1 BIG TECHS, DATA PROTECTION, AND COMPETITION REGULATION IN A DATA-DRIVEN ECONOMY: A MULTIDISCIPLINARY APPROACH [1]

Big Techs, Proteção de Dados e Regulação de Concorrência em uma Economia Baseada em Dados: uma abordagem multidisciplinar

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STRUCTURED ABSTRACT

Context: The rapid growth of the Information Economy and the consolidation of the Big Tech Monopoly in Digital Markets have made privacy and data protection a central concern for consumers and regulatory authorities worldwide. The increasing relevance of personal data as both a market asset and a fundamental right has highlighted the need for new regulatory approaches to address these issues.

Objective: This article aims to explore how competition regulation can be used as a mechanism to protect privacy and data protection in the digital markets.

Method: The research employs a qualitative approach through a critical analysis of relevant literature, including legal documents and reports from regulatory authorities. The analysis is conducted through a perspective that integrates competition regulation and privacy and data protection matters. In addition, its theoretical references are Shoshana Zuboff and Evgeny Morozov, besides other instruments of national and international regulatory law.

Conclusions: The study concludes that competition regulation can play a vital role in protecting privacy and data protection in the digital markets. By promoting competition and preventing anti-competitive behavior by dominant players, competition law can help to create an environment where privacy and data protection are prioritized by companies. Additionally, competition policy can

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complement data protection regulation by providing an additional layer of protection for consumers.
Keywords: competition regulation; digital markets; Big Tech; monopoly; privacy; data protection.

RESUMO ESTRUTURADO

Contexto: O rápido crescimento da Economia da Informação e a consolidação do monopólio das Big Techs nos Mercados Digitais tornaram a privacidade e a proteção de dados uma preocupação central dos consumidores e das autoridades reguladoras em todo o mundo. A crescente relevância dos dados pessoais como um ativo de mercado e um direito fundamental tem destacado a necessidade de novas abordagens regulatórias para tratar destas questões.

Objetivo: Este artigo tem como objetivo explorar como a regulação da concorrência pode ser utilizada como um mecanismo para proteger a privacidade e a proteção de dados nos mercados digitais.

Método: A pesquisa emprega uma abordagem qualitativa por meio de uma análise crítica da literatura relevante, incluindo documentos legais e relatórios de autoridades reguladoras. A análise é conduzida a partir de uma perspectiva que integra a regulação da concorrência e a matéria de privacidade proteção de dados. Além disso, possui como referências teóricos a Soshana Zuboff e o Evgeny Morozov, para além das demais normas do direito regulatório nacional e internacional.

Conclusões: O estudo conclui que a regulação da concorrência pode desempenhar um papel vital na proteção da privacidade e da proteção de dados nos mercados digitais. Ao promover a concorrência e impedir comportamentos anticompetitivos por jogadores dominantes, a lei da concorrência pode ajudar a criar um ambiente onde a privacidade e a proteção de dados são priorizadas pelas empresas. Além disso, a política de concorrência pode complementar a regulação da proteção de dados, fornecendo uma camada adicional de proteção para os consumidores.

Palavras-chave: regulação da concorrência; mercados digitais; Big Tech; monopólio; privacidade; proteção de dados;

Classificação JEL: K21; K24; L12; O33.

1. INTRODUCTION

The beginning of the 21st century is marked by a series of events and social, political, economic changes, in addition to an exponential technological development that has revolutionized the world and the way individuals interact with it. In this context, it is possible to state that technological development has been driven by profit, and has even been one of the pillars of the history of technology itself. Thus, as technology evolved, the economic relations that involved it also prospered, just as society molded itself in this new paradigm of what we have come to call the "Information Age".

From this perspective, data began to play a key role in economic relations, while surveillance

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became the foundational mechanism of this new form of market. The abrupt rise of the Silicon Valley giants implied a series of consequences – social, economic, political – and, among them, the weakening of privacy and data protection, which is the focus of this paper.

In June 2019, the United States House of Representatives began investigating the actual parameters of competition from tech giants, in particular, the market domination exercised by Big Techs. The intention was to determine the power wielded by the giants, such as the consequences of economic domination and threats to American democracy. Nevertheless, the subcommittee analyzed the existing antitrust laws, such as competition policies and their efficiency as a way to check how adequate they are to manage the digital market power and its competition conducts. For example, each platform acts as a gatekeeper over a key distribution channel, as it is possible to observe, for example, Meta (formerly Facebook), which holds evident domination over communication platforms, since it alone owns Facebook, Messenger, Instagram, WhatsApp. In this sense, by controlling access to markets, the technological giants have the power to choose the winners and losers throughout our economy.

