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Chair of Industrial Organization and Competition Theory

Anticompetitive Mergers in Digital Markets

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INTRODUCTION

Mergers and Acquisitions practices have been around for quite some time now, and do not represent cutting-edge strategies adopted by firms to achieve intents to grow. In fact, the Great Merger Movement (1895-1905), dates back more than 100 years ago. As a matter of fact, it was exactly during such period that US firms, predominantly, started to fundamentally comprehend the magnitude and significance of conducting such activities. Nonetheless, fast-forward a century, and while the picture does not seem to have experienced drastic changes, this phenomenon encounters new horizons. For instance, reports demonstrate how the 2021 M&A market got a hold of unprecedented transaction volumes, setting all-time highs and breaking prior records by a long shot. However, as this trend is expected to keep up with the current motion, experts and scholars are increasingly trying to understand the main elements driving such tendencies.

In turn, one of the main factors encouraging such breakthrough lies in the exceptional expansion technology and innovation has been having on society, and therefore, on the economy. To effectively grasp such fortuity, we can observe that the largest 5 US corporations by market capitalization, are all firms active in digital markets. Henceforth, such information suggests that these industries are characterized by some extremely peculiar features, allowing companies to exploit resources in a league of their own. In particular, this trend would not be intimidating if such expansion were to be based upon similar developments in other industries. However, evidence shows that behind Big Tech and digital firms' unrivaled development, hundreds of non-sanctioned, unlawful, and under-the-table mergers and acquisitions have been paving the way.

On the other side of the coin, the recent flourishing of such activities went hand in hand with record numbers of merger control filings in many jurisdictions. Undoubtedly, such engagement served as to shield current M&A operations that could result in a lessening of a market's competition and subsequent cutbacks on consumers' welfare. At the same time, however, the results of antitrust authorities' work of protecting consumers, have been effective only to a partial extent. The lack of tools and methods to adequately counter such threatening dynamics, lays claim to new instruments and approaches to be used in the assessment of such mergers, especially considering the complex structure of digital markets.

This paper will first discuss Mergers as a distinctive notion: this will help us understand the main concepts around such topic and lay strong grounds upon which further analysis can be developed. This section includes understanding mergers from their definition all the way through the different types of such activity, the causes, consequences, and ultimately the notions surrounding anticompetitive mergers. Consequently, the debate will evolve around the acknowledgment of M&A practices within the digital markets' boundaries. While the competitive landscape in this context exemplifies the unconventional attributes of

such markets, the process behind mergers of digitally intensive firms, and an example of a potentially anticompetitive merger (case in point), contribute to taking on board the cardinal forces in connection with this environment. Lastly, the efforts to stipulate coherent reasoning of the authorities in charge of regulating the competitive process, will sustain the comprehensive understanding of both the implications and challenges occurring in such scenario. In drawing things to a close, this will give us the framework to develop propositions to essentially enhance antitrust authorities' much-needed approach rearrangement.

Chapter 1. Mergers: An Overview

1.1 Exploring Mergers

1.1.1. Definition

Starting from the 19th century, M&A has played a key role in shaping a corporation's strategy to exploit the competitive advantages, expand the firm size, gain market share, and ultimately increase profits. Nonetheless, the often-disappointing performance of M&A has prompted a significant amount of research from the 1950s: as a result, several scholars and experts of the matter have tried to identify the principles and structure of M&A, the reasons behind such operations, as well as why some of these practices have greater impacts on a market's competition than others. In this section, we are going to analyze Mergers and Acquisitions from a conceptual point of view, with the aim of providing strong grounds for further developments and in-depth analysis.

As far as outlining the definition of M&A, many scholars do not explicitly distinguish between the object of their study: merger or acquisition. These terms – often used interchangeably – fundamentally relate to the same area of study: whether discussions evolve around one or the other, researchers examine both and frequently focus on mergers, but label their work 'M&A', or vice versa. The main reason explaining such controversies and doubts, primarily stems from the fact that these activities can take many forms, depending on their context. It follows that the lack of theory regarding the matter resulted in having a rather blurred concept that has room for improvements from a pure denotational point of view. Nevertheless, we can refer to M&A as a portfolio of transactional types: particularly, researchers – such as Teerikangas et al. (2019)¹ – suggest categorizing the different types of M&A according to: target, buyer type, timing of the purchase, deal structure and relative strategic or organizational based-fit: this can help in structuring the context of such operations. Furthermore, the theories related to M&A definition often differ due to the contrasting approach such doctrines take with respect to the actor involved in the discussion. In particular, while textbooks tend to focus mainly on the financial or sociocultural aspects of M&A, practitioners and consultants prefer to offer expertise on pre-deal valuation, post-deal integration, or change management. In a similar way, academics operate in disciplinary silos ranging from finance, to strategy, organizational behavior, and international management, sometimes extending the subject to psychology, history, and sociology areas. Clearly, the impediments to provide robust theories and the failed efforts to stipulate coherent interpretations are associated with the multi-sided aspects and forms M&As can take, hindered by the one-sided lens research and experts tend to adopt when confronting such issues.

¹ Junni P., Teerikangas S., 2019

On a rather more practical level, mergers and acquisitions are usually defined as a situation involving two or more firms that blend to form a new entity. In fact, M&A is a general term that describes the consolidation of companies or assets through various types of financial transactions, including mergers, acquisitions, consolidations, tender offers, purchase of assets, and management acquisitions². Although more frequent in some industries rather than others, nothing stops these operations from occurring in any sector, at (almost) any time, and according to different rationales. For instance, empirical research proves that M&A activities are far more frequent in industries such health care, technology, finance and retail rather than manufacturing sectors or other industries. Consequently, as previously indicated, even if treated referring to the same meaning, a fundamental difference separates mergers from acquisitions. In this regard, it is crucial to understand that Mergers are represented as the combination of two firms, which subsequently form a new legal entity under the banner of one corporate name. It occurs when two separate entities combine forces to create a new, joint organization requiring new ownership and management structure. Successful mergers that resulted in benefits for the merging firms include the \$75.3-billion merger between Exxon and Mobil taking place in 1999, which created a dominion in the energy sector and reshaped the industry's organization that had experienced a hit due to the persistently low oil prices³. In contrast, an Acquisition occurs when one company purchases another outright, effectively implementing a takeover of one entity from another. When such practices take place, the smaller company is usually consumed and ceases to exist with its assets becoming part of the larger company: these types of transactions require larger amounts of cash but grant an absolute power to the buyer, as opposed to mergers. Additionally, even if they are often referred to as takeovers, these practices generally carry a more negative connotation than mergers: as a result, companies may refer to an acquisition as a merger, even though it is clearly a takeover. For instance, examples of such acquisitions include Pfizer's notable acquisition of Warner-Lambert for \$90 billion (2000), which accounts for one of the all-time record deal for this type of transaction⁴. In that case, both companies operated in the pharmaceutical drug industry, and the deal between these two corporations became known as one of the most hostile acquisition examples in history.

Moreover, an additional distinction can be made between mergers and acquisitions: common divergences to differentiating a deal is whether the purchase is friendly, therefore referring to as mergers, or hostile, in which case the matter evolves around claims of acquisition. That said, in practice, friendly mergers of equals do not take place very frequently as only in rare occasions CEOs would agree to trade their own

² Hayes A., 2022

³ Brooks N. R., 1998

⁴ Global Expansion, 2020

authority for the potential benefits stemming from the combination of joint forces, especially since the usage of the term M&A suffers a managerial bias.

1.1.2 Motives

As far as the reasons why firms may engage in M&A operations, these can vary according to the different types of industry, sectors or set of activities the firm conducts. Nonetheless, we can find a common pattern through which firms may find opportunities to merge or acquire with other businesses with the fundamental goal of increasing the competitive advantage and ultimately scale the firm's realized profits. In this section we will aim at unveiling the main motives influencing a firm's decision to merge with other businesses, effectively discovering why such mergers and acquisitions are of vital importance for corporations in the competitive landscape.

In the case of M&A, the main premise is that these activities are generally intended to benefit consumers as the union of two firms can enable businesses to operate more efficiently. This is achieved primarily by exploiting economies of scale – which occur when a firm experiences cost advantages by producing at an efficient rate, spreading costs over larger amounts of production – and economies of scope – which refer to situations where producing two or more goods together results in a lower marginal cost than producing them separately –. This ultimately has an effect on the retail price offered to consumers, which can now be smaller thanks to the reduction in the overall operational costs. This process of combining business activities to increase performance while decreasing costs is generally referred to as synergy⁵ and represents the main reason driving M&A. It follows that when two businesses have complementary strengths and weaknesses, implementing (financial or operational) synergy at the corporate level represents an opportunity for firms as they can increase the creation of value through the company's better-performing value chain.

Aside from achieving synergy, a set of other reasons form the rationale behind firms' M&A activities. Corporations' related motives often relate to the company's intentions of growth: this entails growth in sales – allowed by a set of factors such as reduced production costs, reduced marketing and sales costs, increased access to resources, brand name & awareness, and lower prices, to name a few – which can be translated into larger firm size and subsequent greater market share⁶. As a consequence, the company can achieve a higher market power and can therefore have a major influence on the market by adjusting prices, quantities, and overall offerings. Moreover, firms may engage in M&A by finding opportunities to acquire and gain access to necessary resources that can range from rare raw materials to customers & specific

⁵ CFSG, 2022

⁶ Dhaval S.

customer segments, manpower, or other asset categories. In particular, as we will later explore in greater detail, mergers in technology-intensive industries often happen in order for firms to acquire intangible assets such as particular know-how or specific technologies, that would otherwise be much costly and/or timely to develop internally. Furthermore, some empirical cases show how publicly traded corporations may undergo a merger to benefit their shareholders⁷. The existing shareholders of the original organizations receive shares in the new company after the merger: this can be beneficial especially if the former company was considered undervalued, and through the merger and subsequent growth strategy, can gain value and increase returns to shareholders. Additionally, aside from Mergers' eventual result in better planning and utilization of financial resources, a common reason for mergers lies in optimizing tax-related issues. In fact, when a firm with accumulated losses merges with a profit-making company, it is able to utilize a tax shield: a company having losses will not be able to set off losses against future profits since it is not a profit-earning unit. Given the importance of taxation's role in a corporation, it emerges that to lower the tax liability, a company generating substantial taxable income may look to merge with a company with significant Net Operating Losses (NOL).

Lastly, the main reason for corporations to seek mergers is to effectively reduce the competition. Nonetheless, this comes as a double-edged weapon. While the company can exploit this situation by imposing itself on the market through increased market share, this does not come free of negative effects for consumers, at least not always. Clearly, the merger or amalgamation of two or more companies will eliminate competition among them: and as we have outlined, this should benefit consumers through lower prices. At the same time, however, consumers will now face a lower range of products, and in worst cases, the merging effect will harm consumers if the new blended company exerts anticompetitive behaviors and can set higher prices and lower quality, similarly to common practices affecting imperfect types of competitions such as monopolies, oligopolies or monopolistic competition.

1.1.3 M&A waves

Mergers and acquisitions have become widely widespread progressing into a prevalent research area not only for academics but primarily for investors, analysts, and the audit world as well. In fact, the increase in research and investigation in this matter, is closely linked to M&A's increasingly important role in the competitive environment: various reports have shown how conducting M&A is gradually becoming a standard way of practice for executives and officials that face competition within their firm's industry. The current literature on M&A identifies six main 'waves' of such activities throughout history, showing an

⁷ Richard A., Shick and Frank C. Jen, 1974

upward trend on both the volume and value of such activities⁸. Furthermore, each wave has its unique characteristics, has been dictated by its relative circumstances and has had different effects on industry competition on one side, and competition authorities' response on the other.

The first wave, assumed to be exclusively US-related, started approximately in 1900, driven by an accentuated economic growth and a lack of antitrust regulation. Hence, the outcome resulted in the creation of monopolies primarily conducting activities in the manufacturing, oil, and steel industries⁹; this first wave ended in 1903 with a nationwide economic decline.

Subsequently, strong economic activity in the US, led the second wave of mergers. Encouraged by the post WW I's strong need for industrial development, this wave focused on forming oligopolies through diversification strategies and involved friendly acquisitions between smaller firms. This was due in response to interventions by the U.S. government to impose antitrust legislation and ban anticompetitive corporate behavior¹⁰, especially after the effects of the first wave. This wave, which ended with another economic downturn – the 1929 Great Recession – involved firms actively operating in the petroleum and primary metals industries; this 2nd wave strongly influenced the establishment of the Securities and Exchange Commission (SEC) in 1930.

The third wave, initiated in the late 1950s, lasted roughly 10 years and is today known as the age of conglomerate mergers in history. Not surprisingly so, as the previous two waves were mainly centered around horizontal and a few vertical mergers, this third wave is characterized by a global initiative and a major focus on firms' dynamism of acquiring other companies in different lines of business, with the scope of diversifying and forming conglomerates¹¹. As different regions and continents of the world were involved, such as the US, Europe and the United Kingdom, unrelated diversification reduced firms' risks associated with being active in only one industry. This, however, slowed down corporate decision-making and created inefficiencies: as a result, while short-term market reaction showed positive effects, the profitability of acquirers did not improve, and many acquisitions were subsequently divested in the years that followed.

