ERASMUS UNIVERSITY ROTTERDAM
Erasmus School of Economics
Bachelor Thesis Economics and Business Economics
Financial Accounting

A Literature Review on Mergers and Acquisitions

Joep D. Hijmans
381522

28 July 2022

Abstract

Using prior academic literature, this thesis gathers and combines information on mergers and acquisitions (M&A) to provide a better understanding of this topic. More specifically, this literature review discusses several types of M&As, such as horizontal-, vertical-, and cross-border M&As. In addition, various motivations for M&A activities are discussed. These motivations include the expansion of technological innovations, the creations of synergies, and the diversification of operational and geographical activities.

Supervisor: Y. Gan
Second Assessor: A.T. Fytraki

Table of Contents

Introduction

Mergers and acquisitions are expansionist business activities that often help companies to grow and to expand their operating areas. A merger involves the combination of two distinct organisations. This combination results in a brand-new organisation. For example, the merger of Kraft Foods Group and Heinz Company resulted in The Kraft Heinz Company (Epstein, 2005; The Kraft Heinz Company, 2015). An acquisition involves one company buying another (often, but not necessarily, smaller) company. The acquiring company can either absorb the target company, dissolve the target company, or it can simply own and manage the target company. In all three cases, a new company is not formed (Epstein, 2005). For example, in 2020 Heineken acquired the small brewer Texelse Bierbrouwerij to enlarge their craft beer product lines. Heineken chose to own and manage the Texelse Bierbrouwerij (Heineken, 2020).

The aim of this thesis is to gather and to combine specific fundamental information and current academic literature on targeted areas of the general M&A topic. Some prior literature reviews have focused on specific aspects of M&As. For example, Hitt and Pisano (2003) concentrate on the strategy and opportunities of cross border M&As. Other researchers focus on M&As in the high-technology sector (Rossi, Yedidia Tarba, & Raviv, 2013). Rossi et al. (2013) find that in the technology sector, the major driver for M&As is the gain of new knowledge for the acquiring company. A more recent paper by Renneboog and Vansteenkiste (2019) provides a detailed look into the existing literature of a company's performance prior, during, and after engaging in M&A activities.

Before delving into the main topics of this thesis, it is wise to take a general overview of some of the driving forces in the market for M&A transactions. For example, an acquiring company searching for opportune target companies to acquire, must be aware of competing acquirers searching for the same M&A opportunities. Only a limited amount of target companies with a good fit for a particular acquirer exist at any one time. Competing over the acquisitions of specific target companies can result in bidding wars. Thus, if not careful, the acquiring company can overbid the true value of the target company. Curiously, in a highly competitive M&A market, competing acquirers with complementary assets, are more likely to have one of those acquirers absorb the other. Conversely, in a highly competitive M&A market, competing acquirers not having complementary assets, are less likely to have one of those acquirers absorb the other (Hoberg & Phillips, 2010).

Another driving force to consider is how participation in M&A transactions can create value for participating companies. For example, becoming a potential target company can increase its value. In active M&A markets, companies can try to monetize their unrealised investments by being acquired. To be more valued and wanted as a target, the company can increase its R&D investments. If there are an abundance of buyers in this market, then the price of the target will be higher (Phillips & Zhdanov, 2013).

The ebb and flow of acquirers and targets in the M&A marketplace is, in of itself, a driving force. For example, a peculiar phenomenon can occur in active M&A markets. These M&A markets can show an increase and decrease in entries and exits, respectively, by companies in the goods and services market (hereinafter referred to as "G&S market") (Dimopoulos & Sacchetto, 2017). G&S market entries rise as market entrants expect to be taken over by a competitor in the future. Thus, it can be a profitable endeavour for entrepreneurs to start a business and to enter the G&S market. The decrease in G&S market exits by struggling, already established companies (companies that may have a poor performance) is caused by a lower incentive for such companies to exit the G&S market. M&As can offer the poorly performing company an alternative option. The company can be bought out, rather than exit the G&S market voluntarily. Thus, poorly performing companies will remain in the G&S market hoping to become an M&A target (Dimopoulos & Sacchetto, 2017). The opportunity for G&S market entrants to participate in potential M&As has a positive effect on their productivity. The more these companies stand out as a potential target, the more likely they are to be acquired. Typically, the entrants' productivity is higher than that of the established companies (Dimopoulos & Sacchetto, 2017).

This thesis is constructed as follows: the first part of this literature review focuses on the types of mergers and acquisitions, such as horizontal-, vertical- and cross-border M&As. The second part analyses some of the underlying motives companies can have to engage in M&A activities, such as acquiring new technology, creating synergies, or diversifying operations (Cefis & Marsili, 2015; Hitt, Hoskisson, & Ireland, 1990). Lastly, this thesis is concluded with a summary of the topics reviewed. Appendix A provides an overview of the fourteen most important and most useful papers used in this thesis.

Part I: Types of Mergers and Acquisitions

Three types of mergers and acquisitions will be discussed in this part, namely, horizontal M&As, vertical M&As, and cross-border M&As. Each chapter will first provide the definition of the specific type of M&A, followed by several findings of existing academic literature.

A: Horizontal Mergers and Acquisitions

An M&A between two organisations that operate in the same industry, and sell similar products, thus, being in direct competition with each other, is called a horizontal M&A. An example of such an M&A is the merger of Kraft Foods Group and Heinz Company. At the time, the merged company became the fifth largest food and beverage company worldwide (The Kraft Heinz Company, 2015). Several benefits, such as reduced competition, an increased market share and operational synergies can arise from the union of two such organisations (Capron, 1999; Hoberg & Phillips, 2010). One should note, synergistic opportunities were forecasted by the management of the newly formed The Kraft Heinz Company (The Kraft Heinz Company, 2015).

Asset Divestiture

Post-acquisition (hereinafter referred to as either "*ex post* acquisition", "*ex post* merger", or "*ex post* M&A"), the acquirer may decide to dispose of certain assets of either the target company, the acquiring company, or certain assets of both companies. The acquirer may also decide to reduce labour employment in certain departments (Capron, 1999; Rozen-Bakher, 2018). Capron (1999) found an asymmetry in divestiture between the acquirer and target company in horizontal M&As, *ex post* acquisition. Asset disposal percentages for several assets were calculated both for the target and the acquirer. The results showed that *ex post* M&A, the target company's assets were three to five times more likely to be divested by the acquiring company, when compared to the divestiture of the acquirer's assets. A reason put forth is that it is often easier (from a political point of view) for the acquiring company to divest the target's assets, rather than their own assets (Capron, 1999).

However, Capron (1999) also finds that *ex post* M&A, the divestiture of assets of the target company often does not lead to cost savings. Often, the acquirer is not effective in rationalizing the 'excess portions' of the target company's businesses. As a result, the divestiture of those target's excess assets may damage the capabilities of the target company (Capron, 1999).

Reducing Labour Employment

Horizontal mergers have the potential for reducing costs. Savings can be accomplished by reducing the amount of labour employment and/or increasing employment efficiency. For example, one could remove similar (and/or redundant) jobs within the newly formed company and retain the most efficient employees (Conyon, Girma, Thompson, & Wright, 2002; Rozen-Bakher, 2018). Conyon et al. (2002) find that *ex post* merger, labour employment demand decreases significantly. Decreases may be due to the aforementioned increase in employment efficiency. Their evidence also suggests that labour employment reductions are relatively larger for smaller companies, when compared to larger companies. Labour employment efficiency in smaller companies can be easier to achieve, as they have less labour employment in the first place (Conyon et al., 2002).

