11581.94
              _cons |   3383.525   2603.158     1.30   0.196    -1760.922    8527.971
--------------------------------------------------------------------------------

.  lincom treated+treat_manufacturing

 ( 1)  treated + treat_manufacturing = 0

--------------------------------------------------------------------------
     dsales |     Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
------------+-------------------------------------------------------------
        (1) |   3698.949   4708.959     0.79   0.433    -5607.053    13004.95
--------------------------------------------------------------------------
```

Table 39 DID estimation through a first-difference regression model: output variable ROA (Manufacturing vs Services)

```
.  reg droa treated treat_manufacturing [iweight = cem_we], robust
(sum of wgt is    1.5000e+02)

Linear regression                               Number of obs   =        150
                                                F(2, 147)       =       0.56
                                                Prob > F        =     0.5735
                                                R-squared       =     0.0133
                                                Root MSE        =     .33101

--------------------------------------------------------------------------------
                    |               Robust
               droa |     Coef.    Std. Err.      t    P>|t|    [95% Conf. Interval]
--------------------+-----------------------------------------------------------
            treated |   .0826626   .1064724     0.78   0.439    -.1277517    .2930769
treat_manufacturing |  -.0966057   .1074429    -0.90   0.370    -.3089378    .1157265
              _cons |   .0165954   .0103973     1.60   0.113    -.003952     .0371429
--------------------------------------------------------------------------------

.  lincom treated+treat_manufacturing

 ( 1)  treated + treat_manufacturing = 0

--------------------------------------------------------------------------
       droa |     Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
------------+-------------------------------------------------------------
        (1) |  -.0139431   .0205864    -0.68   0.499    -.0546267    .0267406
--------------------------------------------------------------------------
```

We performed a first-difference regression analysis in Stata (Table 40) in order to analyse the relationship between foreign ownership and EBITDA margin (where $debitdam = \Delta EBITDAmargin$), differentiating targets by macro-sectors. When the target operates in the manufacturing industry, foreign ownership has a positive effect on the EBITDA margin (B=0.6099; t=2.28; p<0.05). The effect on the targets operating in the services industry is non-significant and positive (B=0.2820; t=1.37; p>0.1). This result could be explained by the fact that it is more difficult to integrate two companies in the services sector. This can be due to at least two factors: firstly, typically targets in the services industry have higher levels of intangibles assets (Table 41) that are more difficult to integrate and to exploit to develop synergies. Secondly, the most important resource of companies operating in the services sector is usually human capital and people can be more difficult to integrate than manufacturing plants.

Table 40 DID estimation through a first-difference regression model: output variable EBITDA margin (Manufacturing vs Services)

```
.  reg debitdam treated treat_manufacturing [iweight = cem_we], robust
   (sum of wgt is   1.4800e+02)

Linear regression                               Number of obs   =        148
                                                F(2, 145)       =       2.61
                                                Prob > F        =     0.0767
                                                R-squared       =     0.0362
                                                Root MSE        =     1.3199

-----------------------------------------------------------------------------
                    |              Robust
           debitdam |    Coef.   Std. Err.     t    P>|t|    [95% Conf. Interval]
--------------------+--------------------------------------------------------
            treated |  .2820824  .2056968    1.37   0.172    -.124469    .6886339
treat_manufacturing |  .3278769  .2028743    1.62   0.108    -.073096    .7288497
              _cons | -.2025107  .1907621   -1.06   0.290    -.5795444    .174523
-----------------------------------------------------------------------------

