

Elona Marku

**STRATEGY
AND INNOVATION
DYNAMICS IN THE
HIGH-TECH INDUSTRY**

**An Empirical Study
of Technological M&A**

FrancoAngeli

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INDEX

Introduction	p.	7
1. M&A for innovation as a source of competitive advantage	»	11
1.1. Types and motives of M&A	»	11
1.2. Speeding up the innovation process through M&A	»	13
1.3. Competitive advantage in M&A and innovation research	»	15
1.3.1. Achieving ambidexterity via M&A	»	27
2. Disentangling the intellectual structure of M&A and innovation	»	30
2.1. M&A and innovation: a fragmented field	»	30
2.2. Science mapping and visualizing techniques	»	32
2.2.1. Visualization software: VOSviewer	»	34
2.3. Selecting three decades of M&A and innovation research	»	35
2.4. Exploring the most impactful contributions in M&A and innovation studies	»	37
2.5. Unveiling the intellectual structure	»	41
2.5.1. Focusing on the role of technological M&A	»	44
2.5.2. Organizing for innovation in M&A context	»	47
2.5.3. Organizational adaption and change through M&A	»	50
2.5.4. Resource configuration after M&A	»	52
2.6. Lessons learned	»	54

3. M&A diversification and knowledge recombination: what is the effect on innovation performance?	p.	57
3.1. Comparison between different perspectives for competitive advantage: Porter's vs. RBV and DCV	»	58
3.2. M&A diversification and knowledge recombination: a proposed framework	»	61
3.3. Measuring innovation performance	»	67
3.4. Empirical study	»	71
3.4.1. Empirical setting and variables	»	73
3.4.2. Results	»	78
3.5. Lessons learned	»	81
4. M&A and innovation: research fronts	»	83
4.1. How to explore research fronts and select promising research	»	83
4.2. Exploring emerging research	»	85
4.3. Research fronts in M&A and innovation research	»	89
4.3.1. Industry life cycle and complementarities	»	91
4.3.2. Exploration and exploitation via M&A	»	93
4.3.3. Resource integration and implementation	»	95
4.3.4. Effectiveness of external sourcing	»	97
4.3.5. International M&A	»	99
4.4. Lessons learned	»	102
Conclusions and future research avenues	»	104
References	»	107
Appendix 1 – Figures	»	133
Appendix 2 – Tables	»	134

INTRODUCTION

Mergers and acquisitions (M&A) are considered as a useful means for firms to grow and succeed, especially in dynamic markets. Firms choose to engage in M&A for several motives, not only to enter new markets or to integrate vertically or horizontally but also to respond promptly to new market needs by acquiring technological knowledge, expertise, and capabilities and fill rapidly the gap between the resources possessed with those necessary to compete. Contemporary to the increase of the number of transactions within and across industries, academics and practitioners have devoted increasing attention to the understanding of the dynamics and mechanisms related to M&A success and failure (Haleblian et al., 2009; Renneboog and Vansteenkiste, 2019).

Existing strategic management literature at the intersection of M&A and innovation research appears fragmented with different schools of thought. Although it is widely recognized the crucial role of M&A on the firm's innovation strategy (Bettis and Hitt, 1995; Sears, 2018), research has shown inconclusive results about the directionality of M&A effects on innovation performance. A positive relationship has been found for technological acquisitions by Ahuja and Katila (2001) and by Cloudt, Hagedoorn, and Van Kranenburg (2006). A negative relationship was reported by Hall (1990), Hitt et al. (1991), Hitt et al. (1996), and Ornaghi (2009), while other studies showed even neutral effects (Healy et al., 1992; Prabhu et al., 2005; Danzon et al., 2007). Alternate, but related, perspective has primarily suggested that M&A by large high-tech firms generally falls into the category of outsourced R&D, where the firm acquires previous produced knowledge more than potential innovations (Bernstein, 2015). Also, studies pointed out that technological acquisitions may negatively affect innovation quality (Valentini, 2012), and many targets with existing successful innovations can be quickly integrated into the firm from a more product-based view (Puranam, Singh, and Zollo, 2006). Nevertheless,

recent research highlights several challenges, not only whether external technology sourcing helps or hinders gaining and sustaining competitive advantage but also what are the drivers' underlying mechanisms of technological change in M&A contexts (i.e., diversification, knowledge recombination, technology search, integration, and implementation).

