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Monopolization From Two Different Perspectives: Intellectual Property Law and Competition Law

Abstract

Monopolization is the practice of acquiring or maintaining exclusive control over a market. It is illegal under both intellectual property law and competition law. Despite their shared aim of addressing monopolies, these two legal frameworks approach the issue differently, primarily concerning the delicate balance of the monopoly privilege.

Intellectual property law grants inventors and creators exclusive rights to their inventions and creations for a limited period of time. These exclusive rights are intended to promote innovation by giving inventors and creators a financial incentive to create new products and ideas. However, these rights can inadvertently lead to monopolies, potentially harming consumers through reduced competition and inflated prices. Competition law, on the other hand, is designed to promote competition and protect consumers from the harmful effects of monopolies. While it prohibits various anti-competitive practices, it also acknowledges that certain monopolies can be essential for driving innovation and economic growth.

This paper discusses the divergent perspectives on monopolization within the realms of intellectual property law and competition law. It argues for a harmonious coexistence of these legal domains to encourage both innovation and competition. Furthermore, it addresses the challenges inherent in balancing these two areas of law, especially in the context of the digital age.

I. Introduction

It is usually argued that exclusive rights that protect intellectual property rights are inherently conflicting with the competition. Although these rights are necessary for unrestricted competition in fields like innovation and quality, without them, an undertaking might take advantage of its competitors' efforts rather than try to surpass them. It is not so much a conflict as it is a need to balance these various forms of competition. As long as intellectual property rights are properly understood, they will restrict some forms of competition, in production and distribution, while enabling and enhancing others, in invention and quality.

The balance is mostly maintained by intellectual property laws, which restrict the scope and availability of protection based on the subject matter at hand and may also call for obligatory licensing in some situations. Nonetheless, intellectual property exploitation may be subject to EU and national competition laws if doing so unnecessarily restricts competition concerning the protection of intellectual property. The economic goals of intellectual property protection and a prohibition on anti-competitive behavior are consistent with the application of competition laws in such instances.¹

1. Defining Monopolization

The concepts of ‘monopoly’ and ‘monopolization’ – which refer to the exclusive possession or control of the supply or trade of a good or service – are primarily economic terms, but have been

¹ JONATHAN D. C. TURNER: *Intellectual Property and EU Competition Law*. Oxford University Press. Oxford, 2010. p. 3.

employed in a wide range of disciplines and can encompass a diverse range of meanings depending on the perspective. While legal frameworks are generally restricted by national borders, the economics of monopoly are not so constrained. Moreover, the field of economics plays a significant role in the development of competition laws in jurisdictions such as the European Union, the United States, and Canada. Consequently, despite the fact that regulations are not exclusively or solely based on economic principles, it is crucial to consider both law and economics holistically while analyzing the economic theories of monopolization to comprehend the concept of monopolization and how economic principles can inform the application of monopolization regulations. Economics plays a vital role in studying monopolization law by identifying economic harms and benefits and understanding the incentives of dominant firms to engage in anticompetitive exclusionary conduct, which can inform enforcement and policy decisions.²

In the legal realm, true monopolies are uncommon in actual markets; however, competition law restricts companies with significant market power, even if they do not hold a monopoly. Competition law focuses on firms with a dominant position that have the potential to act monopolistically, even if they are not actually monopolists. The fundamental concepts of each jurisdiction's substantive monopolization laws appear to be similar, primarily prohibiting a dominant company from engaging in exclusionary, disciplinary, or predatory behavior that would be detrimental to competition. Despite apparent similarities, the underlying policy goals of monopolization legislation may differ across the European Union and other countries.³

Courts do not require a literal monopoly before applying rules for single-firm conduct but rather a firm with significant and durable market power. A monopolist is a company with enduring market power, which is the ability to raise prices or exclude competitors. If a company or group of companies accounts for less than half of the sales of a particular good or service in a particular area, courts typically do not find monopolistic power. The leadership position must be sustained over time as the leading firm's behavior could be restrained by new competitors or other companies.⁴

Judging the actions of an alleged monopolist necessitates a thorough examination of the market and the strategies implemented in establishing and maintaining the monopoly. While obtaining a monopoly through superior products, innovation, or business acumen is legal, competition concerns may arise if the same outcome is achieved through predatory or exclusionary acts. In certain instances, the monopolist may have legitimate business justifications for actions that hinder the success of competitors within the market. For example, the monopolist may participate in merit-based competition, ultimately benefiting consumers through improved efficiency or a distinctive range of products or services. This necessitates a comprehensive analysis of the concept of monopoly across various dimensions. In certain scenarios, a specific monopoly may be established to safeguard the intellectual property rights of the holder.

The potential for misinterpretation between competition law and intellectual property law arises from their shared use of the term 'monopoly'. Competition law interprets 'monopoly' as market power, while IP law views it as a collection of rights over a design, invention, or work. While IP

² DAMIEN GERADIN: *Limiting the Scope of Article 82 EC: What Can EU learn from the US Supreme Court's Judgment in Trinko in the wake of Microsoft, IMS, and Deutsche Telekom?*. In: Rosa Greaves (ed): *Dominance and Monopolization*. Routledge. New York, 2016. p. 514.

³ GERADIN 2016, p. 526.