.  lincom treated+treat_manufacturing

 ( 1)  treated + treat_manufacturing = 0

-----------------------------------------------------------------------------
   debitdam |    Coef.   Std. Err.     t    P>|t|    [95% Conf. Interval]
------------+----------------------------------------------------------------
        (1) |  .6099593  .2676326    2.28   0.024    .0809943    1.138924
-----------------------------------------------------------------------------
```

Table 41 3-years Avg. Intangible/Tot. Assets Pre-M&A

	OBS.	MEAN	STD. DEV.	MIN	MAX
SERVICES	47	0.10	0.16	0.01	0.70
MANUFACTURING	53	0.09	0.15	0	0.54

4.7 Empirical results based on the form of the deal

A major shortcoming of many studies in finance is that researchers typically aggregate all types of acquisitions in their studies. With synergies varying significantly across acquisitions types (Lubatkin, 1983), the wisdom behind such aggregation is questionable. Moreover, different forms of the deal could be related to a different post-merger integration (PMI) process, which play a critical role in M&A success.

It is plausible to state that in case of "acquisitions" the foreign acquirer of a controlling stake has a dominant position while in "mergers" prevail different logic of cooperation and knowledge transfer. When the acquiring company has a dominant position, it typically removes autonomy from the target company and imposes a rigorous set of rules, systems and performance expectations, upon it to gain quick control (Datta and Grant, 1990). Since tight controls tend to signal the absence of trust, their use generally results in a cycle of escalating distrust and can lead to a worsening of the performance.

Autonomy removal can be devastating from the perspective of the managers and employees of the target company and it can result, for example, in reduced commitment and motivation and, in extreme cases, in resentment, anger and hostility (Buono and Bowditch, 1989), as members of the target firm vigorously defend their autonomy (a situation termed "conquering army syndrome" by Datta and Grand (1990)). Post-merger organizational identification is lower when employees feel dominated by the acquirer (Graebner et al., 2017).

Therefore, we want to test if there are performance differences between acquisitions (of assets and majority interest) and mergers. Out of 75 matched treated companies, 22 have been subject to merger and 53 to foreign acquisition.

Let $Merg_i$ a dummy variable equal to 1 if the deal is a merger and equal to 0 if the deal is an acquisition of assets or an acquisition of majority interests:

$$\Delta Y_i = \lambda' + \beta F_{iPost} + \delta(F_{iPost} \times Merg_i) + \Delta\varepsilon_i \qquad (12)$$

We performed a first-difference regression analysis in Stata (Table 42) in order to analyse the relationship between foreign ownership and sales (where $dsales = \Delta\text{sales}$), distinguish M&A by deal form. In case of merger, the effect on sales is positive and non-significant (B=152.9763; t=0.04; p>0.1) while the effect in case of acquisition is positive and non-significant (B=3134.432; t=0.81; p>0.1).

We performed a first-difference regression analysis in Stata (Table 43) in order to analyse the relationship between foreign ownership and ROA (where $droa = \Delta$ROA), distinguish M&A by deal form. The model has a low quality (p>0.1). Our regression output shows that foreign mergers have a non-significant and positive effect on ROA (B=0.1595; t=0.92; p>0.1). Conversely, foreign acquisitions show a non-significant and negative effect on ROA (B=-0.0185; t=-0.88; p>0.1).

Table 42 DID estimation through a first-difference regression model: output variable Sales (Acquisitions vs Mergers)

```
.  reg dsales treated treat_merger [iweight = cem_we], robust
(sum of wgt is   1.5000e+02)

Linear regression                               Number of obs   =        150
                                                F(2, 147)       =       0.39
                                                Prob > F        =     0.6775
                                                R-squared       =     0.0051
                                                Root MSE        =      20914


------------------------------------------------------------------------------
             |               Robust
      dsales |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     treated |   3134.432   3857.647     0.81   0.418    -4489.178    10758.04
treat_merger |  -2981.456   4227.627    -0.71   0.482    -11336.23    5373.322
       _cons |   3383.525   2603.158     1.30   0.196    -1760.922    8527.971
------------------------------------------------------------------------------

.  lincom treated+treat_merger

 ( 1)  treated + treat_merger = 0


------------------------------------------------------------------------------
      dsales |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   152.9763   4067.463     0.04   0.970    -7885.279    8191.232
------------------------------------------------------------------------------
```

We performed a first-difference regression analysis in Stata (Table 44) in order to analyse the relationship between foreign ownership and EBITDA margin (where $debitdam = \Delta$EBITDAmargin), distinguish M&A by deal form. The model adopted is appropriate to explain the effects of foreign mergers on EBITDA margin (p<0.05). The empirical results suggest that in case of cross-border mergers, the effect on EBITDA margin is significant and positive (B=1.0025; t=2.80; p<0.01). Foreign acquisitions have a positive but not significant effect on EBITDA margin (B=0.2168; t=1.10; p>0.1). This result seems to suggest that in mergers, where it is more common to find logic of cooperation compared to acquisitions (where logic of predominance of the foreign acquirer can prevail), the effects on profitability measured by EBITDA margin is positive and significant.

Table 43 DID estimation through a first-difference regression model: output variable ROA (Acquisitions vs Mergers)

```
. reg droa treated treat_merger [iweight = cem_we], robust
(sum of wgt is    1.5000e+02)

Linear regression                               Number of obs   =        150
                                                F(2, 147)       =       0.83
                                                Prob > F        =     0.4362
                                                R-squared       =     0.0328
                                                Root MSE        =     .32773