In the service sector, a complication may arise for companies engaging in horizontal M&A activities. When management *ex post* M&A wants to reduce labour employment (redundant and/or similar jobs may exist), often, management will have to come to an agreement with the labour unions. The unions' main interest is the job security of their members. However, labour unions are much stronger in the service sector, then in the industrial sector. This difference in power may result in a smaller reduction in labour employment in the service sector than initially anticipated by the company's M&A analysts (Rozen-Bakher, 2018).

Purchasing Power and the Supply Chain

Horizontal M&As not only have effects on the participants, but can also have effects on other companies in the supply chain. The newly merged company can increase its purchasing power against existing suppliers upstream. Often, the *ex post* M&A company is larger than the previously individual companies separately. Together, the companies can realise an increase in production, which, in turn, leads to an increased need for input factors *e.g.* raw materials. The merged company can bargain for lower prices with the upstream supplier, as they are now able to purchase a higher quantity of input factors. Hence, the merged company can realise an increase in purchasing power against their suppliers. The enhanced purchasing power can be another benefit of engaging in M&A activities (Fee & Thomas, 2004; Homberg, Rost, & Osterloh, 2009; Shahrur, 2005). In industries that are more locally concentrated, the purchasing power of a merged company is more distinct (Fee & Thomas, 2004). The increased purchasing power can reduce the 'cost of goods sold' of the merged company. Accordingly, the sales revenues of their suppliers are reduced. *Ex post* M&A, those suppliers are more dependent on the merged company for sales, and, often, their cashflow margins are reduced (Fee & Thomas, 2004). As a result, not all suppliers that are solely dependent on the merged company will survive the decrease in revenues. The good news is, surviving suppliers can experience a significant increase in market share (Fee & Thomas, 2004).

However, regardless of the size of the merging companies, their suppliers will often not see a significant increase in abnormal returns. More often than not, the suppliers will see a drop in their abnormal returns, *ex post* a downstream merger (Fee & Thomas, 2004; Shahrur, 2005). If the downstream merger consists of two big companies, then the abnormal returns of the supplier are often even lower (Shahrur, 2005). The bigger both the companies are before the merger (hereinafter referred to as either "*ex ante* merger", "*ex ante* acquisition", or "*ex ante* M&A"), often, the more purchasing power they have *ex post* merger. Thus, often, the bigger the merger, the greater is the lowering of the abnormal returns to the suppliers.

B: Vertical Mergers and Acquisitions

A vertical type of M&A occurs when a company merges with (or acquires) another company in the same supply chain. For example, an upstream company that sells intermediary products like conductors, can merge with (or acquire) a downstream company that produces the final product of computers (Zhou, Yan, & Liu, 2019). Here, the upstream company was the *ex ante* M&A supplier of the downstream purchasing company. We can see a real-world example from events in 2002. The online auction website eBay acquired the online payment service PayPal. With this acquisition, eBay not only receives money from the sales made on its own platform, now it also makes money from the transactions made through PayPal (The New York Times, 2002).

One should keep in mind, the integration phase of vertical M&As can be more complicated than the integration phase of horizontal M&As. One of the reasons is, that the processes of products and services of united vertical companies need to be efficiently synchronised. The coordinated effort to achieve such synchronisation can negatively affect the anticipated efficiency gains of the vertical M&A (Rozen-Bakher, 2018).

Advantages of Vertical M&As

Market inefficiencies along the supply chain can be removed by vertical M&As (Zhou et al., 2019). The removal of these inefficiencies can lead to numerous advantages. Kedia, Ravid & Pons (2011) find that in non-competitive M&A markets, vertical M&As are linked to higher returns. If both companies are dominant in their respective industry, then one can achieve those higher returns. Large market power and possibly large market share enhances the procurement of larger returns.

Vertical M&As can also increase the ability to lock competitors out from purchasing at one of the merged (or acquired) suppliers. Moreover, the *ex post* M&A company can use its newly acquired supplier status to increase prices to its competitors. By opting to do so, the company can damage the competitors of its downstream company. Higher purchasing prices typically lead to lower profits. Likewise, the vertical M&A can also damage the competitors of its upstream company. The *ex post* M&A downstream company can choose to no longer purchase goods from the competitors of its now *ex post* M&A supplier (Kedia, Ravid, & Pons, 2011).

Information Advantages

Close geographic proximity between companies can lead to information advantages. A close geographic distance between the companies can aid the information gathering by the acquirer. The closer the acquirer is to the target, the easier it is to gather information. Thus, the closer the acquirer is to the target, the more information advantage it has over its more distant acquisition competitors (Uysal, Kedia, & Panchapagesan, 2008). Better information on a target company can be utilised by an acquirer to engage in more profitable M&A transactions. Local acquisitions have significantly higher returns for the acquiring company, when compared to non-local acquisitions. Typically, the returns of local acquisitions are more than double than the returns of non-local acquisitions (Kedia et al., 2011).

Research, Development, and Innovation

Companies with a vertical relationship can benefit from M&As on the innovation frontier. The benefits of research and development (R&D) are often increased, and, thus, the innovation threshold is reduced. Passing the innovations threshold means that a non-innovating company becomes an innovator. In addition, the vertical M&A can increase the company's incentive to invest in R&D. All three benefits disclosed can arise from the removal of market inefficiencies (Zhou et al., 2019). Where both companies have high R&D investments, vertical M&As can witness higher total returns, typically 4% higher than in other vertical M&As.

However, horizonal and unrelated M&As (between companies with high R&D investments), often, do not realise the same kind of returns that can be realised by vertical M&As. The higher returns realised in vertical M&As are typically generated by the ability to combine with specialized companies within the supply chain. After all, merging with (or acquiring) another company in the supply chain is a hallmark of vertical M&As (Kedia et al., 2011). Innovation incentive is stimulated when vertically related companies invest in R&D together, but is not stimulated as much when compared to being vertically merged. One reason is the conjecture that the market inefficiencies remain, taking into account that the companies are not vertically merged (Zhou et al., 2019).

Economic Downturns

Mergers and acquisitions can be an option for vertically related companies to survive economic downturns, in particular, cycles of economic recessions. As a means to avoid bankruptcy during economic recessions companies may want to merge. By doing so, they can continue to operate and to keep the supply chain running. Thus, with the economic onslaught of a recession, the *ex post* M&A value of the vertically merged company is often greater than the risk of default of one of *ex ante* M&A, non-merged companies (Tarsalewska, 2015). However, vertical acquisitions financed through debt (increasing the acquirer's leverage), increases the risk of default of the acquiring company (Murray, Svec, & Wright, 2017).

C: Cross-Border Mergers and Acquisitions

Entering a foreign country's market as a new market entrant can be hard, and can be subject to a number of inefficiencies for an organisation. Commonly referred to as 'entry barriers'. The organisation may not be accustomed to the foreign country's culture. Or, it may not have existing relationships with the foreign suppliers and customers (Lebedev, Peng, Xie, & Stevens, 2015). One way to enter a foreign country's market, is to acquire an existing organisation in that market. An M&A transaction that occurs over a country's border is called a cross-border M&A.

Opportunities for firms in developed countries can emerge when companies use M&A activities in emerging countries (Lebedev et al., 2015). A representative and easily appreciated example of a cross-border M&A is Heineken's (a Dutch company) acquisition of Asia Pacific Breweries (located in Singapore) in 2012 (Lim & Danubrata, 2012). By acquiring Asia Pacific Breweries, Heineken got instant access to a local organisation with experience in the market, the culture, and the language of Singapore, halfway around the world from The Netherlands.