⁴ Federal Trade Commission: *Monopolization Defined*. 2013

<https://www.ftc.gov/advice-guidance/competition-guidance/guide-antitrust-laws/single-firm-conduct/monopolization-defined>

rights grant some legal exclusivity to their owner, it is still to be determined whether this translates into economic power within the scope of antitrust laws.⁵

This distinction is critical because the existence of a monopoly under competition law may necessitate intervention to protect market competition, while the existence of a monopoly under IP law is inherent to the grant of intellectual property rights. To address this potential for misunderstanding, it is essential to carefully examine the specific context in which the term ‘monopoly’ is used. In the context of competition law, the focus is on whether the holder of intellectual property rights possesses market power, which is the ability to influence market conditions, particularly pricing. Meanwhile, the focus under IP law is on the exclusive rights granted to the intellectual property holder, regardless of whether these rights translate into market power.

2. Innovation and Monopolization

The relationship between innovation and monopoly is a delicate balancing act between two distinct regulatory frameworks: competition law, which aims to curb monopolies, and patent law, which fosters and upholds monopolies. Innovation encompasses both the inventive process and the practical steps involved in bringing that invention to market. Various factors influence the driving force behind innovation, such as the characteristics of an invention, the effectiveness of intellectual property protection, the competitive environment, and barriers to entry in production and research and development.⁶ Innovations can manifest as either new products or processes. A process innovation focuses on reducing the cost of manufacturing an existing good or service, while a product innovation introduces a novel or enhanced good or service.

The strength of intellectual property protection determines the extent to which an inventor can reap the benefits of their discovery and contribute to economic growth. In theory, it can be assumed that patent protection, when granted, provides the inventor with complete and permanent protection against imitation. While this assumption represents an extreme case where an invention has ‘exclusive rights’, it serves to illustrate the consequences of strong intellectual property rights. It is important to note that patent protection does not guarantee the inventor's ability to prevent competition from others, either legally through creative workarounds or illegally through patent infringement.⁷

‘Non-exclusive’ intellectual property rights, akin to trade secrets, allow firms to retain ownership of their inventions while permitting others to independently develop similar products or processes without infringing upon the original inventor's rights. These rights, while not preventing independent discovery, restrict the unauthorized replication of inventions.

The dynamics of the innovation process play a crucial role in shaping incentives for research and development investments. A firm may gain a competitive edge by securing an early lead in the innovation process, thereby obtaining an exclusive right to the innovation.⁸ In the absence of competitive market forces, a monopolist can exercise its market power to restrict output and elevate the price of goods and services. This unchallenged dominance can breed complacency and diminish incentives for innovation and efficiency gains. Consequently, the monopolist may

⁵ VIKTORIA ROBERTSON: *Competition Law's Innovation Factor: The Relevant Market in Dynamic Contexts in the EU and the US*. Hart Publishing. New York, 2020. p. 156.

⁶ RICHARD J GILBERT: *Competition and Innovation*. Journal of Industrial Organization Education, 2006. p. 1.

⁷ GILBERT 2006, p. 1.

⁸ GILBERT 2006, p. 2.

prioritize profit maximization over customer satisfaction, leading to the provision of lower-quality goods and services at inflated prices. Consumers, lacking alternative options, are effectively captive to the monopolist's market power and must bear the burden of higher prices and lower quality.⁹

Companies and entrepreneurs are incentivized by competition to innovate, provide superior products and services for customers, and establish novel revenue streams within a market economy. While competition benefits society and consumers by encouraging increased innovation which leads to better goods and services for consumers, the question of whether producers or business owners generally desire to compete has yet to be raised. The answer to this question is likely otherwise, as demonstrated by the numerous instances of businesses in a variety of industries attempting to form cartels, engage in monopolistic activity, or attempt to become monopolies in the past. One could argue that no company owner would prefer increased competition as it could lead to decreased profits and, in certain situations, their own demise.¹⁰

Oligopolies and monopolies can serve as catalysts for innovation and efficiency. The looming threat of new entrants, either more efficient firms or firms introducing innovative products, compels the monopolist to continuously innovate and improve its production processes and product offerings. This competitive pressure, even in the absence of direct rivals, drives the monopolist to maintain a high bar for efficiency and innovation.¹¹ . In the long run, however, the lack of competition can lead to complacency and stagnation. Without the fear of losing market share to rivals, monopolies may become less motivated to invest in research and development or to improve their products and services. This can result in a decline in overall innovation and limited choices for consumers. Additionally, monopolies may engage in anti-competitive practices, such as price-fixing or collusion, which can harm both consumers and smaller competitors. Therefore, while oligopolies and monopolies can initially drive innovation and efficiency, a lack of competition ultimately poses risks to the market and consumers.

Globalization, shifting consumer preferences, and emerging technologies will all play a role in shaping the future of monopolies and innovation. Emerging technologies with the potential to transform sectors and open up opportunities for innovation include biotechnology and artificial intelligence. Innovation is further fueled by globalization, as companies increasingly exchange knowledge and skills and collaborate across borders. Innovation is also being driven by changing customer preferences, such as the demand for customized goods and services, as companies strive to adapt to these evolving demands.

Policymakers, regulators, and industry stakeholders must collaborate to establish a regulatory framework that protects consumer interests and encourages innovation in order to address the challenges and seize the opportunities of the future.

II. Intellectual Property Law and Monopolization

1. The Objectives of Intellectual Property Law

Intellectual property rights (the IPRs), such as patents, copyrights, trademarks, and licenses, grant market power to firms, enabling them to control market conditions, particularly pricing. By

⁹ ARIEL EZRACHI: *Competition and Antitrust Law: A Very Short Introduction*. Oxford University Press. Oxford, 2021. p. 42.