-----------------------------------------------------------------------------
             |               Robust
        droa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+---------------------------------------------------------------
     treated |  -.018509    .0209973    -0.88   0.379    -.0600046    .0229867
treat_merger |   .1780387    .1744491     1.02   0.309    -.1667133    .5227908
       _cons |   .0165954    .0103973     1.60   0.113     -.003952    .0371429
-----------------------------------------------------------------------------

. lincom treated+treat_merger

 ( 1)  treated + treat_merger = 0

-----------------------------------------------------------------------------
        droa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+---------------------------------------------------------------
         (1) |   .1595298    .1738039     0.92   0.360    -.1839473    .5030069
-----------------------------------------------------------------------------
```

Table 44 DID estimation through a first-difference regression model: output variable EBITDA margin (Acquisitions vs Mergers)

```
. reg debitdam treated treat_merger [iweight = cem_we], robust
(sum of wgt is    1.4800e+02)

Linear regression                               Number of obs   =        148
                                                F(2, 145)       =       3.99
                                                Prob > F        =     0.0206
                                                R-squared       =     0.0651
                                                Root MSE        =        1.3

-----------------------------------------------------------------------------
             |               Robust
    debitdam |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+---------------------------------------------------------------
     treated |   .2168737    .1966954     1.10   0.272    -.1718869    .6056343
treat_merger |    .785671    .3074169     2.56   0.012      .178074    1.393268
       _cons |  -.2025107    .1907621    -1.06   0.290    -.5795444     .174523
-----------------------------------------------------------------------------

. lincom treated+treat_merger

 ( 1)  treated + treat_merger = 0

-----------------------------------------------------------------------------
    debitdam |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+---------------------------------------------------------------
         (1) |   1.002545    .3586035     2.80   0.006     .2937795     1.71131
-----------------------------------------------------------------------------
```

4.8 Post-M&A performance based on the size of the target company

Target size can be an important indicator of the M&As reasons and resulting outcomes. SMEs are more likely to be acquired due to efficiency motives, while large firms can be acquired due to both efficiency and managerial synergy motives, therefore such difference in motives can also result in different post-acquisition performance.

For this reason, equation 7 was re-estimated by taking into account target size. Out of 75 matched treated companies, 63 are SMEs and 12 are large companies.

Let SME_i a dummy variable equal to 1 if the target is a SME (measured by average sales three-years before the M&A $< €50$ million) and equal to 0 if it a large company (average sales before the M&A $> €50$ million):

$$\Delta Y_i = \lambda' + \beta F_{iPost} + \delta(F_{iPost} \times SME_i) + \Delta\varepsilon_i \tag{13}$$

We performed a first-difference regression analysis in Stata (Table 45) in order to analyse the relationship between foreign ownership and sales (where $dsales = \Delta$sales), distinguish M&A by target size (SME vs large companies). The effect of foreign ownership on SMEs is negative and not significant (B= -1195.316; t= -0.42; p>0.1). Conversely, even if large companies acquired by foreign investors show a significant and positive effect on sales (B=20399.61; t=1.81; p<0.1), the regression model has a low quality (p>0.1) and does not show a statistically significant relationship between the outcome variable and the dependent variables.

We performed a first-difference regression analysis in Stata (Table 46) in order to analyse the relationship between foreign ownership and ROA (where $droa = \Delta$ROA), distinguish M&A by target size (SME vs large companies). The model has a p-value higher than 0.1 and does not show a statistically significant relationship between ROA and the independent variables. On the one hand, SMEs acquired by foreign investors show a positive and non-significant effect on ROA (B=0.0442; t=0.69; p>0.1). On the other hand, large domestic firms acquired by foreign companies show a negative and non-significant effect (B=-0.0218; t= -0.90; p>0.1).

Table 45 DID estimation through a first-difference regression model: output variable Sales (SMEs vs large companies)

```
.  reg dsales treated treat_sme [iweight = cem_we], robust
(sum of wgt is   1.5000e+02)

Linear regression                              Number of obs   =        150
                                               F(2, 147)       =       1.97
                                               Prob > F        =     0.1427
                                               R-squared       =     0.0757
                                               Root MSE        =      20159

-------------------------------------------------------------------------------
              |               Robust
       dsales |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
--------------+----------------------------------------------------------------
      treated |   20399.61    11267.8     1.81   0.072    -1868.185     42667.4
    treat_sme |  -21594.92   11026.36    -1.96   0.052    -43385.58    195.7359
        _cons |   3383.525   2603.158     1.30   0.196    -1760.922    8527.971
-------------------------------------------------------------------------------