These challenges provide the scope for achieving the objectives of the book:

- provide a comprehensive overview of the theoretical foundations, intellectual structure of existing studies that lay at the intersection of M&A and innovation fields. In this vein, we can detect evolutionary patterns and emerging dynamics;
- offer a theoretical framework that bridges core strategy perspectives and further provide empirical insights investigating and measuring the effects of potential drivers of innovation in technological M&A contexts, also focusing on complementarity effects;
- identify the research fronts and the emerging trends in the M&A and innovation literature, highlighting gaps and future research avenues. This is instrumental to a more in-depth understanding of the theoretical and managerial implications.

To achieve these goals, from a methodological perspective, we adopt a bibliometrics approach to map and disentangle the most impactful studies in M&A and innovation fields in a 30-year time frame. More specifically, co-citation and bibliographic coupling techniques allow us to provide an objective examination of these domains overcoming critical cognitive limits that might influence researchers when analyzing a high number of scientific studies.

Besides, our empirical study examines the innovation performance of firms operating in the U.S. high-tech industry that engaged in technological M&A; our sample includes 1.980 transactions. Additionally, for the innovation performance measures, we used the information of 558.853 patents and their backward and forward citations. We apply a novel approach in strategy studies, the endogenous treatment effects, a quasi-experimental approach that accounts for endogeneity issues that might affect the outcome (i.e., the self-selection into diversified M&A or firm-specific characteristics that may lead acquirers to have lower innovation performance). We further introduce a new instrumental variable helpful to scholars that investigate M&A and innovation to understand similar dynamics.

The main target of this book is the community of scholars in the strategy field. We highlight the core theoretical reflections of studies published in the most impactful journals in the last three decades. In this way, we provide a rich and updated bibliography on M&A and innovation research, including

classic and very recent contributions. We provide empirical evidence applying a novel method and new variables for the measurement of M&A diversification, highlighting the complexity of the dynamics related to technological M&A and innovation. We believe that this overview can be of stimulus for both expert scholars and those who are moving the first steps into research as they can find new insights and suggestions of future research that we hope will enrich the debate of M&A and innovation within the strategy field. Finally, managers and practitioners are a vital audience of this study. Our reflections throughout this book highlight several challenges and practical implications, especially in the light of the empirical contribution that provides new insights on diversification strategies pursued via M&A.

Organization of the book

This book illustrates a journey on the strategic management literature aiming at providing a wide-ranging overview of what we already know and what is still missing in M&A and innovation research. More specifically, in Chapter 1, after clarifying the core pillars and concepts used throughout the present work, our attention is devoted to disentangling the theoretical foundations of a firm's competitive advantage for innovation in an M&A context, going through sustainable competitive advantage and the more recent configuration of temporary competitive advantage. In this chapter, we apply different theoretical lenses, from Porter's contribution to transaction costs theory, resource based view (RBV), the dynamic capabilities view (DCV), knowledge-based theory (KBT), and absorptive capacity. These different crucial perspectives allow us to observe the various standpoints from which strategy scholars have examined the conjoint domain of M&A and innovation, pointing out how the adoption of different theoretical approaches allows the interpretation of phenomena in various ways, emphasizing multi-dimensional features from external to internal, from sector perspective to firm-level focus, and from specialization to diversification.

Chapter 2 pushes farther by disentangling the intellectual structure of 30 years of studies that lay at the intersection of M&A and innovation research. This work aids in our understanding of the most impactful studies. By applying a bibliometric technique and adopting cluster analysis, we map and visualize the main contributions, identifying the dominant schools of thought and the intellectual structure of the field while highlighting the focal research streams and the links between them.