¹⁰ KO UNOKI: *Competition Laws, National Interests and International Relations*. Routledge. New York, 2020. p. 5.

¹¹ BRUCE WARDHAUGH: *Competition, Effects and Predictability: Rule of Law and the Economic Approach to Competition*. Hart Publishing. Oxford, 2020. p. 126.

erecting barriers to entry, IPRs restrict competition within the industry. Companies with strong IPRs may limit production and sales, leading to higher monopoly prices for consumers.

Market power and competition are two opposing forces that shape most markets. Market power refers to the ability of a firm to influence market conditions, particularly pricing. In a perfectly competitive market, firms lack market power and face intense competition. At the opposite end of the spectrum lies monopoly, where a single firm holds dominant market power and faces no competition. Most real-world markets are competitive, albeit with varying levels of competition from perfect competition. In these markets, firms possess some degree of market power, though it is not as strong as in a monopoly. These markets, neither perfectly competitive nor monopolistic, fall under the categories of monopolistic competition or oligopolistic competition.¹²

Within the context of a market-based economy driven by profit-seeking, incentivizing innovation necessitates compensating companies for their efforts. Research, development, and innovation are inherently costly endeavors. Investing in R&D and pursuing innovative outcomes demands a degree of protection to ensure that firms have sufficient time to recoup their investments and maintain motivation for continued investment.

The intellectual property protection system pursues two primary economic objectives:

Encouragement of Investment in Knowledge Creation and Innovation: The establishment of exclusive rights to utilize and exploit new technologies and products effectively stimulates innovation. In the absence of such protection, competitors could freely utilize the results, discouraging companies from investing in research, development, and innovation.

Facilitation of Widespread Dissemination of New Knowledge: While intellectual property rights can promote the acquisition and dissemination of new knowledge and information, this can come at significant costs. Information and knowledge, as intellectual creations, exhibit characteristics of non-competitive public goods, making it challenging to exclude others from their use.

From an economic standpoint, providing broad access to new discoveries is socially efficient. In a free market without intellectual property rights, new products and technologies could be easily replicated at a marginal cost, benefiting society. Consistent with the concept of public goods, it is more efficient to share knowledge freely but restrict its use by imposing a usage fee.

Striking a balance between these two objectives is crucial: an overly protective system would restrict social gains by limiting the dissemination and utilization of results, while an inadequate protection system would stifle innovation due to insufficient returns on investment.

2. The Relationship Between IP Rights and Monopolies: Navigating Theoretical Frameworks

Intellectual Property rights, granted to individuals for their creative endeavors, serve as a multifaceted construct with justifications ranging from rewarding labor to facilitating social progress. These exclusive rights, often termed ‘negative rights’, empower creators to control external usage of their inventions, distinguishing them from monopolies under competition law that confer unrestricted market power.

The time-limited monopoly inherent in IP rights, while preventing exploitation by others, diverges from the market-centric approach of competition law monopolies. The IP monopoly, a concept rooted in safeguarding an author's moral and financial interests, offers a nuanced balance between privatizing knowledge for commercial gain and contributing positively to societal welfare.

¹² LIVIA ILIE: *Intellectual Property Rights: An Economic Approach*. Procedia Economics and Finance. Sibiu, 2014. p. 548.

<https://core.ac.uk/download/pdf/81960566.pdf>

A fundamental component of intellectual property law is the monopoly or exclusivity of IP rights, which give the creator, patentee, author, or registered proprietor, the ability to limit who is permitted to use their work as well as to use them themselves. The elimination of these monopolies could impede intellectual property development and hinder societal progress, a primary objective of the IP system.

The monopoly in an IP right has advantages as well as disadvantages. Indeed, a creator can privatize knowledge and commercialize an invention with the help of the IP monopoly. On the other hand, this monopoly has a long-term positive utilitarian impact on society. For this reason, the IP monopoly issue needs to be modified finely rather than forced into a rigid framework.¹³

In every society, shared resources and ideas form a collective heritage, prompting intellectual property owners to contribute original concepts for the greater good. Utilitarian theory justifies IP by asserting that protecting innovations incentivizes individuals to openly share ideas, contributing to societal well-being. Within this framework, IP rights act as a means to an end, promoting the broad sharing of novel concepts and innovations for the benefit of society.

The utilitarian theory also underlies patent regimes, emphasizing a delicate balance between safeguarding creators' rights and facilitating knowledge exchange about new technologies. However, concerns arise when monopolies conflict with the public interest, potentially stifling creativity by limiting expression and imposing excessive prices. Advocates propose a balanced IP framework that acknowledges the validity of monopolies, provided they don't impede the creativity and freedom of expression of others. In the end, society benefits when novel concepts and innovations are shared broadly.¹⁴

To address these concerns, governments deploy mechanisms like compulsory licensing to regulate actions where creators misuse their monopoly power. This ensures a delicate balance between protecting creators' rights and preventing monopolistic practices that hinder broader societal benefits.¹⁵

However, the notion of IP rights extends beyond utilitarian justifications. In contrast to the utilitarian theory, the personality theory of IP emphasizes the protection of individual rights and expression. This theory is prevalent in continental European countries and those influenced by civil law. Under the personality theory, IP rights are viewed as an extension of an individual's moral and intellectual property, allowing creators to control the use of their works and maintain their autonomy over their creations.