Evidence of the fourth wave can be found starting from 1980¹², and occurred mainly in the US, Europe, and Asia. The term 'merger-mania wave' – often also called 'megamergers' – refers exactly to this period, where economies experienced a never-seen-before increase in the number and size of these deals. The

⁸ Kolev K., McNamara G., Haleblan J., 2012

⁹ Sudarsanam S., 2003

¹⁰ Stigler G., 1950

¹¹ T.J.A. Nouwen, 2011

¹² Ravenscraf D. J., 1987

deregulation of financial markets, favorable economic conditions, and relaxed antitrust legislation that allowed horizontal M&A, fuelled this 4th wave, characterized by a return to specialization on core businesses, the elimination of inefficiencies in conglomerates, and the Japanese and European investor's search for opportunities to acquire cheap US corporations that were suffering the US Dollar decline. This fourth wave is defined by the peculiar increase in hostile takeovers and LBOs¹³ – leveraged buyouts –, against the wishes of the targeted firm management, owners, or shareholders. The conclusion of the fourth wave matches the crash in stock markets.

The fifth wave, starting from 1990, confirmed the previous trends in globalization and continued in the direction of related M&A, which, together with cross-border M&A, constituted an important role in firms' growth strategies¹⁴. As opposed to the fourth wave, this subsequent wave mostly involved friendly deals: this is partly due to stricter anti-takeover laws imposed by the different jurisdictions. During this period, while acquirers did not experience major benefits from the deals, targets found surprising gains from these M&A, particularly in terms of short-term exceptional returns.

Shortly after the economic descent of 2000, which caused the end of the fifth wave, a sixth wave started emerging. Following the market recovery, globalization continued driving M&A, for which a substantial part is due to cross-border M&A and private equity investments in sectors such as real estate and retail that also increased during this time, simultaneously with the LBO comeback¹⁵. International mergers increased in number and value, especially thanks to the development of the European Union and the erosion of nationalistic barriers as the continent moved to a unified market structure with a common currency. As most of these mergers occurred between many different sectors of the airline, automotive, banking, petroleum, and Internet, this sixth wave ended with the financial crisis of 2007, which had an economy-wide impact.

Finally, we can outline a seventh wave, which is still currently undergoing: started roughly in 2011, this wave could not be more influenced by globalization as the interrelation between markets and nations is far more developed than ever. This is also shown by peaks of transaction value, reaching \$2 trillion in 2018¹⁶, a value unreachable just until a few years ago. This seventh wave finds its roots in disruptive innovations that are changing the industry landscape and blurring industry boundaries. In turn, this calls for acquisitions of start-ups and adjacent business, in an attempt to strengthen competitive strategies and thus revenue and growth.

¹³ Ching K., 2019

¹⁴ Gregoriou G. N., Renneboog L., 2007

¹⁵ Wright M., Renneboog, L., Simons, T., & Scholes, L., 2006

¹⁶ Reuters, 2018

1.2 Types of Mergers

Having a better idea of what mergers are, the reasons behind firms' initiatives to conduct such operations, and the various M&A's development through time, it becomes now central to determine and explore the different types of mergers. Amongst the general merger strategy, a demarcation can be made according to the different categories such mergers refer to. In particular, we examine the three most common forms of mergers: vertical, horizontal, and conglomerate. Aside from these categories, other subdivisions deserve to be mentioned: these consist of market extension and product extension. The main differences between these various categorizations depend primarily on the economic function, purpose of the business transaction and relationship between the merging companies.

1.2.1 Vertical

First off, we consider one of the most common – and theoretically straightforward – type of merger: vertical mergers. This category, which essentially exploits the idea of creating something that's greater than the sum of its parts, occurs when two or more firms, operating at different levels within an industry's supply chain, combine their operations, especially along the production and distribution process of a business¹⁷. This type of merger finds its rationale in the aforementioned synergies: in turn, this has an effect on the operations' efficiencies which, as they are enhanced, create a stronger & higher quality control, ultimately generating benefits from a better flow of information along the supply chain. It follows that the firm conducting this merger strategy acquires complete control over every aspect of its supply chain, all the way through from sales to the final customer. In fact, most vertical mergers involve buying the key suppliers of those components necessary for the company's products, together with the distributors of those products and the retail locations in which they are sold. However, some cases of vertical mergers show that this type of transaction can occur even in instances where the two firms are not actual competitors, and interestingly so, the convergence still makes logical sense.

Nonetheless, vertical mergers comprehend some limitations, predominantly for what regards compliance and management. In fact, these mergers can hinder flexibility and might result in new complexities for the business to manage, together with other constraining factors such as key personnel loss and problems resulting from the possibly contrasting corporate cultures that blend as one¹⁸. Examples of this type of vertical merger include, for instance, cases where a car manufacturer merges with a parts supplier in order for common processes to be done with closer proximity and visibility. As a consequence, the car manufacturer gains better control over the price of parts and the parts supplier benefits from a consistent

¹⁷ Hart A., 2022

¹⁸ Rana S. et Al, 2010

stream of business. Moreover, real-world examples of such operation can be found in Ikea's acquisition of Romanian and Baltic forests which took place in 2015¹⁹. Ikea, the Swedish flatpack furniture manufacturer and distributor, tried to face its dependency from essential raw materials for his products – such as wood – by ensuring that the raw material it uses comes directly from its own sustainably logged forests, as well as being insured against any geopolitical issues that may arise if the firm contracts with unstable governments where it would otherwise need to purchase wood from.

1.2.2 Horizontal

While vertical mergers fundamentally relate to actions of backward or forward integration, in the case of horizontal mergers, we encounter a slightly more complex situation. In fact, this type of merger represents the most popular, yet scrutinized type. In particular, whilst vertical mergers allow the merging parties not necessarily to be competitors, in the horizontal mergers' picture, the two or more firms seeking to combine, are corporations operating in the same market, meaning they offer similar products or services to customers, therefore acting as competitors. From a purely notional point of view, horizontal mergers can be defined as the situations in which two companies active in the same industry come together. Here, as in the case of vertical mergers, the more profound thinking behind this type of merger is that the blended companies are worth more than they are separate. This second category emphasizes the link between competitors' convergence²⁰: by the act of one company merging with a direct competitor, it can combine the product lines and locations of the two entities, resulting in more robust offerings to customers.

As far as their implementation, most successful cases of horizontal mergers, work through means of accentuating the extra value that can be generated at every level of the company's value chain, from the supply chain where the bigger company can avail of bigger discounts, right through to the customer, where it now has a much larger customer base. Furthermore, what makes this type of merger so attractive is primarily that it can strongly help to build economies of scale and decrease market competition by eliminating the very same source of competition. Specifically, apart from reducing competition and leveraging economies of scale, horizontal mergers can be particularly alluring to companies seeking to generate growth in a rather quick manner, gain products, ideas, professionals (and their skill sets), together with appropriating additional resources and ultimately increase customer demographic via geography or new products/services, therefore penetrating deeper into markets. As a result, common motives for establishing such M&A strategies, include larger access to financial capital – mainly through lower cost of capital –, larger customer base, improved access to human capital, lower manufacturing costs per unit, and

¹⁹ Rose D., 2015

²⁰ Langohr P, 2003

advantages on inputs through bulk discounts from suppliers²¹. Nonetheless, this type of merger, while extremely beneficial for firms, comprehends a set of potential downsides. First off, this approach can have anti-competitive connotations, especially if the two parties had previously been engaged in a price war, since the acquirer can then raise prices. Moreover, horizontal mergers usually come with increased regulatory scrutiny and stringency while also bearing the possibility of value loss if the post-merger integration is not fully realized. Other common disadvantages concerning this type of merger include antitrust issues – for instance, when US antitrust agencies have become involved in M&A investigations, it's invariably for horizontal mergers –, together with reputational risks as the bigger the company becomes, the bigger of a target it becomes. Additionally, firms must confront issues related to overpayments, stemming from errors of overvaluations, and problems due to inconvenient scale developments: companies conducting horizontal mergers often suffer the establishment of extra layers of middle management, the loss of control across the organization, and the general lack of agility. Furthermore, the most noteworthy cases of horizontal mergers cover Hewlett-Packard (HP) and Compaq's agreement to merge in 2001, effectively creating an \$87 billion global technology leader²². In that case, executing the merger allowed HP to better fight off the increasing competition within the information technology industry. Thanks to the combination of resources and information, the newly formed company believed it would be better able to innovate and face the market's ever-changing demand.

1.2.3 Conglomerate

The third most common type of merger is referred to as Conglomerate merger: unlike the other types of mergers, a conglomerate merger occurs between two companies whose business activities and industries may be completely unrelated. It deserves to mention that a conglomerate is a large company composed of smaller companies it has acquired over time.

As counterintuitive as it may seem, this type of merger can turn out to be extremely beneficial. While this category of mergers experienced a decline in popularity since its peak in the 1960s and '70s, conglomerate mergers are still seen as valuable if the value of the two companies combined is greater than what they are valued at separately. Moreover, a further sub-distinction has to be made: conglomerate mergers can be distinguished between pure and mixed²³. Whereas pure conglomerate mergers refer to mergers between companies with absolutely no market crossover, mixed ones occur when two companies merge in order to expand their markets, products, or services. Moreover, these mergers can provide strong advantages to

²¹ CFI, 2020

²² HP, 2001

²³ Deal Room, 2021

merging firms by providing an increased market share and the diversification of a service, asset, and stock portfolio while also offering the opportunity to cross-sell products. However, conglomerate mergers can be especially challenged to integrate dissimilar companies, therefore raising the risk of culture clashes and lost efficiency due to disrupted business operations. Particularly, disadvantages of such mergers relate to possible governance conflicts, potential loss of tax benefits and an inherent overall reduction in market efficiency²⁴. Perhaps one of the most recent and emblematic examples of conglomerate merger can be found in Amazon's completed acquisition of Whole Foods for \$13.4 billion (2017)²⁵. The acquisition reflects both the vastness of the grocery business (which accounts for roughly \$800B in annual spending in the US), and the acquiring company's intents to become a significant player in the food and beverages market. While such merger has been categorized at times as horizontal and at times as vertical, we can distinguish the conglomerate nature by noticing that Amazon fully broke into the grocery industry, of which just until a few years ago, was more than far from being a market competitor. Additionally, this example confirms the complexities and cross-overs involved with modern-day large mergers.

1.2.4 Market extension & Product extension

Lastly, companies make use of the two supplementary types of mergers for expansion and growth purposes: these are commonly nominated market extensions and product extensions. While these two additional forms of M&A are rather similar in some aspects, some key differences distinguish one from the other. In particular, whereas the former usually take place between two companies providing the same product or service, the latter involves two companies producing different products that are typically consumed together, in an attempt to improve their offering while simultaneously cutting down on operating costs²⁶. In particular, two firms engaging in market extension, are characterized by both producing the same general types of products but competing in unrelated markets. This approach, which gives the acquiring firm a larger sales upside, is focused on the company's intention of developing a larger customer base which is essentially achieved through acquiring customers in new, unexplored markets²⁷. It follows that if the firm's purpose is to expand its reach, a market extension merger can provide bases to do so, especially thanks to its ability to attract new clients, therefore boosting the customer base, and reducing external risks through relative diversification. On the downside, potential problems could arise in rationalizing the two sets of product lines to make them look as if they are being produced and serviced by a single, unified business.

²⁴ E-Finance Management, 2022

²⁵ Hirsch L., 2018

²⁶ Carlson A., 2020

²⁷ Deal Room, 2022

On the other hand, product extensions can be defined as the situation where two companies operating in the same market, and which offer different products or services decide to join forces to expand the product's reach within its relevant market. A peculiarity of this type of merger, lies in the fact that the two products for which the merger occurs, are often products subject to co-consumption²⁸. As a result, merging companies can group their products together, hence sharing expertise, technology, and designs, as well as improve access to a much bigger set of customers, potentially leading to greater profits. A striking example of such an M&A category can be seen in the 1977 acquisition of Pizza Hut by PepsiCo²⁹. Pepsi's need for more visibility turned out to be a call for the merger with the notorious pizza-serving restaurant: as a consequence, the merger resulted in advantages for both parties. In fact, Pepsi increased its sales overnight and secured the exclusive rights to sell its drink in Pizza Hut's restaurants; correspondingly, Pizza Hut was able to stock its restaurants with a drink that could be purchased in bulk, over very favorable terms.

1.3 Anticompetitive Mergers

Given the findings of the subdivision above, we conclude this section with the examination of anticompetitive mergers. By deep-diving into the investigation of such phenomenon, we first analyze when can mergers raise concerns, while then proceeding through the potential effects these exploitative mergers can have on an industry's competitive rivalry.

1.3.1 Outlining Anticompetitive Mergers

The picture emerging clearly shows that not all mergers pose threats to competition in any market. In fact, most of them represent nothing more than investments, attempts to better exploit the unused resources, or cases where the competition's reduction is so minimal so as not to have a strong impact on consumers. Nonetheless, particular cases demonstrate how mergers can lead to firms' significant increase in the probability of exercising market power. If one company merges with another and as this new entity they are able to control and exhibit market power, this could harm consumers through losses in quality, reduction in output, and increase in prices. As a result, mergers that present potential risks to an industry's competition need to be thoroughly assessed. This is why cases of potentially anticompetitive mergers represent the situation that competition authorities seek to investigate. In particular, the rationale focuses on preventing firms from gaining market power, rather than attempting to control market power once it exists. By doing that, an effective competition policy requires a judgment concerning the impact of a merger on competition before the merger has occurred. As we will greatly analyze later on in Chapter 3, the process is developed

²⁸ Larkin Y., Lyandres E., 2015

²⁹ Neumann A., 2019

as a set of analyses and examinations of the factors influencing such merger, together with its potential consequences.

