POLITECNICO DI TORINO

Board of Management Engineering

Master's Degree
in Engineering and Management

Master Thesis

The effects of foreign acquisition on Italian target firms.

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Academic year 2018-2019

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INTRODUCTION

In a world that is becoming increasingly globalised and undergoing profound economic changes, mergers and acquisitions have certainly taken on a leading role.

Chinese and Russians buy but also French and Americans, who in this way consolidate their historical positions in the beautiful country. Then there are the Swiss and many new investors, from the Middle East, Asia and even Africa. The fact is that Made in Italy is attracting more and more investors from abroad: the value of mergers and acquisitions carried out in Italy in 2017 amounted to 47 billion euros, corresponding to the historical maximum of 820 completed transactions, of which the cross-border-IN contributed 70%. These data confirm a strong reversal of the trend, confirming the "high degree of attractiveness" of our country's system: "the prestige of Italian brands continues to channel significant capital flows to Italian companies, especially those operating in the key sectors of Made in Italy, perceived as privileged assets, producers of a high quality offer" (KPMG, M&A Report 2017). However, the question of the consequences (from an economic point of view but also from a social one) of this sale of the Italian entrepreneurial patrimony is being asked again and more urgently.

It is undeniable that today this type of operation, once considered of an extraordinary nature, has aroused increasing interest both in economic theory and in applied economics. Many scholars have already dealt with this topic at different times and under different perspectives, but the documentation is very poor and especially the results often appear to be in contrast to each other. This is therefore the main objective of the work: to verify the aims and effects of the acquisitions in our country through a more in-depth analysis of their nature and the way in which they operate.

For the sake of clarity, the three main questions this thesis will attempt to answer are: 1) why do companies choose to make an acquisition as a growth strategy? 2) how multinationals select the companies to be acquired and what characteristics do they have in the pre-acquisition phase? 3) What are the effects in terms of performance on the target company?

To answer these questions, the thesis will be organized as follows.

The first chapter will deal with the main growth strategies of a company with particular attention to external growth, then the focus will shift to M&A operations

through an analysis of the reasons that drive companies to buy a target company with references to the theoretical literature and the advantages / disadvantages associated with them. The last paragraph of the chapter will focus on cross-border transactions.

The second chapter will deepen the main empirical papers with the aim of comparing the available data and laying the foundations for our analysis. These chapters together will represent the theoretical cornerstones on which the third and last chapters will be built.

The third chapter will show the methodology adopted in the analysis with reference to the data used and the propensity score matching, a procedure aimed at associating each target company with an enterprise belonging to the control sample. This control sample consists of enterprises which have not been acquired but have characteristics very similar to those of the target enterprises. Then, using data from Italian manufacturing companies, the main performance variables were analyzed to evaluate the companies acquired in the moment prior to the acquisition and compare them with the respective selected by the control sample.

Finally, the last chapter will show the post-acquisition effects on the acquired companies and compare them with those previously obtained by other scholars and economists.

CHAPTER 1: Corporate growth strategies

1.1 What drives businesses to want to grow?

The concept of enterprise size is complex and indeterminate, because there is no single way to define it and several equally satisfactory qualitative and quantitative criteria can be identified, so it is often appropriate to use them together.

The decision to increase the size of the company must be considered with great caution, as the increase in size could have considerable effects on the management of production processes and especially on the business organization.

Development and growth, although two distinct concepts, interact with each other, leading the company in a direction of creation of "added value", i.e. the difference between revenues and the cost incurred in the production phase.

In an extremely competitive world, companies aim to achieve a solid and lasting position in the long term by adopting a winning strategy aimed at having a high profit and return on investment. As suggested by Michael E-Porter, father of modern strategy and competitiveness, every company must be able to have a competitive advantage over its competitors in order to create economic value.

In this context, the following questions should be answered: What does competitive advantage mean? How to achieve it? How can a company create value?

A company acquires a competitive advantage when its products succeed in attracting much more customers than its competitors, offering a higher economic value that can be translated into a series of better economic-performing characteristics.

However, the transitory nature of competitive advantage pushes companies to continually question themselves, especially as a result of the high spread of the phenomenon of globalization which, involving every sphere of human life and therefore also the market, puts at risk companies threatened by the imminent growth or birth of new opponents.

Therefore, the starting point of each company is to define the right strategy to follow that must consider some essential aspects: the development of goals and objectives in the medium to long term, the resources necessary for the implementation, the selection of the business area in which the company intends to operate and, finally, select the most appropriate organizational structure defining roles and functions.

But *where does* the company have to compete? Answering this question allows us to define three important growth strategies:

- New markets and products: *Diversification;*
- Geographical: *Internationalisation;*
- Dimensional: *Integration.*

Diversification" means the entry of a company or business unit into a new line of business, either through internal development or through acquisitions or alliances.[1]

As long as the company can exploit profitable growth opportunities in its sector, there is no urgent need for diversification. A diversification strategy, with entry into new sectors, deserves careful consideration whenever a company operating in a single business observes a decrease in market opportunities and a stagnation in sales in its main business area.

On the contrary, many times companies identify opportunities for expansion in sectors with technologies and products that integrate their business and that allow them to exploit existing skills and capabilities in new contexts where these strengths are key success factors and are competitive resources of value. In addition, diversification into closely related businesses opens up new possibilities for cost reduction.

With regard to this growth strategy, it is worthwhile to understand the reasons that lead a company to carry out a diversification operation:

[1] RAMANUJAM V., VARADARAJAN P., 1989. *Research on corporate diversification: a synthesis, on Strategic Management Journal, Strategic Management Society*

- GROWTH: Larger companies have many advantages which allow them to have easier access to capital and thus to have greater market power, but also to enjoy a growth in knowledge of technological, entrepreneurial, administrative and operational know-how.

- PROFIT: the greater the correlation between the businesses in which the company is active, the greater the possibility of converting strategic correspondence into a competitive advantage that can also be translated into economic terms. In fact, the combination of interrelated value chain activities allows to achieve economies of scope, which are cost reductions related to the business activity in multiple sectors and result from greater efficiency in the management of the value chain.

- DIVERSIFICATION OF RISK: by diversifying investments, a company is able to offset the losses recorded in one business with the revenues obtained in the others. In fact, it is known that unrelated (or negatively related) activities reduce the variability of profits.

However, in addition to the high benefits that such an operation has, it is also necessary to take into account the higher costs that this company will have to bear.

The internationalization strategy is the growth strategy through which a company decides to extend its activities beyond national borders. There are many reasons why a company should implement such a strategy:

- Increasing the turnover: opening to a foreign market allows the company to increase its market base, profitability and turnover. When activity across national borders becomes important and no longer secondary, then the company will grow in terms of size and will be able to have new and greater economic resources at its disposal. In practice, it can implement economies of scale by decreasing the average cost of production.

- OPENING TO INNOVATIONS: the very fact of approaching abroad gives the company the opportunity to get in touch with experiences, ideas and even different ways of thinking from those with which it is used to working. All this can only be perceived as an advantage, able to increase the

competitiveness of the company itself and to acquire tools to cope with any changes in the market.

- Increasing COMPETITIVENESS: the company, already strong and consolidated within its market of origin, decides to pursue a competitive advantage even in foreign markets or to exploit the factor made in. In addition, having acquired new experience, skills and resources from abroad, the company will be more competitive against its opponents.

Finally, the third and final growth strategy is Integration.

Integration is the strategy through which a company increases the size or number of activities carried out along the economic production chain. The latter is defined as "the sequence of processes carried out in succession in order to transform the raw materials into a finished product". For the purposes of strategic analysis, the supply chain represents all the interdependencies between the various agents involved in the cycle of physical-technical and economic transformation of an asset, contributing to the creation of value. Therefore, taking the supply chain as an object of observation allows us to have a broader picture of the reasons that can lead companies to extend their domination over several production phases or to develop partnerships with suppliers and customers.

The phenomenon of growth is intrinsic to the economic activity of a company, identifying as essential characteristics internal growth and external growth as we will see below, but also causes the effects on the extension of production processes.

The increase of the dimensional scale can lead to:

- HORIZONTAL INTEGRATION:
  Horizontal integration is the expansion of the company's activities to products, processes and know-how similar to the existing technological-production chain.
  The horizontal strategy allows for the best possible optimisation of resources already available, but also for the appropriation of knowledge, processes, technologies and know-how already possessed by other companies in the

same sector by purchasing or incorporating competing companies carrying out the same operations.

The aim is to have significant control over the market while maintaining and preserving the acquired competitiveness and making it more difficult for competitors to enter the market, to have more market shares, to reduce production costs and to obtain other advantages such as economies of scale and scope.

An example of horizontal integration was Disney's acquisition of Pixar: Disney couldn't keep up with digital innovation, while Pixar was a leader in film technology.

- VERTICAL INTEGRATION:

  Vertical integration is an expression that, in microeconomics and strategic management, describes the choice of a company producing or assembling a certain product to integrate into its activities a greater number of "intermediate steps" necessary to obtain the finished product.

  The choice of vertical integration is nothing more than a choice of *make or buy*: to assess whether it is more convenient for the company to carry out a certain activity directly or whether it is more convenient to outsource it and then entrust its management to an external entity.

  The main advantage is to increase the added value, but also to allow the company to achieve a more consolidated and prominent position in the market given the extensive resources placed under its control.

  A good example of a company that has completely revolutionized the business model and supply chain management is Zara: the Spanish company manages every aspect of product life, from determining consumer needs to implementation, from warehouses to distribution in individual stores.

These growth strategies can be implemented by following different approaches, but below we will define the M&A operations, their diffusion and the motivations and objectives pursued through them by the acquiring and acquired companies.

1.2 External growth through mergers and acquisitions

There are two types of growth that a company can decide to follow: growth by internal line and growth by external line.

- INTERNAL growth: every company should follow a Resource-Based View approach, i.e. evaluate from within the operational effectiveness of the means and resources available to it. This strategy consists in the development of new activities, hinging on skills, competences and financial, managerial and technological resources already in the possession of the company. For example, it is possible to use more modern technologies, adopt new management techniques and increase investment in production factors. The result is an increase in production capacity that allows the company to increase its market share compared to its main competitors.
  Growth by internal lines brings with it a series of advantages and criticalities. In fact, this strategy is slower to implement and requires excess resources to be allocated to the new business but provides stability to the company allowing growth in line with the needs and characteristics of the company itself. However, today there is an increasing awareness of the impossibility for individual companies to develop on their own, to effectively master all the resources needed to compete successfully in an extremely complex environment.

- EXTERNAL growth: companies may be characterized by a lack of such resources so they can decide to expand through different ways such as strategic alliances, joint ventures and Mergers and Acquisitions (M&A) operations both nationally and across borders.
  Until a few years ago, especially in Italy, the small size of companies and the ability to adapt to the ever-changing economic scenario were the real source of competitive advantage. However, in the current context, small businesses may be too inefficient to compete in global markets. In fact, this entails the use of a large reserve of financial resources and not of which only a small percentage of companies currently have at their disposal. There is an increasing trend towards a centralised production system, driven mainly by a group of medium and large companies.

Therefore, the underlying reason for these M&A operations is certainly the search for faster ways to obtain competitive advantages, such as market shares and know-how that would require a longer time frame if developed independently.

Focusing particularly on external growth, what is meant by mergers and acquisitions?

The term *Merger* refers to an operation whereby several companies merge into a single company, resulting in the reduction of the assets of two or more companies to a single unit and the merging of the shareholders into a single organisational structure.
A merger in the strict sense of the term can be said to exist if a new company is created towards which the existing companies merge or if a *merger by acquisition occurs* when one company acquires the other. From a legal point of view, the first implies the creation of a new company legally distinct from the previous ones and with new consolidated assets; the second, on the contrary, implies that an existing company incorporates one or more companies that lose their individuality in this way, ceasing to exist.
The result of the operation is achieved through the entry of the shareholders of the participating companies into the new legal entity resulting from the operation and this is achieved through the exchange of shares.

Acquisition, on the other hand, is an extraordinary financial transaction that allows one company to take control of another. The main instrument is the purchase of the majority or all the package of shares representing the shares on the stock exchange of the company itself. When acquisitions involve very large companies, the ownership of which is dispersed among many shareholders, one can speak of acquisition even when the shares acquired do not represent the majority of the capital, but a percentage that allows control.
Mergers and acquisitions, although they have a great deal in common because they are aimed at the external growth of the company, are two very different operations.
In fact, in an acquisition transaction the companies maintain their original legal structures, while in a merger transaction a new legal entity is created which completely replaces the previous ones. In the latter case, the basic problem concerns the definition of the relative weights of the companies involved in the operation, i.e.

how to determine the value of the shareholding within the share capital of the newly formed company.

Mergers and acquisitions generate new business realities and can therefore change the structure of the markets; if they take on a certain size, they are subject to the legal control of the authorities responsible for protecting the market and competition. The objective of the competition test is to ascertain whether a concentration of undertakings substantially and sustainably reduces competition by raising prices for consumers. The European Union exercises legal control over merger transactions between companies of European Union size. In order to preserve effective competition, the European Union may prohibit their implementation or prescribe the measures necessary to prevent distorting effects on competition. In our country, M&A operations are regulated by Law no. 287 of 10 October 1997, which establishes that the control activity must be exercised by the Antitrust Authority (also known as Antitrust or AGCM).

1.2.1 Reasons, benefits and risks of acquisition transactions

In recent years, growth through acquisitions has become increasingly widespread both internationally and nationally. The underlying reason is certainly the search for faster ways to obtain competitive advantages such as market shares and know-how that would take a considerable amount of time if developed independently.

The rapidity of strengthening in a market, of offering new services and products, of acquiring and integrating distinctive skills has now become one of the key elements of the companies' strategy. Time", moreover, is one of the key drivers of an acquisition so that the real challenge becomes that of being able to live with the need for speed and the undoubted level of complexity that an extraordinary operation such as a corporate merger by its nature provides. Acquiring a company and above all integrating it into a pre-existing reality requires particular caution in order to avoid compromising the expected results and obtaining the opposite effects.

We will now focus on the rationale behind M&A transactions in order to investigate the benefits and advantages associated with them.

As far as the objectives are concerned, "the main objectives of M&A operations are the operational rationalisation and rationalisation of the competitive position, through which to proceed to the creation of greater value".[2]

The operational rationalization focuses on increasing the scale of production and increasing the scope of action of the company in order to reduce the average unit cost. In this case, it is a question of exploiting the economies of production: *economies of scale, economies of purpose, economies of experience.*

An economy of scale is defined as a decrease in the average unit cost as a function of the increase in the quantity produced by the company, given its production capacity.

From a microeconomic point of view, we speak of exploitation of the economy of scale when the following inequality is respected:

$$marginal\ cost < average\ unit\ cost$$

We speak of economies of scope when we have a reduction in the average unit cost as a result of the sharing of an asset between two businesses of the same company. M&A operations can take place between companies that offer products or services that have a technological-productive or marketing correlation and also between companies that address customers with the same needs. In the first case we speak of "concentric" operations while in the second case we speak of "conglomerate" operations. From a mathematical point of view, a special purpose economy is achieved when the total cost necessary to produce two goods X and Y is less than the sum of the total costs necessary to produce the two goods separately:

$$TC\ (X;\ Y) < TC\ (X) + TC\ (Y)$$

The economies of experience produce the decrease of the average unit cost as a consequence of the greater efficiency and specialization that is accumulated within the company. Experience, in turn, measured in relation to the accumulated production of the holding since its birth.

The rationalization of the competitive position, on the other hand, focuses on three specific objectives: *the strengthening of the market share, risk diversification and dimensional growth.*

[2] VERNA F., 2008. *"La grande onda: Fusioni e acquisizioni"*

Through a merger and acquisition, a company is able to significantly strengthen its market share, thereby consolidating its bargaining power vis-à-vis suppliers and customers. Moreover, with this type of operation, the company is able to reduce the level of competition through a reduction in the number of competitors (the latter being the subject of M&A) and through the creation of barriers to entry that do not allow new incumbents the opportunity to enter that market. Risk diversification refers to the possibility, through the merger or acquisition of another company, of rapidly diversifying one's business and therefore the products and services offered; this makes it possible to minimise the losses recorded in a single sector.