Entering New Markets

Similar to other types of M&As, cross-border M&As can lead to an increase in market power and cross-border M&As can offer a company different kinds of opportunities (Hitt & Pisano, 2003). New markets are opened by entering international countries, leading to an increase in international economic integration. Acquirers can extend the market for their current goods and services, while also enabling them to diversify their product lines (di Giovanni, 2005; Hitt & Pisano, 2003).

Cross-border M&As can allow the acquiring company to enter international markets in an accelerated manner. Speed of entry is one reason that cross-border M&As have become a popular tactic of global expansions for companies (Hitt & Pisano, 2003). By acquiring companies in new countries, the acquiring company can get hold of knowledge and capabilities previously unknown. Another opportunity that arises with cross-border M&As is the gain of access to valuable and complementary resources. If an acquiring company has trade connections with a certain country, then it is more likely that they engage in M&A activities in that country. Relations already made and information already obtained by a potential acquirer in a foreign country can provide insights into potential M&A opportunities (di Giovanni, 2005; Hitt & Pisano, 2003).

Differences in Standards and Regulations

Challenges for the acquirer can arise in cross-border M&As. There can be differences in, *e.g.*, accounting standards, fluctuating exchange rates, or governmental regulations across any national or regional border (Hitt & Pisano, 2003; Larsson & Finkelstein, 1999). Corporate tax treaties between countries lowering taxes and/or removal of double taxation can increase the number of M&A transactions. Accordingly, a decrease in M&A transactions is observed in target countries with higher taxes (di Giovanni, 2005).

Also, it can be difficult to value the target's financial assets when accounting standards differ (Hitt & Pisano, 2003). For example, consider a possible acquisition of a Dutch company by a company from the USA. Accounting standards differ, The Netherlands uses IFRS and the USA uses US GAAP. Variations in valuations can occur due solely to different classifications in cashflows (KPMG, 2021).

Government regulations can hinder a company from introducing a particular good into a market. A real-world example is Ferrero's Kinder Egg, a confectionary chocolate shell containing a plastic toy inside. Such a configuration is not allowed into the USA's marketplace due to federal government regulations. The regulations state that confectionaries are prohibited from having non-nutritive objects within (U.S. Food & Drug Administration, 2022). The Kinder Egg will have to be altered in order to be sold in the USA.

Differences in Culture

Not only do differences in accounting standards and governmental regulations in cross-border M&As matter, but also differences in culture and language can have an effect on the success of cross-border M&As. Di Giovanni (2005) finds that if companies share the same language, then the shared language has a positive effect on M&A performance. There is little chance of either translation errors or linguistic nuances to occur. Often, such is not the case where there is a difference in languages. Experience with cross-border acquisitions is helpful as a company will be more aware of certain pitfalls in the M&A process. Culture differences can even be beneficial to the acquisition performance. Inexperienced acquirers benefit less from these cultural differences. Often, they lack an action plan for resolving cultural-sensitive conflicts. More experienced acquirers will anticipate and prepare for such eventualities in advance of engaging in an M&A transaction, resulting in a better M&A performance (Dikova & Rao Sahib, 2013).

The Geographic Distance

Close geographic proximity between companies in an industry (such as that exist within the high-technology hub of Silicon Valley), are linked with knowledge spill overs and the sharing of human resources, the sharing of human capital, and the resolution of information problems. M&As can create synergies from the aforementioned benefits if the acquiring company and the target company are located close to each other (Uysal et al., 2008). Increasing the distance between the acquirer and the target has a negative effect on generating such synergies. The farther the distance, the bigger the negative effect. However, the effects of distance can be offset by access to better and more direct means of communications between the acquirer and target company personnel (such as clear and reliable telephone connections and wide bandwidth internet connection availability). The greater the access to communications, the more positive is the effect on synergy creation in cross-border M&As (di Giovanni, 2005; Uysal et al., 2008).

All of the challenges and differences between the acquirer's country and the target's country discussed thus far can disrupt synergy realisation of cross-border M&As (Larsson & Finkelstein, 1999). Thus, M&A analysts should be aware of the challenges of M&A activities, when projecting the outcome of a potential M&A.

Part II: Motivations for Merger and Acquisition Activities

In competitive goods and services markets, each company must keep a business eye out on its competitors. The company's objective is to gain market share and to increase revenues. A company can compete in different ways, such as product differentiation, service differentiation, or cost leadership. Another choice a company has in order to increase market share and to increase revenues is either to merge with or acquire its competitors (Rozen-Bakher, 2018). As the number of competitors reduces, the market share of the merged company increases (Homberg et al., 2009).

In this second part of this thesis, several motivations for companies to engage in M&A activities will be analysed and discussed. Motivations for M&A activities (other than increasing the shareholders' wealth), that will be analysed include acquiring technological innovation, creating synergies, and diversification. Although these motivations are in separate chapters, overlaps in effects can occur from engaging in M&A activities. The knowledge, capabilities, and assets gained by these three motivations for M&As can be utilised to increase market share and to increase revenues.

D: Acquiring Technological Innovation

A firm can obtain information and materials regarding new technology in multiple ways. In the first place a firm can have its own research and development (R&D) department, one where it can develop new technologies in-house. The second option is for a research alliance to be formed between separate firms with the intention to share the risk and rewards of an R&D endeavour. A third option for the firm is to license technologies from a licensor company. None of these options involve M&A activities. However, some companies prefer to obtain technology a different way. They procure technologies by engaging in M&A activities (Korde, 2020).

This chapter first analyses the advantages that technology transfer information and/or materials have on potential M&A opportunities. Then, reasons are reviewed as to why young technology companies are often targeted. Also noted are the differences among firms concerning innovation, R&D investments, and R&D productivity, all of which can affect M&A activities. The next topic discusses how differences in sizes can affect a firm's incentive to investment in innovation, and how a firm's size can affect its motivation to engage in M&A activities. This chapter ends with a discussion of two drawbacks caused when an M&A acquisition involves technological innovation.

Information Advantage and Acquiring Technological Innovation

The gathering of information about a target company can help the acquirer realise higher returns *ex post* M&A. The acquirer can approach a shared base of customers and suppliers in the supply chain. It can approach financial institutions or advisors used by both seeking non-confidential information. Even a close geographic proximity can help an acquirer get valuable information on their target companies. Taken together, the quality and quantity of business and technical information an acquirer has on the target company matters. Such information can reveal the true value of the target company to the acquirer, as opposed to the 'hoped for' value. It can aid in the evaluation of the target's R&D projects. It can lead to the creation of technological innovation synergies (Uysal et al., 2008).

Information gathering and analysis can assist established companies with identifying companies that are potential future competitors. In particular, Katz (2021) notes that young companies often have prosperous growth potentials and, often, seek to acquire complementary assets. Often, it is the visibility of a young company seeking to acquire complementary assets that attracts the attention of an established company. To use the Wall Street vernacular, the bigger fish (an established company) can look at the pool of 'up and coming' small companies, searching for the right 'meal', a 'best fit' small target company with growth potential. After identifying a target or targets, the established company can then decide to acquire these companies (Katz, 2021).

In the high-technology sector specifically, M&A transactions are deal-making instruments established companies use to limit competition and to secure their position in the market with existing goods or services. By acquisitions established high-tech companies can protect 'their' market. The acquired company is eliminated from getting a foothold in that market. High-tech companies do pre-emptively rid themselves of potential competitors with M&A transactions (Gautier & Lamesch, 2021). (A discussion of the anti-trust implications of such actions is beyond the scope of this thesis).