Moreover, when assessing the elements triggering a competition authorities' investigation, a strong role is occupied by the access to relevant information³⁰. In fact, this factor represents the main aspect to define the accuracy of merger control processes. If access to perfect information would be available, enforcement agency's work would be reduced to the examination of only the demand and supply functions facing the merging parties in order to evaluate whether the merger would likely harm competition in a sinister way. Unfortunately, however, access to perfect information is a high-demanding ambition, and enforcement agencies are forced to gain access to information through indirect sources. That said, assessing the demand & supply function, can still turn out to be a great tool to get a sense of the conditions of the competitive firms' behavior. This entails understanding companies' responses to a firm's attempts to raise prices. One hint indicating the harmlessness of a merger focuses on estimating whether a sufficient number of buyers will turn to alternative sources of supply and make a price increase unprofitable. In addition, in order to assess demand and supply conditions, competition authorities must obtain crucial information such as the identity, views, strategies, and behavior of buyers and competitors; characteristics of the relevant products and their close substitutes; buyers' switching costs and the existence of secondary markets, together with transportation costs and possible government restraints, amongst other evaluations³¹. To such a list, a special mention is required for the assessment of foreign competition. As outlined by the 5th M&A wave onward, the increasing trend in globalization is shifting market and industries' organization, as a consequence, the penetration of foreign firms into domestic markets represents an increasing concern for government authorities.

Furthermore, while several sources of important information in a merger inquiry are available, in a comprehensive merger investigation no single source is sufficient. In fact, the different types of sources within a given class – such as large and small customers – are generally available from actors such as the very same merging parties, existing and potential competitors, customers, suppliers, and public and government sources. Remarkably so, the first piece of information regards merging parties. Research shows that commonly, the parties' initial submissions allow a quick evaluation of whether the merger in question will require detailed examination by enforcement agencies. Conversely, in more stringent cases, authorities require the merging parties to provide more detailed information regarding their business activities. This translates into a cross-examination of both internal – product lines, customers, suppliers, market shares –

³⁰ OECD, Mergers

³¹ See Reference 30

and, external factors, such as the relevant market, competitors and their market shares, and information about substitute goods or services. Moreover, other cases require competition authorities to investigate third parties. These apparently behind-the-scenes actors, actually play a big role in a merger as the industries' interests are often tied together amongst central and peripheral actors. This adds complications to the governing authorities' work as, if for instance, competitors believe that a merger will significantly reduce competition, it is in their interest for the merger to be approved. Oppositely, if the merger will increase competition by creating a more efficient firm, competitors would likely suggest the merger not take place³². This goes to show that another element joins the factors influencing an evaluation. In particular, the role moral hazard plays in providing or misleading information can be a crucial aspect that helps, or restrains the ease of determining whether a merger can be pictured as anticompetitive.

1.3.2 Effects: Unilateral & Coordinated

While vertical mergers are less likely to result in a loss of competition since they do not immediately reduce the number of competitors in a market, not the same can be said for horizontal mergers as they, by definition, do reduce the number of independent competitors within a particular market. Most competition laws across the globe identify and constrain two forms of anticompetitive behavior apart from mergers: abuse of a dominant position by a single firm and certain restrictive agreements by two or more firms. While anticompetitive mergers incentivize such behaviors, it follows those anticompetitive effects of horizontal mergers – which are the most probable type of merger incentivizing such conduct – can be separated into two categories: unilateral effects and coordinated effects.

The OECD – short for Organisation for Economic Co-operation and Development –, which role is to promote policies that will improve the economic and social well-being of people around the world, defines unilateral effects as a merger that “creates a single firm with substantial market power or significantly increases the market power already enjoyed by a single firm”³³. In particular, the worst-case scenario involves the establishment of a monopoly, while less severe cases involve the creation of a firm with enough market power such that it can raise its price above competitive prices, acting as a near-monopoly and resulting in consumer harms. Moreover, other types of anticompetitive unilateral effects occur in markets with heterogeneous products, meaning those products that have distinctive characteristics between them, such as telephones, cars, or computers. In these types of markets, differentiation strategies are a key factor for the firm's success, and corporations may therefore find opportunities in merging to either gain access

³² See Reference 30

³³ OECD, 2020

to a different customer segment, or ease competition within the same market segment³⁴. This raises primary concerns as the closer is the acquired product as a substitute, the more is the constraint on pricing eased by the merger, and the more likely is the result of the merger to be a unilateral increase in price for at least the product concerned. In addition, cases where unilateral effects could lead to a significant increase in the impediments to competition, evolve around situations of mergers in oligopolistic markets. This is particularly due to the elimination of important competitive constraints that the merging parties previously exerted upon each other, together with a reduction of competitive pressure on the remaining competitors, even when coordination between the members of the oligopoly is improbable or remote.

On the other hand, coordinated effects are rather different. In particular, this is because the concerns for this type of effect relate to a series of players agreeing on a set of terms, therefore extending the effect of a potential anticompetitive merger through impacts on additional players' behavior, rather than having only one firm as the main element of examination. As horizontal mergers would strengthen a firm's market share, it may make it easier for the remaining firms to coordinate their behavior and effectively influence the products' price, quantity, and quality. Examples of such coordinated behavior include both explicit and implicit agreements over the price to be charged; which seller to serve a given geographic territory, and which seller to serve particular customer. Moreover, a common paradigm serves to identify when an agreement can be deemed to be successful, and it is comprised of four separate conditions that must be met³⁵. In order to bring a coordinated effect case, it must be proved that: a) a collusion post-merger is possible and sustainable; b) there have to be coordinated effects, that is, firms must then be able to agree on their future anticompetitive behavior; c) firms will reach an understanding on the collusive dynamics, i.e., they must be able to detect whether a participating firm is cheating on the agreement; and d) firms must be able to collectively punish such a cheating firm so as to maintain the terms and coherence of the original agreement. Additionally, a particular case involves firms where the companies, prior to the merge, were considered potential rather than actual competitors. In fact, a firm seen only as a future seller, by the act of merging with an established competitor, is likely to bear positive effects on the competitive behavior of firms already in the market.

In conclusion of this section, it is essential to understand that whether mergers can turn out to be anticompetitive or not, the analysis fundamentally relates to the impact such a merger could produce on the market as the first element, and on consumers as a consequence. In addition, the negative repercussions such anticompetitive conduct could generate, are most often the aftermath of a horizontal merger, which

³⁴ Werden, 2008

³⁵ See Reference 30

can lead to effects that vary from having an impact on a singular firm's dynamics – mainly through abuse of dominant position and excessive and corroding market power –, or brunt on the remaining firms' behavior – that could potentially result in collusive and deceitful conduct –, both of which have an extent of harming consumers.

Chapter 2. M&A in the Digital Economy

2.1 Competitive Landscape in the Digital Markets

Given the topics defined in the first section, where the development and assessment of the merger notion served as to clarify the subject of M&A activities, their types, and purposes, we will now explore anticompetitive mergers in the particular case of digital markets and within the boundaries of the digital economy.

While the first part of this chapter focuses on the characteristics of the firms active in the digital industries, the section subsequently initially evolves around understanding the links between competition and digitalization by analyzing the latest trends and dynamics around this topic. We then develop the framework by which companies compete in the digital economy, mainly through the identification of the motives and outcomes behind M&A for companies competing in digital markets. Consequently, we close the chapter with a blistering analysis of an example where an anticompetitive merger could have taken place in the digital economy but has been reviewed and amended by the antitrust authorities, hinting at the implications for merger authorities' control, which will be greatly explored in the following section.

2.1.1 Characteristics of firms

It is starting to become clear that the environment surrounding firms in digital markets is a rather complex one. While technological advantages and tech-induced innovations allow for a virtually unlimited reach of customers, the challenges such firms encounter develop on the multi-sided competition on one hand, and on competition regulations on the other. The latter in particular, even if not always constraining, have some extent over the inhibition of practices that aim to gain excessive market power. In this context, we will now aim to unveil the specific traits of firms active in digital industries, highlighting the main aspects through which such firms can experience a leveraged market position by exploiting market-particular characteristics and the elements deriving from such market.

The ecosystem of interlinked and connected products makes it that the success of a product is not independent of other complementary products within this ecosystem. This, in turn, suggests that traditional models of competition might not always be feasible in digital industries. As a consequence, in order to

correctly adapt and reshape the current competition policies tools to make them inherent to the forces dominating digital markets, we must identify the unique characteristics of digital markets. In our case, these evolve around three elements: abnormal returns to scale, network effects, and the role of data³⁶.

First, we examine extreme returns to scale as a response to why traditional models of competition might be incompatible with ‘unwritten’ laws dictating digital markets. Return to scale can be found in most industries where, for instance, larger factories are more efficient than smaller ones. This can be achieved thanks to the reduced marginal cost stemming from economies of scale and scope. In digital markets’ case, however, the cost of production is significantly less when compared to the volume of potential consumers, and much less than proportional to the number of customers served. This entails that after its production, information can be shared to an extremely large quantity of people through relatively low costs. While providing services to users cannot be deemed costless, it does remain true that the costs rise much more slowly than the number of users. Furthermore, increasing returns to scale would force two firms producing the same product not to cover their costs. However, were they to cover their (total) costs, they would need to amend the pricing scheme by setting their product’s price above the marginal cost – the cost of serving an additional consumer –. If this occurs, each firm would then find it profitable to lower their price to steal the competitors’ clients. As a consequence, no firm, predictably so, would want to enter a market dominated by an incumbent, even when this incumbent is making large profits. Of course, this is unless the competing firm is capable of providing a much superior technology at significantly lower costs³⁷. Finally, this gives rise to situations such as the incumbents’ advantage³⁸. This players’ advantage refers to instances where an existing and established firm – the incumbent – exploits advantages and benefits stemming from an installed base of consumers, and thus may prevent entrants from penetrating the market, despite the latter being endowed with better quality products.

Moreover, the second element characterizing digital markets, finds its roots in the above-discussed network effects. These effects, which are generally associated to externalities, derive from the idea that the convenience of using a technology or a service increases with the number of users that adopt it. As a result, this increases the industry’s entry barriers. In fact, new entrants’ better quality and price offers might not be enough to counter competitors’ offers. In particular, an additional effort would need to be addressed in convincing customers to migrate from the incumbent’s platform to their own. As we have seen through the incumbent advantage, this is a legitimately hard work, especially given real-world instances showing that large incumbent digital players are difficult to dislodge. This, in turn, raises concerns for competition

³⁶ Cremer J. et Al, 2019

³⁷ See Reference 36

³⁸ Malnight T. M., Buche I., 2022

policies' outlook since, given the favorable position, dominant digital firms therefore have undoubtedly strong incentives to engage in anti-competitive behaviour.

Furthermore, a special case of network externalities has gained lots of attention since the beginning of the century: two-sidedness³⁹. This phenomenon, strongly present in digital markets, can be found when platforms are able to connect two distinct and well-defined groups of users. For instance, such framework allows Airbnb to connect properties owners with renters and similarly, eBay to connect buyers with sellers. For these types of businesses, the benefit that one side derives from the platform depends on who participates on the other side, meaning both the numbers and identity of such players. As a consequence, two-sided platforms are characterized by each side of the market being both a consumer of the platform, and the "product" which is being sold to the other side of the market. Consequently, firms will find it pro-competitive to subsidise one side of the market when its presence on the platform is very valuable to the other side. As a consequence, it is not surprising to see platforms relying on advertising revenues, to often provide content for a very low price, or even for free, leading to a common issue known as the 'Zero Price'⁴⁰. Even if such practice would require a separate analysis, it is crucial to understand its effects, especially given the competition issues associated with quality in zero-price markets. In this paper, however, we will limit the analysis to the definition of such practice. While zero-price offerings can be found in other markets as well, in the digital economy, this practice is even more pronounced as 7 of the biggest 10 companies offer zero-price products & services in digital markets⁴¹. In those cases, the reasons for such pricing schemes relate to motivations such as data acquisitions, advertising, and development of the customer base, amongst other long-term objectives. In turn, markets where zero-price constraint is present, competition can often lead to theories of harm associated with problems in privacy, advertising, unsound consumers' switching costs, and other quality-focused theories of harm.

The third and last aspect emphasizing the peculiarity of digital markets relates to the increasingly important role of data. As we have already discussed the implications and effects of innovation on society, it does not come as a surprise that data, in a similar manner, is paving the way to digitalization and proving to be tech-companies' source to understand consumers' behaviors, define their overall demographics, and ultimately improve the overall customer experience as a way to reach an increased market share. While data can be considered as much more of a sub-product of platforms and deserves separate treatment, its relevance cannot be understated. Technology's evolution has and will continue to have strong impacts on the way markets function. Since data is one of the key ingredients of not only smart online services but of Artificial

³⁹ Cremer H., Bardey D. et al, 2009

⁴⁰ OECD, 2018

⁴¹ PWC, 2018

Intelligence (AI) technologies as well, it follows that companies can make use of such an essential input to improve production processes, logistics, and targeted marketing⁴². Furthermore, since data is often gathered as a by-product of the normal functioning of a platform, incumbent players will then find a source of competitive advantage mainly through an eased access to much more and more recent data than other firms, resulting in a better product offering. Arguably, the competitiveness of firms will increasingly depend on timely access to relevant data and the ability to correctly use that data to develop new, innovative applications and products. In this matter, an important debate has emerged on whether, and if so under which conditions and on which legal basis, government authorities' intervention is needed to ensure sufficient and timely access to all players.

In addition to these main three characteristics of digital markets, further elements indicate and portray the peculiarity of such a technology-intensive industry. In particular, this relates to the dimensions of competition, often leading to practices such as the 'Zero Price' issue, or other effects such as theories of harms related to these practices, as we will shortly see. In particular, digital markets are characterized by a competitive landscape evolving around two dimensions: price and product innovation. As cost reduction does not necessarily lead to economic success through this new competitive advantage – contrastingly to the case for other industries –, firms commonly introduce new products at a low price. Subsequently, only once they have convinced consumers of the products' quality, they can then increase their price. This practice, reinforced by network externalities makes it that firms having a larger customer base will be rewarded to a greater extent. Finally, this can lead companies to strongly focus on growth, making the difference between a natural market entry strategy and predatory pricing not always clear.