The personality theory highlights the personal and expressive aspects of IP. Creators often invest their creativity, passion, and identity into their works, and IP rights provide them with the means to protect and preserve their creations. This protection not only ensures the recognition and respect for creators but also contributes to the cultural and artistic heritage of society. However, the personality theory also acknowledges the potential for IP rights to be used in a way that restricts the dissemination and enjoyment of creative works. For instance, overly restrictive copyright laws can make it difficult for others to access and build upon existing works, hindering creativity and innovation.

¹³ LOKESH VYAS - UMANG SETHI: *The Future of Intellectual Property Rights – an End to Monopoly*. King's Student Law Review. London, 2020.

https://blogs.kcl.ac.uk/kslr/2020/12/18/the-future-of-intellectual-property-rights-an-end-to-monopoly/#_edn7

¹⁴ RITU PAUL: *Intellectual Property Rights: A Utilitarian Perspective*. 2021. p. 17.

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3842429

¹⁵ WILLIAM FISHER: *Theories of Intellectual Property*. In: Stephen Munzer, (ed.): *New Essays in the Legal and Political Theory of Property*. Cambridge University Press. Cambridge, 2001. pp. 168-199.

The utilitarian and personality theories of IP provide distinct yet complementary perspectives on the justification and regulation of IP rights. While the utilitarian theory focuses on the societal benefits of IP, the personality theory emphasizes the protection of individual rights and expression. In practice, governments and policymakers often draw upon both theories to develop fair and effective IP policies. Compulsory licensing, for example, reflects the utilitarian concern for promoting competition and innovation while also acknowledging the personality rights of creators.

By carefully considering both utilitarian and personality perspectives, policymakers can strike a balance between protecting creators' incentives and promoting competition and innovation. Embracing both utilitarian and personality theories, along with implementing mechanisms like compulsory licensing and antitrust laws, allows governments to cultivate an environment where creativity thrives, and societal well-being is safeguarded.

III. Competition Law and Monopolization

1. The Purpose of Competition Law

Competition law aims to safeguard market competition from unfair practices, primarily those stemming from agreements between dominant market players.¹⁶ Its scope encompasses a vast array of products and services, potentially causing significant consumer harm and financial losses. Effective competition policy benefits consumers by driving down prices, fostering allocative and productive efficiency, and incentivizing firms to innovate and enhance their offerings to retain market share.

The roles of competition law are a subject of intense debate and encompass diverse perspectives. Society aims to uphold the positive dynamics of competition for the benefit of consumers, the promotion of innovation, and the attainment of efficiency. The prevailing viewpoint underscores the importance of enforcing competition laws against companies whose actions negatively impact consumers. Contrarily, there are two opposing views. The first divergent perspective argues that competition law should prioritize preserving the competitive process rather than fixating on specific outcomes. The alternative viewpoint opines that competition law could extend its scope to address a broader range of economic and non-economic objectives, including the support of national industries, the safeguarding of employment, and the protection of national resources.¹⁷

2. The Application of Competition Law to Intellectual Property Rights

The relationship between competition law and IP law is intricate. While IP law governs the granting of IPRs, competition law focuses on the manner in which IP owners exercise these rights.¹⁸ IPRs can be perceived as a deviation from free-market principles, as they bestow temporary exclusive rights upon creators. Competition law safeguards against IP owners extending their market dominance beyond the legitimate scope of the property right granted by a patent or other IPR. Consequently, competition law adds another layer of regulation to IPRs.

¹⁶ DEBORAH HEALEY et al.: *Research Handbook on Methods and Models of Competition Law*. Edward Elgar Publishing. Massachusetts, 2020. p. 52.

¹⁷ DAMIAN CHALMERS et al.: *European Union Law: Text and Materials*. Cambridge University Press. Cambridge, 2019. p. 910.

¹⁸ ALDEN F ABBOTT, *Intellectual Property Licensing and Antitrust Policy: A Comparative Perspective*. Law and Policy in International Business 34. 2003. p. 801.

Despite their distinct roles, both competition law and IP law advocate for innovation. However, a dilemma arises when competition authorities strive to ensure that the incentive to innovate, fostered by IP laws, is not hindered by antitrust regulations.¹⁹

IV. Balancing Intellectual Property Rights and Competition

1. Antitrust Control and Its Implications for Incentivizing Innovation

i. Defining Innovation

Innovations are advancements that utilize novel ideas to create products at a lower cost or enhance their overall quality. Innovation plays a crucial role throughout history in the case of societal development. Advancements such as jet airlines, biopharmaceuticals, electronic communication, and automation have revolutionized our lives and propelled society forward along the trajectory of progress. Innovation serves as a catalyst for social change, fostering openness, tolerance, and adaptability among individuals, thereby propelling societal success. Innovation stands as an unparalleled engine of economic prosperity. It is responsible for approximately 80 percent of per capita income growth in developed nations. The transformative power of innovation unleashes a torrent of economic benefits as household purchasing power increases, making previously unaffordable goods and services accessible, or even gratuitously so. Innovation empowers individuals to enhance their economic circumstances by rendering basic necessities more affordable, thereby opening doors to a world of opportunities.²⁰ Economic theory attributes long-term growth to three primary factors: physical capital (infrastructure and machinery), human capital (workforce productivity), and ‘innovation.’²¹ Many innovations can be protected through intellectual property rights.