Besides protecting the present, there is also the future to consider in protecting a market. Younger companies often have a window into that future, the next generation of goods or services. By accessing the novel innovations of a younger company, the established company can regain control over the future of 'their' market. As Gautier & Lamesch (2021) point out, technologies introduced by younger companies have the potential, at the very least, to compete with the products of established companies. Moreover, these technologies could make the established company's products obsolete (Gautier & Lamesch, 2021). Thus, the importance of market control for the established company can drive the need for M&A transactions to control the effects a younger target company can have on the market.

R&D Investments and R&D Productivity

Bena & Li (2014) make two interesting observations regarding relative R&D investments made by acquiring companies and target companies. A company with either relatively high proprietary R&D investments or one possessing a large intellectual property portfolio, is more likely to be a target, than to be an acquirer. Furthermore, a company with relatively low R&D investment is more likely to be an acquirer, than to be a target. The acquiring company gains innovations and unique products from the target company, without investing in such innovation efforts itself (Bena & Li, 2014; Hoberg & Phillips, 2010). Thus, a company's incentive to invest in R&D in-house can be reduced when new technologies are ‘invested in’ through M&A transactions (Hitt et al., 1990). Combining these two findings can result in a vicious circle for an acquirer. M&A transactions motivated by acquiring innovation, reduce the acquirer’s incentive to invest in in-house R&D. As a result, the need to acquire more innovating target companies increases. Curiously, Cefis & Marsili (2015) find that as M&A transactions increase, the probability of passing the innovation threshold is also increased.

Large economies of scale can be found in the creation of innovations of intellectual property such as software and designs of hardware. The creation of intellectual property is characterised by low variable costs and high fixed costs (Katz, 2021). Exchanging best practices after an M&A increases R&D productivity. More innovations are generated for the same amount of investments (De Man & Duysters, 2005). These innovations can lead to an increased production volume and a higher price premium, which, in turn, can lead to an increase in revenues (Capron, 1999). The probability of a merger occurring increases when companies have a technological overlap in R&D activities. The potential for technological synergy creation is an incentive and a motivation for companies to merge (Bena & Li, 2014).

Effects of Firm Size on Technological Innovation and M&A Activities

The connection between firm size, the degree of innovation, and M&A activities has also been researched. Cefis and Marsili (2015) divide firm size into three classes, namely, small, medium, or large. Small sized firms can pass the innovation threshold by engaging in M&A activities. Be it a first R&D investment, or the first sale of a new product, a small firm can become an innovator simply through the act of merging or acquiring. As small firms tend to innovate on an occasional basis, it is often difficult for them to invest in R&D continuously. While small firms may engage in M&A transactions, gaining knowledge and capabilities, these gains do not transform them into becoming continuous innovators (Cefis & Marsili, 2015).

M&A activities in medium sized firms have a more dispersed impact on innovations, when compared to small firms. Although, for medium sized firms, the innovation threshold can be crossed by engaging in M&A activities. For medium sized firms, M&A transactions are often beneficial in helping them cross the innovation threshold, and becoming continuous and persistent innovators (Cefis & Marsili, 2015).

Large sized firms benefit the most from engaging in M&A activities. To remain as persistent innovators, large firms often use a strategy of M&As to acquire their source of innovation from others (Cefis & Marsili, 2015). As managers get less committed to invest in R&D in-house, they get more incentive to gather innovations by engaging in M&A activities (Hitt et al., 1990). Large firms that were innovators *ex ante* M&A activity, have been found to benefit more from M&As than those firms that have not crossed the innovation threshold. Having the necessary R&D experience aids in the innovation process (Cefis & Marsili, 2015).

Finally, some closing observations that should be noted regarding different firm sizes. For small sized firms and medium sized firms, M&A activities appear to be driven by the need to obtain innovation. Engaging in M&A activities provide them with an entry into areas of foreign knowledge, capabilities, and resources. This *ex post* M&A access, in turn, feeds into and enhances their in-house R&D capabilities (Cefis & Marsili, 2015; Hitt & Pisano, 2003). Large firms often let small firms invest in R&D and innovate, afterwards the large firm will acquire those small firms. Engaging in a R&D race with small firms can be unappealing for large firms where there are moderate levels of aggregate demand. Thus, large firms rather access the useful innovations by acquiring small firms (Phillips & Zhdanov, 2013). Small firms often use new product market resources to continue technological innovation. Large firms often use technological resources gained from engaging in M&A activities for further technological-driven innovations (Lee & Kim, 2016). When compared to other sized firms, large firms also utilise M&A transactions for more than just innovation (Cefis & Marsili, 2015). Some of these other motives will be highlighted later on.

Drawbacks of Acquiring Innovation

Using M&A activities to gather technological innovation can have drawbacks. Knowledge and capabilities gained by M&As can only be valuable with respect to a small portion of the acquiring company. Like not separating the wheat from the chaff beforehand, a sizable amount of unusable information is also acquired. It must be processed along with the smaller amount of valuable information (De Man & Duysters, 2005). How much did the acquiring company have to pay for this unusable information? It is a question that should be addressed as best as possible before engaging in M&A transactions.

In determining whether or not to engage in an M&A transaction to acquire vital research information, the M&A analyst should weigh in the balance the alternative possibility of forming a research alliance. Research alliances let the allied companies cherry pick research information that is useful to each. Value for value is given just for what is available and wanted. In the case of innovation, research alliances tend to outperform M&As. Typically, M&As only outperform research alliances in achieving certain economies of scale in R&D investments (De Man & Duysters, 2005). Perhaps research alliances outperform M&As in such cases due to the avoidance of having to deal with the meshing of different management styles between the companies within the alliance. Each company can hold on to its own management style and still get the information it wants. Answers should come from further academic research.

E: Creating Synergies

Creating synergies can be a motive and/or an effect of engaging in M&A activities. Capron (1999) separates synergies into two categories. The first category is revenue-based synergies, such as increased market coverage and better innovation capabilities. Market coverage can be increased by product line extensions, allowing the merged company to add product lines to the current line-up. Geographical expansion of the current market can also increase market coverage by offering their products to a wider range of customers. Each of these revenue-based synergies can be obtained by resource redeployment (Capron, 1999).

The second category is cost-based synergies, this type of synergy is mostly generated by cutting costs of the merged company, such as reducing labour employment, and savings can be achieved by the disposal of assets (Capron, 1999).

An example of an M&A transaction that is motivated by synergy creation follows. A merger of two pharmaceutical companies that operate in the same pharmaceutical market, but in separate areas. The goods can be marketed as complementary products. The driver for this merger was to get access to technologies from the other company, thereby creating technological synergies. The *ex post* company's R&D department benefits from these technological synergies. The scale of projects increased and the lead time decreased (Bena & Li, 2014).

The 'Synergy Creation' chapter starts off with a discussion of the effect that complementary assets have on the creation of revenue-based synergies. Secondly, a discussion of several factors that can affect the amount of synergies that are created *ex post* M&A. Thirdly, the effect of the economic cycle on synergy creation is discussed.

Synergies and Complementary Assets

Synergies can arise when the firms that are merging (or are making acquisitions) have complementary assets. The synergies gained by using the complementary assets of the *ex post* merged firm can be used for value creation through a growth in sales and the introduction of new product lines, ones differentiated from products made by its competitors (Hoberg & Phillips, 2010). Hoberg and Phillips (2010) find that firms with complementary assets, *ex post* M&A, use the generated synergies to launch new goods into the market, and generate more cash flows. The distribution of the synergies between the firms is determined by the scarcity, and the costs to search for a suitable firm with which to merge (Rhodes-Kropf & Robinson, 2008).