Chapter 3 aims to provide a bridge between the dominant perspectives discussed in Chapter 1, including Porter's perspective on market positioning and RBV and DCV. The chapter advances the discussion on the effects of

M&A on innovation, focusing on complementarities exposed in Chapter 2. We propose a theoretical framework that combines different conceptualizations of firm competitive advantage, jointly examining the external and internal dynamics and investigating synergic effects on innovation performance. We explore the mechanisms through which an innovation process outcome is fostered, focusing on the impact of the diversification via M&A as an active ingredient to differentiate in the market and the firm's capabilities to recombine resources, including technological knowledge. To better understand these dynamics, we offer an empirical investigation of one of the most fast-paced industries in the world: the U.S. high-tech industry. We examine and measure the effect of M&A diversification on innovation, and the synergies generated after an M&A occurs.

In Chapter 4, we aim to better understand the research fronts of the conjoined fields of M&A and innovation. In this way, we provide a recent picture of the core discussions characterizing the intellectual structure exposed in Chapter 2 and the additional insights obtained in Chapter 3. In the present analysis, we adopt a bibliographic coupling technique to analyze the latest literature published in top journals from 2017 to 2019. We map, visualize, and discuss the most relevant emerging schools of thought while presenting gaps.

In the last part of the book, we conclude with a summary of the results and the main contributions and managerial implications, pointing out also the limitations of this study. Finally, several future avenues for research are highlighted, encompassing pivotal research streams and promising trends.

1. M&A FOR INNOVATION AS A SOURCE OF COMPETITIVE ADVANTAGE

For a deeper understanding of the combined domain of M&A and innovation, in this chapter, we first expose the different types of M&A and the various motives that lead firms to engage in this type of corporate transaction. Focusing on the strategic management literature, we then highlight theories that stand at the roots of innovation for competitive advantage, emphasizing the implications from an M&A context. In this vein, we illustrate Porter's perspective, RBV, DCV, and KBT. This multiplicity of lenses allows us to cover the many aspects of firms' external and internal environments, shifting from the concept of sustained competitive advantage to the more recently promulgated temporary competitive advantage.

1.1. Types and motives of M&A

Although the term "merger" is easily understandable, within an economic context, it refers to any transaction that forms one economic unit out of two or more previous ones. Existing studies distinguish between three types of mergers: horizontal, vertical, and conglomerates. In a horizontal merger, two or more direct competitors operating in the same market are joined. A vertical merger links firms that are in different stages of production within a specific market. On the contrary, conglomerate mergers are unions of firms that are neither direct rivals nor in the same production chain. Their products may complement each other, but they are not technically the same (King et al., 2004). Additionally, the acquisition means that firm X buys a part of firm Y sufficient to acquire its control (Ross et al., 1999).

Firms use a variety of M&A strategies. Horizontal M&A allows firms to strengthen their market position and mitigate competition, because higher

concentrations imply higher market power. Firms increase their market share, revenues, and subsequent profits while they become more efficient by removing redundant activities and achieving economies of scale, thanks to their increased size and decreased average production costs. Vertical M&A often takes place to guarantee the supply of key goods and to avoid disruption in the supply side. However, it also restricts supply to direct competitors, thus improving their positioning and market share. Several benefits can be enjoyed by such a firm, including higher profits and smaller supply costs. Moreover, firms engage in conglomerations to increase diversification and reduce risks by providing access to new resources previously unavailable while boosting revenues coming from selling two or more products together.