Intellectual property regimes, as integral components of the innovation system, aim to foster innovation by empowering innovators to control the utilization of their knowledge. This control is achieved through the implementation of reward mechanisms in exchange for access to that knowledge, thereby creating the potential for a return on investment. However, it's crucial to recognize that the innovation system encompasses a broader spectrum of elements.²²

ii. Analyzing the Intersection of Antitrust Control and Innovation

The prevailing approach to competition policy, which has dominated for the past century, has failed to adequately account for the dynamic effects and implications of technological innovation. It is imperative to modernize this antiquated approach and integrate innovation considerations into antitrust frameworks.

At the heart of this paradigm shift lies the recognition that market power serves as a catalyst for innovation. Firms with market power possess the resources and incentives to engage in groundbreaking research and development, fueling technological advancements. Moreover,

¹⁹ US Department of Justice: *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition*. 2007. p. 2.

<https://www.justice.gov/d9/atr/legacy/2007/07/11/222655.pdf>

²⁰ AURELIEN PORTUESE: *Principles of Dynamic Antitrust: Competing Through Innovation*. 2021.

<https://itif.org/publications/2021/06/14/principles-dynamic-antitrust-competing-through-innovation/>

²¹ ROBERT COOTER: *The Falcon's Gyre: Legal Foundations of Economic Innovation and Growth*. Berkeley Law Books. Berkeley, 2014. p. 1.6

<https://www.law.berkeley.edu/library/resources/cooter.pdf>

²² ILIE 2014, p. 548.

innovation serves as a primary driver of competition, constantly reshaping market landscapes and challenging the dominance of existing players. Disruptive innovations, often introduced by new entrants, pose a significant threat to established market power.

To effectively navigate these dynamic market forces, antitrust enforcement must adopt an evolutionary approach that prioritizes both the innovation benefits arising from firms with market power and the potential for disruptive innovation to undermine market dominance.

Innovation has long been a paradoxical element in the realm of antitrust. While antitrust scholars and enforcers acknowledge innovation's critical role in competition, it remains an elusive principle within antitrust frameworks. Despite its recognized significance, innovation is rarely considered a primary source of competition. This oversight stems from a static approach to competition that fails to capture the dynamic nature of innovation. Innovation patterns often transcend market structures, highlighting the need for an evolutionary approach to antitrust enforcement.

Antitrust discourse has historically relegated innovation to a secondary position, treating it as an ancillary consideration. Innovation has been marginalized within the antitrust community, despite its acknowledged importance in fostering competition. This marginalization has led to a compartmentalized approach to antitrust analysis, where innovation is considered relevant only in specific contexts such as high-tech markets, or cyberspace markets.

The casual treatment of innovation within antitrust frameworks hinders the development of an innovation-centric approach to competition policy. Innovation should no longer be relegated to a paradoxical position but rather should be elevated to the cornerstone of both antitrust theory and practice. By integrating innovation into the core principles of antitrust, a more dynamic and effective approach to competition policy can be fostered.²³

2. The Dual Impact of Monopolies on Innovation

The impact of monopolies on innovation is a complex and multifaceted issue that has been the subject of much debate among economists and policymakers. On the one hand, monopolies can provide the resources and stability necessary for research and development, which can lead to innovation and new products and services for consumers. On the other hand, monopolies can also stifle competition and innovation by discouraging new entrants from entering the market.

Joseph Schumpeter, an Austrian economist, introduced the concept of 'creative destruction' to describe the dynamic nature of competition and innovation within the capitalist system, arguing that monopolies can play a positive role in innovation. Creative destruction is a cyclical process whereby established market leaders, also known as 'incumbents', are forced to adapt or become obsolete due to the disruptive introduction of new innovations. These innovations are pioneered by entrepreneurial firms that reshape the competitive landscape, making incumbent firms' products, services, or business models outdated. As the cycle of creative destruction continues, these newly successful firms eventually face the same fate, replaced by another wave of innovators. Schumpeter considered creative destruction to be an essential element of capitalism, asserting that it surpassed incremental improvements in resource allocation through price competition in established markets, driving economic growth. Contrary to conventional economic thought, Schumpeter believed that a degree of market size and monopoly power could foster innovation. He argued that the prospect of market dominance provided a strong incentive for innovation, while the resources associated with dominance enabled further advancements. As a result, Schumpeter advocated against the unrestrained fear or condemnation of scale and monopoly, viewing them as

²³ PORTUESE 2021, p. 2.

necessary conditions and incentives for the transformative power of creative destruction inherent in capitalism.

Debate has persisted over the past 60 years about whether Schumpeter was correct in describing or prescribing the role of competition versus monopoly in promoting innovation. Notably, Nobel Laureate Kenneth Arrow believed that competitive markets were a more reliable driver of innovation than monopoly-dominated markets. This Schumpeter-Arrow debate has generated extensive literature on innovation and market dynamics.²⁴

The European Court of Justice (the ECJ) has established a distinction between the inherent existence of intellectual property rights and their exercise, recognizing that the latter may fall within the realm of competition law.²⁵ In exceptional circumstances, the ECJ may mandate compulsory licensing and has granted access to IP under the EU equivalent of the essential facilities doctrine.²⁶

The ECJ has employed these principles to address competition concerns arising from excessively broad national IPRs. In the *Magill* case, the ECJ wielded competition law to compel access to television programming lists, enabling a non-broadcaster to enter the market and publish a comprehensive TV Guide-type publication. While such programming information would not be subject to copyright protection in the U.S., European competition law intervention was necessary to allow third parties to offer novel program information products, which were met with resistance from incumbents. This outcome aligns with a Schumpeterian, innovation-centric competition policy.²⁷

A Schumpeterian competition policy might also have tolerated an otherwise problematic joint venture between incumbents aimed at providing the same type of new integrated program guide. The *Magill* court's framework for abuse of a dominant position required that a refusal to license prevented the emergence of a new product with customer demand, that such refusal lacked objective justification, and that the refusal reserved a 'secondary market', in this case, the programming guide, for the right holder.