2.1.2 M&A trends in the Digital Economy

Various analyses and reports exemplify how M&A activities have been showing an upward trend in the last couple of decades, and as indicated in the previous chapter, recent M&A deals have been reaching extremely high levels. Already in 2018, technology acquisition was the number 1 driver of the M&A global volume, where roughly ¼ of deals were related to technology acquisitions⁴³. While it does remain true that deal-making fell off a cliff in the first half of 2020, as corporate acquirers hesitated in the face of the COVID-19 pandemic, the responsive bounce-back has more than compensated. In fact, according to a Bain & Co Report on M&A's state of the market⁴⁴, during the year 2021, global M&A deal values peaked at

⁴² See Reference 36

⁴³ Bain & Co., 2022

⁴⁴ See reference 43

\$5.9 trillion, showing a 64% increase from 2020 and a value 48% higher than 2018, the previous highest record⁴⁵.

Smart devices, blockchain, online platforms, hyper-connectivity, and cloud computing are just a handful of the activities evolving around such phenomenon. Technologies such as artificial intelligence (AI), the internet of things (IoT), and cloud-based computing have disrupted traditional industries like healthcare, advertising, automotive and banking, and have led to tech convergence⁴⁶. As a consequence, these hybrid-tech companies can infiltrate into large markets – for instance, such as the healthcare one – and the race to exploit emerging technologies ultimately creates opportunities for M&A, either as an acquirer or as a target to be acquired. Additionally, the 2015 OECD report on “Data-Driven Innovation: Big Data for Growth and Well-Being” found that the number of M&A deals in data and digital-related sectors has increased rapidly from 55 deals in 2008 to almost 164 deals in 2012⁴⁷. In particular, the latest M&A trends show a bustle of deals in ‘quick commerce’, meaning services related to the rapid delivery of food, groceries, or other goods. As part of the strong environment, an important factor influencing the often-uncontrolled M&A activity in 2021, was the intense increase in demand for technology, digital and data-driven assets, and the stifled deal-making demand from 2020 that was unleashed, as indicated above. When dealing with such and complex setting, especially given the enormous increase in global M&A volume and values, much of researchers’ work often focuses on understanding the main drivers of such movements. In this matter, it does not sound surprising that experts rely one of the main reasons for such activities’ increase to the extreme development and expansion that digitalization has been having on society, and as a consequence, on economy.

As far as mergers in the digital industries, the technology sector represents some arguably controversial trends. In particular, while in the year 2021 there have been 130 megadeals with a deal value greater than \$5 billion⁴⁸ – for instance these include Microsoft’s acquisition of Activision Blizzard for \$69bln –, the market has been dominated mainly by smaller deals as 96% of big tech players’ deals were less than \$500 million. In relation to the latest trends, observation in tech industry in 2020 shows that the pandemic accelerated changes that companies had been considering, pulling forward years of transformation into mere months⁴⁹. In fact, this M&A wave is characterized by some peculiar features. For instance, as latecomers to global business competition, emerging-market multinational companies (EMNCs) utilize cross-border mergers and acquisitions to quickly acquire strategic assets, resulting in an improved

⁴⁵ Allen & Overy, 2022

⁴⁶ PWC, 2022

⁴⁷ OECD, 2015

⁴⁸ PWC, 2022

⁴⁹ S&P Global Market Intelligence, 2022

competitive position⁵⁰. Additionally, the rather unpredictable developments in the tech industry associated to these emerging market acquirers requires such multinational firms to use further ‘non-conventional’ integration approaches⁵¹, which arguably take inspiration from alliance management approaches. As a notion to be remembered, however, it is necessary to highlight that – particularly in the tech industry – most of M&A’s extraordinary recent increase is also a result of antitrust policies’ significant yet elusive intervention. In 2021, global merger control decisions made by antitrust authorities rose by approximately 30% in volume across the EU, US, UK, and China⁵². Nevertheless, while calls for stricter merger control enforcement led antitrust authorities’ scrutinies to be conducted more severely, the results arguably don’t match with the industry’s quick pace.

Furthermore, as mergers between companies in the digital economy often comprehend purposes of extending the firm’s ecosystem, competition dynamics amongst these companies often lead firms to compete *for* the market, rather than *in* the market. It follows that corporations’ competitive dynamics are not only related to serving customers with a particular product. Rather, because of the interrelation of digital fields and network effects these markets are characterized by, firms frequently end up competing for consumers’ attention. As we will examine in the following section, the dynamics of digitalization and competitions create unique links around which companies can exploit the favorable conditions dictating digital markets – and amongst these, mergers and acquisitions are an example of such conduct –. Along with the particular characteristics of the market, governance of such issues can play an important role in setting the boundaries for the execution of such activities, while simultaneously influencing whether sustaining M&A operations can be an efficient competitive strategy or not. In particular, this can have strong effects on the market competition: given the quick pace, fast-moving and diversified markets, regulations organizing the whole sector might not always turn out to be appropriate. Nonetheless, as predictions envision such trends to further continue, with tech increasing its share of global M&A activity, competition authorities will continue to get involved, especially in data-heavy mergers where data privacy, consumer protection, and innovation are at stake

2.1.3 Dynamics of Competition and Digitalization

With an overview of recent trends of M&A in the digital economy in place, we can now examine the competitive dynamics evolving within digital markets. In particular, the study drafts the underlying forces surrounding firms engaged in merging activities, where three key aspects evolve around the link between

⁵⁰ Liou R., Chen-ho Chao M., Yang M., 2016

⁵¹ Kale, P., Singh, H., 2012

⁵² Allen & Overy, 2022

industry competition and digitalization. Moreover, we analyze the dimensions of such mergers in digital industries, shedding light on the players' advantages in this sector, together with providing a breakdown of the theories of harm related to such issues. We conclude this subsection with an introduction of the implications for competition policies, which will be further examined later on.

In the context of mergers in digital markets, some fundamental aspects of these markets need to be further explained as a way of understanding the links between tech-based companies – and their digital environment – and the competition between them. First off, it is crucial to understand that firms making use of digital technologies to offer product and services, find themselves into a triplet of competitive domains. In this matter, we can define the three different faces of competition as competition for attention, for the ecosystem, and for innovation⁵³.

Diving into competition for attention, a first look might suggest that this type of competition has always been present in other industries such as the one for fashion goods, business class airline seats, or financial products. In these industries, firms advertise quality to draw consumers' attention rather than focusing on price offer as the main objective. In our case, however, the situation differs. Common digital market instances show how platforms provide content, broadly speaking, freely accessible to users and sell the attention of these users to advertisers. As an example, search engines provide freely accessible lists of websites, and similarly, gaming platforms provide freely accessible games. Since the firms' market position stems from users' perceived quality of the content, platforms thus have incentives to keep their users satisfied. In a comparable yet distinctive manner, social media platforms also compete for attention. Nevertheless, as far as this latter category, users are attracted by the presence of other users; subsequently, advertisers are then attracted by the presence of the users to whom they can promote their product. It follows that simple network externalities can create the basis for the difficulty of dislodging social media platforms from their market positions.

Consequently, the second face of competition relates to competing for above-mentioned the digital ecosystem⁵⁴. An ecosystem can be understood as a complex network of stakeholders that connect online and interact digitally in ways that create value for all; meaning a group of interconnected information technology resources that can function as a unit. Through the increasing integration of hardware, software, and IoT, devices can connect to online services, therefore opening opportunities for tech companies to offer a very broad range of services often fairly integrated with one another. For instance, an example of this phenomenon can be observed by analyzing the purchase of a smartphone. When buying a phone today, you

⁵³ See Reference 36

⁵⁴ Subramanian M., 2020

“buy into” a large ecosystem that includes, for instance, not only the operating system, a marketplace for applications, a payment system, and a cloud service, but also a range of smart home applications and other devices. Successful digital ecosystem can be found in Apple’s ecosystem business model⁵⁵. Through the diversification of its product range in digital services, wearables (Apple Watch), devices (Apple TV), and other accessories for home and professional use, the company has been able to successfully employ an ecosystem business model that no one on the could replicate at scale so far. While the rigid environment where only Apple products can exist and thrive can be constraining, consumers are wired to a single technology environment that is difficult to change without a bargain. Add to that the advantage of upgrading Apple products without losing a seamless experience, and this strategy can effectively provide extremely profitable returns. Additionally, one increasing argument of debate evolves around claims of large multiservice platforms benefitting from what economists call “economies of scope”. Through the acquisition of firms with substantial data, network effects can be even more precise determinants of the firms’ rate of success. It follows that this effect can be even more pronounced if the company makes use of an extended ecosystem capable of collecting and sharing even more data across the same platform. However, despite the concerns, this does not translate into the necessity of limiting access to the creation of ecosystems. If large incumbent ecosystems are better at offering new services, there might be benefits at letting them do so. Nonetheless, despite providing these potential benefits, this process might strongly prevent competition on the merits of new entrants, attempting to offer new products & services on the market. As competition for ecosystems can be rather intense – for instance, Apple and Google constantly compete over which of the firms’ digital ecosystems can capture a larger amount of consumers –, the presence of some sort of multi-market competition will, nonetheless, not make up for the absence of sufficient competitive pressure in a given product market, and proceedings of abuse of dominance might prevent efficient competition in this context. Furthermore, additional concerns have been rising regarding the long-term effects on competition, especially if no regulation were to be implemented. In particular, competition limited to a relatively small group of firms might not be as vigorous as the one sought by competition authorities. This is particularly relevant when dealing with issues of collusion: as both the economic theory and practice has shown, firms competing against each other across many markets will find it easier to collude, hence increasing the risks of a potential reduction in consumers’ welfare.

Lastly, the third aspect of competition for firms in the digital economy relates to competing for innovation⁵⁶. First, the impact of innovation can be witnessed at all levels of society: innovation has improved the welfare

⁵⁵ Loboyoko M., 2021

⁵⁶ See Reference 36

of consumers by allowing them to connect to each other in unprecedented ways. In turn, thanks to cheap distributing costs and eased access to new markets, this last aspect allowed improvements on the efficiency of firms by granting larger amounts of data to be collected, shared, and used across supply chains. While competition policies' purpose is to fundamentally ensure that innovation keeps on serving both consumers and firms, not all innovations depend on the same criteria. In fact, innovation in the digital industries is however very different from innovation in, for example the pharmaceutical industry, and therefore needs a specification of its own. The divergence develops around four main ideas. First, innovation in this area it is less discrete: a new platform is a mixture of new features, new processes and new technologies arranged in a unique and innovative way to support a business idea. Second, products are in constant evolution, experiencing a permanent renewal. Therefore, we find a relative smaller portion of time where a product is considered as 'new', since the next innovation is already undergoing and will soon hit the markets. Third, it is less structured: often, the features of the innovation are developed at the same time as the innovation is implemented and tested. Hence, the flexible format innovation can adopt calls for additional freedom for both firms and the market structure. Fourth, it places less importance on formal intellectual property protection, such as patents or copyright. As a consequence, given that innovation frequently focuses on being the 1st mover, and rewarding firsts to market⁵⁷, an excessive distorting competition on this aspect, poses serious concerns for competition policies. Market boundaries change rapidly, large user bases can be created or leveraged at unprecedented rates, and future developments are very hard to predict even on a relatively short horizon. All these various aspects, together with other competition law-related issues, ultimately lead to supplementary challenges for competition authorities as the policies, models and tools are often too static to respond to a such fast-moving environment.

Before concluding this sub-section, a special denotation on the dynamics of competition in digital markets deserves to be mentioned, in particular this relates the dynamics of theories of harm occurring digital markets. In this context, theories of harm can be categorized according to the type of merger the two companies engage in. In the case of horizontal mergers, theories of harm comprehend loss of competition with network effects and multi-homing, loss of competition in markets for attention, loss of potential competition, and loss of innovation⁵⁸. First, loss of competition with network effects and multi-homing stems directly from the aforementioned network effects that allow a company to expand its customer base – either by raising barriers to entry or by implementing potential harming expansion –. Secondly, loss of competition in markets for attention, relate for instance to the Facebook/WhatsApp case⁵⁹. While

⁵⁷ Varandarajan R., Yadav M. S., Shankar V., 2007

⁵⁸ Argentesi E., Buccirosi P. et al, 2020

⁵⁹ Eseyas S., 2017

WhatsApp did not sell advertising spaces nor user data, it did receive potentially valuable customer attention. This is particularly relevant especially given Facebook's data gathering system. Mergers involving firms competing with one another for consumer attention, create an incentive to increase the firm's ability to exert market power within the rather loose online advertising markets, even in cases where the services supplied are different and not substitutable to one another. Furthermore, loss of potential competition focuses on assessing whether the merging parties will form an effective competitive force. This entails understanding the extent to which there would remain a sufficient number of either actual or potential competitors in order to maintain the competitive pressure even after the merger. Lastly, horizontal mergers in the digital markets can lead to the loss of innovation. This is primarily due to the fact that when two important innovators merge or eliminate a firm with promising pipeline products, the transaction can lead to a significant impediment of effective competition. While evidence of this potential harmful effect is fortunately almost non-existent for digital markets, it is becoming an increasing concern for competition authorities to inquire into such effects, especially given the market's extremely high rate of innovation. On the other hand, vertical mergers in digital markets present somewhat different dynamics. While network effects can still lead to theories of harms for this type of mergers, as in the case of the Microsoft/LinkedIn merger⁶⁰, other theories of harm fundamentally related to the creation of a larger or more diverse dataset. The Microsoft and LinkedIn merger, where the former was strong competitor for OSs and software for PCs markets and the latter a leader in the Professional Services Networks (PSN), would have likely resulted in the foreclosure of LinkedIn's competitors and a reduction in competition. As a consequence, the Commission approved the merger, provided that merging parties were to submit three sets of commitments⁶¹: the first addressing the concerns related to the possible pre-installation of a LinkedIn application on Windows PCs. The second, removing the concerns related to the possible exclusion of LinkedIn competitors from Microsoft's Office products. The third, granting competing professional social network service providers access to 'Microsoft Graph', a gateway for software developers.