Another type of complementary assets that is important in M&A transactions, is the existence of complementary products. *Ex post* M&A, the acquiring company has the option to kill development (and/or production) of the target's product, or to continue it. This decision depends on product complementarities. If the products of the acquirer and target have a high degree of complementarities, then the acquirer continues target's product development and produces and sells both products (Gautier & Lamesch, 2021). An example is Facebook's acquisition of WhatsApp in 2014. WhatsApp was a competitor for Facebook in the text messaging market. Not only did Facebook remove a competitor in this market, but it also gained WhatsApp's market share and technologies. Facebook continued to invest in WhatsApp's technologies as it was complementary to Facebook's technologies (Reuters, 2014).

Combination Potential, Organisational Integration, Employees, and Differences

The differences, such as culture, organisation, employees, and policies, between an acquiring firm and a target firm can significantly determine the amount of synergies that are generated by M&A transactions. Larsson and Finkelstein (1999) find that synergy creation is affected by combination potential, organisational integration and employee resistance. Firms that have a high potential of combination have a larger opportunity to create synergies than firms that have a low potential of combination. The latter is not likely to create significant synergies (Larsson & Finkelstein, 1999).

Rhodes-Kropf & Robinson (2008) find that firms in the M&A market make a trade-off between the ambition of merging with a higher quality firm, and the loss in bargaining power that results from succumbing to such ambition. A low-quality firm tends to combine with another low-quality firm, the reason being to obtain a larger part of this smaller synergy. The same holds for high-quality firms, 'similars attract'. A high-quality firm can offer a bigger synergy to another high-quality firm, as opposed to a low-quality one. Again, bargaining power in M&A transactions is considered by the firms on each end of the deal. Low-quality firms do not have much power when bargaining with high-quality firms (Rhodes-Kropf & Robinson, 2008; Rozen-Bakher, 2018).

The most advantageous M&A synergies occur if the firms have complementary assets and are a high-quality acquirer and a high-quality target. Even if both high-quality firms have the same bargaining power between them as two low-quality firms have, their respective high quality nature results in higher synergy creation (Rhodes-Kropf & Robinson, 2008; Rozen-Bakher, 2018).

In their research, Larsson and Finkelstein (1999) find that organisational integration is the strongest predictor of synergy creation success. Consequently, the more interaction and coordination by the firms, the higher the amount of synergies that are created. In addition, synergy creation is positively affected by the potential of combination (Larsson & Finkelstein, 1999). However, synergy creation is negatively affected by employee resistance. M&A transactions often have a negative effect on the employees in target firms. Reasons for employee resistance include the stress of being redundant and being fired, or differences in business cultures between the firms. These reasons can cause hostilities by the target's employees, resulting in a more difficult integration process, possibly resulting in a harder time for the acquirer to generate synergies (Larsson & Finkelstein, 1999).

Thus, the relative differences between the acquiring firm and target firm is important when explaining synergy creation, and how the synergy surplus is divided (Larsson & Finkelstein, 1999; Rhodes-Kropf & Robinson, 2008; Rozen-Bakher, 2018).

Synergies and the Economic Cycle

Companies have different options to capture synergies from M&A transactions during the different stages of the economic cycle (Dimopoulos & Sacchetto, 2017; Tarsalewska, 2015). Similar to the economic cycle, M&A activities also follow a cycle. Depending on the M&A cycle, cost-based or revenue-based synergies can be preferred by the company's management (Dimopoulos & Sacchetto, 2017).

During economic recessions companies have the option to utilise M&A transactions to survive and keep production lines operational (Tarsalewska, 2015). During periods of relative low demand, realisation of cost-based synergies (such as reducing fixed production costs) are an option for companies. Cost-based synergies are more pertinent during economic recessions, and typically are countercyclical (Dimopoulos & Sacchetto, 2017).

Revenue-based synergies generated by M&As, such as an increased productivity, are more pertinent during economic expansions and are procyclical of nature. When the economy has relatively high demand, the increased productivity is more valuable to companies. Typically, more demand requires more production. Increased productivity can help to achieve higher production. Economic expansions are observed to lead to M&A transaction waves (Dimopoulos & Sacchetto, 2017).

When analysing the value of potential M&A transactions, revenue-based synergies, cost-based synergies, and synergies that arise from complementary assets should be considered. These three types of synergies are often a driving force for engaging in M&A activities (Bena & Li, 2014; Capron, 1999; Hoberg & Phillips, 2010; Rhodes-Kropf & Robinson, 2008).

F: Diversification

Diversification of products and markets can be a motivation for a company to acquire other companies. For example, Heineken acquired a craft beer brewer in order to diversify their product offering from the 'standard' pilsners (Heineken, 2020). Another way for a company to diversity is by geographical diversification, extending their current market into other countries. Diversification can be aided and achieved by engaging in M&A activities.

Business Risk

As mentioned before, a firm can diversify by acquiring other firms. By this means, a firm can reduce its business risk and reduce the risk that its shareholders face. Opportunities arise in sectors with high growth potentials. If a firm diversifies by M&A transactions made in these sectors, thereby opening new markets, then the firm reduces the overall business risk and the risk for its shareholders (Gupta, Raman, & Tripathy, 2021; Hitt et al., 1990).

If a firm finances an M&A transaction through debt, increasing its leverage, then the firm's financial risk and default risk both may increase (Hitt et al., 1990; Murray et al., 2017). However, the potential cost savings realised by cost-based synergies (that can be generated by M&A transactions), can be used to pay off the firm's debt. Consequently, dampening the increase in the firm's leverage and dampening the increase its financial risk and default risk (Hitt et al., 1990).

A reason why a company should opt to diversify and reduce business risk is the real-world example of the monoculture of bananas. Back in the 1950s to 1960s banana plantations that grew a monoculture of the Gros Michel variety for export found themselves having a problem due to only growing a single variety of bananas. The Panama disease fungus demolished the banana industry, as the Gros Michel was one of the most prized varieties. The Panama disease fungus does not affect all varieties of bananas (Microbe Wiki, N.A.; Stellenbosch University, N.A.). Had the banana plantations grown multiple varieties, perhaps the damage to their business would not be as large.

Geographical Diversification

Cross-border M&As can be seen as a kind of geographical diversification. As pointed out earlier, most countries have different cultures and customs. When a firm moves into a new region it gets access to a new market and can sell its current goods in this new market. The expansion of the sales market of its current goods can provide economies of scale and can reduce the cost per item. The economies of scale lead to potentially higher profits (Hitt & Pisano, 2003). However, a chance exists that the firm's current version of goods does not fit well in the foreign market and foreign demand. Thus, alterations to the current goods might have to be made to accommodate the difference in cultures and customs. For example, a revision in the flavour profile of a confectionery product to suit the taste of consumers in the foreign market.

Moreover, new products can be created for the foreign markets. However, creating new products also means increased R&D expenditures, the increase in costs lowers the bottom line (Hitt, Hoskisson, & Kim, 1997). Again, one must weigh the negative effect against the positive benefit in order to get a truer picture of the more likely outcome. R&D expenditures may be increased, but the geographical diversification can lead to higher returns from new products as the market size is increased (Hitt & Pisano, 2003).