.  lincom treated+treat_sme

 ( 1)  treated + treat_sme = 0

-------------------------------------------------------------------------------
       dsales |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
--------------+----------------------------------------------------------------
          (1) |  -1195.316   2858.365    -0.42   0.676    -6844.111     4453.48
-------------------------------------------------------------------------------
```

Table 46 DID estimation through a first-difference regression model: output variable ROA (SMEs vs large companies)

```
.  reg droa treated treat_sme [iweight = cem_we], robust
(sum of wgt is   1.5000e+02)

Linear regression                              Number of obs   =        150
                                               F(2, 147)       =       0.69
                                               Prob > F        =     0.5009
                                               R-squared       =     0.0053
                                               Root MSE        =     .33236

-------------------------------------------------------------------------------
              |               Robust
         droa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
--------------+----------------------------------------------------------------
      treated |  -.0218021   .0241061    -0.90   0.367    -.0694413    .0258371
    treat_sme |   .0660926   .0669122     0.99   0.325    -.0661415    .1983268
        _cons |   .0165954   .0103973     1.60   0.113     -.003952    .0371429
-------------------------------------------------------------------------------

.  lincom treated+treat_sme

 ( 1)  treated + treat_sme = 0

-------------------------------------------------------------------------------
         droa |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
--------------+----------------------------------------------------------------
          (1) |   .0442906   .0641276     0.69   0.491    -.0824406    .1710217
-------------------------------------------------------------------------------
```

We performed a first-difference regression analysis in Stata (Table 47) in order to analyse the relationship between foreign ownership and EBITDA margin (where $debitdam = \Delta EBITDAmargin$), distinguish M&A by target size (SME vs large companies). The model shows a statistically significant relationship between foreign acquisition/ownership of SMEs and the outcome of interest EBITDA margin. SMEs acquired by foreign companies show a significant and positive effect on profitability measured by EBITDA margin (B=0.5074; t=2.23; p<0.05). These results reflect the findings of Sinani and Meyer (2004) which argued that SMEs are more flexible and more likely to benefit from acquisition in the short term. Conversely, in large acquisitions, the integration process may last for several years (Thanos and Papadakis, 2012).

Table 47 DID estimation through a first-difference regression model: output variable EBITDA margin (SMEs vs large companies)

```
.  reg debitdam treated treat_sme [iweight = cem_we], robust
   (sum of wgt is    1.4800e+02)

   Linear regression                              Number of obs   =         148
                                                  F(2, 145)       =        4.20
                                                  Prob > F        =      0.0169
                                                  R-squared       =      0.0334
                                                  Root MSE        =      1.3218

   ---------------------------------------------------------------------------
                |               Robust
      debitdam  |    Coef.   Std. Err.      t    P>|t|    [95% Conf. Interval]
   -------------+-------------------------------------------------------------
       treated  |  .1561958   .1931365     0.81   0.420   -.2255306    .5379223
     treat_sme  |  .3512085   .1277059     2.75   0.007    .0988029    .6036141
         _cons  | -.2025107   .1907621    -1.06   0.290   -.5795444    .174523
   ---------------------------------------------------------------------------