2.2 The Process behind M&A in the Digital Economy

Having a more complete interpretation of the competitive landscape surrounding firms in the digital economy, the analysis now pleads for an examination of the process behind M&A in digital industries. In particular, this relates to the common objectives sought by firms engaging in merger activities in digital markets, their intended strategies and the outcomes such practices generally lead to.

⁶⁰ EC, 2016

⁶¹ Erdem E., 2017

2.2.1 Motives

Subject to the former assessment about the most common motivations for firms to conduct M&A operations in traditional industries, which fundamentally relate to goals of achieving synergies and exploiting the competitive advantages through companies' 'combined effort', it is crucial to highlight that firms' motives in digital markets' are somewhat diverse from conventional motivations.

In particular, this is because of the peculiarities these fast-moving markets are characterized by. First off, common objectives amongst firms active in digital markets are associated to seeking out interesting start-ups and purchasing them, attempting to prevent the target company from ever becoming a competitive threat. Moreover, given that most of this M&A activity occurs beyond the radar of competition authorities since the transactions' turnover is often not enough to trigger an antitrust investigation, several big players from the tech industry have exploited this favorable condition. As an example, we can look into the volume of deals made by the largest firms in the US tech market – which represents one of the most prominent M&A sectors in the digital environment. In fact, according to UK Competition and Markets Authority⁶², the giant tech corporations such as Google, Facebook or Amazon have made some important advancements. Notably, between 2008 and 2018, Google has acquired 168 companies, Facebook 71 companies and Amazon 60 companies⁶³. While mergers and acquisitions in this context do not always relate to the same segment in which the firm seeks expansion, a common pattern can be identified. Whereas Facebook has been more concentrated on purchasing 'communication apps and tools', while Amazon's focus was rather on 'physical goods and services', and Google engaged in more heterogeneous yet the most substantial M&A, all the Big 5 tech companies' – otherwise known as GAFAM: Google, Apple, Facebook, Amazon, Microsoft – operations have common strategies. In fact, evidence shows that most M&A activity within these firms was conducted to strengthen their current business models, and not necessarily as a way to enter into new markets. In particular, these multi-sided platforms that effectively enable both interaction and value creation among multiple user groups, generally acquire companies operating in segments where the GAFAM firms were already active: roughly less than 40% of deals were carried out as a means of strengthening the firms' main business segment⁶⁴.

As far as the reasons behind such market-leading corporations' intentions to merge or acquire other businesses, most commonly the rationale evolves around two main aspects. The purchase follows the acquiring firm's interest in either the products developed by the target company, or their valuable inputs; other common instances unfold the acquisition as a way to restrict competition and consolidate firm's

⁶² Argentesi E., Buccirosi P. et al, 2019

⁶³ See Reference 62

⁶⁴ Gautier A., Lamesch J., 2020

position in the market. In fact, given that GAFAM acquisitions regularly cover the purchase of startups – as 60% of acquisitions involve firms less than 4y/0⁶⁵ –, it does not come as a surprise that these acquisitions are generated with the intent of enhancing the competitive advantages. However, competitive advantage in this framework runs through purposes of expanding the ecosystem – in case of acquisitions for product – and expanding the customer base – in case of acquisitions for inputs–. The latter, specifically, embeds other advantages such as the possibility to enhance the shaping of new technology & innovation: as inputs can be considered precious assets, their purchase may include the obtainment of advantageous patents, talents⁶⁶ and engineering processes. The separation, however, develops on rather unrestrained territory as the rationales often overlap.

Nevertheless, the reasons behind the Big 5's M&A strategies and objectives do not always originate from wanting to expand their ecosystem or customer base. Additional explanations in connection with the purchase of inputs implicate that the acquisition is often prone to develop services ad-hoc for mobile phones or improve the advanced data analytics techniques (such as big data, AI, machine learning, and analytics). It is the case of digital markets, that the competing companies heavily rely on making predictions of various sorts to provide their services. For instance, Amazon uses them to manage its stock based on expected demand; Facebook to propose targeted content and ads to its users; and Google to improve its search algorithms and target ads more accurately. Hence, these mergers may be efficiency-enhancing as they enable incumbents to improve their know-how needed to make such predictions. The point in question is exactly how much this improvement can generate enough of a forceful impact as to reshape the industry's dynamics and ultimately cause damaging effects on consumers. While the US Federal Trade Commission (FTC) arbitrarily requires corporations to report acquisitions whose deal is worth more than \$92 million⁶⁷, most M&A transactions do not meet this requirement and can therefore bypass antitrust scrutiny. This, in turn, raises the risks of firms engaging in anticompetitive behaviors. This situation is especially delicate since such firms are hardly ever held accountable for these conducts and their M&A activities are usually exempted from more in-depth investigations. For instance, a 2021 FTC study found that in the period ranging from 2010 to 2019, these 5 giant tech corporations reported a total of over 820 non-HSR reportable transactions⁶⁸. In fact, one other reason behind such large corporations' intentions of growth through M&A initiatives, might stem directly from the eased accessibility to those practices. Given that these firms seldom encounter major impediments from authorities when attempting to merge or acquire, the simple fact of not

⁶⁵ See Reference 64

⁶⁶ Klompen M., Mank J., 2020

⁶⁷ FTC, 2021

⁶⁸ See reference 67

engaging in M&A might be counterproductive, especially in times where such activities are limited only to some degree. Nonetheless, M&A activity in this sector is not free of any obstructions and may occasionally lead to imposing sanctions. It is the case of Google's acquisition of ITA Software Inc⁶⁹. While ITA Software's European revenues were not large enough to warrant European regulatory review, the US Department of Justice (DOJ) came to a final judgement in October 2011. The decision ultimately consented the deal to proceed, however, it ordered to resolve the complaints related to Google's potential anticompetitive behavior post-merger. The effects of Google's acquisition of ITA's airfare pricing and shopping systems would have potentially produced serious outcomes on the degree of competition among online flight search platforms, resulting in contracted consumer choice and scaled-down innovation for consumers using those zero-price services.

2.2.2 Outcomes

We can now establish that the execution of digital M&A strongly contributes to building the digital knowledge base of industrial-age firms. Consequently, this enables corporations to drive digital innovation. Nonetheless, some increasing concerns speculate on the idea that as a consequence of digital markets' characteristics and competitive dynamics – where factors such as network externalities and returns to scale are strong, while data security and differentiation demand a more challenging effort – market competition might be available only to a limited number of platforms. On these grounds, we can arguably deduct that it might be this very same phenomenon strongly contributing to firms' pursue of increasing their market share through anticompetitive behaviors. Moreover, given that the benefits deriving from such M&A practices are typically intangible, they are hard to quantify. Nonetheless, we will focus our analysis on the outcomes of M&A activities occurring within digital markets. In particular, we examine the effects of both potentially anticompetitive mergers on digital markets' competition and the common evolution of targeted firms in the digital economy, also in cases where the merger or acquisition was not judged to be anticompetitive by the relevant competition authority.

To begin with, it must be outlined that despite the type of merger occurring, the merging firms' integration of complementary products and activities between the companies may appear as a pro-competitive efficiency to the casual eye. In most traditional M&A cases, the conventional theories of harm are then essentially constrained to either foreclosure or coordinated effects, as previously depicted. However, when market environments are characterized by a few large firms capable of altogether exploiting their dominant market position in core segments and concentrating on the expansion of their digital ecosystem, new theories of harm may need to be explored. This is particularly true since this industry's frequent acquisition

⁶⁹ US DOJ, 2011

of start-ups may increase the risks of a company's exercise of an abusive dominant position. As startups most often represent a company's stimulating idea that has not yet reached the foreseen market demand, larger corporations can merge or acquire these smaller companies as a mechanism to reinforce their market offering, rather than an attempt to eliminate the competition triggered by the start-up. In turn, the acquisition's effects can progress even if the overlap is not within the more narrowly defined product market where the acquirer is dominant, or if the overlap in this separate product market as such would not raise competitive concerns.

This effect is particularly pronounced in the case of digital markets and embodies the main argument by which mergers in this context have an increased risk of having anticompetitive connotations. To a large extent, when firms in digital markets engage in M&A activities, the acquisition and subsequent disruption of the product acquired, represents one common outcome occurring in this context. If that is the case, we can then refer to the acquisition as a 'killer acquisition', which occurs a number of times in digital markets. This process, exhibited as the acquisition of promising young firms only to discontinue the target's innovation projects, can turn out to be an effective practice to prevent the emergence of competition, at least from the acquiring firm's point of view. The problem then emerges when such acquisitions eventually limit the market's competitive mechanisms. However, even if there are good reasons to suspect that digital incumbents' killer acquisitions as evidence shows how this practice has at times eliminated potential competition, such an M&A process has not always produced negative outcomes. In fact, killer acquisitions can also assimilate concepts such as bolt-on acquisitions. This latter acquisition type refers to incumbents' purchase of other businesses that does not lead to the elimination of actual or potential competition. Dissimilarly, these acquisitions can result in the yield of uplifting competitive effects. Primarily, this is due to the innovation boost achieved by exploiting synergies and implementing complementary technologies. In killer acquisitions, however, the company's purchase of the targeted firm, often causes the latter's products to disappear. If that is the case, the acquisition most probably evolves around the firm's core business segments and indicates that the purchase is likely to be knowledge-driven. In contrast, if the targeted firm's product continues to be offered under its original name and brand, the acquiring company likely sought expansion in its non-core business segment, and the acquisition results in the acquiring firm's new obtainment of an already developed and established product, ready to be offered in the market. In fact, however, not all acquisitions of digital products are then discontinued – in other words, not all digital acquisition are 'killer'–, even in cases where the acquisition was knowledge-driven. Mergers and Acquisition within digital markets can also cause the acquiring firm to diversify its range of product offering. For instance, Facebook's acquisition of WhatsApp, one of the leading apps for social network's messaging services, did not include the disruption of either Facebook's Messenger app, nor the very same

WhatsApp mobile application. The acquisition ultimately led Facebook to keep users' high engagement inside the company's ecosystem, and while it did not effectively 'kill' the acquired product, it had important effects on market competition. In fact, the merger eventually allowed Facebook's CEO M. Zuckerberg to integrate the newly acquired company into its already thriving digital ecosystem⁷⁰. In turn, this, enhanced the users' ability to interact across the platform, ultimately generating strong effects on market competition, causing a global increase in WhatsApp's market share, at the expense of other, second-string competitors. Nevertheless, were these effects too impactful to the extent of harming consumers, the merger would have probably been further investigated and subsequently prohibited by the relevant antitrust authorities. However, jurisdictions around the world did not deem this merger to encourage anticompetitive behavior nor to produce extremely harmful consumer effects.

Furthermore, the consequences anticompetitive mergers could produce on digital markets' competition often go beyond simple and conventional outcomes of entering new markets or strengthening a firm's competitive market position. Because these markets edge in the peculiar characteristics noted in previous sections, the firms are provided with additional elements which ultimately result in such unnatural M&A activities. In particular, this relates to the magnitude of innovation occurring in these markets, which, in turn, affects consumers' welfare. Problematic merger activities in the digital sector can span across different sections of the firms' business model. As a consequence, technology firms operating in a such a multi-sided environment can make use of merger and acquisition strategies to achieve a series of not necessarily linked benefits, all at once. Nonetheless, while the benefits generally include firm growth, ecosystem & customer base expansion and ameliorations on the overall offerings, amongst others, the setbacks could outmatch benefits. Whether the merging parties' integration of activities leads to a damp down on innovation through the firms' unnecessary need to innovate (stemming from the enjoyment from a favorable market position), or non-sanctioned anticompetitive behaviors further intensifies the competitive landscape – inducing firms to contest the market share through supplementary sub-optimal strategies – the ultimate harm to consumers is to likely come indirectly. This would be true in any market, thus it even more so in digital ones. Competition albeit providing benefits, can generate substantial costs (increase in price, impacts on customer privacy and/or reductions in quality). As a consequence, competition for the market cannot, by itself, solve the problems associated with market tipping and 'winner-takes-most' issues, since evidence shows that such a framework is likely to lead to unwelcomed types of competition. Thereupon, this process' outcome ultimately creates an important trade-off given that the potential dynamic costs of concentration can generally outweigh any static benefit.

⁷⁰ Reuters, 2019

2.3 Case in point: Google's acquisition of Fitbit

Understanding the reasons and consequences behind M&A in digital markets, can be an efficient way of to capture why anticompetitive behaviors can arise in those environments. Nonetheless, in order to fundamentally grasp how a firm orchestrates such activities and especially how antitrust competition authorities respond to these activities, an analysis of a real-world case is very much needed at this stage. In particular, in this section we will unveil the one of the most noteworthy recent M&A deal prevailing in the digital economy: Google Inc.'s acquisition of Fitbit for US \$2.1 billion⁷¹. The assessment will be carried out as an examination of the acquisition, from the initial announcement all the way through the EU Commissions' approval and subsequent purchase execution.