M&A are often motivated by technological reasons. This implies that the acquirer aims at absorbing the technological knowledge of the target to foster the innovation process and to achieve a competitive advantage (Ahuja and Katila, 2001; Cloudt et al., 2006; Harrigan and Di Guardo, 2017; Makri et al., 2010). Scholars have investigated the major factors influencing post-acquisition innovation performance, including the quality of the inventive process output (Harrigan et al., 2017; Valentini, 2012), the characteristics of the acquirer (Desyllas and Hughes, 2010; Prabhu et al., 2005), and those of the targets (Ahuja and Katila 2001; Cloudt et al. 2006; Datta and Roumani, 2015; Lin and Jang 2010). For example, Sears and Hoetker (2014) found that the variance of post-acquisition innovation performance depended on the technological overlap between target and acquirer. Indeed, firms appear to be more efficient when acquiring technologies that differ from those already owned. Conflict arises when these technologies are too similar. The authors observed that when target overlap was high, knowledge redundancy hindered the ability of the acquirer to create value from the capability of the target. Moreover, when target overlap was low, it did not seem to affect innovation performance negatively. Interestingly, in the case of simultaneously high acquirer overlap and a high target overlap, the high acquirer overlap has a negative impact on the acquirer's capability to generate value from the target's capabilities. Makri, Hitt, and Lane (2010) considered technological M&A as a means for firms to acquire new knowledge and capabilities and, by extension, the technological resources needed for research and development (R&D). The specific focus on the search for complementarities reveals that the innovation outcome is much richer when science and technological complementarities are both present. Puranam, Singh, and Choudhuri (2009) focused their investigation on how acquirers could connect the external source's organizational capabilities to those existing within the boundaries without destroying them. They developed the concept of common ground,

defined as knowledge that is recognized, and found that the paradox just highlighted can be solved using the concept of the common ground which works likely the concept of absorptive capacity: some degree of overlap is useful to the acquisition of nonoverlapping knowledge and capabilities.

Finally, existing research has also looked at the broader context of globalization. M&A provides firms the fastest means of building a sizeable presence in a new cross-border market. Yet, they are fraught with risks of overpayment and the inability to fully assess the value of acquired assets and post-acquisition challenges. This includes cross-cultural integration. Cross-border M&A links different cultures, institutions, and management approaches (Di Guardo et al., 2016; Kale et al., 2009). Firms elect to enter markets in which they can exploit the existing technological resources and in which the existing resource base is strongest (Silverman, 1999). However, Teece (1980) stressed how, for this to be true, it must be the case that the transfer of such excess resources is subject to market failure. If these resources can be efficiently sold, then there would not be any need for expansion. The broad spectrum of M&A exposed herein challenges firms to design a coherent M&A and innovation strategy aimed at gaining an advantage over competitors and succeed in the marketplace.

1.2. Speeding up the innovation process through M&A

Most existing literature has highlighted how innovation is generally associated with the idea of spontaneous and unstructured processes that are not governed by formal rules (Bower and Christensen, 1995; Schumpeter, 1934). Specifically, these processes are related to random events or the genius of isolated individuals (i.e., inventors) more than to any form of planning. Nevertheless, this vision of innovation is partially overcome, because it neglects the essential components of the innovative process. The same definition of innovation, conceived as a process initiated from the perception of an opportunity for the creation of a new product or service or that of a new business model involves the development, production, and commercialization of this new idea. From this, it can be deduced that the randomness of the innovative event is possibly linked to the phase of the invention, which, although it occurs very rarely, may be the result of the brilliant intuition of the individual rather than the real research and dissemination of innovation. The complexity and difficulty associated with the activation of innovative processes can be traced back to the nature of innovation, which represents an influential factor of environmental dynamism, because it modifies the conditions of balance

within and across firms, often altering the mechanisms of creating and defending the gained competitive advantage. Additionally, innovation requires the involvement of various actors not only within the boundaries of a firm but those that interact with it. Innovation does not necessarily require a simple reallocation of resources and skills included in an organization. However, it requires the activation of more complex processes related to organizational learning by modifying the value of skills and strategic resources of firms necessary for the acquisition of systematic revenues and alters the structure and the balance of the sector. In other words, innovation can decisively transform boundaries and sectoral dynamics by changing the market power of some firms toward others (Christensen et al., 2018).

Nevertheless, firms may not be able to develop the necessary resources internally to face competition. Organic growth is often risky and time-consuming. Because of this, firms may choose to engage in M&A to speed up the innovation process and to succeed with technological advancements by acquiring new knowledge and capabilities (Ahuja and Katila, 2001; Capron and Mitchell, 2009; Cloudt et al., 2006; Di Guardo et al., 2019; Graebner, 2004; Hagedoorn and Wang, 2012; Makri, Hitt, and Lane, 2010; Puranam, Singh, and Zollo, 2006; Puranam, Singh, and Chaudhuri, 2009; Puranam and Sriniketh, 2007; Sears and Hoetker, 2014) to acquire and to redeploy new technologies (Arora, Cohen, and Walsh, 2016; Chondrakis, 2016; Grimpe and Hussinger, 2014; Kaul and Wu, 2016; Ransbotham and Mitra, 2010; Valentini, 2012; Van de Vrande, 2013), to create synergies by combining different businesses, and to access complementary resources (Harrison et al., 2001; Tanriverdi and Venkatram, 2005).