The 2005 *IMS Health* case blurred the final element, concluding that the introduction of a new product or service was not essential, but that mere price competition was insufficient. The test remains fundamentally rooted in innovation, but the precise definition of innovation remains unclear.²⁸ More recently, the Court of First Instance decision in *Microsoft* further complicated the matter by further diluting the standard for the EU essential facilities doctrine without a definitive ruling on whether the new entrant sought to introduce innovative services to the market.²⁹

While other factors contribute to the more robust version of the EU essential facilities doctrine, its legitimacy is strongest when it links access to infrastructure to the needs of downstream innovation. A more explicit Schumpeterian focus could aid in clarifying the application of the essential facility doctrine to IP in Europe.³⁰ Competition advocacy is easier to scale than enforcement, and prioritizing innovation should be the first consideration when agencies face difficult decisions about resources and strategies.

²⁴ SPENCER WEBER WALLER - MATTHEW SAG: *Promoting Innovation*. 100 Iowa L. Rev. 2015, p. 2223.

²⁵ Case 78/70 *Deutsche Gramophone v. Metro* [1971] E.C.R. 487, 500 113, Cases 56 & 58/54 *Grundig & Consten v. Comm'n* [1966] E.C.R. 299, 344-46.

²⁶ WALLER 2015, 2223.

²⁷ WALLER 2015, 2223.

²⁸Case T-18 4 /*IMS Health, Inc v Commission of the European Communities* European Court Reports 2005 II-00817

²⁹ Case T-201/04 *Microsoft Corp v Commission of the European Communities* European Court Reports 2007 II-03601

³⁰ WALLER 2015, 2223.

In 2020, the U.S. Justice Department (DOJ) filed an antitrust lawsuit against Google, alleging that the company had abused its monopoly power in the markets for search and search advertising. Google is a dominant force in the online advertising market, controlling over 90% of the search engine market and over 50% of the mobile advertising market, and that dominance in the online advertising market has presented a complex interplay between innovation and competition. On the one hand, the company's vast data collection and analysis capabilities have spurred innovation in advertising targeting techniques, benefiting advertisers and motivating rivals to develop their own strategies. However, Google's market power has also raised concerns about its potential to stifle competition and innovation by unfairly favoring its own products and services. The DOJ's lawsuit against Google reflects these concerns and could force the company to make changes that promote competition and innovation. The outcome of this case will have significant implications for the future of innovation in the digital economy globally, determining if Google will be forced to open the door for new entrants or remain dominant, potentially hindering innovation.³¹

V. Navigating the Evolving Digital Landscape: Balancing Intellectual Property and Competition

The rapid advancement of digital technologies has transformed our world in profound ways, offering unprecedented opportunities for innovation, connection, and progress. However, this technological revolution has also brought about a concentration of power in the hands of a few global tech giants, collectively known as Big Tech. These companies, including Microsoft, Google, Amazon, Facebook, and Apple, wield immense influence over various aspects of our lives, from the information we consume to the way we interact with each other.³²

Amidst this transformative landscape, a critical question arises: how can we effectively balance the protection of intellectual property rights with the promotion of competition and innovation in the digital age? IP rights play a vital role in safeguarding the creations of inventors and innovators, providing incentives for investment and ensuring that creators are rewarded for their contributions. However, when IP rights are wielded by dominant firms, they can potentially stifle competition and hinder the entry of new players, leading to market stagnation and reduced consumer choice.

To address this challenge, it is essential to understand the mechanisms by which Big Tech companies achieve and maintain their dominance. The network effect, a phenomenon where the value of a product or service increases as more people use it, is often a key factor in the monopolization of digital platforms. This positive feedback loop creates a formidable barrier to entry for new competitors, making it extremely difficult for them to challenge the incumbents.

IP rights can further entrench the network effect by providing dominant firms with exclusive control over valuable data and technologies. For instance, Google's dominance in the search engine

³¹ United States Department of Justice: *U.S. and Plaintiff States v. Google LLC [2023]*
<https://www.justice.gov/atr/case/us-and-plaintiff-states-v-google-llc-2023>

³² DANIEL MCINTOSH: *We Need to Talk About Data: How Digital Monopolies Arise and Why They Have Power and Influence*. *Journal of Technology Law & Policy*: Vol. 23: Iss. 2, Article 2. 2019. p. 185.

market is partly due to its extensive patent portfolio and its control over vast amounts of user data.³³

1. Adapting Competition Law Frameworks to the Digital Age

In light of the challenges, traditional competition law frameworks, designed to regulate markets where firms compete on the basis of price, quality, and other factors, often fall short in addressing the challenges posed by Big Tech's dominance. Competition law frameworks need to adapt to the realities of the digital age, where network effects and data-driven advantages play a significant role in shaping market dynamics.³⁴