While Google announced in November 2019 its intent to acquire Fitbit – an American company active in the development, manufacturing, and distribution of wearable devices –, it took slightly more than six months for competition authorities to be notified of such a merger. Through a statement released by Google hardware's chief R. Osterloh, the company announced that the Fitbit purchase was “an opportunity to invest even more in Wear OS as well as introduce made by Google wearable devices into the market.”⁷² However, regulators quickly got involved, and in the 25 days span after the June's merger notification – in which the Commission had to decide whether to grant approval (Phase I) or to start an in-depth investigation (Phase II) – they concluded that a more comprehensive investigation would be needed. Accordingly, in August 2020, the Commission formally initiated investigations about Google's purchase of Fitbit over data privacy and antitrust concerns.

The European Commission's initial concerns are a result of the preliminary assessment executed by regulators. Commission's Executive Vice-President Margrethe Vestager was particularly worried that the proposed transaction would further entrench Google's market position in the online advertising markets⁷³. By further collecting and developing the already large amount of data that Google could use for the personalization of the ads it serves and displays, the platform could ultimately make use of a significant advantage in the online advertising markets. Moreover, additional concerns focused on the extent to which the purchase would raise barriers to entry and the expansion of Google's competitors for these services to the final expense of advertisers and publishers, which would face a reduction in choice and a price increase. Given Google's leading market position and the characteristics of its business model within the digital industry, the transaction's impact could therefore be exceptional. This is because we have to evaluate the

⁷¹ R. Osterloh, 2021

⁷² R. Osterloh, 2019

⁷³ EC, 2020

consequences of the deal on the supply of both display advertising services and online search, as well as on the supply of ‘ad-tech’ services such as analytics and digital tools needed to develop digital advertising. As a consequence of such concerns, the European Commission conducted an investigation on such deal. The investigation was conducted through an all-encompassing collection of information and feedback from competitors of the merging companies on one hand, and from several other market participants and stakeholders on the other. In particular, antitrust forces’ analysis focused on clarifying the three main concerns it had previously identified. Fundamentally, the transaction could potentially result in harm on the market competition for markets such as advertising, access to Web Application Programming Interface (‘API’) in the market for digital healthcare, and Wrist-worn wearable devices. In fact, through Google’s acquisition of Fitbit, the acquiring company would purchase relevant tangible and intangible assets. These include Fitbit’s database about its users’ health and fitness, the technological know-how needed to develop similar systems, together with a set of tangible assets necessary to produce and sell these products on the market. This, in turn, would reinforce competitors’ already demanding task to match Google’s dominion in the markets for online advertising and it would improve Google’s ‘ad-tech’ ecosystem as a whole. Moreover, with regards to the access to web API in digital healthcare markets, the commissions’ concerns evolved around the deals’ effects on young startups in the EU digital healthcare marketplace. As Web APIs play an important role in providing services for Fitbit users in this market, Google’s strategy could restrict competing firms’ access to the Fitbit Web API, resulting in having an extremely intrinsic competitive advantage for Google. Additionally, the Commission’s final concern considered the deal’s effect on wrist-worn wearable devices. Following the acquisition, Google could have considerably extended market power in the market for such smart devices, especially over the extent to which it can draw competitors’ success by compromising their device’s synergism with other Android devices, such as smartphones.

As a response to the merger notification and subsequent investigation, as of December 2020, the EU Commission approved, under the EU Merger Regulation, Google’s acquisition of Fitbit⁷⁴. However, in approving the deal, Google had to agree to a number of concessions to ease the Commission’s concerns. In addition, Vice-President M. Vestager announced that the commitments – set to last for 10 years, with an option to further extend them, – ‘will ensure that the market for wearables and the nascent digital health space will remain open and competitive’. In particular, the concessions worked as a cushion to alleviate the previously indicated concerns. As far as the advertising commitments, the Commission made sure that i) the health and wellness data collected from users in the EEA area would not be used for Google Ads’ services; ii) Google would maintain a technical separation of the relevant Fitbit’s user data, therefore

⁷⁴ See Reference 73

requiring Google to use two separate ‘data silos’ for advertising purposes; and iii) Google would ensure that users will have an effective choice to grant or deny the use of privacy-related data stored in their Google accounts or adjacent Fitbit accounts by other Google services. On the other hand, commitments to allow efficient access to Web API to all players focused on Google’s promise to preserve users’ access to health and fitness data to software applications through the Fitbit Web API, without charging for access and subject to user consent. Finally, to grant the correct framework around the Android API environment, the commission set forth a set of commitments generally focusing on Google’s guarantee to keep licensing for free to Android original equipment manufacturers (OEMs) those public APIs covering all current & future core functionalities that wrist-worn devices need to interoperate with an Android smartphone.

However, despite the implementation of such restraining commitments, the acquisition still turns out to be successful and makes logical sense. In fact, Google has spent years trying (and largely failing) to break into the wearables market with its Wear OS platform, but it’s struggled to make a real impact. Over and above that, Google’s software skills and wide developer support could help Fitbit’s smartwatches get a little smarter, alongside the deeper software integration with Android that a closer relationship could offer. In particular, Fitbit’s hardware chops have always been great, giving Google a much stronger foundation to build on for future Android-integrated wearables devices. In addition, Fitbit’s strong focus on fitness tracking could be integrated into Google’s existing Google Fit apps, ultimately providing such upgraded products as a solid alternative to the Apple Watch’s deep fitness tracking integration with the iPhone.

If no antitrust scrutiny were to be performed, and no commitments were to be agreed upon by the parties in order for the acquisition to be approved, the deal would most likely represent an example of an anticompetitive merger. However, through the medium of antitrust competition authorities, the clearance of the transaction has ultimately led the Commission to conclude that Google’s proposed acquisition, as amended by the commitments, would no longer raise competition concerns.

Chapter 3.

Regulating the Competitive Process

3.1 Understanding Competition Authorities

While we can consider having a rather a robust idea of the concepts of mergers as a whole and the process behind such practices, especially in the context of anticompetitive mergers in the digital markets, our analysis now calls to examine a crucial player which relevance in the discussion cannot be understated: competition authorities. In particular, the assessment will be developed by understanding competition authorities’ role, the different actors and bodies influencing the debate – particularly in the context of EU

and US regulation regimes – and the latest trends in this area. Thereafter, we will explore the challenges arising in such environments and the methods behind authorities' intervention, especially by providing an outlook on EU and US' approach to merger control procedures. Lastly, we'll question antitrust policy's approach to such theme and provide some proposal to further improve its efficiency.

3.1.1 Role

Given the relatively complex environment competition can lead to, as seen in previous chapters, it is no wonder that some sort of authority is needed to ensure the correct endurance of competition. Considering competition's strong contribution to a country's productivity and economic growth, it would be easy to predict that most nations around the world have some sort of regulating body for such phenomenon. In fact, today, more than 125 jurisdictions have a competition law regime, and the large majority has an active competition enforcement authority⁷⁵. Undeniably, if a market is characterized by a presence of strong dominant players, namely large established firms, it is most likely than not that they would strive to abuse that position through engaging in anti-competitive behaviour. As a consequence, regulatory regimes' rationale is precisely to monitor and control such threatening behaviour. Under these circumstances, and given the previous chapters' findings, it is inevitable to recognize that this situation especially true and problematic in the case of digital markets.

While most regulation regimes around the world rely on virtually identical principles to ensure a fair competitive process, the bodies regulating competition amongst markets vary across nations, political unions, and regional areas. In this context, the operational framework adopted by nations to achieve such goal is mainly driven by the work of regulators. To that end, regulators generally fall in either one of the following two categories: sector regulators and competition authorities. While the former conduct activities related to specific sectors, the latter are established to enforce national competition laws⁷⁶. Moreover, whereas some research points to the idea that the best approach to regulation would be one involving cooperation between sector regulators and competition authorities⁷⁷ – meaning that both regimes, together, can have the most efficient impact – our analysis will more broadly discuss competition authorities' groundwork. Nonetheless, if competition responsibilities are shared between these two types of agencies, there could be issues arising from how such collaboration can be organized and managed in order to avoid duplication, jurisdictional uncertainty, and turf disputes⁷⁸.

⁷⁵ OECD, 2020

⁷⁶ Dube C., 2008

⁷⁷ See Reference 76

⁷⁸ Tremolet S., Binder D., 2008

While the number of terms and actors around such activity can be confusing, their intent is easily graspable. In particular, a first denotation must be made regarding the terms used in this context. To accomplish such task, we must preliminarily denote that Competition (or Antitrust) Authorities generally refer to the set of trusted government bodies that have the power of regulating competition in all types of markets. Competition authorities then make use of Competition Policies to form and control a particular market's competition. This refers to the guidelines, executive policies and approaches aimed at ensuring that competition is not restricted or undermined in ways that are detrimental to the economy and society⁷⁹. Such policies subsequently shape Competition Law, which refers to the legal regime establishing the legal consequences (including sanctions) on conduct that restricts competition⁸⁰ and which fundamentally enacts such laws in the courts of law.

As far as Competition Authorities' role, a common mistake lies in thinking that their aim is to reach 'perfect competition' type of models. This common misconception which some even consider would not provide desirable outcomes, represents a hypothetical extreme in economics and goes beyond the scope of our analysis. Rather, their focus rotates on protecting and ensuring a fair competitive process for all market participants. In turn, this so-called process fundamentally relates to dynamic promotion of rivalry for sales between market participants and potential market participants, who invest capital in the production and development of goods and services⁸¹. In fact, competition authorities' work effectively fosters consumer welfare by preventing business conducts or mergers that harm consumers in a specific market. As a result, a competition authorities' law enforcement's mission is to promote competition and its incentives, focusing on the alignment of the general public's interests.

Competition authorities' regime looks for a set of factors that threaten competition: these include the formation of cartels, cases of abuse of dominance or anticompetitive agreements, amongst others. However, even though this analysis will particularly focus on competition authorities' activity in merger control, it is crucial to understand that CA's role can comprehend a numerous set of activities. In fact, on a more practical note, Competition Authorities' function can be summed up into three main activities. First, they propose remedies to anticompetitive conducts, such as collusion and anticompetitive agreements and control incumbents' ability of the abuse their dominant market position to restrict competition. Effectively, they ensure that industry mergers do not significantly decrease competition. In this context, an active merger control policy may be the only effective remedy against market power in a number of situations. Lastly,

⁷⁹ Buttà A., 2021

⁸⁰ See Reference 79

⁸¹ Smith R. L., 2013

their activities broadly relate to protecting consumers from anti-competitive practices which may include, but are not exclusive, to the creation of cartels or anticompetitive mergers.

3.1.2 Different regimes: EU and US

While most competition authorities around the world rely on similar principles to ensure a fair competitive process, the bodies regulating competition amongst markets vary across nations and political unions. In particular, our study will attempt to enlighten the main bodies and roles of both EU and US' competition regulations regimes as they are by far the world's two largest and most influential systems of competition regulation.

Most nations around the globe have their own National Competition Authority (NCA), in relation to a broader perspective, however, political unions & states such as the European Union or the United States of America have their correspondent bodies which generally assess cases requiring a broader examination, and in particular when they evolve through international frameworks. For instance, the European Union regulation regime comprises both the European Commission (EC) and the national competition authorities in all 27 EU Member States, which cooperate with each other through the European Competition Network (ECN). Within the European Commission, the Directorate-General for Competition (DG COMP) is responsible for the implementation of competition rules as to ensure competition in the single EU market is not disrupted. The EU Competition Network, in turn, creates an effective mechanism to counter companies that engage in cross-border practices that implicate restrictions on market competition⁸². In fact, through the ECN, the different national competition authorities inform, coordinate, discuss and exchange opinions and evidence regarding particular investigations. Ultimately, this allows the competition authorities to pool their experience and identify best practices to approach such market-oriented competitive issues. At its core, the ECN's objective is to build an effective legal framework to enforce the EC competition law against companies that engage in cross-border business activities that could potentially restrict competition and result harmful to consumers⁸³. On the other hand, the US, having a different political structure relying on a federal system comprised of 50 states, relies on different actors to oversee federal competition law issues. In particular, the US centers on two main bodies to correctly control and enforce antitrust laws: the Department of Justice (DOJ) and the Federal Trade Commission (FTC), both of which operate at the federal level. While the two bodies' authorities overlap in some aspects, the two agencies fundamentally complement each other and over the years have developed expertise in particular markets or industries. On this note, the U.S. Department of Justice (DOJ) – an executive agency created by

⁸² EC, ECN

⁸³ See Reference 82

Congress in 1870 as an extension of Attorney General (AG) in the enforcement of federal law⁸⁴ – has its own Antitrust Division, responsible of enforcing all competition laws, seeking both criminal and civil remedies. In contrast, the FTC – an independent agency of the U.S. federal government, created by the FTC Act in 1914⁸⁵ – primarily focuses on protecting consumers and competition by preventing anticompetitive, deceptive, and unfair business practices through law enforcement, advocacy, and education without unduly burdening legitimate business activity. This translates into the FTC's main involvement in consumer-related segments, particularly in markets where consumer spending is high. While there is no clear statement explaining how the two bodies decide which will lead any particular investigation, the two agencies share jurisdictions and levels of intervention on a number of cases.