M&A, as argued in the previous paragraph, is an effective means of achieving long-term business reconfiguration (Karim and Mitchell, 2000) and gaining a competitive advantage, especially in fast-moving environments in which they are required to promptly sense and seize opportunities and respond to external stimuli. M&A allows firms to fill the gap between the technological resources already possessed and those necessary to keep pace with technology and high competition. This chapter considers the different strategy theories used in M&A and innovation research and highlights how these two concepts change their connotations according to the different theoretical lenses applied. The use of strategic analysis for the investigation of innovation within an M&A context requires a preliminary examination of existing perspectives to grasp their specificities, to identify their strengths and weaknesses, and to relate them to the dynamics of innovation previously addressed. Assuming this perspective, it is easier to understand how the scrutiny of the literature on innovation and M&A represents in its entirety a useful modality for constructing

the logical junctions related to the analysis presented here. Hence, it is essential to resume, albeit briefly, the perspectives that dealt with explaining the strategic forces at work and the creation of competitive advantage, specifically in the context of technological M&A that must have a verified ability to interpret processes of innovation and integrate and update them in the light of the considerations and observations developed.

Moreover, the models that over time have been used to explain the dynamics related to the gain of firm competitive advantage are particularly important when dealing with substantially stable environments in which less is invested in innovative processes. On the one hand, the ongoing competition and the increasing diffusion of pervasive innovations in all sectors of the economy continually require new configurations of strategic management methods and tools. On the other hand, firms shape their boundaries and choose to proliferate via M&A not only to enter new markets or to strengthen the existing market, but also to acquire new technologies (Ahuja and Katila, 2001; Brakman, Garretsen, and van Marrewijk, 2013; Chevalier, 2004). Additionally, the spread of digital transformation in all industries more strongly highlights that technological change is not merely an external event affecting the firm's activity (Marku et al., 2019; Zaitsava, Marku, and Castriotta, 2020). However, it is an event resulting from contextual conditions, also influenced by the firm itself and by factors and mechanisms within other organizations with which the firm interacts. In other words, the technological dimension is not considered an external variable to a specific system. In contrast, it is contextualized, and to some extent, internalized. In this scenario, M&A provides an excellent example in which firms shape their boundaries for modifying the environment in which they operate, merging with other businesses, or simply acquiring them.

1.3. Competitive advantage in M&A and innovation research

As argued previously, M&A and innovation are key elements required for achieving competitive advantage. To disentangle both phenomena, it is important to understand where the roots of the two domains reside and how they have evolved. Specifically, scholars have proposed several theories to explain the determinants of performance variations between firms. For instance, the approach based on the model of industrial economics adopts a standpoint that looks to the firm's external environment, including the market structure and its effects on performance (Porter, 1980, 1985, 1990, 1991). Within this framework, the firm is conceived as a set of strategic activities to

adapt and potentially modify the sector dynamics for an attractive competitive positioning. The sustainability of the revenues, thanks to this positioning, depends on the influence of the sector's competitive forces (McGahan and Porter, 1997). On the contrary, RBV devotes attention to the set of unique skills and resources within the firm; it postulates that performance is the result of unique assets owned and controlled by the firm (Barney, 1986, 1991; Rumelt, 1991; Wernerfelt, 1984). Although these models offer different explanations for the existence of heterogeneous performances, they share two fundamental assumptions. First, they adhere to the idea that competitive advantage originates from initial or more favorable access to resources, markets, or opportunities. Second, according to these approaches, the exploitation of opportunities reflects some degree of active interpretation of internal and external environmental signals. Strategy research has focused on understanding how firms respond to these signals that continually interact with their innovation processes. Nevertheless, the question of the impact on a firm's strategy regarding innovation appears highly controversial.