.  lincom treated+treat_sme

   ( 1)  treated + treat_sme = 0

   ---------------------------------------------------------------------------
      debitdam  |    Coef.   Std. Err.      t    P>|t|    [95% Conf. Interval]
   -------------+-------------------------------------------------------------
           (1)  |  .5074043   .2275687     2.23   0.027    .0576241    .9571846
   ---------------------------------------------------------------------------
```

4.9 Limitations and future research

This study presents a number of limitations and suggests some avenues for future research. Firstly, the analysis was based on the comparison between foreign acquired firms and domestically-owned firms. Nevertheless, the permanence in Italian hands from 2008 to 2016 does not exclude that some companies may have been acquired by other domestic firms. If the frequency of domestic deals in the control group is relevant, our results could

be influenced by this factor. Moreover, our post-acquisition performance can consider only companies that in the three years after the deal did not fail, were not incorporated, and publish balance sheet. The necessary observation of the only companies that survive imply the presence of the "survivorship bias" problem that appears to be technically not eliminable from the existing literature (Barbaresco et al., 2018).

Our empirical findings should be evaluated with care as regards their applicability in case of emerging countries' acquirers. This is due to the fact that our sample consists of small number of cross-border M&As in which more than 90% of the acquirers are headquartered in developed countries. Another limitation of this study is that, the empirical strategy adopted (DID combined with CEM) is based on accounting-based measures that have two drawbacks when assessing the success of M&As. First, reliability of the accounting-based measures is subject to the quality of the annual financial statements. Secondly, aspects of nonfinancial performance are not captured by using accounting measures. Given that M&A performance is a multidimensional construct referring to both financial and nonfinancial performance, the solely use of accounting measures results in incomplete knowledge.

Future research could add to equation 7 some non-financial covariate to improve the model by considering, for example, some additional information on the type of acquisition (related or unrelated), deal purpose[30], post-merger integration process[31], changes in management after the M&A, acquirer's previous experience in M&As, acquirer's experience in the target country, etc. Alternatively, future studies could combine the statistical approach adopted in this study with interviews to managers of target and acquiring companies in order to discern motivations, implementing procedures, post-acquisition integration process, etc.

Moreover, future studies should try to investigate a longer period of time since, as suggested also by Chen (2011), foreign acquisition effects can manifest after a few years from the closure of the deals. However, it is difficult to assess a priori how many years it takes for the possible effects of an ownership change to manifest completely.

---

[30] *Rothaermel, F. T. (2015) illustrates three main reasons to make acquisitions: gaining access to new markets and distributions channels; gaining access to new capability or competency; pre-empting rivals.*
[31] *Haspeslagh, P. C. and Jemison, D. B. (1991) identified four PMI strategies. Namely: preservation, symbiosis, holding and absorption.*

4.10 Conclusions