Finally, through an M&A operation a company can undergo a significant growth in size. Territorial expansion, in this case, is the result of the company's entry into new geographical areas and new competitive contexts. What generally drives a company to enter new markets is the possibility of being able to make and pursue high and potential profits. Alongside these macro-objectives, there are several other factors that can push a legal entity to carry out this type of operation: the possibility of having new resources, skills and technologies useful in order to pursue and achieve a competitive advantage; face or at least prevent the risk of possible hostile take-overs; finally, market pressure that requires the pursuit of certain values of effectiveness and efficiency that can only be achieved through an economic and strategic strengthening of the company.

In general, it can be said that an extraordinary transaction produces a benefit only if the value of the company resulting from the transaction is greater than the sum of the values of the companies involved, or if the transaction brings with it a synergistic benefit, gross of the price paid, greater than zero.[3]

According to A. In the case of the Rappaport, three levels of benefits can be identified with consequent effects on the growth of the value of the company:

- OPERATIONAL BENEFITS:
  they concern companies with related, competing or substitute products between which there are synergies. In this respect, a particular strategic analysis tool to identify these synergies can be Porter's value chain model.
  In fact, by breaking down the productive combinations of the two companies into the individual activities of the value chain, useful indications can

[3] M. SNICHELOTTO A. PEGORARO, *"Le operazioni di M&A come strumento di vantaggio competitivo"*, rivista n. 3 Febbraio 2009, Università di Verona

emerge about the possibility that a unitary strategic management involves considerable advantages. Activities with high actual or potential interrelationships are ideal candidates for an integration or coordination process, especially through the accumulation, combination and transfer of cultural and cognitive heritage between the companies involved. This consideration is all the truer when collaboration does not simply lead to the transfer of knowledge from one to the other but succeeds in generating a new knowledge that is transformed into development.

- FINANCIAL BENEFITS:
  result in a reduction in the cost of capital for the companies involved or for that resulting from two main reasons. First of all, it seems reasonable to think that the company that was financially weaker before the transaction could now be more stable in the eyes of creditors, since it has more security than before and can therefore obtain lower-rate financing because of the lower level of risk associated with it. The second reason is that the reduction in operational risk resulting from the diversification of the company's portfolio makes it possible to obtain financing at a lower rate and also to remunerate risk capital to a lesser extent.

- TAX BENEFITS:
  favour investments in terms of physical capital stock, given the possibility to exercise higher depreciation rates, due to the accounting revaluation of assets recorded in the balance sheet.

However, despite the considerable advantages, the risks associated with this type of operation are due to the difficulty of integrating several companies with a different corporate culture. In order to minimise these risks, the choice of the target firm to be purchased must be carefully assessed in both its strategic and economic aspects.

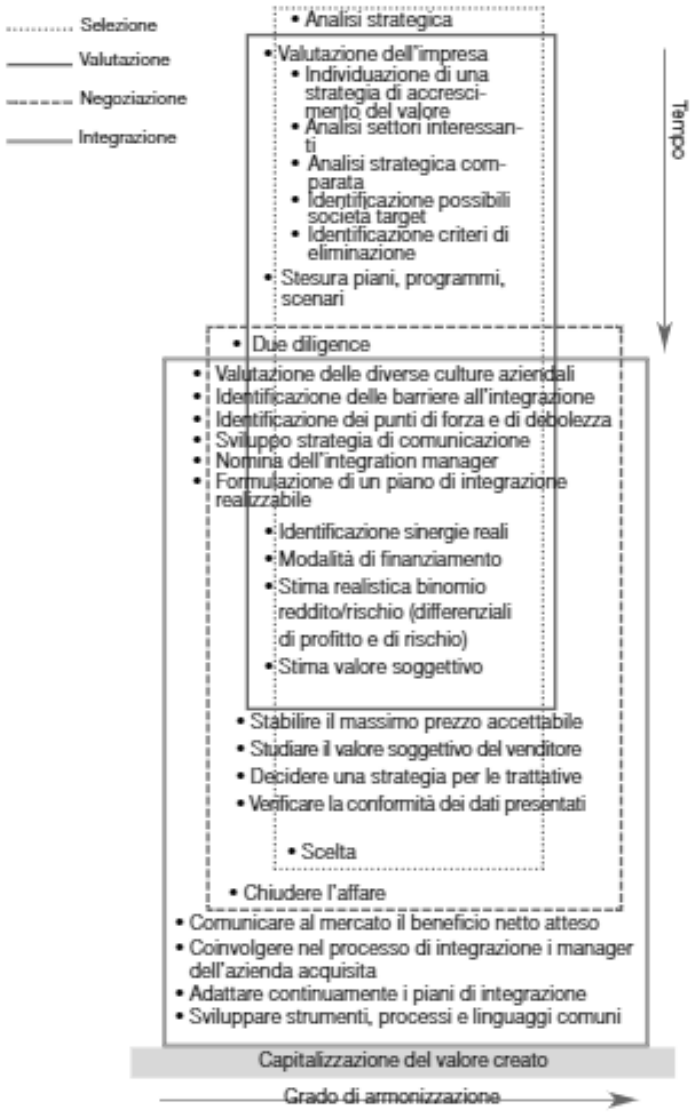


***Figure 1**: The M&A process (M. Snichelotto A. Pegoraro, "M&A operations as a competitive advantage tool"*

From a strategic point of view, acquisitions must create value and therefore must take place between companies that can share different skills acquired within their respective businesses. So, even before proceeding with the identification of the companies considered interesting, the manager must carefully analyze the sectors involved and understand if the shared resource is crucial and can create competitive advantage. After that, it will be necessary to carry out an evaluation of the companies in the sector and identify the best one, leveraging the common skills needed to develop new activities through diversification and to penetrate new markets with a high rate of return in the future.

Once this phase has been completed, the company's economic evaluation phase, called *due diligence,* is proceeded with, during which the value attributable to the target firm is estimated.

At the end of the negotiation phase, the integration phase begins at this point, with the need to define both the implementing arrangements and the harmonisation process. Account must be taken of the different managerial cultures, barriers and strengths and weaknesses of the companies involved in the operation. During this phase it is essential to create operational plans whose success necessarily implies an active collaboration with the exchange of experiences and skills acquired for a secure and profitable success of the operation.

1.2.3 Dimensions of the phenomenon

M&A operations have spread quite frequently since the end of the 19th century and initially affected the US and UK markets, and only after the war did they also affect the European market. In Italy, interest has been increasing due to the wave of operations that occurred in the 1980s, but the phenomenon has never had a considerable impact due to an excessively family-run corporate model characterized by the dominant presence of the state in the share capital of most large companies.

It’s possible to identify five different historical periods in which we can place most of the M&A operations and the walk over these waves from the past century draws a picture about the evolution of M&A activity, and about different reasons behind them. The first three waves occurred during periods of economic boom and a flourishing stock market; the end of the waves was due to economic recessions usually preceded by a stock market crash. The fourth and fifth waves were respectively due to increased enforcement of anti-trust laws and technological innovations which led to the redeployment of assets.

Geographical dispersion is also very different between the waves. The first and second waves predominantly existed in the US, while from wave three onwards the M&A activity in Europe increased significantly. The last was really a global M&A wave, where also the activity in mergers and acquisitions increased substantially in Asia. The dominant source of payment also gives an interesting picture about the changing climate of the capital market and corporate strategy. In the first wave, cash was the prevalent way of financing the deal. This was probably due to the fact that

the capital market was only just beginning to development. In the second, third and fifth wave, equity was the dominant form of financing whilst the fourth wave is characterized by cash and debt financing.

The focus of corporations also shifted in the different waves, whereas the first wave was directed to monopoly building with a significant impact on industry structure while the fifth wave was characterized by globalization with limited effect on industry structure. M&A activity in the last century is also industry specific. In fact, in the first wave the oil, mining and steel industry were subject to increased M&A activity while in fifth wave, for example, the industries involved with information technology were most active in M&A activity.

	Wave # 1	Wave # 2	Wave # 3	Wave # 4	Wave # 5
Period	1893-1904	1910s-1929	1955-1975	1984-1989	1993-2000
Predominant means of payment	Cash	Equity	Equity	Cash / Debt	Equity
M&A outcome	creation of monopolies	creation of oligopolies	Diversification / conglomerate building	'bust-up' takeovers; LBO	Globalization
Predominant nature of M&A	Friendly	Friendly	Friendly	Hostile	Friendly
Beginning of wave	Economic expansion; new laws on incorporations; technological innovation.	Economic recovery; better enforcement of antitrust laws.	Strengthening laws on anti-competitive M&A's; Economic recovery after WW 2.	Deregulation of financial sector; Economic recovery.	Strong economic growth; Deregulation and privatization.
End of wave	Stock market crash; First World War.	The Great Depression.	Market crash due to an oil crisis.	Stock market crash.	Burst of the internet bubble; 9/11 terrorist attack.

***Table 1**: Summary of the completed waves of the past century*

Globally, competition between large and small companies operating in traditional sectors, often facing new high-tech competitors, is leading to "impose" aggregations that can improve profitability through economies of scale. This trend, also favoured by high stock market prices, thus allowing low interest rates to finance acquisitions using debt leverage, is affecting M&A activity.

The protagonists are companies looking for growth opportunities and synergies to become more competitive, but the rapid change in the global competitive environment is difficult to reconcile with the slow pace of authorization procedures

by regulatory bodies and competition authorities around the world, as evidenced by operations such as Bayer-Monsanto or Luxottica-Essilor that have waited for the opinion of the various authorities involved for over a year.

However, the high availability of financial resources, the aggregative processes among market leaders, the consolidation that causes an increasingly disruptive technological innovation has involved more and more sectors, helping to liven up the market of mergers and acquisitions in 2017.

In line with the trend of global activity, 2017 was also a year for the Italian market of mergers and acquisitions in which volumes reached the historic high of 820 completed transactions, while the countervalues stopped at just under 47 billion euros, due to the effect of the extension of the finalization times of some billionaire deals announced. These data testify to the involvement of our country in the processes of globalization underway in many sectors, leading an increasing number of small and medium-sized enterprises to adopt internationalization strategies. Cross-border business remains an integral part of M&A activity and in 2017 contributed to generate 70% of the total values.

The strong appeal of Italian assets towards foreign industrial operators and private equity funds is confirmed by the positive performance of *cross-border IN* business, influenced by the improvement of macroeconomic indicators and the reduction in the perception of country risk, as well as by the excellence of our companies in many sectors of our economy. These data and the significant list of transactions announced reasonably suggest that the Italian M&A market in 2018 achieved the best result of the post-crisis period.[4]

The factors of uncertainty that characterised the global geopolitical context, in particular the first year of Trump's presidency in the United States, the start of the process of the United Kingdom's exit from the European Union, only partially influenced M&A activity at a global level. In fact, 2017 ended with **37,437** completed deals, up 7% over the previous year, while the countervalues amount to approximately USD 3,000 billion, down slightly by 9% due to the cancellation of several billion transactions.

[4] KMPG-M&A-2017 report

Europe and Asia Pacific both contribute about 22% of the global market in value, while the Americas are confirmed as the first area of contribution with 53% of the total world market.

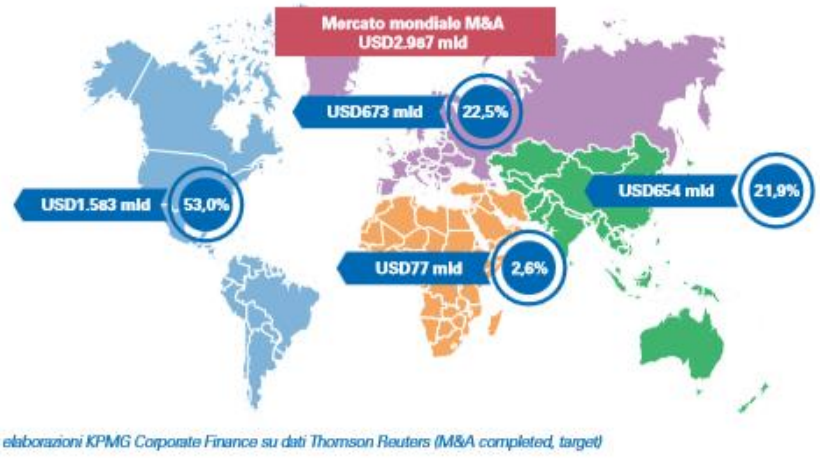
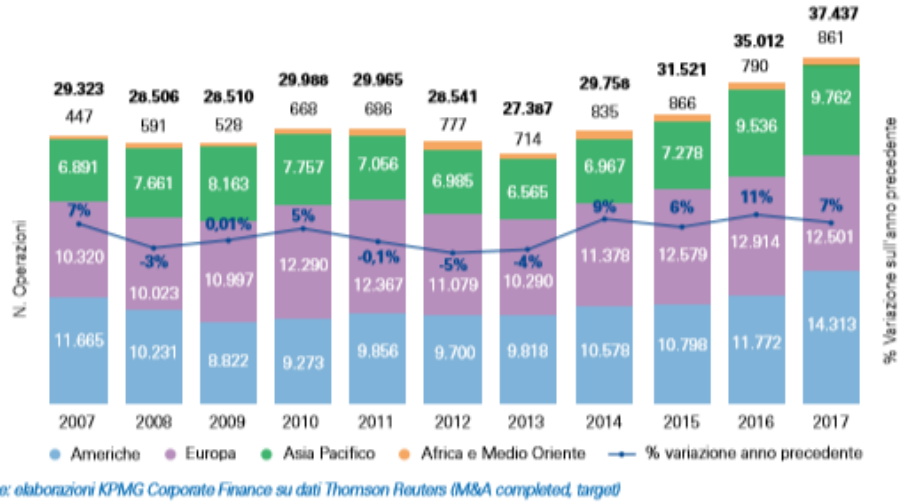


***Figure 2**: World M&A market 2017 - countervalue by geographical area of the target and percentage incidence on the overall market*

The reduction in overall values reflects the decline in both domestic transactions and cross-border activity, which fell by 12% compared to 2016 and whose contribution to the global M&A market fell to 47%, compared to 49% the previous year.

With the sole exception of Asia Pacific, all other geographical areas have been affected by a more or less significant reduction in cross-border IN and OUT transactions. Despite a reduction in terms of value compared to the previous year, Europe maintains its leadership as the area with the most significant incidence of cross-border, both in relation to the M&A activity generated by the region (over 71% of the total European market), and compared to the entire world market (18%). Looking at the performance of individual countries, it can be seen that, while in France (+5%), Spain (+10%) and Germany cross-border activity partially recovered from the losses in value suffered in 2016, the British cross-border activity decreased significantly compared to the previous year. In Africa and the Middle East, cross-border transactions were also downsized (-36%) and in the United States, cross-border transactions continued to contribute to 35% of the total M&A market.



Fonte: elaborazioni KPMG Corporate Finance su dati Thomson Reuters (M&A completed, target)

Figure 3: *World M&A market 2007-2017 - number of completed transactions by target region*

Looking at the contribution made to global M&A activity by the target companies' sectors, it emerges that the Consumer Markets sector maintains its leadership in terms of relative contribution both in terms of value and volume, thanks to USD 840 billion (-3%) achieved against 12,370 completed deals (+8%, a new record since 1999).

Energy & Utilities gained a position, thanks to growing values (USD 505 billion, +7%), despite confirming its position as the last sector in terms of volumes with 2,351 transactions (+4%).

The last step of the podium was taken by Industrial Markets, with values of USD 479 billion (+9%) and the new all-time high of 7,070 completed transactions (+8%, stable in third position).