The report revealed that each platform uses its gatekeeper position to maintain its market power to control the infrastructure of the digital age by acquiring other companies – potential rivals – in order to cut down on their competitive threats. In this sense, Mark Zuckerberg himself, when speaking on the subject, did not deny that he saw Instagram as a threat, which motivated the acquisition of the application in 2012, for the amount of one billion dollars, such an event caused a real shock in market economists, considering that at the time Instagram was a company with only 13 employees.

The lack of real competitiveness has led the technology giants to establish a low standard of data protection and privacy protection. In this conjuncture, even though privacy and personal data have received the status of fundamental rights of individuals, enshrined in constitutions such as the Brazilian Federal Constitution and in international treaties such as the Universal Declaration of Human Rights, tech companies still maintain a predatory posture towards personal information of users.

The rise of the Informational Economy and the dominance of Big Tech companies in digital markets have brought privacy and data protection to the forefront of consumer and regulatory concerns. The increasing relevance of personal data as both a market asset and a fundamental right has highlighted the need for new regulatory approaches to address these issues. This article aims to explore how competition regulation can be used as a mechanism to protect privacy and data protection in the digital markets, with a multidisciplinary approach that integrates legal, economic, and technological perspectives.

For its purpose, this article is divided into three main parts. Firstly, it discusses the transformation of the economy with the rise of digital technologies, characterized by the increasing importance of data as a strategic asset, and the emergence of digital markets dominated by Big Tech companies. Continually, the second topic, addresses the intersection between competition and data privacy concerns, focusing on the practice of behavioral profiling and the potential for "instrumentarian power". At last, the article explores the potential role of competition regulation in protecting privacy and data protection in the digital markets, with a particular emphasis on the Digital Markets Act (DMA) proposed by the European Commission.

By examining the intricate connection between competition regulation and privacy and data protection, this article offers an overview of the challenges and opportunities of creating a more

sustainable and equitable digital economy. By all means, it elucidates the way in which Big Techs companies leverage their power to consolidate their dominance, especially when they exploit their role as intermediaries to strengthen and extend their control. This way, by adopting a multidisciplinary approach that considers legal, economic, and technological factors, this article aims to highlight the importance of policymakers and stakeholders cultivating an effective solution that balances the benefits of digital innovation with the need to protect fundamental rights and values in the digital age, as the competition regulation in the digital markets, that, although cannot guarantee absolute privacy and data protection, it is indispensable for curbing the hegemony of large technology corporations and promoting healthy competition.

2. INFORMATIONAL ECONOMY, DIGITAL MARKETS AND PRIVACY

It is important to note that the rise of Big Techs – understood as large technology companies associated with platforms for intensive use and exploitation of data (MOROZOV, 2018, p. 144) – happened at a minimally curious historical juncture. Following the global financial crisis of 2008, an unfavorable scenario overlapped by the Silicon Valley giants, and as the economy began to recover, Big Techs found a fertile ground for significant, unbridled and, above all, unnoticed growth, this being one of the temporal milestones that favored their accelerated growth.

After 2008, the globe was facing the biggest economic disaster since 1929, scenario that the Big Techs appeared as true "saviors" of the economy. The rise of tech giants succeeded in part because they helped in coping with the crisis, since they provided institutions or citizens with the ability to supplement their budgets and revenues through new sources of income, as well as enabling a radical reduction in costs (MOROZOV, 2018, p. 144). Similarly, over 10 years later, the Covid-19 health crisis boosted the increasingly widespread digitalization of various aspects of human life, since lockdowns and remote working have enlarged demands for a rang of big tech's offerings (KSHETRI, 2020, p. 10).

Notwithstanding the social role that Big Techs played, the expansion of these companies also sustain a smooth transition to a new economic model, which would come to be known as the information economy. It is important to note that, in general, privacy tends to be renegade before values involving national security, terrorism, efficiency, or entrepreneurship (DIAS, 2017, p. 172). Which is precisely the combination of circumstances observed in that conjuncture, favoring the rise of the tech giants.

As it was, the rise of Big Techs is not – and should not be – understood as a symptom of the great global financial crisis, instead, it appears as a solution amidst the tribulation of the time, and very ambitiously, as a promise of a new economic and political commitment, a New Deal 2.0 (MOROZOV, 2018, p. 145). Thus, while the giants presented themselves as a way out of the crisis, the Big Techs gauged one of the facilitators that enabled their exponential and indiscriminate growth. By all means, it is important to note that technological innovations were still exciting for users at that moment, so the idea of personal technology use as a device that could cause harm was only an academic debate, which was not taken seriously by popular culture, instead, the possibility of a media that was accessible to the entire population was considered a democratizing force. It was not expected, however, that the strengthening of the technology giants, as it happened, would turn into a democratic threat, as can be seen today.