Comparing M&A Types

When comparing diversifying or unrelated M&As to related M&As (such as horizontal M&As), Renneboog and Vansteenkiste (2019) find that unrelated M&As are outperformed by related M&As. They find multiple reasons for this observation. One reason is that a related acquirer is more likely to integrate and operate the target firm, as they have the required skills and resources available. Their finding is also supported if relatedness is measured by cultural similarities, technological overlap and industry classification (Renneboog & Vansteenkiste, 2019).

Conclusion

Mergers and acquisitions are a useful tool for top management seeking to grow their business. M&As are laden with opportunities, but also fraught with pitfalls. A review of the academic literature can provide valuable insights and hints to those whose mission is to advise top management on prospective M&A engagements. Several of the M&A types (such as horizonal M&As, vertical M&As, and cross-border M&As), and various motivations for M&A activities (such as technological innovation, synergy creation, diversification, and combatting competition) are explained and discussed in this thesis.

Ex post horizontal M&A, companies can reduce costs by divesting either the assets from the acquiring company, or assets from the target company. The majority of the asset divestitures performed are that from target companies (Capron, 1999). Another practice of *ex post* M&A cost savings, is to cut back labour employment of similar (or redundant) jobs, often increasing labour employment efficiency (Conyon et al., 2002; Rozen-Bakher, 2018). Although, in the service sector, cutting back labour employment may be hindered by more powerful labour unions (Rozen-Bakher, 2018).

The increased purchasing power of the horizontally merged company reduces its 'cost of goods sold'. The merged company can get lower prices from its suppliers. Lower prices cause lower revenues for these suppliers, some of which will not be able to survive a drop in revenue (Shahrur, 2005).

Market inefficiencies along the supply chain can be removed by vertical M&As (Zhou et al., 2019). Vertical M&As can give an *ex post* acquiring company the ability to hinder its competitors from buying goods at its now *ex post* target suppliers. When utilised, this ability not only hurts the acquirer's competitors, but it also hurts the competitors of its target company (Kedia et al., 2011). During economic recessions, companies have the option to utilise vertical M&As to evade bankruptcy, and keep their supply chain running (Tarsalewska, 2015).

The benefits of R&D are increased if vertically related companies engage in M&A activities. When vertically related companies invest in R&D together, their innovation incentive is stimulated. The stimulation of innovation incentive is higher in vertical M&As (when compared to other types of M&A), because of the removal of market inefficiencies (Kedia et al., 2011; Zhou et al., 2019).

New goods and service markets are opened for companies if they engage in cross-border M&A into international countries. Not only is the market for their current goods and services extended, cross-border M&As also enable companies to diversify their product lines (di Giovanni, 2005; Hitt & Pisano, 2003). International economic integration is increased, because cross-border M&As allow companies to enter foreign markets in an accelerated manner. Cross-border M&A activities also allow a company to obtain previously unknown knowledge and capabilities, and obtain valuable and complementary resources (di Giovanni, 2005; Hitt & Pisano, 2003).

Differences (such as accounting standards, governmental regulations, taxes, and culture) between the acquirer's country and target's country, may hinder the success of the cross-border M&As (di Giovanni, 2005; Dikova & Rao Sahib, 2013; Hitt & Pisano, 2003; Larsson & Finkelstein, 1999).

Mergers and acquisitions allow a company to obtain innovations from target companies. M&A activities can reduce the incentive of the acquiring company to invest in R&D in-house. On the other hand, a company's M&A activity can increase their probability to pass the innovation threshold (Cefis & Marsili, 2015; Hitt et al., 1990). The size of a company effects their potential to become, and remain continuous innovators. For instance, often it is difficult for small companies to invest in R&D continuously. M&A activities can aid medium sized companies to cross the innovation threshold, and become continuous innovators. Large companies seem to benefit the most from M&A activities. They utilize M&A activity as a strategy. Large companies remain persistent innovators by acquiring smaller companies (Cefis & Marsili, 2015). One drawback that innovation gathering by M&A activities causes, is that not all of the acquired knowledge, capabilities, and innovation is useful to the acquiring company (De Man & Duysters, 2005).

Synergy creation can be an important motive for a company to engage in M&A activities. Complementary assets can create revenue-based synergies. Such as growth in sales and introduction of new product lines, products that are differentiated from competing products (Capron, 1999; Hoberg & Phillips, 2010). Cost-based synergies can be generated by cutting costs, such as asset disposals, and reduction of labour employment (Capron, 1999).

The amount of synergy created *ex post* M&A is affected by differences between the participating companies. Differences such as culture, organisation, employees, and policies. Other factors that affect synergy creation are combination potential, organizational integration, and, employee resistance (Larsson & Finkelstein, 1999; Rhodes-Kropf & Robinson, 2008; Rozen-Bakher, 2018).

Diversification can reduce a company's business risk and reduce the risk to its shareholders (Gupta et al., 2021; Hitt et al., 1990:). A different kind of diversification is geographical diversification, and can be achieved by cross-border M&As. New markets can be opened for the current goods and services of a company. The expansion of the sales market can provide economies of scale and can reduce the cost per item. The economies of scale lead to potentially higher profits (Hitt & Pisano, 2003). However, differences in culture and customs between the two countries may hinder successful introduction of the current goods and services into the foreign market.

As one can conclude from the above factors, evaluating a prospective M&A opportunity is not for the faint of heart.

The information on M&As provided in this thesis is limited, because of a length restriction. More types of mergers and acquisitions exist than the three types discussed above. For instance, there are also conglomerate M&As or congeneric M&As. Also, there are more motivations for companies to engage in M&A activities, including increased external financing capabilities, reducing taxes, empire building, and manager hubris.

I urge future researchers to investigate the following two subjects, as more knowledge on these subjects would increase our understanding of the three M&A activities covered herein. First, what options does an acquiring company have to obtain vital information of a target company located in a foreign country? Exploring these options to obtain vital information on a target company may benefit future cross-border M&A transactions. Second, why do foreign countries (when compared to the domestic country) often benefit more from R&D investments resulting from M&A activities? Research may find that foreign countries benefit more from R&D investments if cross-border M&As occur from a developed country into an emerging country.

Appendix A

Author(s)	Title	Published	Journal	Research Question	Sample	Sample Period	Main Findings
Capron, L.	The long-term performance of horizontal acquisitions.	1999	Strategic Management Journal	How is value created in horizontal M&As?	Survey of managers of over 253 H-M&A in USA-Euro manufacturing industries.	1988 - 1992	• Asset divestiture and resource redeployment can contribute to acquisition performance. • Acquisition performance may be damaged when the divested assets and redeployed resources are those of the target.
Cefis, E., & Marsili, O.	Crossing the innovation threshold through mergers and acquisitions.	2015	Research Policy	Does involvement in M&A triggers distinct patterns of innovative behaviour across firms, and whether this effect is conditional on firm size?	Dutch manufacturing firms with more than 10 employees. The sample is composed of 13,901 M&A observations.	1994-2002	• M&As influence the probability that firms will begin innovation activities or persist with them, and these effects vary at different points in the firm size distribution. • Firms that use M&As can persist with the innovation efforts and output over time, and this effect is especially strong for large firms. • M&A help small firms to cross the innovation threshold, increasing the probability of the transition from a non-innovator to an active innovator. However, the M&A effect does not mitigate the tendency of small firms to be occasional innovators.