Our findings, in line with the studies conducted by Barbaresco et al. (2018), Bentivogli and Mirenda (2017), ICE & Prometeia (2014) and Piscitello & Rabbiosi (2005), do not give support to the worries that cross-border M&As may lead to sudden performance deterioration of the acquired companies. We apply a methodological approach similar to Bentivogli and Mirenda (2017) and ICE and Prometeia (2014) by combining DID with a matching procedure. However, while most of the studies use propensity score matching, we adopt coarsened exact matching (CEM) that to our knowledge was never used in cross-border M&A literature.

After building a treated and control group and running a regression in first differences for each outcome of interest, we find significant and positive effects on EBITDA margin due to the foreign ownership, and non-significant and positive effects on sales and ROA.

Table 48 reports the results of the DID matching estimator. In each cell, the first term shows the effect of foreign M&A on the target firm's 3-years average outcome of interest (i.e. sales, ROA, EBITDA margin) after the takeover. Robust standard errors are enclosed in parentheses. The first row provides aggregate results while the following rows report results for the different sub-groups analyzed: target macro industry (manufacturing vs services), acquirer's region (European vs non-European; Latin-European vs Others); form of the deal (mergers vs acquisitions); target size (SMEs vs large companies).

From an aggregate point of view, the effects for both sales and ROA are positive but not significant ($p>0.1$). However, we find that foreign-acquired firms have, on average, 45.04% higher EBITDA margin in the three years after the takeover compared to domestic firms that had a similar ex-ante takeover probability of becoming a foreign M&A target. The results indicate some differences in the sub-groups analysed. Firstly, national cultural distance appears to have a significant ($p<0.05$) effect on the post-acquisition performance of the target. When the acquirer is culturally distant from the target based on Ronen and Shenkar (2013) classification (i.e. when it is not based in Latin Europe), foreign-acquired companies have, on average, 53.98% higher EBITDA margin in the three years after the takeover than counterfactuals. Our findings suggest that when the acquirer is culturally distant, targets might access to diverse routines and repertoires which are beneficial to their performance. Moreover, findings suggest that targets firms in the manufacturing firms have the higher improvement in EBITDA margin, with a 60.99% higher ratio (95% level of significance) than control group units. This suggest that firms in the

services sector are more difficult to integrate because of the higher component of human capital and usually intangible assets. Findings indicate also different effects on the target performance according to the form of the deal analysed. Specifically, domestic firms subject to a foreign merger have a significant and positive improvement (B=1.0025; p<0.001) compared to local firms with a similar ex ante likelihood of being acquired. These results could be due to the fact that the merger implies a greater complementarity between the target and the acquirer (in terms of ex-ante evaluation) while, vice versa, an acquisition could be made for simply scale reasons. It is plausible to assume also that in case of mergers the previous owner and/or manager is held within the company, and that the foreign acquirer merely integrates the information and control systems but grants autonomy to those who have run the business up to that moment. In this way, when local companies are included into a largest vehicle through a merger, foreign ownership can act as an accelerator for performance. Furthermore, results show that the effect on EBITDA margin is larger and significant only for SMEs (B=0.5074; p<0.05). This result is consistent with the findings of Sinani and Meyer (2004) and Thanos and Papadakis (2012) which state that SMEs are more likely to benefit from acquisition in the short term while in large acquisitions the integration process may last for several years.