Several initiatives have emerged to address the challenges of Big Tech and the balance between IPR and competition in the digital age. One of the key developments in this area is the Digital Markets Act (DMA), which entered into effect on the 2nd of May 2023, aiming to regulate the behavior of gatekeeper platforms in the European Union.³⁵ The Digital Markets Act (DMA) was developed after over a decade of the European Commission's efforts to regulate digital markets. During this period, several high-profile cases involving the American multinational technology company Google received considerable attention. Google, known for its diverse business interests, primarily generates revenue through advertising. Like many online platforms, Google's activities involve gatekeeping, which gives it the power to significantly influence and control access to digital markets. It can impose unilateral terms and conditions on both businesses and consumers. This power has been the subject of various European Commission investigations and rulings. The Commission has expressed concerns about Google's search algorithm, alleging that it has been used to promote its own products while demoting those of its competitors, as seen in the Google Shopping case.³⁶ Additionally, it was discovered that Google had not applied its own penalties on product placement to its own products. In another case, known as Google AdSense, the tech giant was accused of mistreating its partners by demanding exclusivity (i.e., no engagement with competitors) as a condition for working with it.³⁷ Overall, in the decade following 2010, there were three major antitrust cases involving Google, resulting in fines totaling over €8 billion, the most significant penalties in the history of European competition policy.³⁸ These cases demonstrate the European Commission's growing scrutiny of Google's business practices and its commitment to fostering a fair and competitive digital market.³⁹

³³ ROBERT WRIGHT: *Why We Can't Let Google Monopolize AI*. Wired. 2018.

<https://www.wired.com/story/google-artificial-intelligence-monopoly/>

³⁴ MCINTOSH 2019, p. 196.

³⁵ Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828, OJL 265, 12 October 2022 (Digital Markets Act).

³⁶ European Commission (2017), Commission Decision of 27. 6.2017. Proceedings under Article 102 of the Treaty on the Functioning of the European Union and Article 54 of the Agreement on the European Economic Area (AT.39740- - Google (Search Shopping)), C(2017) 4444 final, (Brussels: European Commission).

³⁷ European Commission (2019) DG Competition Conference 'Shaping Competition Policy in the Era of Digitisation'.

https://ec.europa.eu/competition/information/digitalisation_2018/conference_en.html

³⁸ JAVIER ESPINOZA: *Brussels Faces Test of Its Will to Tackle Big Tech*. Financial Times. 2021.

<https://www.ft.com/content/961def63-4f55-469c-b9d9-08cfe443bbc0>

³⁹ MICHELLE CINI - PATRYK CZULNO: *Digital Single Market and the EU Competition Regime: An Explanation of Policy Change*. 44 Journal of European Integration. 2022. p. 46.

The Digital Markets Act (the DMA) aims to create a more competitive and fair digital market by establishing a set of obligations for gatekeepers, a group of companies with significant market power and a dominant position in the core platform services market. These core platform services include online intermediation services, search engines, social networks, video-sharing platforms, messaging services, operating systems, web browsers, virtual assistants, cloud computing services, and online advertising services. Key objectives of the DMA are to prevent gatekeepers from engaging in unfair practices that harm competition and protect consumers and businesses from their market power.

The DMA requires gatekeepers to comply with a set of ex-ante obligations, which are put in place before any harm occurs. These obligations include prohibiting self-preferencing, enforcing interoperability, providing access to data for business users, prohibiting unfair trading practices, and enforcing data protection and other rules. The DMA hopes that by imposing these strict obligations, gatekeepers will be less likely to abuse their market power and harm competition in the digital market.⁴⁰

The DMA's implementation will be challenging, as there is little guidance on the limits of the ex-ante obligations and their relationship to national competition rules. It is crucial to ensure that the DMA and competition law are enforced in a coordinated and coherent manner to ensure that both regimes are implemented effectively and fairly.⁴¹

As the field of artificial intelligence (AI) continues to evolve at a rapid pace as well, concerns have arisen about the potential risks and impacts of AI systems on society. In response to these concerns, the European Union has taken a proactive stance by provisionally agreeing on the landmark AI Act, which aims to establish a comprehensive regulatory framework for the development and use of AI systems in the EU.⁴²

The European Union's AI Act establishes a risk-based regulatory framework for AI systems, differentiating between unacceptable, high-risk, and low-risk categories. Unacceptable AI systems, such as those employing social scoring or disproportionately targeting certain groups through surveillance, are prohibited entirely. High-risk AI systems, encompassing applications in healthcare, transportation, and law enforcement, must undergo rigorous pre-market assessment to ensure they minimize potential harm to individuals and society.

Low-risk AI systems, encompassing everyday applications like facial recognition in smartphones and spam filters, are not subject to specific requirements but encouraged to adhere to general principles of transparency, accountability, and non-discrimination. The AI Act emphasizes data transparency and accountability, mandating companies provide transparency summaries explaining their AI systems and providing access to training and evaluation data. Companies are also held responsible for ensuring their AI systems do not cause harm, and penalties may be imposed for non-compliance.

The provisional AI Act has sparked mixed reactions. Some applaud it as a necessary step to mitigate AI risks and ensure societal benefits. However, others criticize its strictness, fearing innovation could be stifled. Critics argue the high-risk AI restrictions could make the EU unattractive for AI companies and even lead to job losses in the European tech sector.

⁴⁰ JASPER VAN DEN BOOM: *What Does the Digital Markets Act Harmonize? – Exploring Interactions between the DMA and National Competition Laws*. European Competition Journal. 19:1. 2023. pp. 57-85.

⁴¹ VAN DEN BOOM 2023.