di Giovanni, J.	What drives capital flows? the case of cross-border M&A activity and financial deepening.	2005	Journal of International Economics	What key roles do macroeconomic and financial variables play in the foreign direct investment (FDI) decision of firms?	A panel data set of cross-border Merger & Acquisition deals.	1990-1999	• The size of financial markets has a strong positive association with domestic firms investing abroad.
Dimopoulos, T., & Sacchetto, S.	Merger activity in industry equilibrium.	2017	Journal of Financial Economics	What is the role of mergers and acquisitions (M&As) in improving productive efficiency via reallocation?	The authors make use of a theoretical model.	-	• Mergers affect productivity directly through realized synergies, and indirectly through firms' incentives to enter or exit the industry.
Fee, C. E., & Thomas, S.	Sources of gains in horizontal mergers: Evidence from customer, supplier, and rival firms.	2004	Journal of Financial Economics	What are the upstream and downstream product-market effects of horizontal M&As?	The sample consists of horizontal mergers following certain criteria. There were 554 transactions included that met the criteria.	1980-1997	• Little evidence that is consistent with an increased monopolistic collusion. • Gains of horizontal mergers include improved productive efficiency and buying power.
Gautier, A., & Lamesch, J.	Mergers in the digital economy.	2021	Information Economics and Policy	What are the characteristics of the firms that Google, Amazon, Facebook, Apple and Microsoft acquire?	The 175 acquisitions of Google, Amazon, Facebook, Apple and Microsoft.	2015-2017	• In the majority of cases that are observed, the product of the target is discontinued under its original brand name post acquisition.

Hitt, M. A., Hoskisson, R. E., & Ireland, R. D.	Mergers and acquisitions and managerial commitment to innovation in M-form firms.	1990	Strategic Management Journal	Are managers committed to invest in R&D after M&As?	The authors make use of a theoretical models, substantiated by academic literature.	-	• The authors suggest a trade- off between growth by acquisition and managerial commitment to innovation. • Acquisitions serve as a substitute for innovation and greater diversification may affect managers' orientations. Managers may reduce their commitment to innovation.
Hitt, M. A., & Pisano, V	The cross-border merger and acquisition strategy: A research perspective.	2003	Management Research	What are the opportunities and challenges that cross-border M&A present?	The authors find answers to their questions through and extensive literature review.	-	• Cross-border mergers and acquisitions present significant opportunities for firms wishing to diversify their activities geographically, learn new knowledge, and gain access to valuable resources. • Cross-border M&A challenges include the difficulty of evaluating target firms, cultural and institutional differences, and the liabilities of foreignness among others.
Hoberg, G., & Phillips, G.	Product market synergies and competition in mergers and acquisitions: A text-based analysis.	2010	The Review of Financial Studies	To which extent do new product synergies and asset complementarities impact mergers?	The authors use firms' 10-K text product descriptions to compute continuous measures of product similarity for every pair of firms in their sample.	1997-2006	• "Transactions are more likely between firms that use similar product market language. • Transaction stock returns, ex post cash flows, and growth in product descriptions all increase for transactions with similar product market language, especially in competitive product markets. These gains are larger when targets are less similar to acquirer rivals and when targets have unique products.

Homberg, F., Rost, K., & Osterloh, M.	Do synergies exist in related acquisitions? A meta-analysis of acquisition studies.	2009	Review of Managerial Science	When is relatedness between firms a source of potential synergies?	67 empirical studies are used, they include 479 statistical correlations between synergy variables.	1948-2002	• Analysis finds that synergies stemming from relatedness depend on industry-, country-, and investor-characteristics.
Larsson, R., & Finkelstein, S.	Integrating strategic, organizational, and human resource perspectives on mergers and acquisitions: A case survey of synergy realization.	1999	Organization Science	What are the mechanisms through which several critical characteristics of an acquisition affect its performance?	Authors make use of a case study of 61 papers.	-	• The extent to which a merger or acquisition resulted in synergistic benefits is related to the strategic potential of the combination, the degree of organizational integration after the deal was completed, and the lack of employee resistance to the integration of the joining firms.
Phillips, G. M., & Zhdanov, A.	R&D and the incentives from merger and acquisition activity.	2013	The Review of Financial Studies	How does an active acquisition market affects firm incentives to innovate and conduct R&D?	A sample of 11,288 firms with 84,471 firm-year observations is used.	1984-2006	• Small firms optimally may decide to innovate more when they can sell out to larger firms. • Large firms may find it disadvantageous to engage in an “R&D race” with small firms, as they can obtain access to innovation through acquisition. • R&D responsiveness of firms increases with demand, competition, and industry merger and acquisition activity. All of these effects are stronger for smaller firms than for larger firms.”

Rhodes-Kropf, M., & Robinson, D. T.	The market for mergers and the boundaries of the firm.	2008	The Journal of Finance	What is the relation between property rights theory of the firm and empirical regularities in the market for mergers and acquisitions?	A sample of 3400 merger transactions was used.	1980-2001	• They find that like buys like in mergers. • The decision to merge balances the expected benefits of pairing with the current potential partner against the expected benefits of waiting and finding a more suitable partner.
Rozen-Bakher, Z.	Comparison of merger and acquisition (M&A) success in horizontal, vertical and conglomerate M&As: Industry sector vs. services sector.	2018	The Service Industries Journal	How does each of the types of M&As (horizontal, vertical and conglomerate) separately affect M&A success?	Data on 394 public firms (half acquirers and half targets) of which 99 industrial and 96 in the service sector.	-	• Horizontal M&As lead to integration success and synergy success in the industry sector, but in the services sector, it leads to a failure of the integration stage, and in the both sectors it hinders the profitability. • Vertical M&As lead to a success only in relation to synergy in the services sector. • Conglomerate M&As lead to integration success and synergy success in the both sectors, but without success in relation to the profitability in the both sectors.

References

Bena, J., & Li, K. (2014). Corporate innovations and mergers and acquisitions. *The Journal of Finance (New York), 69*(5), 1923-1960. doi:10.1111/jofi.12059

Capron, L. (1999). The long-term performance of horizontal acquisitions. *Strategic Management Journal, 20*(11), 987-1018. doi:10.1002/(SICI)1097-0266(199911)20:113.0.CO;2-B

Cefis, E., & Marsili, O. (2015). Crossing the innovation threshold through mergers and acquisitions. *Research Policy, 44*(3), 698-710. doi:10.1016/j.respol.2014.10.010

Conyon, M. J., Girma, S., Thompson, S., & Wright, P. W. (2002). The impact of mergers and acquisitions on company employment in the united kingdom. *European Economic Review, 46*(1), 31-49. doi:10.1016/S0014-2921(00)00086-6

De Man, A., & Duysters, G. (2005). Collaboration and innovation: A review of the effects of mergers, acquisitions and alliances on innovation. *Technovation, 25*(12), 1377-1387. doi:10.1016/j.technovation.2004.07.021

di Giovanni, J. (2005). What drives capital flows? the case of cross-border M&A activity and financial deepening. *Journal of International Economics, 65*(1), 127-149. doi:10.1016/j.jinteco.2003.11.007

Dikova, D., & Rao Sahib, P. (2013). Is cultural distance a bane or a boon for cross-border acquisition performance? *Journal of World Business*, *48*(1), 77-86. doi:10.1016/j.jwb.2012.06.009

Dimopoulos, T., & Sacchetto, S. (2017). Merger activity in industry equilibrium. *Journal of Financial Economics, 126*(1), 200-226. doi:10.1016/j.jfineco.2017.06.014

Epstein, M. J. (2005). The determinants and evaluation of merger success. *Business Horizons, 48*(1), 37-46. doi:10.1016/j.bushor.2004.10.001