Finally, our work suggests that foreign ownership does matter, having per se a positive and significant effect on firms' performance. However, we find significant effects on EBITDA margin but no significant effects on sales growth. This finding suggests that EBITDA margin probably improves not because sales decrease but because operating costs decrease (e.g. elimination of redundant costs, lower advertising or R&D expenses, lower wages because of downsizing etc.). This aspect seems to testify that it is easier to "cut costs" by realizing synergies rather than increase the turnover of the target company.

Table 48 Difference in differences: The effects of foreign M&As on target firm's performance

VARIABLE	SALES-DIFF	ROA -DIFF	EBITDA MARGIN -DIFF
Aggregate level	2259.872 (3407.41)	0.0337 (0.0541)	0.4504** (0.2170)
EU Acquirer	861.629 (3578.689)	0.0628 (0.0831)	0.4407 (0.2331)
Non-EU acquirer	4745.637 (5026.018)	-0.0181 (0.0200)	0.4673 (0.2550)
Latin Europe acquirer	3614.293 (6950.375)	-0.0319 (0.0345)	0.1507 (0.1931)
Non-Latin Europe acquirer	1862.887 (3378.071)	0.0529 (0.0688)	0.5398** (0.2330)
Manufacturing (target)	3698.949 (4708.959)	-0.0139 (0.0205)	0.6099** (0.2676)
Services (target)	781.9007 (3256.196)	0.0826 (0.1064)	0.2820 (0.2056)
Mergers	152.9763 (4067.463)	0.1595 (0.1738)	1.0025*** (0.3586)
Acquisitions	3134.432 (3857.647)	-0.0185 (0.0209)	0.2168 (0.1966)
SMEs	-1195.316 (2858.365)	0.0442 (0.0641)	0.5074** (0.2275)
Large companies	20399.61 (11267.8)	-0.0218 (0.0241)	0.1561 (0.1931)

Notes:
(i)   N=150 companies (75 treated and 75 control) for Sales and ROA; N=148 for EBITDA margin (74 treated and 74 controls)
(ii)   Robust standard errors are enclosed in parentheses.
(iii) ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

APPENDIX

Appendix I

Table 49 Number of companies by industry

ATECO 2007 - 3 DIGIT CODE	DESCRIPTION OF THE ACTIVITIES	CONTROL SAMPLE	TREATED GROUP	TOTAL
105	Industria lattiero-casearia	653	1	654
106	Lavorazione delle granaglie, produzione di amidi e di prodotti amidacei	372	1	373
108	Produzione di altri prodotti alimentari	877	2	879
141	Confezione di articoli di abbigliamento (escluso abbigliamento in pelliccia)	2.640	1	2.641
151	Preparazione e concia del cuoio; fabbricazione di articoli da viaggio, borse, pelletteria e selleria; preparazione e tintura di pellicce	1.187	1	1.188
152	Fabbricazione di calzature	1.474	1	1.475
172	Fabbricazione di articoli di carta e cartone	1.337	1	1.338
181	Stampa e servizi connessi alla stampa	2.387	-	2.387
200	Fabbricazione di prodotti chimici	67	1	68
203	Fabbricazione di pitture, vernici e smalti, inchiostri da stampa e adesivi sintetici	422	1	423
205	Fabbricazione di altri prodotti chimici	682	1	683
212	Fabbricazione di medicinali e preparati farmaceutici	259	1	260
222	Fabbricazione di articoli in materie plastiche	3.631	3	3.634
233	Fabbricazione di materiali da costruzione in terracotta	323	2	325
241	Siderurgia	159	1	160
243	Fabbricazione di altri prodotti della prima trasformazione dell'acciaio	365	1	366
245	Fonderie	552	-	552
255	Fucinatura, imbutitura, stampaggio e profilatura dei metalli; metallurgia delle polveri	1.023	-	1.023
256	Trattamento e rivestimento dei metalli; lavori di meccanica generale	6.330	2	6.332
259	Fabbricazione di altri prodotti in metallo	2.346	1	2.347
263	Fabbricazione di apparecchiature per le telecomunicazioni	451	2	453
265	Fabbricazione di strumenti e apparecchi di misurazione, prova e navigazione; orologi	625	3	628