The Telecommunication Media & Technology sector, on the other hand, slipped from second to fourth place with USD 465 billion (-39%) and 8,014 deals finalized (+8%); Support Services & Infrastructure, with USD 404 billion (+2.8%) and a new volume record (3,943 transactions) and Financial Services (USD 294 billion, -13%; 3,689 transactions, -2%) were confirmed, respectively, in the penultimate and last place in the ranking.

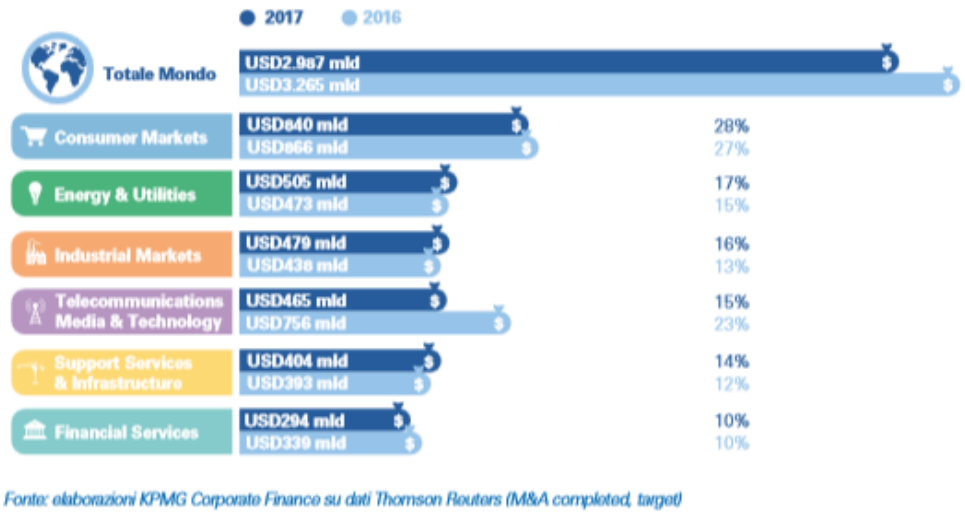


Figure 4: *World M&A market by macro-sector of activity of the acquired company 2016-2017*

1.2.4 An analysis of Literature

The intense development of acquisitions worldwide in recent years has meant that these transactions, which have always been considered extraordinary, have become quite recurrent and are considered the most important form of external growth. Entire economic sectors have been redesigned by these waves of acquisitions over time, causing profound repercussions on the economic and financial systems.

Therefore, they have attracted the attention of many scholars who, through empirical research and theoretical contributions published on the subject, have analyzed the phenomenon from different angles - strategic, organizational or financial. However, given the complexity of the subject, the literature is very fragmented as it tries to provide interpretative models for a complex, multidimensional and multi-temporal phenomenon.

In the field of schools of thought, a first division that analyses the possible causes and motivations of acquisitions is that between economic studies and studies of a corporate nature.

The first strand highlights real motivations and therefore that acquisitions have an impact on the internal structure of the industry, the profitability of the company and also its performance.[5]

A further division can be made between the Industrial Organization, which investigates the effects of such operations on the entire economic system, and the Financial Economics, which focuses on shareholders:

- The *Industrial Organization* is based on the structure-conduct-performance paradigm, according to which the structure of the market conditions the behaviour of the enterprise and, consequently, determines its performance. In this regard, Scherer (1980) offers his own theory on the reasons and effects of these operations, which highlights the difficulty in determining a clear conclusion on the subject. In fact, it is true that these operations have had the effect of increasing concentration in the markets, but it is very difficult to understand the performance achieved and thus demonstrate the benefits for the entire economic system.

- On the other hand, the *Financial Economics* has used a number of measures to evaluate acquisition success, starting with stock return studies, moving to accounting-based studies and some discussions of empirical evidences, but probably the most common is the change in the company's value at the time of the announcement of the acquisition. For the purpose of measuring the total economic impact of acquisitions, it is appropriate to use the combined change in value of both the acquiror and the target. In fact, the change in value at the acquisition announcement is given by the market's evaluation of the acquirer and target as standalone entities and the combined returns if the acquisition has positive synergies. On balance, it results that acquisitions create economic value relying on the announcement returns as empirical evidence.

In the economic literature, there are mainly three alternative ideas.

The first is that acquisitions are made for the purposes of economies of scale and market power (Williamson, 1968), therefore the problem of the trade-off between the benefits resulting from the former (lower unit costs) and the loss of allocative

[5] M. ROSSI, *"Fusioni e Acquisizioni. Teorie, metodi, esperienze"*, Cap. Primo, Ed. Franco Angeli 2009 Benevento

efficiency (lower quantities) arises. Indeed, after the acquisition, prices increase as a result of reduced competitive pressure, but losses are due to lower quantities produced due to the fact that part of the demand is no longer met (effects of monopolisation).

Therefore, when assessing the impact of the operation on social welfare, it must be taken into account that:

- There is a social gain due to cost reduction;
- There is a private gain for the company due to higher prices;
- There is a social loss, the deadweight loss, due to allocative inefficiency.

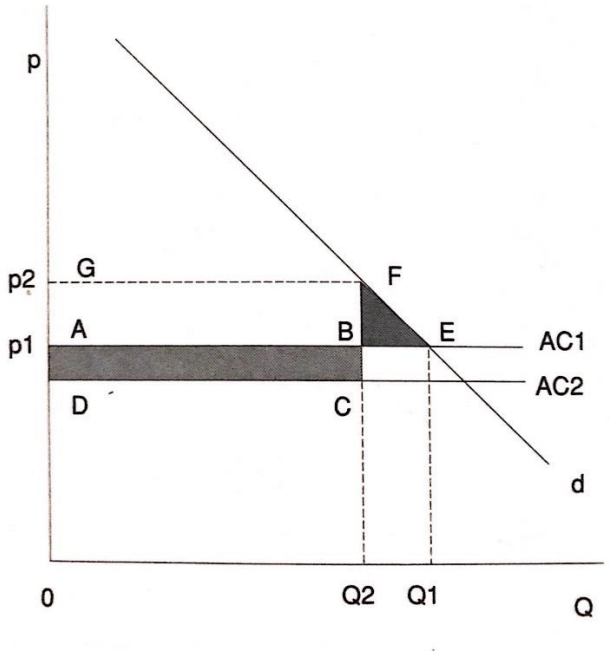


***Figure 5**: Williamson model without initial profits*

Above all, the model shows how a moderate reduction in costs compensates for price increases, thus providing a good reason for the antitrust authority not to intervene.

A reduction occurs in the operational areas of the company where there are high fixed costs or where duplications can be eliminated (administration, marketing, etc.); there may be advantages due to a reduction in transaction costs, to the fact that some assets would not otherwise be reproducible or could not be separated from the organization of the target company. Equally important may be in the R&D area, due to the riskiness of the activity itself and the possibility of exploiting the cumulative properties of the innovative-technological process.

However, the model appears static and it is clear that cost reductions do not take place in the short term: in fact, the sum of two small plants does not lead in itself to technical economies of scale but only following a restructuring or the construction of a single larger plant can there be advantages. In the long term, opposite effects may occur: on the one hand, the reduction to competition may reduce the incentives to compress costs, on the other hand, the high profits stimulate the entry of other competitors in the market.

The second idea is based on the separation between *ownership and control* and argues instead that the acquisitions are made for managerial purposes (Mueller, 1969) by the control group of the company; in fact, within the *corporate strategy*, the objective of the largest size can be achieved more easily with external growth rather than with internal growth.

These first theories work perfectly if the interest is focused on horizontal operations, i.e. between companies belonging to the same markets. However, the overwhelming weight that conglomerate operations have assumed has led to the search for different explanations and in this context the theories relating to the operation of a market for corporate control have offered a powerful tool for analysis.

This third idea starts from the assumption that companies do not necessarily push towards efficient industrial configurations and, if we consider the organizational problem, the non-observability of the managers' behaviour can lead to opportunism (*moral hazard*) producing further inefficiencies. Therefore, the phenomenon of acquisitions is linked to the concept of *market for corporate control* (Manne, 1969), that is, alternative teams of managers compete to maximize the profits of the company for fear of being removed after an acquisition. However, the question arises as to why managers should be afraid of these operations: literature shows how, if they lose their jobs, they also lose an income concerning reputation, prestige and the so-called on-the-job leisure (quiet living within the company). However, it is not clear how effective this theory is overall, as internal controls could be carried out and, above all, if there were inefficient managers, they would be replaced after take-over.

Beyond the contrast between a traditional theoretical model based on the binomial economies of scale and growth and that of market for corporate control, the most interesting aspect is to consider acquisitions as an instrument of *dynamic competition* in the field of competitive relations, a factor that will be confirmed in the empirical part of the work.

Even in company matrix studies it is possible to distinguish two different approaches: Strategic Management and Organizational Behaviour.

- In their strategic studies, Tsoukas and Knusden (2002) have tried to reconstruct the two main lines of research in this field, i.e. the *variance approach* and the *process approach* that are complementary to each other, thus allowing a broader view of the theme. The first, in fact, analyses the significant variables that influence M&A operations, while the second focuses on the various aspects of the entire process that leads to the occurrence of the phenomenon.

- Within the company studies, the behavioural school (*the Organizational Behaviour*) investigated the implications that the acquisitions have both at an individual and at an organizational level. In fact, the effectiveness of an M&A transaction also depends on the level of integration between the acquired and the acquiring company and therefore on the possible negative reactions that may occur later. The studies carried out focus on several factors, such as the turnover of the top management of the acquired company (Walsh 1988, 1989), the resolution of conflicts (Blake and Mouton 1985), the reaction of employees in terms of sabotage and absenteeism but especially the cultural clash that originates from different organizational cultures (Marks 1982, Sales and Mirvis 1985).

The analysis of the different schools of thought shows how it has been impossible to arrive at uniform theoretical models on the phenomenon due to a great variety of problems and, moreover, to the complexity of the phenomenon which is, in some ways, still partially explored and known.

1.3 Multinational Enterprises

Analysis and researches on the theme of M&A show how these operations nowadays tend more and more towards internationalization, therefore it is important to focus our attention on the concept of Multinational Enterprise (MNEs) to understand why firms choose to become MNEs, how they expand their operations and according to which principles they decide to locate their activities abroad and why.

According to economists Barba-Navaretti and Venables[6] , an MNE is a firm that owns a significant equity share (typically 50% or more) of another company operating in a foreign country. This foreign country is generally denoted as the *host-country*, as opposed to the *home-country*, which is where the MNE's headquarters are located.

In order to keep track of the activities of an MNE operating abroad, it is best to rely on data on flows of Foreign Direct Investment (FDI), which is the instrument that an MNE uses to create, acquire or expand a foreign subsidiary. More precisely, FDI "reflects the aim of obtaining a lasting interest by a resident entity of one economy (direct investor) in an enterprise that is resident in another economy (the direct investment enterprise) [7], where "lasting interest" implies the existence of a long-term relationship and of a significant influence on the management of the direct investment enterprise."

With the 1990s and the 2000s, the process of globalization sped up, and thanks to the progressive reduction of trade barriers, the level of FDI grew considerably. Developing countries went through a phase of liberalization and of stabilization, opening their economies to foreign investments, and the improvements in information and communication technologies (both in terms of cost and performance) helped MNEs in carrying out their activities in an even more efficient way than before. Besides, the increased importance of financial activities and the liquidity of markets made it easier for firms to expand their operations abroad.

[6] BARBA NAVARETTI, G., & VENABLES, A. J., 2004 *"Multinational Firms in the World Economy."* Princeton University Press

[7] DUCE, M., 2003 "*Definitions of Foreign Direct Investment (FDI): a methodological note*."

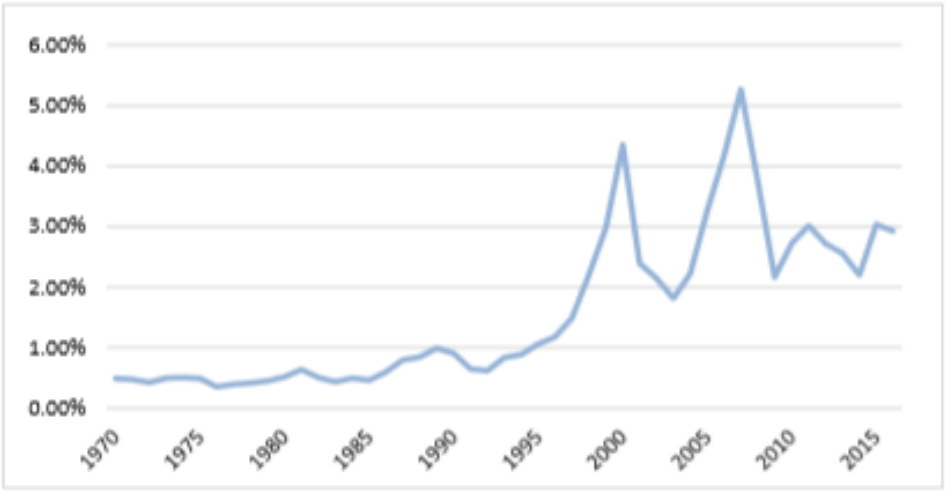


***Figure 6**: Net inflows of FDI (% GDP). Source: The World Bank, 2017*

When firms choose to follow an "international strategy", they generally go through a decision-making process that can be modelled in two phases. First of all, they need to identify an opportunity that might be grasped abroad, such as the relocation of a production stage in a country with lower factor prices, and after that they have to deal with a twofold decision: choosing the most suitable mean to seize this opportunity, where the two main alternatives are FDI and exports, and choosing the best location to do it (since it is common not only for countries, but also for regions and provinces to differ from one to another)[8].

Despite its limitations, the most influential framework for the investigation of the determinants of FDI is John Dunning's eclectic or OLI paradigm, where OLI stands for Ownership, Location and Internalization. According to Dunning, there are three potential sources of advantage underpinning a firm's decision to become multinational: firm-specific advantages originating from resources owned by the firm (Ownership); the availability of resources, networks and institutional structures in the host country (Location), and the abatement of transaction costs arising from international market interactions (Internalization)[9].

[8] FRANCO, RENTOCCHINI, & VITTUCCI MARZETTI, 2008 *"Why Do firms invest abroad? An analysis of the motives underlying foreign direct investment"*
[9] CRESCENZI, R., PIETROBELLI, C., & RABELLOTTI, R., 2014 "*Innovation drivers, value chains and the geography of multinational corporations in Europe."*

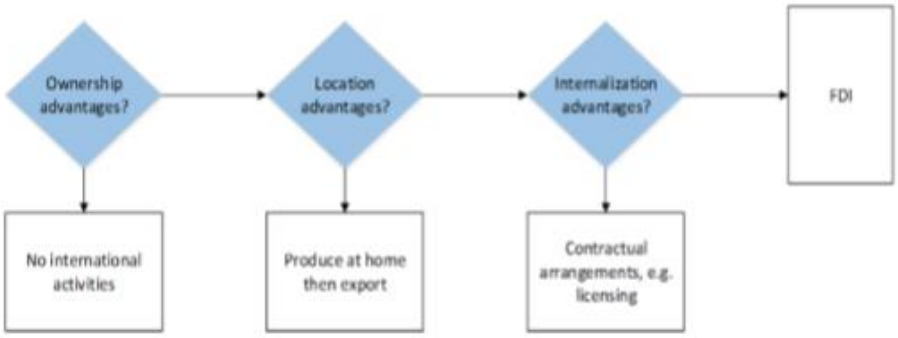


Figure 7: *The OLI paradigm and the alternative activities available to an MNE. Source: Gruning & Morschett, 2012*

Starting from this eclectic paradigm, Dunning subsequently developed a taxonomy of the reasons underlying FDIs, which is made of four categories:

1) *Market-Seeking*: Firms may go to foreign countries to find new buyers for their goods and services, both because they have saturated their home market, or because they are convinced of the superiority of their product with respect to those of the potential competitors. In some cases, those investments can be a reaction to the introduction of protectionist measures, to increased difficulties in transportation that make it difficult to maintain already existing business relationships or can result from the decision to follow suppliers or clients who have built production facilities in foreign countries. Besides, geographical proximity facilitates the process of adapting goods to the tastes and preferences of local customers and allows saving the cost of serving a market from distance. Finally, being physically present in a market might have an impact on the decision of potential rivals to compete for it.