Fee, C. E., & Thomas, S. (2004). Sources of gains in horizontal mergers: Evidence from customer, supplier, and rival firms. *Journal of Financial Economics, 74*(3), 423-460. doi:10.1016/j.jfineco.2003.10.002

Gautier, A., & Lamesch, J. (2021). Mergers in the digital economy. *Information Economics and Policy, 54*, 100890. doi:10.1016/j.infoecopol.2020.100890

Gupta, I., Raman, T. V., & Tripathy, N. (2021). Creating value through related and unrelated merger and acquisition: Empirical evidence. *Corporate Ownership & Control*, *18*(4), 67-76. Retrieved from https://web.archive.org/web/20210711102753id_/https://virtusinterpress.org/IMG/pdf/cocv18i4art5.pdf

Heineken. (2020). Wind in de zeilen voor texelse bierbrouwerij door overname heineken. Retrieved from https://nieuws.heinekennederland.nl/wind-in-de-zeilen-voor-texelse-bierbrouwerij-door-overname-heineken/

Hitt, M. A., Hoskisson, R. E., & Ireland, R. D. (1990). Mergers and acquisitions and managerial commitment to innovation in M-form firms. *Strategic Management Journal*, *11*, 29-47. Retrieved from https://www.jstor.org/stable/2486668?seq=1

Hitt, M. A., Hoskisson, R. E., & Kim, H. (1997). International diversification: Effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal*, *40*(4), 767-798. doi:10.2307/256948

Hitt, M. A., & Pisano, V. (2003). The cross-border merger and acquisition strategy: A research perspective. *Management Research (Armonk, N.Y.)*, *1*(2), 133-144. doi:10.1108/15365430380000522

Hoberg, G., & Phillips, G. (2010). Product market synergies and competition in mergers and acquisitions: A text-based analysis. *The Review of Financial Studies*, *23*(10), 3773-3811. doi:10.1093/rfs/hhq053

Homberg, F., Rost, K., & Osterloh, M. (2009). Do synergies exist in related acquisitions? A meta-analysis of acquisition studies. *Review of Managerial Science*, *3*(2), 75-116. doi:10.1007/s11846-009-0026-5

Katz, M. L. (2021). Big tech mergers: Innovation, competition for the market, and the acquisition of emerging competitors. *Information Economics and Policy*, *54*, 100883. doi:10.1016/j.infoecopol.2020.100883

Kedia, S., Ravid, S. A., & Pons, V. (2011). When do vertical mergers create value? *Financial Management*, *40*(4), 845-877. doi:10.1111/j.1755-053X.2011.01164.x

Korde, A. (2020). 5 ways to acquire a new technology for your business. Retrieved from https://indieseducation.com/ways-to-acquire-a-new-technology-for-your-business/

KPMG. (2021). *IFRS compared to US GAAP - handbook.* (). December, 2021: KPMG. Retrieved from https://assets.kpmg/content/dam/kpmg/xx/pdf/2021/12/ifrs-us-gaap-2021.pdf

Larsson, R., & Finkelstein, S. (1999). Integrating strategic, organizational, and human resource perspectives on mergers and acquisitions: A case survey of synergy realization. *Organization Science, 10*(1), 1-26. doi:10.1287/orsc.10.1.1

Lebedev, S., Peng, M. W., Xie, E., & Stevens, C. E. (2015). Mergers and acquisitions in and out of emerging economies. *Journal of World Business : JWB, 50*(4), 651-662. doi:10.1016/j.jwb.2014.09.003

Lee, J., & Kim, M. (2016). Market-driven technological innovation through acquisitions: The moderating effect of firm size. *Journal of Management, 42*(7), 1934-1963. doi:10.1177/0149206314535439

Lim, K., & Danubrata, E. (2012, -09-28). Heineken wins control of tiger beer maker; focus shifts to F&N. *Reuters* Retrieved from https://www.reuters.com/article/uk-apb-shareholders-idUKBRE88R05M20120928

Microbe Wiki. (N.A.). Panama disease in bananas. Retrieved from https://microbewiki.kenyon.edu/index.php/Panama_Disease_in_Bananas

Murray, B., Svec, J., & Wright, D. (2017). Wealth transfer, signaling and leverage in M&A. *International Review of Financial Analysis, 52*, 203-212. doi:10.1016/j.irfa.2017.06.002

Phillips, G. M., & Zhdanov, A. (2013). R&D and the incentives from merger and acquisition activity. *The Review of Financial Studies, 26*(1), 34-78. doi:10.1093/rfs/hhs109

Renneboog, L., & Vansteenkiste, C. (2019). Failure and success in mergers and acquisitions. *Journal of Corporate Finance (Amsterdam, Netherlands), 58*, 650-699. doi:10.1016/j.jcorpfin.2019.07.010

Reuters. (2014). Facebook to buy WhatsApp for $19 billion. Retrieved from https://www.reuters.com/article/us-whatsapp-facebook-idUSBREA1I26B20140219

Rhodes-Kropf, M., & Robinson, D. T. (2008). The market for mergers and the boundaries of the firm. *The Journal of Finance, 63*(3), 1169-1211. doi:10.1111/j.1540-6261.2008.01355.x

Rossi, M., Yedidia Tarba, S., & Raviv, A. (2013). Mergers and acquisitions in the hightech industry: A literature review. *International Journal of Organizational Analysis (2005), 21*(1), 66-82. doi:10.1108/19348831311322542

Rozen-Bakher, Z. (2018). Comparison of merger and acquisition (M&A) success in horizontal, vertical and conglomerate M&As: Industry sector vs. services sector. *The Service Industries Journal, 38*(7-8), 492-518. doi:10.1080/02642069.2017.1405938

Shahrur, H. (2005). Industry structure and horizontal takeovers: Analysis of wealth effects on rivals, suppliers, and corporate customers. *Journal of Financial Economics, 76*(1), 61-98. doi:10.1016/j.jfineco.2004.01.001

Stellenbosch University. (N.A.). Brief history of banana fusarium wilt. Retrieved from http://www.sun.ac.za/english/faculty/agri/plant-pathology/ac4tr4/background/brief-history-of-banana-fusarium-wilt

Tarsalewska, M. (2015). The timing of mergers along the production chain, capital structure, and risk dynamics. *Journal of Banking & Finance, 57*, 51-64. doi:10.1016/j.jbankfin.2015.03.014

The Kraft Heinz Company. (2015). H.J. heinz company and kraft foods group sign definitive merger agreement to form the
kraft heinz company. Retrieved from https://ir.kraftheinzcompany.com/static-files/2303265e-a98f-4082-bfc1-fc90f462742f

The New York Times. (2002, July 9,). EBay to buy PayPal, a rival in online payments. Retrieved from https://www.nytimes.com/2002/07/09/business/ebay-to-buy-paypal-a-rival-in-online-payments.html

U.S. Food & Drug Administration. (2022). Import Alert 34-02. Retrieved from https://www.accessdata.fda.gov/cms_ia/importalert_107.html#:~:text=Section%20402(d)(1,value%20to%20the%20confectionery%20product

Uysal, V. B., Kedia, S., & Panchapagesan, V. (2008). Geography and acquirer returns. *Journal of Financial Intermediation, 17*(2), 256-275. doi:10.1016/j.jfi.2007.12.001

Zhou, K., Yan, R., & Liu, Y. (2019). Vertical merger, R&D collaboration and innovation. *The European Journal of Finance, 25*(14), 1289-1308. doi:10.1080/1351847X.2019.1589551