267	Fabbricazione di strumenti ottici e attrezzature fotografiche	101	1	102

273	Fabbricazione di cablaggi e apparecchiature di cablaggio	496	1	497
274	Fabbricazione di apparecchiature per illuminazione	444	-	444
279	Fabbricazione di altre apparecchiature elettriche	1.202	-	1.202
281	Fabbricazione di macchine di impiego generale	1.279	3	1.282
282	Fabbricazione di altre macchine di impiego generale	4.079	5	4.084
289	Fabbricazione di altre macchine per impieghi speciali	2.570	4	2.574
293	Fabbricazione di parti ed accessori per autoveicoli e loro motori	662	2	664
301	Costruzione di navi e imbarcazioni	685	1	686
323	Fabbricazione di articoli sportivi	137	1	138
325	Fabbricazione di strumenti e forniture mediche e dentistiche	717	1	718
332	Installazione di macchine ed apparecchiature industriali	1.348	1	1.349
351	Produzione, trasmissione e distribuzione di energia elettrica	1.870	7	1.877
390	Attività di risanamento e altri servizi di gestione dei rifiuti	218	-	218
422	Costruzione di opere di pubblica utilità	577	-	577
464	Commercio all'ingrosso di beni di consumo finale	11.992	3	11.995
465	Commercio all'ingrosso di apparecchiature ict	1.973	1	1.974
466	Commercio all'ingrosso di altri macchinari, attrezzature e forniture	6.661	1	6.662
467	Commercio all'ingrosso specializzato di altri prodotti	11.505	2	11.507
471	Commercio al dettaglio in esercizi non specializzati	3.753	1	3.754
477	Commercio al dettaglio di altri prodotti in esercizi specializzati	9.098	2	9.100
494	Trasporto di merci su strada e servizi di trasloco	5.848	2	5.850
521	Magazzinaggio e custodia	614	1	615
522	Attività di supporto ai trasporti	4.152	1	4.153
551	Alberghi e strutture simili	5.069	1	5.070
582	Edizione di software	119	1	120
610	Telecomunicazioni	131	1	132
611	Telecomunicazioni fisse	40	1	41
619	Altre attività di telecomunicazione	384	-	384
620	Produzione di software, consulenza informatica e attività connesse	7.452	12	7.464
631	Elaborazione dei dati, hosting e attività connesse; portali web	6.184	1	6.185
681	Compravendita di beni immobili effettuata su beni propri	30.413	1	30.414
701	Attività di direzione aziendale	2.713	1	2.714
702	Attività di consulenza gestionale	7.577	1	7.578
711	Attività degli studi di architettura, ingegneria ed altri studi tecnici	4.572	2	4.574
712	Collaudi ed analisi tecniche	1.368	3	1.371
731	Pubblicità	2.629	-	2.629
732	Ricerche di mercato e sondaggi di opinione	992	2	994
741	Attività di design specializzate	1.259	-	1.259
771	Noleggio di autoveicoli	469	1	470
774	Concessione dei diritti di sfruttamento di proprietà intellettuale e prodotti simili (escluse le opere protette dal copyright)	256	1	257
829	Servizi di supporto alle imprese nca	3.812	1	3.813
869	Altri servizi di assistenza sanitaria	1.973	-	1.973
931	Attività sportive	1.855	1	1.856
960	Altre attività di servizi per la persona	2.250	1	2.251
TOTAL		**181.660**	**100**	**181.760**

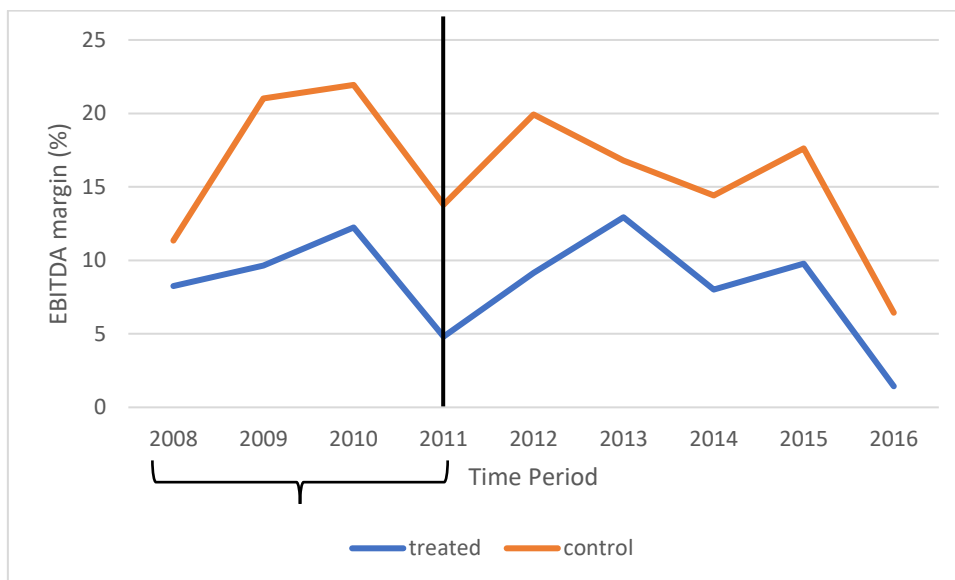Source: elaboration of the author

Appendix II

Note: trends for the matched groups are compared before 2011 (2011 represents the first treatment year in our sample). In this way we are sure that treated companies are domestically-owned before the M&A.

Figure 27 Evidence of parallel trend assumption before 2011 for sales (matched dataset: treated and control groups)
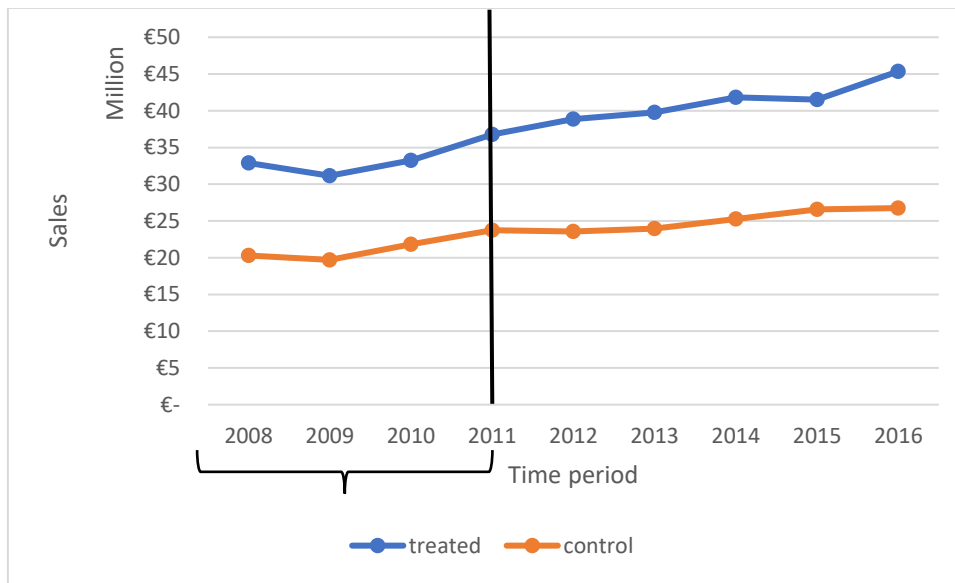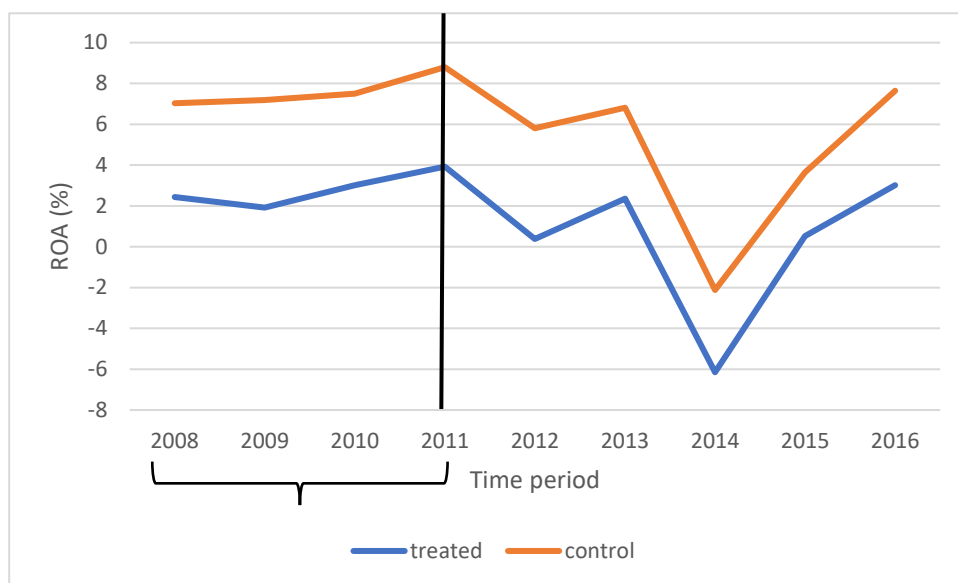

Source: elaboration of the author

Figure 28 Evidence of parallel trend assumption before 2011 for EBITDA margin (matched dataset: treated and control groups)

Source: elaboration of the author

Figure 29 Evidence of parallel trend assumption before 2011 for ROA (matched dataset: treated and control groups)

Source: Elaboration of the author

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