2) *Resource-seeking*: The objective of firms in this case is to acquire resources that are not available in their home-country, or to acquire them at a lower cost. These resources can be raw materials, labour, and capital, but also managerial, organizational and technological competencies.

3) *Efficiency-seeking*: Firms may directly invest abroad to take advantage of the different factor endowments that each country possesses, or as a response to broad economic changes such as the creation of a new free trade agreement among a group of countries.

These first three groups of motivations serve the primary objective of generating economic rents through the exploitation of some firm specific assets, and for these reasons they are identified as *asset exploiting FDIs*.

4) *Strategic asset-seeking*: Firms may invest abroad to build strategic assets, such as distribution networks or new technologies, and to gain access to competences and resources considered crucial in terms of competitive positioning.

After describing the motives behind the decision to go multinational through an FDI, what remains to be addressed is the issue of MNE's location decisions and of their determinants. Depending on its resources and capabilities, and on how the strategic behaviour of its rivals shapes the competitive landscape, an MNE has in general the possibility to choose the location in which to invest between multiple countries, and between multiple regions within the same country.

Unsurprisingly, MNEs tend to locate their facilities within regions with appropriate factor endowments. In other words, their spatial choices are determined by the presence and the quality, or by the absence, of those specific characteristics (either economic/physical or institutional/cultural) that have an impact on the relative expected profits of the available alternative locations[10].

Starting from the economic/physical features, the first and most obvious factor playing a role in location decisions is *market size*. Regardless of the proxy used, whether it is per capita income or GDP, several studies have shown its positive relation with FDI: the larger the size of a market, the more attractive the location becomes for an MNE.

The characteristics of the *labour market*, encompassing labour cost, unemployment rate, and the extent of unionized labour, are of course important factors as well. Labour cost is in principle expected to be negatively correlated with FDI, but when the high wages of a region reflect the productivity and the quality of the available workforce (which is in turn another location determinant), it is not certain that an MNE will lean towards other locations (Fung, Iizaka, Lee, & Parker, 2000). The unemployment rate, which is often used as a proxy for the size of the pool of potential workers, is positively related to FDI too, as an MNE should value the possibility of

[10] FUNG, IIZAKA, LEE, & PARKER, 2000 "*Determinants of U.S. and Japanese Foreign Direct Investments in China."*

hiring without encountering difficulties. Finally, with regard to the extent of unionized labour, its impact has been shown to be negative: when union activity is scarce or non-existent, the management is able to pursue profit maximization without the restrictions imposed by union contracts, and this is clearly the situation it prefers (Coughlin, Terza, & Arromdee, 1987).

Another location trait that is always taken into consideration by an MNE choosing between alternative locations is the *quality of the physical infrastructure*, which is an "overarching construct that captures the availability and quality of infrastructure such as roads, ports, airports, telephone lines, and others" (Flores & Aguilera, 2007). At the same conditions, those regions endowed with more developed infrastructures are more attractive for foreign investors, especially for those which are unfamiliar with the regional production conditions (Fung, Iizaka, Lee, & Parker, 2000).

As for institutional/cultural features, there is consensus over the *importance of governance* in the form of laws, regulations, and public institutions (Globerman, Shapiro, & Tang, 2006), as a factor influencing the location choice of an MNE. As shown by the examples of political risk, which when high is proven to be a significant deterrent to FDI (Henisz & Delios, 2001), and of tax policies, with governments resorting to tax credits, deductions, and exemptions as a mean to attract foreign investments, the governance as a whole is strongly responsible for the creation of those favourable conditions that make a prospective location interesting in the eyes of an MNE.

Finally, the last feature to be accounted for is the *cultural distance* between the home-country and the prospective locations. Given the difficulties which MNEs encounter when operating in an environment with different norms and habits, it usually tends to prefer culturally proximate countries and regions as targets for its investments (Flores & Aguilera, 2007).

ENDOWMENT		**FDI CORRELATION**
Market Size		+
Labour market characteristics	Labour cost	+/-
	Unemployment rate	+
	Unionized labour	-
Physical infrastructure		+
Governance	Political risk	-
	Tax policy	+/-
Cultural distance		-

***Table 2**: Location factor endowments and their correlation with FDI*

1.4 Geographical role in M&A: cross-border

In a constantly evolving context, the emergence of new countries on the international chessboard, the more active role of private equity and institutional investors, the need for high protective barriers and the need to increase the cognitive capital for the acquisition of the best competitive position have led companies to increasingly carry out cross-border mergers and acquisitions.

Cross-border M&A are transactions in which assets of companies belonging to different countries are combined to create a new legal entity. They constitute direct foreign investment because they presuppose the investor's intention to acquire a significant level of influence over the management of the company and, therefore, differ from portfolio investments, which are simply financial participations of entities not involved in the management of the company.

From an efficiency perspective, *cross-border* mergers and acquisitions are guided by the logic of reducing transaction costs: M&A choices can only be based on the evaluation of overall costs and market imperfections, which result in situations of disadvantage for the company that maintains relations with other companies and which can push towards choices of internalisation through M&A (Williamson, 1975). It is necessary, however, to consider not only economy as the only variable of choice, but also factors relating to the market in which we intend to operate; companies that invest abroad, in fact, have to face higher costs than local companies, both for the difficulties of operating in socio-economic contexts of which we have less knowledge, and for the presence of barriers to entry posed by governments in terms of protectionist measures or deriving from the tastes and preferences of local consumers (Hymer, 1976).

Integrating the theoretical approach based on the inefficiency induced by market imperfections, economists Buckley and Casson (1976) focus on two factors: the specific *firm* and *location factors*; the first refer to the organizational structure of the company, the human and managerial heritage, the intensity of the factors of production, the degree of technology and the possibility of achieving economies of scale, while the second refer to the political, economic and fiscal situation and the geographical and cultural distance between countries that are involved in the process of internationalization. A company is therefore encouraged to make an investment abroad if the sum of the costs of the two factors mentioned above is less than the

additional costs that market imperfections place on the price of intermediate product transactions.

According to the resource-based approach, companies wishing to gain a competitive advantage must identify the sources of valuable resources, acquire these resources and combine them in a unique and inimitable way so as to generate a value greater than the cost incurred to take possession of them and protect them from imitation: valuable resources are the elements on which the competitive advantage of companies is based (Barney, 1991; Castanias and Helfat, 1991; Ireland, 2002) and, to maintain this advantage over time, the resources possessed must be continuously combined and developed. M&A operations, therefore, by increasing power and control over these resources so as to reduce their dependence, allow access to critical resources and are used to reduce competitive uncertainty (Thorelli, 1986; Pfeffer and Salancik, 1978). The global character of the market has increased the level of competition, forcing companies to seek in the acquisition processes of foreign companies the way to implement a lasting competitive advantage on an international scale. Cross-border cooperation thus provides the opportunity to internalise resources from different parts of the world that would otherwise be difficult to find and to create new synergies that would otherwise be impossible to achieve, as well as the rapid procurement of knowledge and skills and the control of key strategic factors.

Finally, cross-border acquisitions can be a way to enter a new business or develop a new sector. The combination of companies from different sectors can in fact contribute to the emergence or development of new products or services that help to define the characteristics of a new sector. Integration can come from specific opportunities for value creation or from latent needs of customers, with the aim of achieving synergies arising from the complementarity of products or services offered. The success of such operations depends on the entrepreneurial ability of the person who leads the operation, as it is necessary to identify in the best possible way the driver who should guide the choice of an M&A operation and its implementation process.

After analysing the main reasons behind these types of operations, it is advisable to focus on the potential *effects that* they may have on the target and acquiror firm after the acquisition process and to identify the main performance indicators.

The impact of foreign ownership on performance has been one of the most attractive themes for the international business and finance literatures for several decades, even

if findings remain inconclusive given the great complexity characterizing the phenomenon. For this reason, the results may be in opposition to each other.

On one hand, several studies on cross-border takeover deals have found a positive impact of foreign ownership on performance higher than the domestic ones, mainly due to superior-knowledge based assets transferable to the host-market by the foreign acquirer. To evaluate the impact on the performance, the main indicators considered in terms of profitability are profit and productive efficiency but also sales growth and market power.

More recent papers show that technological expertise and specialized production processes, superior management and marketing capabilities are only some of the key advantages that allow the firm to have a *higher overall productivity* (Harris & Robinson, 2003) and greater firm resistance to domestic demand contractions (Varum, Rocha, & Valente DA Silva, 2014). In fact, they observed a relative increase in the total factor productivity (TFP) of merging firms and these results seem to be supported by lots of empirical works: for example, Piscitello e Rabbiosi (2003) found that foreign acquisitions improved the productivity of Italian target companies.

However, the performance of M&A is also mitigated in terms of *profit*: one of the first studies goes back to Ravenscraft and Scherer (1987) that observed US firms' profit declining after the acquisition. These results have been disputed more recently and empirical evidence arrives to different conclusions depending on the country and on the industry sectors.

Moreover, given that they are assumed to be better monitored and controlled, foreign firms are expected to present an overall more robust financial performance.

Since debt ratios have long been identified as predictors of failure (when increased) [11], the role of the foreign ownership in reducing these ratios minimizes the risk of failure and thus enhances the chances for a positive post-acquisition performance and survival. In particular, the focus is on two firm-level debt ratios: *gearing* (ratio of long-term and short-term debts over the total shareholders' equity) and *short-term leverage* (ratio of short-term debt over total assets).

Why is the role of debt so important in order to improve the performance of the firm?

The optimal capital structure is the result of the trade-off between benefits and costs associated with debt (Modigliani & Miller, 1958). If, from one side, debt financing

[11] BEAVER, 1966; GRAHAM & ROGERS, 2002; LELAND, 1998

can lead to significant tax savings with positive effects on firm performance, on the other side high debt also increases the risk of financial distress and raises the direct and indirect costs associated with bankruptcy. High leverage requires liquidation to pay interest expenses and may limit the capacity of a firm to engage in valuable investment opportunities, so inducing it to invest in sub-optimal and riskier projects with the expectation of higher potential profits.

Therefore, it's easy to understand that an increase in the leverage impacts the firm's risk profile and its market rating and, furthermore, arises the default's probability with the consequence of downgrade. As a result, the probability of bankruptcy among highly leveraged firms is doubled with respect to less leveraged firms (Opler & Titman, 1994).

It is, hence, essential to consider also the effects of a cross-border acquisition on the level of the target firm's debt. According to the existing literature, foreign ownership, placing a particular emphasis on managerial control and shareholder protection (Heugens et al., 2009), is expected to be associated with lower levels of debt. In fact, in countries with weaker creditor rights or shallow capital market, parent companies tend to reduce the external debt levels of their subsidiaries even up to three quarters, replacing them with internal funds. Moreover, if the target firm belongs to a native country characterized by a strong presence of the bank in their funding, the effect should be more pronounced and evident.

On the other hand, there are evidences suggesting that acquisitions' deals do not manage to create shareholder value but rather destroy it. Agency costs, liability of foreignness, lack of experience and information asymmetries are some factors that can try to explain the reasons behind these negative performances.

CHAPTER 2: Performance measures and empirical evidence in the post-acquisition phase

In this chapter, the analysis will focus on the management of the post-integration phase, looking at the results obtained in empirical literature (especially with reference to European enterprises).

In the last twenty years, M&A operations involving companies in the Eurozone have shown a strong growth trend. Despite growing contributions from countless studies on the subject, empirical research on M&A activity has been more limited to companies in the UK and the US, while in the European context, studies on the subject are as numerous as they are small. Among them, we'll cite "The effects of mergers: an international comparison. "by Klaus Gugler, Dennis C. Mueller, B. Burcin Yurtoglu and Christine Zulehner, "Foreign vs domestic ownership on debt reduction: A investigation of acquisition targets in Italy and Spain" by Vassiliki Bamiatzi, Georgios Efthyvoulou, Liza Jabbour and "Domestic versus cross-border acquisitions: which impact on the target firms' performance?" by Olivier Bertrand and Habib Zitouna. All these papers will be analysed and commented later in order to put in evidence the main contributes to the argument.

For the US market, studies of improved post-acquisition operational performance lead to contradictory conclusions. While some studies document a significant improvement after acquisition (Healy et al., 1992; Heron and Lie, 2002; Rahman and Limmack, 2004), others show a significant decline in the same performance (Kruse et al., 2002; Yeh and Hoshino, 2001; Clark and Ofek, 1994). There is also a wide range of studies documenting the non-significant change in operational performance mentioned above (Ghosh, 2001; Moeller and Shlingemann, 2004; Sharma and Ho,

2002). The most recent studies on the U.S. market, when using more sophisticated measurement techniques, nevertheless lead to a change in the profitability of bidders and targets that is insignificant in statistical terms (Ghosh 2001) or significantly positive (Linn and Switzer 2001). The conclusions reached by work on the Anglo-Saxon market are more contradictory: while Dickerson at al. (1997) shows a significant decline in performance, the work of Conyon et al. (2002), which uses data for the United Kingdom for the period 1987-1996, shows labour productivity in companies acquired from foreign groups even 13% higher than in other domestic companies, as well as higher wages of 3.4%.

As far as the Italian situation is concerned, we would like to underline the analysis of Piscitello and Rabbiosi (2005) for the period 1994-1997: through the use of the paired t-test, it is evident that in the medium-term foreign acquisitions allow productivity gains.

Assuming the general picture, which confirms the volatility of the results obtained from the analysis of post-acquisition operating performance, we are now going to look more closely at the main articles investigating the effects of M&A transactions.

2.1 Empirical literature

The empirical literature on the motivations and effects of acquisitions is divided into two main strands of analysis, as is the theoretical literature: the first includes contributions from exponents of *financial economics*, who based on stock market data and portfolio models evaluate positively the effects of the phenomenon in question; the second, instead, following the traditional *industrial organization* (I-O) approach and then analyzing accounting data and market structure models, comes to contradictory conclusions at times on the possible results to be achieved in terms of post-acquisition performance.

The economists of the first strand examined two main aspects related to the phenomenon:

- Evaluate the change in the value of the shares following the operation, as a proxy for the added value created. Several empirical studies (Jensen and Ruback 1983, Jarrel, Brickley and Netter 1987) show that the shareholders of the companies involved in such an operation have received a significant

increase in the value of the shares, which varies according to the paper analysed. High prices are present not only in hostile acquisitions, where a priori one might think that the probability of management inefficiency is higher and therefore the effects of take-over are positive, but also in consensual acquisitions.

- Examine changes in other financial variables in the search for the determinants of the increase in value of securities.

One of the main problems with this approach is whether the value of the shares obtained in the vicinity of the takeover bid persists in the following months or years. In this respect, empirical studies show that this does not necessarily occur and, moreover, the method by which the transaction is regulated has a different impact on the value of the shares. In fact, in the case of a cash-funded or debt-funded acquisition, there is a greater incentive to act more efficiently and therefore the value of the securities is expected to increase; in the case of an operation regulated by an exchange of shares, the result is significantly worse.

On the other hand, the work carried out by industrial economists follows a totally different approach that aims to verify the efficiency achieved in the post-acquisition phase, while obtaining different results due to the institutional contexts in which they were carried out. First of all, the analysis focused mainly on the data of the companies *before* the acquisitions: small companies are more likely to be acquired, even if this relationship is not linear, and also the acquired companies are on average less profitable. Buying companies, on the other hand, are on average larger, more profitable, with higher growth rates and a highly indebted financial structure.