One of the dominant strategy paradigms, developed by Michael Porter in the early 80s, encompasses the stream of research centered on the concept of competitive positioning with an emphasis on the changing aspects of various strategic forces. This approach revolves around the typical paradigm of the industrial economics and the structure-conduct-performance model, according to which there is a causal relationship among the market structure, the firm's conduct in that specific market, and the firm's performance. Industrial economics analyzes the actions a firm can take to create a defensible position against competitive forces. The primary focus is on the idea that the firm cannot influence decisively either the conditions and features of the sector nor its performance. Therefore, they are exogenously determined. This vision, characterized by a profound environmental determinism considers that, because the conduct of a firm (or its strategy) is limited by the structural forces of the sector, it follows that the strategy does not represent an independent action pursued voluntarily by the management but is instead an automatic result of the sector's external structure (Bain, 1956; Mason, 1949). Along this line of thought, the idea emerges of how the role of management can be consequently neglected. The deterministic perspective described above, which is typical of initial studies in industrial economics, has been further emphasized and has found additional confirmation in later research about organizational theory, which has highlighted the role of the environment in selecting firm and organizational characteristics (Hannan and Freeman, 1977).

Additionally, many researchers have studied firm performance at the sector level rather than at the business level but have chosen the sector as the

unit of analysis of their research. They have neglected the specific features of firms operating in the same sector. The framework of analysis of the strategic behavior proposed by Porter, which, during the 1980s, dominated the academic and managerial landscape, based its theoretical and methodological background on the typical approach of industrial economics while overcoming the latter for several reasons. In the first place, Porter based the attention on firms rather than sectors. Second, the structure of the sector is neither entirely exogenous nor stable, as is generally the case in traditional industrial economics (Bain, 1968; Caves, 1972). Although the vision of the competitive environment (Porter, 1996) is partially exogenous, it appears to some extent to be conditioned through the firm's actions. Porter's key questions investigate how firms are doing and what makes them strong or weak (Nelson, 1991). In Porter's framework, the role of the conduct of the firm in influencing its performance and the market structure is explicitly recognized, even if the structure of the sector continues to play a vital role in explaining the firm's performance. This certainly reflects the legacy coming from the literature about industrial economics.

It is worthy to note that Porter's contribution has clearly evolved (Foss, 1996). Just thinking about the differences highlights a profound change of his basic premises. For example, among the five-forces model (Porter, 1980) the value chain (Porter, 1985) and the diamond (Porter, 1990), a strategy is a configuration of business activities that aims at creating a competitive advantage. Within this perspective, the strategic choices are both the product and the answer of an in-depth understanding of the sector structure that can lead to the selection of one of the different forms of positioning: cost advantage, differentiation advantage, and focus advantage. The appropriate positioning of the firm in the market is connected to the firm's decision to develop different activities from competitors or to develop the same activities in a different way. Competitive advantage derives from a suitable selection of activities able to determine a unique combination that creates value. In the Porter model, a successful firm is one that has an attractive position in the market or that can gain above-average returns. The sustainability of the competitive advantage is, thus, the result of an activity arrangement directed toward the strategy to be pursued. From this argument, it can be inferred that the internal consistency between the activities and the strategy determines the sustainability of the competitive advantage.

Another perspective regards the strategic approach to conflict, sharing some features and limitations with Porter's model, such as its focus on the imperfections of the market, entry deterrents, and strategic interactions (Shapiro, 1989). The tools used in this approach include game theory, which

implicitly sees the result of competition as a function of the firm's effectiveness to overcome their rivals in terms of strategic investments, price strategies, signaling, and information control. Both the competitive positioning and the strategic conflict approaches are grounded on the basic idea that rents come from privileges derived from market positioning.