On a more functional level, while both regimes fundamentally have the same missions and their actions are driven by similar objectives, the ground laying laws are statutes developed by governments to protect consumers, actually diverge across such regimes. In this context, a first demarcation can be made regarding EU's more centralized and political approach in contrast to US's rather decentralized and common law-oriented approach. As a general rule, we can estimate the European system to be built from the top down, while U.S. antitrust relies on a bottom-up approach. The differences, even if not extremely contrasting, primarily result from the difference in the political structure of the nations. In practice, the European Antitrust policy foundations are mainly developed by two central rules set out in the Treaty on the Functioning of the European Union (TFEU), one of the two main Treaties that form the basis of EU law⁸⁶. In particular, this relates to Articles 101 and 102 of such Treaty. In this regard, Art. 101 of the TFEU prohibits business agreements or arrangements which prevent, restrict, or distort competition within the internal market and affect trade between the Member States⁸⁷. This provision aims to prevent agreements between both competitors (horizontal agreements), but also between non-competitors (vertical and conglomerate agreements). Examples of infringements of such article correspond to the creation of cartels, practices that fix the purchase or selling prices or similarly control production, and in general those conducts that might result in anticompetitive conduct following an agreement by two or more parties. On the other hand, Article 102 of the Treaty prohibits firms that hold a dominant position on a given market to abuse that position⁸⁸. This provision prohibits, for instance, firms' activities of charging unfair prices, limiting production, or refusing to innovate to the prejudice of consumers. Consequently, as a way of applying such

⁸⁴ Roulsonis R., 2015

⁸⁵ See Reference 84

⁸⁶ EC, Competition Policy, Antitrust

⁸⁷ EC, Competition Policy, Antitrust Overview

⁸⁸ See Reference 87

articles, the EU Commission is empowered by the Treaty to apply these rules through a number of investigative powers such as inspections and written requests for information, while also having the power to impose fines on engagements violating such antitrust rules. In a similar way, NCAs are also empowered to apply Articles 101 and 102 of the Treaty fully, to ensure that competition is not distorted or restricted on national levels. In addition, national courts may also apply these provisions to protect the individual rights conferred on citizens by the Treaty.

On the other hand, US competition authorities' approach relates to ensuring a fair competitive process for all market participants, and the subsequent protection of consumers' welfare, mainly by building its policy on three main pieces of legislation, namely, the Sherman Antitrust Act, the FTC Act, and the Clayton Antitrust Act⁸⁹. The first of such triad, refers to a landmark US law. Passed in 1890 by the US Congress, the law prevented well-established groups of firms from controlling, dictating, and manipulating prices in a particular market. The Sherman Antitrust Act was in fact the first piece of legislation pointing toward modern competition policy outlawing all contracts, combinations, and conspiracies that unreasonably restrain a market's competition. As a consequence, practices of price fixing, bid rigging or customer allocation are punishable as criminal felonies in the US. Moreover, the Federal Trade Commission Act (FTCA) federal legislation was adopted by United States in 1914 to effectively create the FTC, and grant the U.S. government a full complement of legal tools to use against anticompetitive, unfair, and deceptive practices in the marketplace⁹⁰. The Act, designed with the purpose of ensuring fair competition and protection of consumers, is, according to the Supreme Court, violated whenever the Sherman Antitrust Act is violated. However, since FTC cannot technically enforce the Sherman Antitrust Act directly, it can bring cases under the FTC Act against violations of the Sherman Act, therefore expanding FTC's range of intervention. Last but not least, the Clayton Antitrust Act, passed by the U.S. Congress and signed into law in 1914, is a civil statute that prohibits merger and acquisitions that are likely to lessen competition⁹¹. In practice, this Act addresses specific concerns that the Sherman Anti-Trust Act did not address. In particular, in strengthening previous antitrust legislation, the Clayton Act prohibits anticompetitive mergers, predatory and discriminatory pricing, while also protecting individuals by allowing them to file lawsuits against companies and uphold the rights of labour to organize and protest peacefully.

⁸⁹ Chen J., 2022

⁹⁰ Britannica, 2017

⁹¹ US DOJ Antitrust Division, 2015

3.1.3 Current Antitrust trends

Given the number of instances where competition authorities can intervene to protect a markets' competition and its consumers, it catches the eye that not all cases are inherent to our analysis. To be exact, the relevant link between firms' M&A activities and competition authorities' intervention, evolves, above all, around the discipline of merger control. In fact, in this part of the paper, we will concentrate on finding the main trends behind such phenomenon, as a way to understand the latest forces influencing this topic.

In fact, the recent increase in global M&A activity went side by side with record statistics of merger control filings in a handful of jurisdictions. Essentially, global concerns about industry concentration and increasing calls for stricter merger control led antitrust authorities to take a tougher interventionist approach. Nonetheless, even if such intervention mainly targeted life sciences, energy and transport, the path to accomplish successful intervention on digital markets, especially the tech one, is still far-reaching. Moreover, the increasing debates over reforms fueled international coordination. Clearly, this can be seen by authorities ramping up initiatives to cooperate internationally, both informally and by establishing formal dialogues and understandings. As an example of such international coordination, in June 2021, the US' DOJ Antitrust Division, FTC and European Commission have launched the EU-U.S. 'Joint Technology Competition Policy Dialogue'⁹² (TCPD, or "Joint Dialogue"). The 'Joint Dialogue' is intended to reaffirm mutual collaboration on antitrust policy and enforcement in the technology sector. This is strikingly interesting in a time when such intervention is much needed and where an international partnership is crucial in response to large corporations expanding beyond a singular geographical area.

Furthermore, while in 2021 we have seen the establishment of a number of cross-jurisdiction initiatives, often focusing on specific sectors such as the pharma or digital one – where substantial developments still need to be made –, major progresses in key jurisdictions indicate that most influential countries are having a future-oriented approach that tries to catch with the M&A markets' quick developments. To that end, while in EU, three deals were abandoned last year due to EC antitrust concerns, (up from just one in 2020), interestingly enough, they were all in the transportation sector⁹³. In addition, for the second year in a row, no deals were blocked. Nevertheless, the situation is not the same everywhere. In the UK, for instance, total deal prohibitions in 2021 were second only to the number of frustrated transactions in the U.S. and also involved interventions on digital markets. In fact, the UK's Competition and Markets Authority (CMA) decision to block Meta (formerly Facebook)/Giphy in December was particularly significant in that it marks the UK's first Big Tech prohibition⁹⁴. The \$400mln deal was closed in May 2021, without the consent of

⁹² EC, 2021

⁹³ See Reference 61

⁹⁴ Baylis N., 2021

the Competition and Markets Authority (CMA). Following the acquisition, the CMA approached Meta and opened an investigation into the transaction. Following such investigation under the Enterprise Act, the CMA has now ordered Meta to sell Giphy. In fact, according to CMA, Meta's acquisition of Giphy would reduce competition between social media platforms and remove Giphy as a potential challenger in the display advertising market. Alongside this potential effect, CMA's concerns were centered on the idea that the acquisition would allow Meta to limit or block other social media platforms from accessing Giphy, or similarly require rival social media platforms to provide user data in exchange for access to Giphy, both of which would translate in anticompetitive behaviour conducted by the acquiring firm.

Furthermore, we find evidence that some of the recent M&A activity of GAFAM members (and of other digital platforms) has been investigated by antitrust authorities. For example, the merger between Apple and Shazam (2018) was investigated by the European Commission at the request of six EU member states⁹⁵; Microsoft/LinkedIn (2016), and Google/DoubleClick (2008) were scrutinized by the European Commission⁹⁶ while Facebook/WhatsApp (2014), despite a purchase price of around \$19 billion, was not subject to notification at the EU Commission level and could only be reviewed by the Commission via a submission, since WhatsApp's annual revenue did not exceed the relevant EUMR turnover thresholds⁹⁷. Other noteworthy digital firms' merger investigations include Facebook/Instagram (2012) and Google/Waze (2013) which have been assessed by the U.K. Office of Fair Trading⁹⁸. However, these are the exceptions to the general rule that competition authorities have not investigated the vast majority of GAFAM acquisitions, and even in these examples where they did investigate, the mergers were ultimately approved.

Lastly, one major development is necessary to be outlined as it goes to show that while sometimes lacking the tools, competition authorities are trying to change the narrative regarding M&A's deployment. In the context of the latest developments in European merger policy, a special highlight has to be given to the EC's long-awaited establishment of the EU Digital Market Act (EU DMA)⁹⁹. Following the Commission's announcement of the EU DMA in late 2020 to better control the fast-growing digital markets, in May 2022, after negotiations with the EU Council and member states' agreements upon the council's position, both the Council and Parliament reached a provisional political agreement on the Act. To all intents and purposes, the DMA serves as to define clear rules for large online platforms active in digital markets, in an

⁹⁵ EC, 2018

⁹⁶ Simon S., 2018

⁹⁷ Ashurst, 2021

⁹⁸ Digital Regulation Platform, 2022

⁹⁹ Legislative Observatory, 2020

attempt to limit their anticompetitive behavior¹⁰⁰. In fact, it aims to ensure that no large online platform that acts as a ‘gatekeeper’ for a large number of users abuses its position to the detriment of companies wishing to access such users. This is especially important in the context of digital markets where such large firms – which act as gatekeepers¹⁰¹ – effectively control a large share of market-segment and are therefore endowed with exclusive powers, especially when it comes to raising the barriers to entry. The decision taken by the Commission goes exactly to show that competition authorities *are* actually attempting to enter the discussion in a systematic manner. On this account, while some believe the enactment of such Act poses serious threats to innovation, it still represents the EU’s latest attempt to define a new framework adapted to the economic and democratic footprint of digital giants.

3.2 Antitrust Intervention

While some mergers in digital markets can produce harmful effects on consumers, usually, as in the case of other markets, not every merger poses critical threats to competition. As a result, competition authorities need to evaluate quickly and thoroughly the extent to which such practice could have negative impacts on consumer welfare. Moreover, most merger laws are written generally, declaring that mergers are unlawful and should be blocked by the competition authority if they will substantially harm competition. It is then left to the competition authority to interpret and employ this broad standard. It follows that given mergers’ usual, yet not always occurring innocuousness, the investigation is necessarily complex. In particular, this paper’s section will discuss the procedures carried out by EU and US competition regulation regimes in terms of merger control procedures.

3.2.1 Merger Control Procedures

Several competition authorities have issued guidelines describing to the public the process that they will use in analyzing mergers. While these differ in detail, they are broadly consistent in their approach. In fact, a well-known example is the five-step process contained in the 1997 U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guideline¹⁰², in which they highlight 5 main steps to conduct a merger review. The guidelines’ steps are the following: 1) Market definition and description, 2) Identification of firms that participate in the relevant market and their market shares, 3) Identification of potential adverse effects from the merger, 4) Analysis of ease of market entry, 5) Identification of efficiencies that might arise. While it is true that such steps represent the most fundamental elements to be

¹⁰⁰ EU Council, 2022

¹⁰¹ Giardin D., 2021

¹⁰² US DOJ, FTC, 1997

assessed in a merger review process, we will now aim to discuss EU and US practical processes towards the review of mergers. While merger control test for digital markets is the same as for any other market, the approach may vary between the two jurisdictions. This is true in the sense that the European approach assesses whether a merger might significantly impede effective competition. In contrast, the American approach examines whether the transaction results in substantial lessening of competition.

On more pragmatic levels, the EU merger review process¹⁰³ is comprised of 5(+1) steps: Merger notification, Phase I, Phase II, Remedies, final decision, and ultimate review by the General Court. For starters, a merger notification should take place following the conclusion of either an agreement, announcement of a public bid, acquisition of control, or after manifestation of a good faith intent to do so. In principle, the Commission only examines larger mergers with an EU dimension that reach certain turnover thresholds¹⁰⁴, which can vary if the turnover is counted as worldwide or only within the European frontiers, depending also if the turnover accounts for all the merging firms or just one party. If the merging firms are not operating in the same or related markets, or if they have only very small market shares not reaching the specified market share thresholds, the merger will typically not give rise to significant competition problems: the merger review is therefore done by a simplified procedure, involving a routine check. Above those market share thresholds, however, the Commission will carry out a full investigation. Following the merger notification, the EC has 25 working days to analyze the deal, giving start to the Phase I of the review. During such stage, most investigations find their end – as 90% of investigations end in this phase, with usually no remedies –. Succeeding the 25-days deadline, the Commission can either clear the deal or further investigate, in which case, it enters into the Phase II. This step represents an in-depth analysis of the merger's effects on competition. This is usually done by implementing a set of substantive and quantitative tests, most notably, these may include the GUPPI test, to understand the firm's post-merger incentive to raise prices, the HMT (Hypothetical Monopoly Test) – a quantitative test of demand side substitutability – or a hybrid test used by the EU¹⁰⁵, comprising both the dominance and SLC tests. During the development of such Phase, the EC has 90 working days to make a final decision on the compatibility of the planned transaction with the EU Merger Regulation¹⁰⁶. Consequently, the fourth stage is referred to as Remedies: if the Commission has concerns that the merger may significantly affect competition, the merging companies may offer solutions. Often also called 'commitments', companies may propose remedies in both Phase I and II of the investigation, proposing certain modifications to the initial merging

¹⁰³ EC, 2021

¹⁰⁴ See Reference 103

¹⁰⁵ Roller L., De La Mano M., 2006

¹⁰⁶ EU Council, 2004

project that would guarantee continued competition on the market. Furthermore, following the end of the Phase II, the EC has powers to either clear the merger, approve it subject to remedies, or prohibit the transaction if no adequate commitments have been proposed by the merging parties. Lastly, all decisions and procedural conduct of the Commission are then subject to review by the General Court and ultimately by the European Court of Justice, based in Luxembourg.