Singh's studies of the United Kingdom (1971, 1975) conclude that acquisitions are not aimed at acquiring a more efficient business and also do not lead to a more profitable allocation of assets, but to a substantially neutral overall impact.

A more accurate analysis also requires taking into account the *effects* obtained from the acquisition. However, it is often the case that an acquisition transaction is followed by a merger transaction so that it is impossible to follow separately the performance of both the acquirer and the acquired. With the consolidation of the accounts, accounting discontinuities and revaluations of the assets follow, distorting

the post-merger results: with the same volumes of profits, the capital employed is greater.

In conclusion, the results appear modest in terms of performance, especially if we talk about horizontal acquisitions characterized by greater difficulties in integration than conglomerates, probably due to the fact that the latter have greater organizational capabilities as they are more divisionalized than single-product ones.

Research on the USA shows almost opposite effects to those resulting from the English empirical literature. The most significant contribution is due to Ravenscraft and Scherer (1987): with reference to profitability in the years prior to the acquisition, the target companies do not present any lower performance and with reference to the post-merger effects, it is clear that intense M&A activity has led to a deterioration in profitability. The reasons for this decline may be as follows:

- Loss of management control by managers which led to a deterioration in performance (growth rates declining in the 5 years following the acquisition), due to the difficulty of managing further activities and higher market shares;
- The acquired companies, considered "cash cows", were exploited and then left to deteriorate both in terms of product and in terms of technological innovation.

The experience of other industrial economies does not add much to what has already been described. In the best-known study, which simultaneously examines several countries, it [12]is concluded that this type of operation is followed by marginal changes in performance, in some cases improvements have been made and in others by deterioration.

[12] MUELLER, 1980

2.2 Results of literature on the effects of acquisitions around the world

The first paper considered is *"The effects of mergers: an international comparison"*, by Klaus Gugler, Dennis C. Mueller, B. Burcin Yurtoglu, Christine Zulehner that analyses the effects of mergers on profitability and sales around the world during the period from 1981 to 1998.

The choice to examine this article is dictated by the fact that it analyses acquisitions that have taken place all over the world and assesses their effects at an overall level, therefore considering both the acquiring and the target company. This approach appears slightly different from the one followed in this work, since our focus is to analyse the effects of these operations only on the target companies, but it is good to have a general overview of the overall effect they cause.

The idea is to determine whether a merger has increased profits or not, so predicting the profits that the *two merging firms* would have had in the absence of the merger and making the comparisons between the merging firms and a control group of non-merging firms.

The principal source of data is the *Global Mergers and Acquisitions* database of Thompson Financial Securities Data (TFSD) and covers the nearly 45.000 mergers completed with almost half of these taking place in the USA. However, the sample used for the analysis is much smaller, due to missing data for relevant variables from the years *t-1* to *t+5* relative to merger year *t,* and it can match 14.269 operations.

The following table presents means of distribution of sales, profits and profit to asset ratios for the acquired (target) and acquiring companies of the sample, deflating all the variables by the Consumer Price Index with base year 1995. On average the target firms are just 16% of the size of the companies which buy them and make only around a tenth of the profits. In the United States, the United Kingdom and Continental Europe the acquired firms are less profitable than their buyers, in Japan, Australia, Canada and New Zeland they are more profitable.

	Number of Obs.	Sales		Profits		Profit rate	
		Acquirer Mn $	Target Mn $	Acquirer Mn $	Target Mn $	Acquirer	Target
United States of America	1967	1997.5	318.0	102.26	9.78	0.029	0.019
United Kingdom	379	2162.1	329.7	110.53	10.89	0.066	0.039
Continental Europe	172	4644.2	729.6	169.86	24.58	0.035	0.033
Japan	16	4349.1	876.1	165.10	26.47	0.011	0.030
Australia/N.Zealand/Canada	172	1940.8	391.9	93.45	15.53	0.024	0.027
Rest of the World	47	2132.4	443.0	157.64	22.88	0.052	0.013
All mergers	2753	2198.0	355.3	108.25	11.53	0.034	0.023

Table 3: *Characteristics of acquiring and target firms*

Looking at the results obtained for the full sample of companies and considering that the size of the observations decrease as it moves away from the date of the merger because of the not availability of data (in fact, the analysis was considering a limited time span and, hence, mergers having taken place in 1994 belong to the sample but only up to year t+4), it emerges a positive difference between actual profits of the combined firms and its projected profitability in all 5 years after the mergers and is significant in every year at the 10% level. The results for sales are again the difference between the actual and projected values of the average acquirer in the sample.

The column % Positive is the fraction of the sample for which the change was positive. If on one side the majority of mergers led to significant increase in profits rather than those predicted ($17.8 million in year *t+5*), on the other side the reverse is true for sales (-$714 million).

Years after the merger	Number of observations	Difference in Mn $	Profits		Difference in Mn $	Sales	
			p-value	% Positive		*p*-value	% Positive
$t+1$	2704	5.91	0.062	57.0	−214.16	0.000	51.5
$t+2$	2274	11.11	0.009	57.2	−382.81	0.000	49.5
$t+3$	1827	10.79	0.056	54.8	−549.59	0.000	46.4
$t+4$	1517	19.68	0.007	57.8	−633.46	0.000	46.3
$t+5$	1250	17.81	0.046	57.6	−714.04	0.000	44.6

Table 4*: Effects of mergers for full sample*

Mergers can be divided into three broad categories: those that increase profits by increasing market power, those that increase profits by increasing efficiency and those that reduce profits and efficiency. The following table summarizes the results

of the study, reporting the fractions of mergers that fall into each of the four categories.

		$\Delta\Pi>0$	$\Delta\Pi<0$
		1	3
	Small	34.7	17.5
$\Delta S>0$	Large	23.4*	12.7*
	All	29.1	15.1
		2	4
	Small	20.4	27.4
$\Delta S<0$	Large	34.8*	29.1
	All	27.6	28.2

***Table 5**: Effects of mergers by firm size in year t+5*

Cell 1 reveals that 29.1% of the mergers in the sample resulted in increases in both sales and profits thus increasing efficiency. Roughly the same fraction of mergers reduced efficiency (cell 4) as increased it, even if there was no difference related to size. Small firms were just as likely to undertake a merger that reduced both profits and sales as were large firms. A slightly smaller fraction of mergers met the criteria for a market power increase (cell 3): large firms accounted for a significantly larger fraction of market power increasing mergers (34.8%) than did small companies (20.4%). Thus, some 85% of the mergers fall into the three main categories 'efficiency increasing', 'efficiency reducing' or 'market power increasing', and they are divided roughly equally across them. However, the pattern characterized by sales rise and profits fall is what one might expect of firms whose managers were size or growth maximisers.

The analysis finds that 56.7% of all mergers result in higher than projected profits, but almost the same fraction of mergers results in lower than projected sales after 5 years. Thus, using profits as the measure of success would lead one to conclude that the average merger was a success, using sales one would reach the opposite conclusion. In general, profit increases and sales decline for mergers that increase market power. More than a fourth of all mergers exhibit this pattern, and this helps to explain why mergers look more successful, when one examines post-merger profits than for post-merger sales.

It is interesting to understand also if the results post operations are the same in all the countries or if each country follows a specific pattern. In the paper, it emerges that the results by country and country group tend by and large resemble one another: differences between actual and projected profits tend to be positive but often are not

significantly different from zero and differences between actual and projected sales tend to be negative and often significantly so.

All the countries are insignificantly different from the sample mean except for Japan, in which three of the five profits comparisons are negative and sales are greater than predicted for the first time in two of the five post-merger years. However, the sample for Japan is quite small and none of the differences is statistically significant.

No significant differences between domestic and cross-border mergers have been found, even if individual mergers can have quite different consequences in terms of efficiency and market power, their effects do not appear to depend on the country origins of the merging companies.

The second paper analysed is "*Domestic versus cross-border acquisitions: which impact on the target firms' performance?"* by Olivier Bertrand and Habib Zitouna, that investigates the effects of horizontal acquisitions on the performance of target firms from a large sample of 371 operations, distinguishing domestic (202) from cross-border M&A (169) and comparing their effects.

Using data on the French manufacturing firms' behaviour in the 1990s (Period 1993-2000) from the Thompson One Banker Deals database, it considers all deals involving a percentage owned after the transaction superior or equal to 50% and focuses only on horizontal acquisitions. From a first sight, it arises that industries such as metal products, mechanical, chemical or publishing were greatly affected by industrial restructuring and also an increasing trend for both domestic and cross-border M&A.

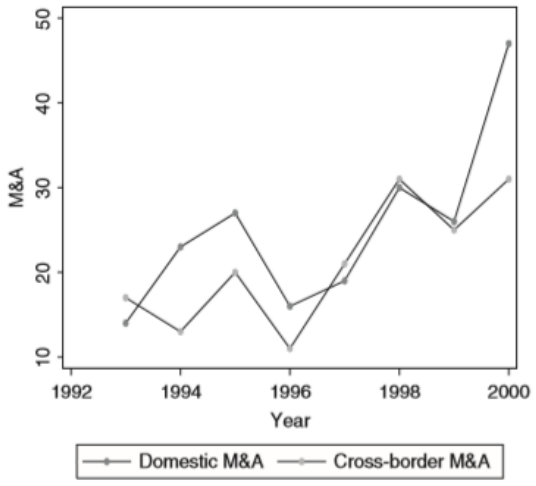


Figure 8: *Evolution of domestic and cross-border M&A. Source: Thomson Mergers*

The paper examines the changes in two complementary indicators: Total Factor Productivity (TFP) and EBITDA. The term stands for "Earnings Before Interest, Taxes, Depreciation and Amortization" and gives information on the company's operating profit before non-operating expenses, such as interests, and noncash charges, such as amortization and depreciation. On the other hand, the TFP index takes into account either returns to scale and technology effects so influencing productivity growth.

In order to evaluate the effects of these operations on the outcome, the Difference-in-difference (DID) approach has been implemented: the idea is that comparing the outcome of the target firm before and after has no sense, because these changes could be due to modifications of the economic situation. Therefore, the method compares the performance of the target firms belonging to the sample with the performance of the firms which have not been acquired belonging to a control group. The main assumption is that the firms of both groups would have been identical in the absence of take-overs:

$$E\left(Y_{it}^{0}/\mathrm{AF}=1,t=1\right)-E\left(Y_{it}^{0}/\mathrm{AF}=1,t=0\right)$$
$$=E\left(Y_{it}^{0}/\mathrm{AF}=0,t=1\right)-E\left(Y_{it}^{0}/\mathrm{AF}=0,t=0\right)$$

Another assumption is that the control group has no marked differences in characteristics compared to the target firms' group, even in the pre-acquisitions period. For this purpose, each target firm is associated with a control firm having similar features and, given them, the same probability to be acquired.

$$\Pr(\mathrm{AF}_{it}=1)=F(X_{it})$$

It is pointed out that a poorly performance firm seems to be more likely to be acquired, because the investor may act as managerial disciplining so implementing more efficient and organizational technological practices, generating high efficiency gains. However, according to Ravenscraft and Scherer (1989) theory, it can happen that investors want to acquire a high-performance target firms to benefit from their technological and managerial knowledge.

The results show that horizontal M&A activities don't increase the profit of French target firms on the short and long run, but they exert a significant and positive impact on their TFP. It confirms that buyers tend to take possession of inefficient companies to improve their efficiency and this is probably due to the fact that companies

redistribute efficiency gains at the upstream and/or downstream production stage. Moreover, the effect of domestic and cross-border significantly differ in terms of productive efficiency: in fact, cross-border M&A efficiency gains are higher but only for extra-EU operations; the achievement of European economic integration explains the similarity between European and domestic acquisitions. In conclusion, the foreign acquisitions of target firms are followed by an improvement in productivity.

	Profit		TFP	
After	6.148e+03***	(3.208e+03)	−7.121e−03	(4.602e−02)
AF Dom	−1.920e+03	(1.536e+03)	−0.161*	(6.065e−02)
AF trs E	−8.421e+03*	(2.519e+03)	−0.333*	(7.747e−02)
AF trs NE	−2.117e+04*	(8.058e+03)	−0.555*	(9.667e−02)
AF dom ∗ After	−1.404e+03	(4.185e+03)	0.164**	(6.955e−02)
AF trs E ∗ After	−6.384e+03	(5.537e+03)	0.252*	(8.849e−02)
AF Trs NE ∗ After	3.071e+04	(2.044e+04)	0.553*	(0.107)
Size	7.576e−02*	(1.076e−02)	3.563e−08*	(1.204e−08)
Marketshare	−8.413e+04	(1.103e+05)	−6.101*	(0.536)
HH	−5.811	(5.174)	1.081e−05	(7.788e−05)
Constant	5.029e+04	(4.053e+04)	−1.544a	(0.123)
Observations	6897		6380	
R-squared	0.63		0.46	

Notes: Sector and year fixed effects are included.
Robust SEs in parentheses.
*, ** and *** significant at 1, 5 and 10% levels, respectively.

Table 6: *Effects of intra-UE and extra-UE corss-border M&A*

Looking at the profit, they don't significantly increase even in the long run, so it seems reasonable to understand that, under competitive pressure, firms redistribute their efficiency gains at the upstream or downstream stage, for example increasing the input prices or decreasing the final good prices. So, there is no evidence of increasing market power, since profits do not vary.

How can it be explained this phenomenon?

1) The reductions in competition is weaker for cross-border operations;
2) Wealth can be transferred from the target to the parent firm in order to minimize their global tax burden, for example moving profits from one high-tax to a low-tax country.

While the previous papers are rather restricted to the implications of the foreign ownership on profitability, the paper that we're going to discuss deals with the changes in the debt ratios of the target company after a takeover deal. The idea is that debt ratios should be always monitored, because they are predictors of failure when increased and they decrease the chances of survival. Empirical evidences show

a strong and positive relationship between the levels of debt and the probability of exit.

With their paper "*Foreign vs domestic ownership on debt reduction: an investigation of acquisition targets in Italy and Spain*", Vassiliki Bamiatzi, Georgios Efthyvoulou and Liza Jabbour have contributed to the international business literature in three distinct ways:

- They show the changes associated with foreign ownership on debt levels of acquired firms after the takeover deal and it is one of the few papers that takes into account debt and not performance in terms of profits or sales. In fact, early studies in finance have suggested that foreign ownership can lead to lower financial risk and as such higher performance[13], but they offer little insights on the implications of foreign ownership on debt.

- They analyse the impact of the operation on the target firm performance, even if most of the previous studies were investigating the effects on the acquirer.

- Finally, they compare domestic and cross-border acquisitions so allowing to isolate the effect of foreign ownership. Specifically, domestic firms in Italy and Spain are characterized by an overreliance on bank credit and a restricted financing availability, because firms are a much larger share of small and medium-sized enterprises (SMEs) and their features don't allow them to self-finance. This implies they are more sensitive to macro-economic shocks and changes in bank credit. This can be confirmed with data reported by European Central Bank in 2012, which show how, as a reaction to changing conditions in bank credit after the crisis, most firms started to decrease the level of leverage except for Italian and Spanish SMEs.

In line with previous literature, foreign ownership is expected to be associated with lower levels of debt ratios, because the new owners want to take over the managerial control and reduce at least the external influences on their affiliates' capital structure. Moreover, considering the ideal setting of Spain and Italy for this kind of analysis,

[13] MICHEL & SHAKED, 1986, report that domestic corporations are less capitalized and have higher systematic and total risks than multinationals.

the results should be more evident and clearer so inducing a significant reduction in gearing ratios after the acquisition compared to domestic investors.

The analysis is based on financial accounting data extracted from the Amadeus data set for firms in Italy and Spain for the period between 2002 and 2010, limiting the attention to private firms operating in manufacturing and services industries; on the other hand, information about the operations of acquisitions come from the Zephyr database and then the two dataset have been matched.