In a competitive positioning model, the revenues obtained by firms are monopolistic. Firms operating in a sector earn income when they are somehow able to hinder the competitive forces that try to mitigate the position rents acquired by the firm. Some sectors become more attractive, because they have intrinsic structures capable of countering competitive forces (e.g., entry barriers) that guarantee firms better opportunities to create a sustainable competitive advantage. Thus, different environments contribute to determining the most advantageous strategic options in the same way for all firms operating in a specific sector. Therefore, the differences and heterogeneities among firms reside only in their greater or lesser ability to position themselves favorably within the environment. In this context, innovation presents an essential variable capable of fruitfully modifying the competitive scenario and creating heterogeneity among firms. Innovation can determine the cost reduction of the product favoring a cost-advantage strategy and an improvement in the quality and characteristics of the asset (differentiation strategy). In this perspective, within a sector, firms focus on non-cooperative investments from a win-lose perspective to create long-lasting and defensible competitive differentials through the activation of innovation processes. The higher the maintenance of a competitive differential guaranteed by the protection of innovation from imitation (e.g., intellectual property rights), the greater the willingness to invest in R&D.

Firms can rapidly improve their competitive positioning by engaging in M&A motivated by increases of market share, exploitation of economies of scale and scope, growth and expansion of product lines, entering new businesses and new markets, and maximizing financial utility (Brakman, Garretsen, and Van Marrewijk, 2013; Chevalier, 2004; Geiger and Schiereck, 2014; Ghosh, 2004; Gopinath, 2003; Porter, 1985; Seth et al., 2002; Trautwein, 1990; Walter and Barney, 1990). M&A allows acquirers to exploit the strengths and to correct the weaknesses of their competitive strategies. Nonetheless, acquirers having a high level of cost leadership are more likely to acquire targets that foster a low-cost strategy (Mudde and Brush, 2004). Porter (1980) pointed out that enhancing competitive strategy would allow firms to create value. In the case of M&A, this depends on the strategic and operational fit between the acquirer and the target. Synergies are generated when the combined value is greater than the sum of single counterparties (King et al., 2004; Singh and

Montgomery, 1987; Worek et al., 2018). Low-cost strategies can be pursued thanks to the increase of overall efficiency, whereas the increase of the market power raises entry barriers. This is the case when two competing firms are unified (Pennings, Barkema, and Doma, 1994; Trautwein, 1990). Additionally, M&A is an effective means for adopting differentiation strategies. For example, the acquisition of innovative targets can be the basis for developing new niche products (Geiger and Schiereck, 2014; Ghosh, 2004; Levinson, 1970). Diversification via M&A allows firms to differentiate within their markets by combining different products, services, and/or technologies while increasing product quality and product innovation (Harrison et al., 1991).

Another approach to creating a competitive advantage is RBV, which attempts to bring the researcher's attention back to the firm and to the idea that an advantage over competitors is the result of a firm's ability to capture income deriving from efficiency at the firm level. In other words, the firm builds its competitive advantage through the efficient allocation of resources (Penrose, 1959; Rumelt, 1984; Teece, 1986; Wernerfelt, 1984). Therefore, if for Porter and the perspective of competitive positioning, a firm is a set of activities, according to RBV, the firm is a complex of unique and inimitable resources. As Barney (1991) denoted, most empirical studies that used Porter's model investigated the relationship between the environment and firm performance, paying scarce attention to the impact of idiosyncratic business attributes on the management results. This was because of the implicit consequences of two major assumptions. First, firms were considered identical in terms of strategically relevant resources. Second, it was assumed that any attempt to develop heterogeneous resources between firms could not be maintained in the long term, owing to the high mobility of strategic resources. On the contrary, RBV focuses on the relationship between the firm and its internal specific features. The latter includes determinants of performance. In this regard, RBV is based on two core assumptions: firms can be heterogeneous in relation to the resources and skills on which they base their strategies; and these resources and skills may not be perfectly mobile between firms, determining heterogeneity among the actors operating within the same sector. The seminal work of Penrose (1959) strongly contributed to the RBV approach to re-establishing the importance of the single firm, individually considered, in opposition to the emphasis that Porter had given to the features of the sector as a critical element and a unit of analysis. For RBV, firms can depend on characteristics and qualities of resources available and strategies residing in the ability to exploit resources. The pillars of RBV research include the contribution of Penrose (1959), who placed resources at