⁴² European Council: *Timeline-Artificial Intelligence*. 2023.

<https://www.consilium.europa.eu/en/policies/artificial-intelligence/timeline-artificial-intelligence/>

Despite these concerns, the AI Act represents a significant step forward in AI regulation. As the first comprehensive AI framework developed by a major economic bloc, it is poised to influence AI development and deployment globally. Careful monitoring of its implementation is crucial to ensure innovation is nurtured while potential AI risks are effectively mitigated.⁴³

The AI Act and the DMA are both still in their early stages of implementation. It remains to be seen how these two pieces of legislation will be implemented in practice and how they will interact with each other. However, both the AI Act and the DMA have the potential to play a significant role in shaping the future of the digital economy.

2. From Data Monopolies to Blockchain Frontiers: Redefining Digital Regulations

Regulators are exploring new approaches to address the monopolization of digital platforms. One approach is to focus on data as a key driver of market power, and the other is to regulate algorithms and data-driven practices. Germany's competition authority, the Bundeskartellamt, took a groundbreaking step in December 2017 by initiating an investigation into Facebook's alleged abuse of its dominant position. The probe centers on Facebook's leverage to compel users to accept its privacy terms and conditions, thereby amassing vast amounts of personal data. This move marks a significant shift in regulatory approaches, as data is increasingly recognized as a key factor in assessing anti-competitive practices in the digital realm.⁴⁴

In recent years, Europe has witnessed a significant shift in perspective. There is a growing acknowledgment that data can function as a barrier to entry, and concerns about the issues associated with data monopolies are on the rise. This is evident in the European Commission's landmark €2.42 billion fine against Google for abusing its search engine dominance to favor its own shopping services. This move signals Europe's commitment to ensuring a level playing field in the digital economy.⁴⁵

Addressing the challenges posed by Big Tech requires a multifaceted approach that encompasses both national and international efforts. Within national jurisdictions, regulators need to adapt their competition law frameworks to the realities of the digital age. This may involve adopting new regulatory tools, such as data portability requirements and algorithmic transparency principles.

Alongside regulatory frameworks, policymakers are also exploring innovative solutions to address the challenges posed by data monopolies. One promising approach is leveraging blockchain technology. Blockchain's decentralized and distributed nature makes it inherently resistant to control by any single entity. This decentralized structure effectively curbs the potential for data-driven monopolies.⁴⁶ Moreover, blockchain's reliance on self-executing code, known as smart contracts, further enhances its suitability for regulating data at scale. Moreover, blockchain's inherent transparency and immutability foster trust and accountability among data stakeholders, thereby mitigating the risks associated with data concentration. Its decentralized architecture,

⁴³ EMILIA DAVID: *The EU AI Act Passed-Now Comes the Waiting*. The Verge. 2023.

<https://www.theverge.com/2023/12/14/24001919/eu-ai-act-foundation-models-regulation-data>

⁴⁴ Bundeskartellamt: *Preliminary assessment in Facebook proceeding: Facebook's collection and use of data from third-party sources is abusive*. 2017.

https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2017/19_12_2017_Facebook.html

⁴⁵ European Commission: *Antitrust: Commission Fines Google €2.42 Billion for abusing dominance as search engine by giving illegal advantage to own comparison shopping service*. 2017.

https://ec.europa.eu/commission/presscorner/detail/en/IP_17_1784

⁴⁶ MARCO IANSITI - KARIM R LAKHANI: *The Truth About Blockchain*. Harvard Business Review, 2017. p. 118.

automated code execution, and focus on data integrity make it a powerful tool for promoting fairness and competition in the digital landscape.⁴⁷

VI. Conclusion

In conclusion, achieving equilibrium between intellectual property rights and competition in the digital age demands a nuanced understanding of their interplay. While both legal frameworks share the overarching goal of fostering innovation and safeguarding consumer welfare, they diverge in their approaches to achieving these objectives. Intellectual property law grants inventors and creators exclusive rights to their inventions and creations, a mechanism intended to incentivize innovation by providing a temporary monopoly over the fruits of one's labor. However, these exclusive rights can inadvertently lead to monopolies, raising concerns about reduced competition, inflated prices, and stifled innovation. Competition law, on the other hand, champions the principles of fair competition and seeks to prevent monopolies from wielding their market power to the detriment of consumers. It aims to ensure that markets remain open and contestable, allowing new entrants to challenge incumbents and driving firms to innovate and improve their products and services. This competition-driven approach is often seen as a counterweight to the potential anti-competitive effects of intellectual property rights.

Recent regulatory developments like the Digital Markets Act and the Artificial Intelligence Act, along with case law examples and innovative regulatory approaches, contribute to shaping a digital ecosystem that encourages innovation, fosters healthy competition, and safeguards consumer welfare. Continuous monitoring and adaptation will be crucial in this ever-evolving landscape. The intersection of IP, competition, and emerging technologies like blockchain sets the stage for future considerations, requiring a proactive and adaptive approach to navigate the intricate dynamics of the evolving digital landscape.

Policymakers, legal scholars, and industry stakeholders must engage in ongoing dialogue and collaboration to foster a balanced approach that promotes innovation, safeguards consumer interests, and ensures a fair and competitive marketplace. By understanding the nuanced interplay between these two legal frameworks, we can strive to create an environment where innovation thrives, and consumers benefit from a wide array of products and services at competitive prices.

⁴⁷ MCINTOSH 2019, p. 212.