In order to better evaluate the effects of the acquisition in a given time period, the matching procedure has been implemented, as in the previous paper analysed, in order to identify a non-acquired match with similar observable characteristics for each acquired firm and to assure the two firms would have performed similarly under the same circumstances.

The following table lists the top ten home countries of foreign acquirers, separately for Italy and Spain: most acquirers originate from other European countries, but outside Europe firms from USA hold a significant share of the foreign acquisitions (18% in the case of Italy and 13% in the case of Spain). Moreover, it results that most of them come from developed economies.

Country	Italy		Spain		
	Number of Acquisitions	% of Total	Country	Number of Acquisitions	% of Total
United States	36	18.18	France	38	15.83
Germany	25	12.63	United Kingdom	36	15.00
France	22	11.11	United States	31	12.92
United Kingdom	19	9.60	Germany	19	7.92
Spain	11	5.56	Italy	19	7.92
Switzerland	9	4.55	Portugal	15	6.25
Belgium	8	4.04	Belgium	11	4.58
Sweden	8	4.04	Sweden	10	4.17
India	6	3.03	Netherlands	7	2.92
Netherlands	6	3.03	Japan	5	2.08

Table 7: *Top ten countries of foreign acquirers*

About the characteristics of the firms before the acquisition, it results that, on average, target firms are more productive, larger and older than not-acquired domestic firms and, moreover, they are less capital intensive and have a lower gearing ratio but a higher short-term leverage ratio.

As a first point, also other studies have showed that foreign investors, in their choice of the target, tend to prefer firms performing well, instead domestic investors do not care so much about this aspect because they rely on the knowledge of the local market, customers and network. On the other hand, the link between the size and the age of the target and the probability of being acquired is not so clear. In fact, large,

old and solid firms with experience and assets to offer appear to be more reliable in the hypothesis of investment (Healy, Palepu, & Ruback, 1992; Barbosa & Louri, 2005), but also younger firms can offer higher growth opportunities for their acquirers. Finally, firms acquired by foreign investors are characterized by higher short-term debt ratios before the acquisition rather than those acquired by the domestic ones.

An additional analysis of the same variables included in their model of regression has been conducted for the acquiring companies, that result to be very robust and in a much better financial condition than the targets prior to the acquisition.

The results of the analysis show that the impact of foreign acquisitions on debt ratios is positive: the year of the operation is characterized by a relatively small improvement due to increasing restructuring costs, but then it leads to a statistically significant and steady reduction in the long-term and short-term debt ratios.

Panel (a): Foreign acquisition/Gearing

Year	Italy			Spain		
	ATT		N	ATT		N
0	−0.683***	(0.170)	137	−0.516*	(0.270)	155
1	−0.980***	(0.226)	123	−0.767**	(0.308)	135
2	−1.121***	(0.246)	110	−1.644***	(0.341)	110
3	−0.855***	(0.240)	84	−1.525***	(0.425)	76

Panel (b): Domestic acquisition/Gearing

Year	Italy			Spain		
	ATT		N	ATT		N
0	−0.552***	(0.120)	208	0.284*	(0.171)	323
1	−0.274**	(0.113)	183	0.224	(0.190)	281
2	−0.268**	(0.106)	151	−0.142	(0.247)	208
3	−0.393**	(0.198)	112	−0.348	(0.329)	136

Panel (c): Foreign acquisition/LeverageST

Year	Italy			Spain		
	ATT		N	ATT		N
0	−0.904**	(0.398)	147	−0.269	(0.309)	168
1	−1.743***	(0.485)	123	−0.940***	(0.303)	139
2	−2.199***	(0.546)	99	−1.857***	(0.430)	97
3	−1.814**	(0.747)	75	−1.720***	(0.574)	62

Panel (d): Domestic acquisition/LeverageST

Year	Italy			Spain		
	ATT		N	ATT		N
0	−0.467	(0.345)	219	0.939***	(0.199)	391
1	−0.423	(0.339)	177	1.192***	(0.269)	300
2	−0.418	(0.442)	134	0.676**	(0.335)	197
3	−0.266	(0.484)	94	−0.611	(0.406)	135

Note: five-nearest neighbor matching. ATT denotes average treatment effect on the treated. N denotes the number of matched targets. Bootstrap standard errors in parenthesis. ***,**,* Statistically significant at the 1%, 5% and 10% confidence level, respectively.

Table 8*: The impact of acquisitions on acquired firms' debt ratios*

2.3 The Italian Case

The phenomenon of acquisitions in Italy has never been the subject of analysis by scholars, especially because external growth was not a strategy undertaken by Italian companies. Therefore, there is no accurate and systematic documentation as in other countries and this leaves a heavy void in the literature, thus making it even more difficult to make an overall assessment of the phenomenon.

At a theoretical level, the set of theories analyzed above seems unsuitable for Italy: in fact, the separation between ownership and control in Italian companies is minimal so it is difficult to think that acquisitions are driven by managerial purposes. The most plausible reasons are those of a real nature, namely that this type of operation is aimed at reducing costs and increasing market power.

Among the most interesting results, there is the fact that the majority of acquisitions are made between companies belonging to the same market and therefore of a "horizontal" nature, probably in order to try to impose dominance in a certain market.

One of the most important contributions to empirical literature on the effects of acquisitions in Italy is due to Guelpa (1992). Using a sample of 152 acquiring companies and 117 acquired in the period 1983-87, it finds that, before the acquisition, the purchasers are rapidly growing companies with a slightly better income profile than the control sample, while the acquired companies are also growing companies and have worse income, productivity and financial structure performance than the control sample.

The only ex post effects concern the acquisitions, for which there is an improvement in overall profitability (ROE), also due to the decrease in financial charges on turnover, in turn probably due to the fact that many of the target companies pass, as a result of the acquisition, from independent companies to companies belonging to a group, resulting in the centralisation of the financial function. Guelpa interprets these results as a verification of managerial theories based on growth.

The research conducted by the scholars of the Bank of Italy has analyzed the more general issue of reallocation of property in Italy, also investigating other aspects related to the phenomenon of mergers and acquisitions, such as the role of financial intermediaries, the pyramid structure of Italian companies, etc. To this end, two surveys were used: the Invind survey, conducted annually by the Bank of Italy on a thousand companies with more than 50 employees, supplementing or not such data

with balance sheet data from the Central Reporting Office, and the Esetra survey, conducted on 300 companies with between 20 and 500 employees and used to investigate certain aspects through detailed questionnaires.

Bianco & Signorini (1996) summarise the main research results and analyse the changes in ownership of 73 companies acquired in the second half of the 1980s: these companies show significantly lower turnover per employee and growth in employment than the control sample before the acquisition; unlike Guelpa, no effect seems to emerge as a result of the change in ownership. Moreover, on the basis of the questionnaires, the authors show that the reallocation of property is linked to phenomena of aging of the owner and liquidity crisis; in the latter case, creditor banks often play a driving role in the change of ownership.

Bianco & Casavola (1999) analyse only the characteristics prior to the acquisition of a group of companies acquired during the 1990s: these companies have lower profitability, higher leverage, lower labour productivity and lower capacity utilisation; however, only the last variable is highly significant, while profitability is only marginally significant. No analysis is carried out on the effects of acquisitions. The scarce previous literature thus seems to agree on the low profitability of the acquired companies, while discordant evidence appears with regard to the effects of the acquisitions.

Luigi Benfratello (2001), after analysing a sample of 224 manufacturing companies in the period 1989-97, shows how the target companies have a typical profile of unprofitable companies, with a slowdown in growth and burdened by debt, especially in the years of change of ownership. This would lead one to think that this deterioration in performance persuades the seller to sell the business and the buyer to buy it. However, the effects of the acquisitions are on the whole negative: there is no sign of improvement in profitability and financial charges increase thus worsening their financial situation.

Finally, the analysis conducted by Piscitello and Rabbiosi (2005) for the period 1994-1997 shows that in the medium-term foreign acquisitions allow productivity gains.

CHAPTER 3: Data description and econometric methodology

3.1 Data sources

The purpose of this analysis is to evaluate the impact on the performance of Italian manufacturing companies when they are purchased by foreign companies.

The data used in this paper are of two types: data concerning the acquisition operations of Italian companies and accounting data concerning the acquired companies and other companies acting as control samples.

The first step was to identify the time interval within which to analyse the M&A operations carried out in Italy and it was decided to consider the period 2008-2011. As regards the acquisition operations, the information was retrieved from the Zephyr dataset, which contained 403 completed operations broken down by Deal type in that period:

DEAL TYPE	NUMBER OF OPERATIONS
Acquisitions	136
Capital Increase	6
Institutional Buy-out	14
Joint Venture 100%	14
Management Buy-out	1
Minority Stake	232

Table9: *Breakdown of operations by Deal Type*

Wanting to analyse only transactions related to *majority acquisitions*, i.e. the shareholder holds a sufficient number of shares (greater than or equal to 50%) to allow him to carry out alone or with other shareholders the control of the economic and social management of a company, the sample was further reduced from 136 to 120 transactions and also excluded all transactions in which the companies had Target BvD ID number zero, since it would not have been possible to obtain the balance sheet data preparatory to the analysis, thus moving to a sample of 94 transactions.

In order to evaluate the effects of the acquisitions, acquired firms must have data on all the variables of interest in the period before and after the change of ownership, year "t", so we have based our analysis selecting all the target firms in Italy for which financial accounting data (unconsolidated), extracted from the Aida dataset, were available for the period between (t-3) to (t+3). Then, data from Zephyr database have been matched to Aida data using as primary key the identifier of acquired firms, that is the Target BvD ID number. This matching process allows us to identify Italian firms that were acquired during the period of study, but it has been necessary to remove all the transactions for which data were not available in Aida or were not available before/after the operation, so reducing further the sample to 57 observations.

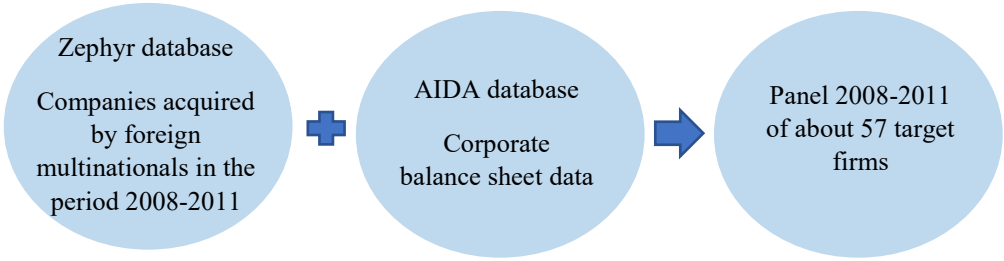


***Figure 9**: The main databases used in the construction of the analyzed sample*

The final figures include information on 57 Italian companies acquired by foreign groups during the period under examination and, moreover, the availability of a very large dataset of companies that have not been the subject of foreign direct investment favours the construction of a consistent control sample. On the other hand, the large number of enterprises remaining domestic could lead to a rather low predictive capacity of the probability of acquisition from abroad for the logit estimation, so, before proceeding with the estimation, a smaller sample is selected by means of a random extraction of 10% of the enterprises in the original sample.

Finally, taking into account the nationality of the acquiring company, the sample is equally divided between European and non-European acquisitions:

EXTRA-EU	N° of OBS	EUROPEAN	N° of OBS
USA	12	SVEZIA	6
CANADA	6	FRANCIA	5
GIAPPONE	2	GERMANIA	4
ISRAELE	1	BELGIO	2
CINA	1	TURCHIA	2
INDIA	2	PAESI BASSI	2
BRASILE	1	SPAGNA	1
ARGENTINA	1	SLOVENIA	2
COREA DEL SUD	1	REGNO UNITO	2
RUSSIA	1	AUSTRIA	1
ISOLE CAYMAN	1	SVIZZERA	1
	29		**28**

Table 10: *Nationality of the acquiring firms*

3.2 The methodology

In order to assess the effects of these operations, the study is not limited to observing the performance of Italian companies acquired from foreign groups, but complements the analysis by organising an appropriate counterfactual: the effects of incoming FDI on domestic economic activity are not relevant in themselves, but only in relation to what would have happened if the companies had not been acquired. However, the evaluation of the impact on the performance of the companies acquired poses some methodological problems. In fact, focusing exclusively on companies that have become foreign owned would make it impossible to understand whether the changes in performance observed are due exclusively to external shocks that actually affect all companies, both national and multinational. It is therefore crucial to associate the sample of companies acquired by foreign multinationals with a sample of companies that have remained domestic.

Hence, to take care of this problem, a methodology widely used in the evaluation of the effects of post M&A operations has been used (see, for example, Guelpa 1992 and Benfratello 2001), that is the *Propensity Score Matching*. In the statistical analysis of observational data, it is a matching technique that attempts to reduce the

bias due to confounding variables that could be found in an estimation of the treatment effect obtained by simply comparing outcomes among unites that received the treatment versus those that did not.

The underlying assumption for the validity of this approach is that, conditional on observable characteristics, the treated (acquired firm) and the matched non-treated (non-acquired firm) would perform similarly under the same circumstances. Our aim is to minimize the selection bias by applying propensity score matching techniques and thus estimating the causal effect of acquisition as the difference in the sample average of the outcome for treated and non-treated firms.

After having identified the sample of companies acquired, it provides for:

- Identify relevant variables on which to make the comparison, then a series of specific characteristics of the enterprise such that two enterprises may be similar to each other;
- Identify a control sample, i.e. a selection of companies that were not acquired during the period considered but that have similar characteristics to target firms.

The idea is to introduce a variable dummy Y such that:

- Y = 0, if the company has not been acquired;
- Y = 1, if the undertaking has been acquired.

The real value of Y within the population will be equal to:

$$Y = \beta_0 + \beta_1 X + u$$

where X represents a vector of regressors, or explanatory variables used as significant variables to explain a phenomenon in a regression model.

However, we need a model of Regression to be able to calculate the predicted value, that is the expected value of the variable Y given the vector X therefore the probability that the enterprise has been acquired or not being in possession of determined characteristics.

$$E [Y \mid X] = 0 * P [Y=0 \mid X] + 1 * P [Y=1 \mid X] = P [Y=1 \mid X] = \hat{Y}$$

In this case, being the variable Y dummy, a simple Linear Regression model cannot be used because, being the estimation of a probability indicator, the predicted value must be positive and above all between 0 and 1.

$$\hat{Y} > 0 \text{ AND } \hat{Y} < 1$$

Hence, it has been chosen Φ that denotes the cumulative distribution function of a standard normally distributed random variable, being monotonous and having codomain equal to [0,1]. The resulting model is not linear, rather than probit.

This variable will be given by the linear combination of a series of determinants, defined by a vector of control variables X = [x1, x2, x3, ... xn] representing performance indicators and characteristics of a given enterprise.

The variables to be compared can be grouped into *growth* variables, *financial structure* variables and *productivity and capital intensity* variables.

For the growth variables, the growth rate of turnover and net assets was used. The use of the two rates is suggested by the fact that they refer to different time horizons: current growth for turnover and prospective growth for net assets.

Three indices were calculated to measure profitability:

- an industrial profitability index (ROI), which expresses the typical operating performance of the company on the basis of all the capital invested in it;
- a Global Profitability (ROE), which measures how management has managed to manage its own resources to increase profits;
- a margin on industrial operations (ROS), which represents the rate of return on sales.

The financial structure variable used is a leverage index, calculated as the ratio between net capital and net liabilities, and therefore represents the complement to one of the traditional leverages (financial/passive debts). This is a capitalisation index and, consequently, an increase implies a reduction in the company's indebtedness.

Finally, the productivity variable used was the value added per employee, while net technical assets per employee were used to measure capital intensity.