In a rather similar, yet distinctive manner, the US competition regulation regimes, makes use of the Federal Trade Commission to ensure a faithful Merger review process. In particular, under the HSR Act, parties engaging in large mergers and acquisitions must file premerger notification and wait for government review¹⁰⁷. Accordingly, the steps in this process are the following. First, deals involving a minimum value and in which the parties must be a minimum size, require filing the notice of such proposed deal to the FTC and DOJ. While not all M&A cases require a premerger filing, most of those who actually do, require both buyer and seller to file forms and provide information about the industry and their own businesses. Once the filing is complete, the parties then have 30-days waiting time, or until the agencies grant early termination, to formally consummate the deal. Subsequently, having disclosed information to both US' antitrust agencies, the matter is "cleared" to either the FTC or the DOJ for review. Once clearance is granted, the investigating agency can obtain non-public information from various sources which may include both parties or other market participants. In a third step, after preliminary review of premerger filing, the agency can decide to: a) early terminate the waiting period prior to the end of the waiting period; b) allow the initial waiting period to expire; or c) issue a Request for Additional Information ("Second Request") to each party, as a way to gain access to additional resources. In the fourth stage, however, once both companies have substantially complied with the Second Request, the appropriate agency has an additional 30 days to review the materials and, if necessary, take action. Finally, the outcomes at this stage, generally lead to: close the investigation and let the deal go forward unchallenged; enter into a negotiated consent agreement with the merging parties – that most often includes provisions that will ensure fair competition –; or stop the entire transaction by filing for a preliminary injunction in federal court. It follows that unless the agency takes some action that results in a court order stopping the merger, the parties can close their deal at the end of the waiting period.

3.3 Antitrust and digital markets

The required and compelling work carried out by competition authorities inevitably shapes an industry's internal arrangement. Particularly so, when regulators' commitment is exercised to better control a market

¹⁰⁷ FTC, 2022

competition, such practice can effectively have a great degree of influence over market participants' decisions. Nonetheless, the complexities and characteristics of digital markets shift antitrust authorities' work to internalize, into the investigations, a set of new challenges arising from such environment. In this section, we are going to investigate the implications antitrust authorities have with respect to such markets, the challenges evolving around such themes, and ultimately question competition authorities' current involvement in the matter, pointing out possible recommendations to potentially ameliorate such activity's performance.

3.3.1 The Challenges

The previous efforts deployed in trying to define the characteristics of digital markets – and the firms active in such domain –, and the activities carried out by regulators as an attempt to shape such industry, could lead one to think that the interlink between these two phenomena can be understood as for any other market. However, evidence on the matter, and the findings of this paper, point exactly to the opposite idea. The peculiar features of digital markets, and especially the implications for its future development ultimately create additional challenges for antitrust authorities trying to regulate such sophisticated territory.

It comes without saying that prohibiting all mergers can definitely reduce consumers welfare if the combination of two separate entities constitutes an efficient and threatening market upgrade. As consequence, merger policy in digital industries must take into account the industry characteristics. In fact, when trying to understand the reasons behind antitrust authorities' apparent unpunctuality in regulating the fast-moving digital markets, several reasons may be intervening. First off, as companies are increasingly willing to engage in strategic, transformative deals, the transactions usually undergo lengthy merger control scrutiny before potentially being prohibited or abandoned. This, in turn, may result in the fact that data on prohibition and abandonment of deals may be lagging data on deal volumes. Moreover, many of the proposals for new or enhanced merger control scrutiny in the digital sector have not yet come into effect. For instance, the above-mentioned EU DMA, which could represent a real shifting point in the way European nations and the European Union as a whole intervenes in regulating digital competition matters, even if announced in 2020, as of May 2022, the Act is still to come into proper effect, with the Digital Services Act package (DSA) expected to be applicable by 2024. In addition, a common feature of digital mergers evolves around not only 'tech'. Rather, other elements, primarily the role of data and innovation, can often form supplementary complications for antitrust as they can limit the latter's scope with which they can enforce rules and remedies. Hence, digital mergers where access to data plays an important role, network effects figure prominently, and firms involved in the merger operate multi-sided platforms offering 'free' services to consumers, provide extra elements to which CAs have to keep an eye on.

In fact, one of the most common arising concerns involves the removal of potential and actual competitors that do not yet generate high revenues. In other words, this refers to the acquisition of small-to medium start-ups. It should be known by now, that firms in digital industries often start monetising only after reaching considerable scale. This is because at that early stage, digital firms focus more on the growth of their customer base than on the growth of their turnover and profit (for instance, because they want to be the first to benefit from network effects and because the market might tip in their favour¹⁰⁸). At that stage in their life cycle, startups' evolution is still uncertain, and it is therefore very difficult to determine if the target will grow to become a significant competitive force. Since big tech companies mostly acquire firms with no or small monetary turn-over as their acquisitions often take place at early stage of acquired firms' development, big tech's acquisition of young startups represents probably the most important policy problem in this context. In particular, the merger control difficulties relating to such instance call to competition authorities' need to predict the evolution of the target in the absence of the merger, i.e., the counterfactual. When defining the counterfactual to a merger, antitrust authorities may therefore need to consider the ability of the target to develop, on its own or attracting outside resources, as well as the likelihood of an alternative buyer coming along. Thus, a start-up could represent a threat, and hence, there could be a pre-emptive motive behind the acquisition even if the entrant's revenues or profits are small. For instance, this is the reason why the acquisition of Instagram by Facebook was not reviewed by the Commission and why, without the specific referral by national competition authorities, the acquisition of WhatsApp by Facebook would not have been reviewed by the Commission, if not external submission were to be made. As a final result, merger notifications that solely rely on meeting a turnover threshold appear to be inadequate, because competition authorities may not be able to investigate possible anti-competitive mergers effects.

Moreover, other challenges may arise as a consequence of the characteristics of these markets. In digital environments, consumers often pay for product or services implicitly through their personal data or attention. This inevitably translate into assessing a merger, not exclusively on the consequences for the market, but chiefly, and expectedly so, on the dynamics that could lead a merger to have effects on sides of competition that take place upon broader level than the traditional ones, for example, on firms' competition for attention. In addition, also related to such issues, a common characteristic of digital markets, could appear to suggest a firm's either uncompetitively high margins or below cost predatory prices, when actually neither is the case. In fact, data-driven firms characterized by multi-sidedness, invoke a set of implications relating for instance, to increased network effects, which can set hurdles to antitrust

¹⁰⁸ Petit N., Belloso N. M., 2021

enforcement when trying to assess the barriers to entry, the firms' actual market power or other elements of investigation. In addition to the markets' characteristics creating challenges for antitrust enforcement, a special additional burden is then created by the work of lobbyists rowing against antitrust developments trying ameliorate their interventions' efficacy. For instance, in the context of the implementation of the EU DMA, primarily the governments of Luxembourg and Ireland that wanted to weaken and water down the law in numerous places. This is particularly piquant because almost all the big American tech companies have their European headquarters in Ireland (Google, Facebook, Apple) or Luxembourg (Amazon). The two states not only help them avoid taxes, but also often support the companies in other avenues, such as data protection¹⁰⁹. It follows that, if some of the very same states within the EU, and particularly those having the closest relationship with big industry players contest against such developments, the challenges arising for competition authorities are further reinforced.

3.3.2 The Propositions

As we have seen, the evolution of digital markets embeds some crucial implications and challenges for competition authorities. In turn, such implications trigger a set of concerns relating to the enforcement of antitrust forces into regulating such environments. In this last section, we will aim to provide some theoretical and practical propositions designed with the intent to renew the traditional approaches antitrust authorities take with respect to merger control, specifically in the case of digital markets where there are broad hopes for developments.

Evidence shows antitrust authorities' intents to change the enforcement framework and shift from a conventional approach to an updated one which eventually accounts for the technological advancements exploited by the digital sector firms. Nevertheless, the information asymmetry on technology and market evolution between large tech firms and antitrust agencies is probably higher in the digital markets than in others. While EU and US' effort relate, respectively, to the proposition of the EU DMA on one side, and application procedures to set a number of bills targeting BigTech on the other, some experts still find such exercises to be sufficient yet not enough convincing. Hence, we are in a situation calling for an unprecedented need modernise the tools and approaches needed to understand and investigate anti-competitive behaviour in digital markets. First off, digital markets' constant evolvement incurs in a lack of case law, precedents, and guidelines to follow. In turn, this implies that institutions need to build institutional knowledge around the concepts evolving in this context. In such case, this can turn out to be especially benefitting to CAs in the context of markets for online advertising, for example. Since the latter represents the way many digital services are monetized, a comprehensive market study into the digital advertising sector could be a good

¹⁰⁹ Fanta A., Schumann H., 2021

instrument to gain the necessary knowledge for future enforcement activity in the sector. Moreover, better understanding the forces driving digital markets, could also reveal advantages in cases of merger for multi-sided firms, which often create unsolved concerns to antitrust authorities. This ultimately means that traditional analysis on the ‘relevant market’ could no longer apply to digital cases. CAs have predominantly been looking at users’ side of the market, to an extent neglecting other sides. In contrast, the current circumstances call upon for all sides of the markets to be looked at jointly, as choices made by the platform are interdependent from users’ ones.

Furthermore, as an attempt to improve EC’s review of big tech acquisitions, the current monetary turnover threshold could be complemented by additional notification thresholds. A revision of the merger control thresholds could allow antitrusts to capture a higher number of transactions at an early stage. For instance, transaction values such as the one implemented in Germany (€400mln) and Austria (€200mln) are exactly advancements in that direction. To that end, additional changes could be made regarding the market shares of the firms involved in mergers and acquisitions, which are often not given the right importance. This includes investigating into the characteristics of the acquirer, for example, by designating digital companies to have ‘strategic market status’ – as proposed by UK’s CMA – and therefore require certain firms to notify all their acquisitions to the relevant competition authority.

Additionally, a more relevant look into the standard of proof (SoP) would be necessary to allow successful merger control decisions. In fact, the current standard of proof is the same for the EC to either authorize or prohibit a merger. Under situations on uncertainty, the SoP requires that Commission should consider equally type I (prohibiting a merger that is actually pro-competitive, ‘false positive’) and type II errors (authorising a merger when in fact it is anti-competitive, ‘false negative’). As a consequence, the Commission should focus more on the risks than on the costs of those errors. When the costs of errors are important, neglecting them can be harmful to consumer welfare. This may be particularly the case in the digital sector where markets tip quickly¹¹⁰, meaning that the costs of type II errors may be very high. As the costs of these type II error can be important, if correctly taken account of, they may lead to the prohibition of the merger or to the imposition of remedies. Consequently, antitrust authorities could require firms to provide burdens of proof exemplifying that a merger can be pro-competitive, rather than interrogating on the anti-competitive effects.

Subsequently, other potentially more radical way to deal with market uncertainty would be to ensure more reversibility into merger review and the remedies associated to it. This could be practically done by allowing an ex-post revision of the merger review on the basis of Article 102 TFEU when market evolution shows

¹¹⁰ See Reference 108

that a big tech acquisition has significantly impeded effective competition. Similar to the UK's ex-post merger review, this could provide advantages in relying on post-merger information to revise enforcement decision. At the same time, however, it could drawback on the regulatory uncertainty, which is an increasing problem, as seen above.

Finally, to allow antitrust authorities to gain knowledge regarding the possibility of the firm to engage in anticompetitive conduct, some experts suggest to imposing to the merging parties to propose, at the time of the merger, a confidential future divestiture plan they would implement if the market were to show that the merger cause significant impediments to effective competition. However, this recommendation would require firms to share information they would be hardly willing to concede. As a consequence, the last recommendation to improve merger control policy on firms' M&A in digital markets, relates to adopting a more economic approach in the assessment of merger. This translates in weighting up both the likelihood and magnitude of the impact of the merger. This 'Balance of Harms' approach could be based on falling short of the meeting the legal tests CAs are required to satisfy to block a merger, and as touched upon earlier, resulting in a more efficient assessment of the risks, before the benefits & costs, such merger could give rise to.

CONCLUSION

Bringing up the rear from the findings of this thesis, it is beyond doubt that the M&A state of the art results in rather complex yet fascinating contexture. In particular, Mergers and Acquisitions can turn out to be an extremely accommodating practice for firms seeking to expand. Whether the integration is unfolded on a vertical or horizontal level, through such operations, corporations can exploit new synergies and capitalize on complementary competitive advantages leading to lower prices or ameliorations of the product or service's quality. In turn, these commute into further unequivocal benefits for consumers. Nonetheless, if the conjunction of two or more firms into one singular competitive force can develop into such new entity adopting overly distorted behavior, this could be conducive to unsolicited types of competition of which results ultimately fall on consumers.

In particular, the extent to which a merger can be problematic and anticompetitive is especially menacing in the case of digital markets. The characteristics of firms active in such environment – which for instance relate to abnormal returns to scale, remarkable network effects and the progressively incremental role of data –, ultimately leads firms to compete through several unique, yet intermixed dynamics. Inevitably, this creates further incentives for such firms to engage in anticompetitive behaviors as a way to amplify their market share. By way of illustration, Google's \$2.1B acquisition of Fitbit represents exactly the case where the purchase of a (potential) competitor, allowed the acquiring party to further develop and thrive in a particular market segment – the smart wearable devices segment – therefore conferring Google additional resources to better control and influence the market. While competition authorities, after an in-depth analysis concluded that subject to remedies, the acquisition would not pose threat to the competitive forces, there still remain second thoughts about the extent and consequences such purchase can lead to, especially in the long-term spectrum.

In compliance with the regulation of the competitive process, while specific rules and statues vary across jurisdictions, the guidelines to ensure such process does not extensively harm consumers are for the most part similar between them. In practice, antitrust authorities seek to enforce the Antitrust Laws to ensure that the Competition Policies are well respected. On the flip side, however, evidence shows that the current instruments used by such authorities –particularly in digital markets occurrence – might be, to some degree, lacking in effectiveness.

The overflowing, bustling and extremely high rate of innovation causes digital markets to have rather loose and impulsive structure. As a consequence, Antitrust authorities will need to reinvent the approaches taken with respect to such issues. Such renewal is unarguably necessary in order not to fall behind and become a

bystander in a situation where they should actually be the active participants, ruling the roost and leading the debate by authentically being in the driver's seat.

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