Economic Variables	Definition	Comment
Profit before taxes (EBT)	Net income + Income taxes	Money retained internally by a company before deducting tax expenses. It is an accounting measure of a company's operating and non-operating profits.
Gross operating income	Added value - Costs of Labour	Accounting index that measures the amount of profit realized from a business's operations, after deducting operating expenses such as wages, depreciation, and cost of goods sold (COGS).
Stakeholders' equity	Contributed capital + Retained Earnings + Profit/Loss	It's the remaining amount of assets available to shareholders after all liabilities have been paid.
Net liabilities	Stakeholders' equity + Long-term debt + Short-term debt	
Value added	Sales revenue - COGS	It can be defined as the difference between a particular product's final selling price and the direct and indirect input used in making that particular product.
Net technical fixed assets	Fixed assets - Accumulated Depreciation	All tangible assets that are used durably in the company's characteristic management, i.e those assets used in technical production, distribution and administrative activities (such as buildings, buildings, plants, machinery, etc.)
Net assets	Total assets - Accumulated Depreciation and Amortization	

***Table 11**: Income statement and Balance Sheet variables*

Economic Index	Definition
Index Of Revenue Growth	((Revenue (t) - Revenue (t-1)) / Revenue (t-1)) * 100
Index Of Net Asset variation	((Net asset (t) - Net asset (t-1)) / Net asset (t-1)) * 100
ROI	(Gross Operating Income / Net Asset) * 100
ROE	(EBT / Stakeholders' equity) * 100
ROS	(Gross Operating Income / Revenue) * 100
Added value per employee	Added Value / Number of employees
Net technical fixed assets per employee	Net technical fixed assets / N° of employees
Leverage	(Stakeholders' equity / Net liabilities) * 100

***Table 12**: List of regressors used in the analysis*

After choosing the variables to be used in the analysis, the methodology involves choosing a *control sample* using the following strategy. Considering that the period evaluated for analysing acquisition operations in Italy is 2008-2011 and the time window selected on the basis of the availability of data in AIDA must be between (t-3) and (t+3), it is necessary to proceed with the identification of the companies belonging to the control sample with balance sheet data available in the period 2005 - 2014. If we consider, for example, an operation that took place in 2009, the matched company in the control sample must also have the 2006 data available in order to be compared with the target company in question.

The starting point for the identification of the control sample is to randomly extract in AIDA the data of Italian manufacturing companies with balance sheet data

available in the desired time frame. Using STATA, a modern and rich program for a very wide panorama of statistical analysis, creation of graphs and manipulation of data, the procedure provides to select for each region of belonging of the target enterprises 1 control company every 10. In this way, a unified database has been created with the same structure and the same variables as the one containing the data of the target enterprises so as to be able to associate more easily to each target enterprise the corresponding control enterprise more similar in characteristics.

The control sample has, therefore, the purpose of normalizing the indices of the acquired enterprises, in the sense of purifying them of effects due to market demand trends or variations in input and output prices.

The next step is to associate the target company with the company in the control sample, following the procedure previously defined as *Propensity Score Matching*. In other words, through this *matching* method, it is possible to construct a sample of companies that remained domestic with characteristics similar to those of foreign investments and that had a very similar ex ante probability of being acquired.

With the data available for the sample of companies resulting from the matching procedure, it is therefore possible to assess the effects of foreign acquisitions using the difference-in-difference estimator (DID). This method makes it possible to assess the difference in performance between the two groups of companies (multinational and national) and between the pre- and post-acquisition periods.

3.3 Analysis of the sample of companies acquired

Before proceeding with the identification of the control sample, it is important to describe the procedure for the preliminary analysis of the acquisition operations of the 57 Italian companies. The work was mainly divided into two phases.

In the first phase, each operation was analyzed individually with the aim of contextualizing and understanding the reasons underlying these changes in ownership both from the point of view of the acquiring company and from the point of view of the acquired company.

All the target companies have been classified according to their *Location*, represented by the Region, the *Sector*, identified by the ATECO 2007 code, the *size class*, identified by the field "Peer Group" present in the dataset of Aida (SM=small companies, ME=medium companies, LA=large companies, VL=very large

companies) and the *Country of the Buyer,* (EU for acquisitions by European companies, EXTRA-EU for acquisitions outside Europe).

For each company under review, the availability of balance sheet data in Aida was verified and the variables were then "dated" with reference to the year of acquisition: for example, if a company was acquired in 2009, the indices for 2009 are classified as "t", those for 2010 are classified as "t+1" and those for 2008 are classified as "t-1".

In the second phase, a screening of all the companies' balance sheet data was carried out with the aim of identifying any anomalies and understanding what had happened in those years, for example, it is possible that the companies acquired after the acquisition have failed or have been incorporated.

In this case, in fact, even if the income is negative, the ROE is paradoxically positive and more positive the more the net capital is small, in absolute value, compared to the income. In addition, all comments with negative added value were discarded, as this means that the company is not able to cover even the costs of raw materials and services and is therefore in a serious management crisis. The income statement figures for the financial statements relating to periods of duration other than the usual 12 months were then restored to a duration of 12 months. Finally, further adjustments were made where anomalous values were found which would have affected the truthfulness of the initial data of the analysis and therefore also of the results. For example, very high turnover change rates probably due to the incorporation of another company or, on the other hand, very high but negative turnover change rates due to the fact that the company has been merged into the purchaser and thus expropriated of all assets and thus left to go bankrupt.

The result of this "cleaning" of the data has led to a further reduction of the sample of target companies analyzed, reduced to 50. The use of an unbalanced panel is dictated by the need not to limit the analysis to companies for which the complete set of seven financial statements is available; moreover, the use of a closed sample suffers from two limitations: it does not allow an ex ante analysis to be carried out on the entire sample of companies acquired and it does not allow an assessment to be made of whether or not the survival of the companies acquired in the post-acquisition period is determined by particular ex ante characteristics. It is possible that the companies acquired subsequently exited the sample because they merged, merged or went bankrupt have particular ex ante characteristics, such as low profitability, so that an analysis conducted only on the companies that remain

operational after the acquisition risks leading to a distorted view of the ex-ante characteristics of all the companies acquired. In addition, the use of an open sample makes it possible to assess whether the exit of the enterprise from the sample in the post-acquisition phase is affected by its ex ante characteristics as well as its survival.

Panel of years available	N° Target firms
4	1
5	6
6	8
7	35

***Table 13**: Panel of years available*

Before moving on to econometric analysis, an examination of the data on companies acquired by foreign operators present in the final database used allows us to highlight some of its main attributes:

- In accordance with the classification defined by the Ministerial Decree of 18 April 2005 "Adaptation of the criteria for identifying small and medium-sized enterprises to EU regulations", the attention of foreign investors is more incisively focused on medium-large companies (measured in terms of the number of employees greater than 50) representing 70% of the sample, while the remaining 30% is made up of small companies (number of employees less than 50). Not surprisingly, there are a significant number of acquisitions of smaller companies, since, from the perspective of integration within a multinational structure, there are many opportunities to establish virtuous interactions that support the productivity of the multinational itself.

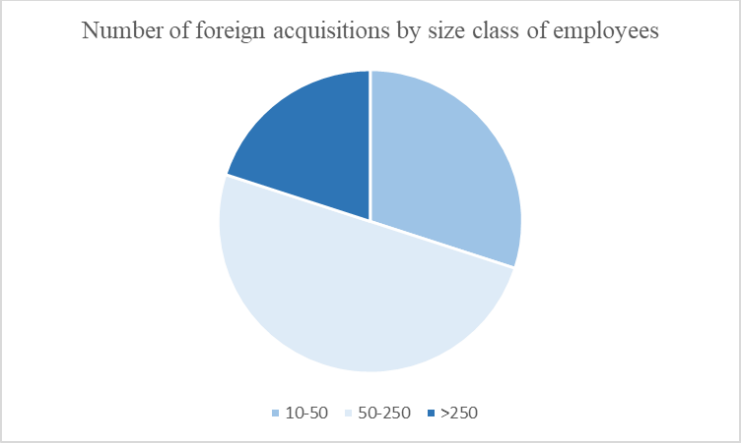


***Figure 10**: Number of foreign acquisitions by size class of employees*

- The sectoral distribution of the acquired companies confirms that the metal and chemical products sectors remain attractive to international operators. There is also a high level of interest in Italian competitiveness in traditional sectors, such as the food industry, and in the capital goods sector.

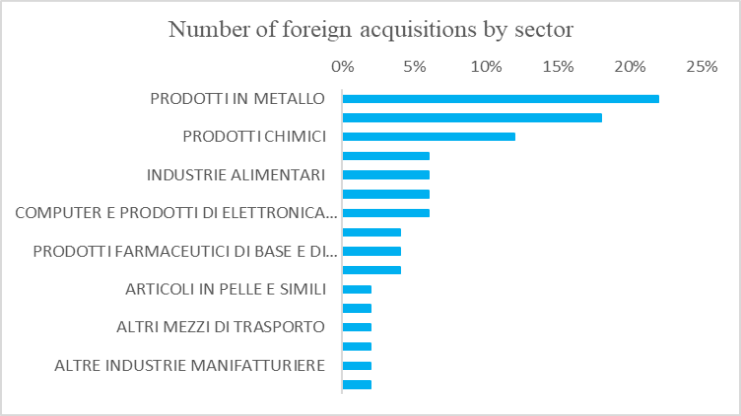


***Figure 11**: Number of foreign acquisitions by sector*

- The geographical distribution reflects the structural balances of the Italian economy. The weakest areas of the country continue to suffer from the lack of a strategic vision of their territory able to support its attractiveness. The delays in infrastructure (physical, financial and technological) and in all those key factors such as technological and innovative human capital, the conditions of security and effectiveness and efficiency, the degree of openness of the local economic system that hinder the creation of a pro-business environment are striking.

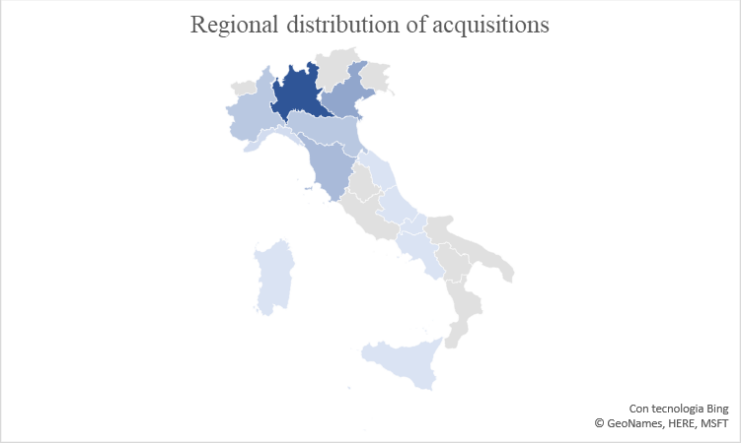


***Figure 12**: Regional distribution of acquisitions in Italy*

CHAPTER 4: Analysis of determinants and effects

4.1 The characteristics of the enterprises before the acquisition

As described in the previous section, a careful analysis of the effects of foreign shareholdings in domestic enterprises requires the construction of an appropriate control sample. This is derived from the sub-sample of companies that were not subject to foreign direct investment in the period under review through the technique of propensity score matching.

Also, for the control sample, any anomalies in the balance sheet data that could have compromised matching were analysed, therefore all companies that had negative net capital or negative value added or negative net technical assets at least in one year were discarded from the selection. Afterwards, a further refinement of the control sample was made by going to exclude all the enterprises for which:

- the change in turnover was greater than 200% or less than -60%;
- the leverage was negative;
- the ROE was higher than 200% or lower than -200%.

To this end, the first step is to estimate a probability to derive the probability for a company to become foreign owned on the basis of certain specific characteristics of the itself, represented by the variables of growth, financial structure and productivity and capital intensity that have been defined above. Control companies were extracted for each acquired company, following criteria of similarity of activity, size and performance in the year prior to the acquisition date: in fact, it was imposed that

control companies were in the same sector defined by the Ateco 2007 2-digit code and that had very similar characteristics in the year (t-1).

The purpose of this step was to estimate the value of the variable Y, having a value of 1 if the enterprise had been acquired and a value of 0 if it had not been acquired, thus obtaining for each enterprise subject to treatment (acquired) a group of enterprises belonging to the control sample with the same probability of being acquired and thus resulting in almost "twin enterprises". It is therefore important to understand which are the determinants and characteristics that these companies had before the acquisition.

Therefore, the values of the β parameters have been estimated, representing the type of correlation existing between the probability of being acquired and the characteristics of the company acquired in the previous year. If this parameter is positive, it means that the company had a good performance thus positively influencing its probability of acquisition, if negative it means exactly the opposite.

What emerges from the analysis is that the acquired companies have overall good performance in the years prior to the acquisition, confirming the fact that the large multinationals are not willing to acquire a company that is in serious economic situations or highly indebted. In fact, their main purpose is the development and growth in new global markets, thanks to the complementarity of resources and the now consolidated position of Italian manufacturing companies, especially in those sectors in which they hold a strong position as market leaders in Europe and the world. The integration of the target company will complete the buyer's strategy to enter new market segments, providing new products and features. The business will grow through new relationships and new sales, exploiting the capabilities of the target and the assembling facilities in Italy.

As regards the profitability variables relating to acquisitions made in the years 2008-2009, an analysis of the descriptive statistics shows that the profitability of the acquired companies is slightly lower than in the control sample. This characteristic is evident in the ROE values, which show a worsening trend, probably due to a loss in terms of pre-tax profit caused by an increase in costs but offset by positive values of the growth in turnover and equity: in fact, from the table below we can see how the impact of the change in turnover is positive, although not particularly significant. In terms of industrial profitability (ROI), the tests show a positive profitability corresponding to a value of the parameter β of 2,3480: this index expresses the typical operating performance of a company on the basis of all the capital invested

and is also confirmed by the fact that the technical assets per employee are higher than in the companies in the control sample and that the change in assets, even if to a negative extent, is small. ROS, on the other hand, has a negative impact despite the fact that the acquired companies have a good return on sales, showing a growth in turnover and a good productivity of the company, but also in this case the probable increase in costs has a negative impact.

On the contrary, when considering leverage, the acquired companies are different from the controlling ones because they have a good financial structure: in fact, the capitalisation index has a positive impact on the probability of acquisition.

As far as growth is concerned, the analysis of the development rates of the acquired companies shows that they have contrasting trends: a positive variation for turnover and a negative variation for assets.

Capital intensity, measured by the ratio of net technical fixed assets to the number of employees, is considered to be significantly higher than in the control sample. Finally, less clear results are obtained by analysing the added value per employee: as we will see below, there is a divergence between the acquisitions that took place in 2008-2009 and those that took place later. In the first case, the test indicates a lower productivity of the acquired companies, while in the second case, the acquired companies are more productive and efficient than those of the control sample.

acquisita	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
fatturato_ml	9.09e-09	2.80e-09	3.25	0.001	3.60e-09	1.46e-08
var_fatt_ml	.4376204	.7217632	0.61	0.544	-.9770094	1.85225
var_attivo_ml	-1.059773	.9473885	-1.12	0.263	-2.91662	.7970741
ROI_ml	2.347999	3.232288	0.73	0.468	-3.98717	8.683167
ROE_ml	-.2587558	.7354712	-0.35	0.725	-1.700253	1.182741
ROS_ml	-.4516253	3.972666	-0.11	0.909	-8.237907	7.334656
vapd_ml	-1.29e-06	2.76e-06	-0.47	0.641	-6.70e-06	4.12e-06
IMMPD_ml	3.17e-07	2.41e-06	0.13	0.896	-4.41e-06	5.04e-06
leverage_ml	.7046228	.8130177	0.87	0.386	-.8888626	2.298108

***Table14**: Indices relating to ex-ante analysis for acquisitions 2008-2009*

As regards the profitability variables relating to acquisitions made in the following years (2010-2011), it can be seen that the companies acquired have similarly lower profitability than the control sample. In this case, however, the companies show a slight decrease in turnover and a worsening of leverage, but still compensated by a good productivity of the same having added value per employee higher than the twin companies

acquisita	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
fatturato_ml	1.13e-08	2.99e-09	3.78	0.000	5.45e-09	1.72e-08
var_fatt_ml	-.8597078	.8052667	-1.07	0.286	-2.438002	.718586
var_attivo_ml	.4410577	.6122168	0.72	0.471	-.7588651	1.640981
ROI_ml	.5233549	3.407492	0.15	0.878	-6.155206	7.201916
ROE_ml	-.0872001	.5543144	-0.16	0.875	-1.173636	.9992362
ROS_ml	-.7088507	3.196187	-0.22	0.824	-6.973261	5.55556
vapd_ml	3.77e-06	3.17e-06	1.19	0.235	-2.45e-06	9.99e-06
IMMPD_ml	5.40e-07	1.80e-06	0.30	0.764	-2.98e-06	4.06e-06
leverage_ml	-.9296966	.7411599	-1.25	0.210	-2.382343	.5229501

***Table15**: Ex ante analysis indices for acquisitions 2010-2011*

The joint reading of the various indicators seems to suggest the following dynamics.

In the years before the acquisition, the companies show significant production capacity with a high added value, as a measure of the increase in value that occurs in production, and high fixed assets for employees which explains the good return on investment (ROI); the overall profitability (ROE) decreases so that it is lower than the control sample but good values of turnover together with good productivity and efficiency of the company make that both the margin of industrial management (ROS) and the margin of global profitability (ROE) do not deteriorate but remain almost constant. On the contrary, the productivity of the acquired companies does not seem to deteriorate over time.

In conclusion, the analysis of the characteristics of the targets before the acquisition shows that these companies have a typical profile of companies that are less profitable, but more productive and efficient than the control sample. The result of negative performance in terms of profitability before the acquisition confirms, and further reinforces, the results obtained from all previous works on the subject: in fact, Guelpa (1992), Bianco & Signorini (1996), Bianco & Casavola (1999) and Benfratello (2001) all find this characteristic, but another important aspect emerges from our analysis, according to which the companies acquired are larger (high turnover values) and more productive than the companies in the control sample.

This would lead to the conclusion that it is precisely these performances that persuade the seller to divest the business and the buyer to buy it. In fact, the seller sees the acquisition as an opportunity for growth and development thanks to the complementarity of technologies, resources and products that would allow him to achieve better production efficiency and high returns on investment. Given the substantial saturation of many Italian markets, becoming part of a multinational

group would encourage a profound change in marketing strategy based on an acceleration of exports but at the same time resulting in conditions of improvement of the wealth of the entire national territory.

In addition, Italian companies can strengthen their brands beyond national borders, establish new relationships with suppliers and, above all, reallocate resources from non-core business to core business in order to expand the portfolio of products offered on the market.

4.2 Assessment of post-acquisition effects

After analysing the characteristics of the companies acquired before the acquisition, in this paragraph we propose to evaluate the effects of the acquisitions, comparing the indices relating to the associated companies in the control sample with the indices relating to the target firms one and two years after the operation.

The fact that the ex-post analysis refers to only 30 companies per year (t+1) and 20 companies per year (t+2), while observing the behaviour of 50 companies in the year preceding the acquisition, deserves reflection. In fact, in our sample many companies disappear because after the acquisition they were incorporated or merged, so it was not possible to assess the effect in the long term due to a lack of data. For many companies, despite having data available 3 years after the acquisition, it was not possible to obtain an exact matching with other companies in the control sample, probably because they had very anomalous values due to mergers or acquisitions with the acquiring companies.

As can be seen from the tables below, the effects of the acquisitions are on the whole negative, with the exception of the turnover growth rate, which is higher than for the companies in the control sample.

Thus, on the one hand, we are witnessing a recovery in the activities of the acquired companies, but on the other hand, their financial situation is worsening. In fact, the capitalisation index is deteriorating in the same way as the profitability indexes: in particular ROE. In terms of value added per employee and fixed assets, even here the values are negative but the difference in value added per employee is practically zero.

```
. ttest differenza_var_fatt1==0

One-sample t test
```

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
differ~1	30	.0578643	.1069736	.5859185	-.1609213	.2766498

```
    mean = mean(differenza_var_fatt1)                             t =   0.5409
Ho: mean = 0                                     degrees of freedom =       29

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.7037         Pr(|T| > |t|) = 0.5927          Pr(T > t) = 0.2963
```

***Table16**: Change in turnover in the year (t+1) for the entire sample*

```
. ttest differenza_var_attivo1==0

One-sample t test
```

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
diffe~o1	30	-.0275609	.0317364	.1738276	-.0924692	.0373474

```
    mean = mean(differenza_var_attivo1)                           t =  -0.8684
Ho: mean = 0                                     degrees of freedom =       29

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.1961         Pr(|T| > |t|) = 0.3923          Pr(T > t) = 0.8039
```

***Table17**: Active variation in the year (t+1) for the whole sample*

```
. ttest differenza_ROI1==0

One-sample t test
```

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
diffe~I1	30	-.0268018	.0182287	.0998425	-.0640836	.01048

```
    mean = mean(differenza_ROI1)                                  t =  -1.4703
Ho: mean = 0                                     degrees of freedom =       29

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.0761         Pr(|T| > |t|) = 0.1522          Pr(T > t) = 0.9239
```

***Table18**: ROI variation in year (t+1) for the whole sample*

```
. ttest differenza_ROE1==0

One-sample t test

------------------------------------------------------------------------------
Variable |     Obs        Mean    Std. Err.   Std. Dev.   [95% Conf. Interval]
---------+--------------------------------------------------------------------
diffe~E1 |      30   -.7521132     .560628    3.070686   -1.898726    .3944998
------------------------------------------------------------------------------
    mean = mean(differenza_ROE1)                                  t =  -1.3416
Ho: mean = 0                                     degrees of freedom =       29

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.0951         Pr(|T| > |t|) = 0.1902          Pr(T > t) = 0.9049
```

***Table19**: ROE variation in year (t+1) for the whole sample*

```
. ttest differenza_ROS1==0

One-sample t test

------------------------------------------------------------------------------
Variable |     Obs        Mean    Std. Err.   Std. Dev.   [95% Conf. Interval]
---------+--------------------------------------------------------------------
diffe~S1 |      30   -.0463447    .0275434    .1508612   -.1026772    .0099878
------------------------------------------------------------------------------
    mean = mean(differenza_ROS1)                                  t =  -1.6826
Ho: mean = 0                                     degrees of freedom =       29

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.0516         Pr(|T| > |t|) = 0.1032          Pr(T > t) = 0.9484
```

***Table20**: ROS variation in the year (t+1) for the whole sample*

```
. ttest differenza_vapd1==0

One-sample t test

------------------------------------------------------------------------------
Variable |     Obs        Mean    Std. Err.   Std. Dev.   [95% Conf. Interval]
---------+--------------------------------------------------------------------
diffe~d1 |      30   -611.3034    8076.731    44238.08   -17130.07    15907.47
------------------------------------------------------------------------------
    mean = mean(differenza_vapd1)                                 t =  -0.0757
Ho: mean = 0                                     degrees of freedom =       29

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.4701         Pr(|T| > |t|) = 0.9402          Pr(T > t) = 0.5299
```

***Table21**: Change in value added per employee in the year (t+1) for the entire sample*

```
. ttest differenza_IMMPD1==0

One-sample t test
```

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
diffe~D1	30	-37473.65	24974.62	136791.6	-88552.49	13605.18

```
    mean = mean(differenza_IMMPD1)                     t =  -1.5005
Ho: mean = 0                         degrees of freedom =       29

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.0722         Pr(|T| > |t|) = 0.1443          Pr(T > t) = 0.9278
```

***Table22**: Change in net technical assets per employee in the year (t+1) for the entire sample*

```
. ttest differenza_leverage1==0

One-sample t test
```

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
diffe~e1	30	-.10805	.0800285	.4383341	-.2717267	.0556266

```
    mean = mean(differenza_leverage1)                  t =  -1.3501
Ho: mean = 0                         degrees of freedom =       29

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.0937         Pr(|T| > |t|) = 0.1874          Pr(T > t) = 0.9063
```

***Table23:** Leverage variation in the year (t+1) for the entire sample*

Obviously, it must be taken into account that, from the moment a company buys another one, numerous problems arise linked to the integration of two different financial and production structures and, furthermore, in the short term, it is to be expected that there will not be these great impactful results in terms of improved performance and profitability.

The stability of this type of operation depends on the quality of cooperation between the partners, their ability to respond to change by adapting to changes in the internal and external environment, and their willingness to renegotiate the agreement if circumstances so require. A successful operation requires close cooperation and not just an exchange of ideas, so the reasons for failure can be traced back to the following reasons:

- differences in objectives and priorities between the acquiring company and the acquired company;

- inability to cooperate effectively;
- changes that make the basic objective of the operation obsolete;
- competition between partners.

Below are the results deriving from the comparison of the indices between the companies acquired and those of the control sample after 2 years from the acquisition operation. Once again, the data confirm the above results and show a further deterioration for some indices.

```
. ttest differenza_var_fatt2==0

One-sample t test
```

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
differ~2	20	.0509032	.0562269	.2514544	-.0667811	.1685875

```
    mean = mean(differenza_var_fatt2)                         t =   0.9053
Ho: mean = 0                                 degrees of freedom =       19

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.8117         Pr(|T| > |t|) = 0.3766          Pr(T > t) = 0.1883
```

***Table24**: Change in turnover in the year (t+2) for the entire sample*

```
. ttest differenza_var_attivo2==0

One-sample t test
```

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
diffe~o2	20	-.0157912	.0486125	.2174019	-.1175384	.085956

```
    mean = mean(differenza_var_attivo2)                       t =  -0.3248
Ho: mean = 0                                 degrees of freedom =       19

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.3744         Pr(|T| > |t|) = 0.7489          Pr(T > t) = 0.6256
```

***Table25**: Active variation in the year (t+2) for the whole sample*

```
. ttest differenza_ROI2==0

One-sample t test

------------------------------------------------------------------------------
Variable |     Obs        Mean    Std. Err.   Std. Dev.   [95% Conf. Interval]
---------+--------------------------------------------------------------------
diffe~I2 |      20   -.0383455    .0429213      .19195   -.1281809    .0514898
------------------------------------------------------------------------------
    mean = mean(differenza_ROI2)                                  t =  -0.8934
Ho: mean = 0                                     degrees of freedom =       19

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.1914         Pr(|T| > |t|) = 0.3828          Pr(T > t) = 0.8086
```

Table26: *ROI difference in year (t+2) for the whole sample*

```
. ttest differenza_ROE2==0

One-sample t test

------------------------------------------------------------------------------
Variable |     Obs        Mean    Std. Err.   Std. Dev.   [95% Conf. Interval]
---------+--------------------------------------------------------------------
diffe~E2 |      20    -.827639    .5148255    2.302369   -1.905181    .2499031
------------------------------------------------------------------------------
    mean = mean(differenza_ROE2)                                  t =  -1.6076
Ho: mean = 0                                     degrees of freedom =       19

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.0622         Pr(|T| > |t|) = 0.1244          Pr(T > t) = 0.9378
```

Table27*: ROE difference in year (t+2) for the whole sample*

```
. ttest differenza_ROS2==0

One-sample t test

------------------------------------------------------------------------------
Variable |     Obs        Mean    Std. Err.   Std. Dev.   [95% Conf. Interval]
---------+--------------------------------------------------------------------
diffe~S2 |      20   -.0390492    .0349558    .1563273   -.1122126    .0341142
------------------------------------------------------------------------------
    mean = mean(differenza_ROS2)                                  t =  -1.1171
Ho: mean = 0                                     degrees of freedom =       19

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.1389         Pr(|T| > |t|) = 0.2779          Pr(T > t) = 0.8611
```

Table28*: ROS difference in the year (t+2) for the whole sample*

```
. ttest differenza_vapd2==0

One-sample t test
```

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
diffe~d2	20	-8587.634	12371.01	55324.86	-34480.46	17305.2

```
    mean = mean(differenza_vapd2)                     t =  -0.6942
Ho: mean = 0                         degrees of freedom =       19

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.2480         Pr(|T| > |t|) = 0.4960          Pr(T > t) = 0.7520
```

***Table29**: Difference in value added per employee in the year (t+2) for the entire sample*

```
. ttest differenza_IMMPD2==0

One-sample t test
```

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
diffe~D2	20	-55786.39	31413.23	140484.2	-121535	9962.264

```
    mean = mean(differenza_IMMPD2)                    t =  -1.7759
Ho: mean = 0                         degrees of freedom =       19

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.0459         Pr(|T| > |t|) = 0.0918          Pr(T > t) = 0.9541
```

***Table30**: Difference in net technical assets per employee in the year (t+2) for the entire sample*

```
. ttest differenza_leverage2==0

One-sample t test
```

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
diffe~e2	20	-.0282463	.0782928	.3501363	-.1921151	.1356225

```
    mean = mean(differenza_leverage2)                 t =  -0.3608
Ho: mean = 0                         degrees of freedom =       19

    Ha: mean < 0                 Ha: mean != 0                 Ha: mean > 0
 Pr(T < t) = 0.3611         Pr(|T| > |t|) = 0.7222          Pr(T > t) = 0.6389
```

***Table31:** Leverage difference in the year (t+2) for the entire sample*

CONCLUSIONS

In this paper we have analysed some aspects of the process of reallocating control of companies in Italy, in terms of the characteristics that the acquired companies present before the acquisitions and the effects caused by the changes in ownership.

The results are as follows.

The companies acquired in our sample have a worse performance in terms of profitability, but are compensated by the fact that they are larger in terms of turnover and more productive, if you consider the value added per employee and fixed assets per employee, compared to those selected in the control sample. This would lead us to think that the reasons why owners agree to sell their companies are linked to the vision of the acquisition as an opportunity for further growth and expansion in new global markets, beyond the Italian market. In fact, in the current context, the ownership structure of the Italian industrial system is still characterized by deep family ties in companies and sometimes they could be too inefficient to be competitive in global markets. This involves the use of a large reserve of financial resources, which often do not exist for companies, so there is an increasing tendency towards a centralized system driven by groups of medium and large companies.

Therefore, the underlying reason for these M&A operations is certainly the search for faster ways to obtain competitive advantages, such as greater market shares and know-how that would require a longer time frame if developed independently, just as becoming part of a multinational group would help Italian companies to further promote growth and expansion globally and to offer a wider portfolio of products.

On the other hand, buyer companies see in Italian companies' leaders in their sector an enormous potential for growth and development in new markets and the achievement of the critical mass, thanks to the complementarity of resources and advanced manufacturing capabilities. This would make it possible to significantly reduce production costs by achieving economies of scale and also to appropriate all the consolidated know-how of these companies.

In fact, Italian companies have always distinguished themselves for their strong technological skills, which would allow the buyer to develop highly innovative products, and also the incorporation of an experienced local management into the company, along with the full consolidation of acquiror's position in Europe, will

reinforce its presence especially in the Italian market. The acquiror expects the acquisition to expand its market in Italy: the new partnership will enable it to improve its position by adding a new distribution channel and supply the industry in the region with an even wider range of products and technologies.

Finally, the main issue is to ensure great advantages for customers in terms of quality, organization, planning and coordination activities and also to re-launch the Italian brand in the international circuit, so exploiting the image of the "Made in Italy". This strategy would be the basis of a much broader project that would include further investments in the peninsula's business.

Turning to the ex post analysis of the aggregate of acquisitions, the effects seem to be certainly not positive in the short-medium term. In this case, data were not available in a longer time interval after the operation, therefore it has not been possible to evaluate if implementing some buyer consolidation policies would have had effect on the acquired companies.

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