Under the premise of national security and the fight against terrorism, the loosening of the right to individual privacy has been increasingly perceived, leading to surveillance practices. This phenomenon can be observed since surveillance has become increasingly present, made possible by the expansion at a frenetic pace of permissive legislation to collect data.

In this sense, Google, considered as the pioneer of this new economic model, also benefited from the premise of national security, inflated by the events of the time, especially the September 11 attacks. The government itself was inclined to support, emulate, safeguard, and take ownership of the emerging capabilities of surveillance capitalism in the name of complete knowledge and the assurance of absolute certainty (ZUBOFF, 2019, p. 24).

Although data protection legislation dates back to the mid-twentieth century, such as the Hessian Law of 1970, in Germany, a distinct trend towards more restrictive and invasive surveillance practices was observed, resulting from the abrupt change of focus of the public power and government policies after the attack on the twin towers in 2001 (LYON, 2003, p. 7). Thus, Big Techs, as creators and owners of technology – and guardians of citizens' data – unequivocally were already ahead in the development of surveillance mechanisms, to the extent that the fight against terrorism on behalf of national security, by softening the guidelines of data protection and privacy, contributed to the rise of Silicon Valley companies.

Meanwhile, a new social model was being organized in which information is the core element of economic development, so as to be the pillar around which society reorganizes and restructures itself. With technological development occurring at an increasingly accelerated level at all times, all kinds of information have become digitized. The exponential valorization of digital companies relies on the fact that they have control over the most important resource of the 21st century: data. Therefore, the key premise of data extractivism is that users are stocks of valuable information together with the fact that we “voluntarily” give up our information in exchange for enjoying the technology offered (MOROZOV, 2018, p. 165).

Against the background of the information economy, based on data extraction, the informational flow prevails over any other means of production as the determining resource in the economic cycle (BIONI, 2019, p. 10). Such that, from the moment that information becomes an asset, inevitably new market mechanisms will arise with the intention of exploiting the information, and transform it into a product. For example, there is the so-called zero-price advertisement business model, in which users do not directly pay a monetary amount for the product or service, however, in return, they provide their personal information (BIONI, 2019, p. 49).

Therefore, data is now used as an exchange currency, so without the provision of information the user will not be able to enjoy the product or service. Thus, the citizen is left with only two options: surrender his personal information or be excluded from the digital media – which make up a considerable part of social interactions. It is worth noting that despite the fact that data by itself already has considerable value, information is not in itself what leverages efficiency in business activity, but its processing-organization to be transformed into applied knowledge. In this way, the creation of the so-called behavioral profile of the user is observed, composed of traits of the individual's personality, based on the extraction of his personal data.

By the end of the 2000s, Google decided to abandon the reciprocal relationship it had with its users – which until then collected and recycled data in order to create a profile that brought satisfactory

results to customers – and started using its own arsenal of behavioral data, along with its computing power and expertise, with the sole task of matching advertisements with users' searches, with this data are transformed into marketable knowledge (ZUBOFF, 2019, p. 75). Therefore, from the possibility of reorganizing data and structuring them in a scalable way – especially with the development of Big Data – the development of a new market supported by the extractivism of data and its "commodification" was observed (BIONI, 2019, p. 13). Thus, the capitalism of surveillance arises, in which the citizen loses autonomy over his information, positioning himself as a mere spectator of his data.

It is in this particular context that surveillance capitalism has emerged as a novel market phenomenon that operates on a distinctive logic of accumulation. It relies heavily on surveillance as a foundational mechanism to convert investment into profit, with privacy being the cost of accessing the abundant rewards of digital goods, information, and connectivity that consumers demand. The market structure that underpins the informational economy is known as surveillance capitalism.

Not only was the economic crisis a considerable fertile ground, but the technology giants also counted on the American anti-terrorist fight frenzy, especially after the events of September 11, which led to the devaluation of the right to individual privacy in favor of surveillance and national security (ZUBOFF, 2019, p. 112). This is another factor that made it possible for data to be collected on a massive scale. As a result, the formation of an informational economy based on the extraction of data was observed.

Furthermore, the establishment of a new dominant economy in the market, the informational economy, which has as its epicenter the data, provided by users itself. In this scenario, data has become the most valuable asset of contemporaneity, having even surpassed oil in market value (THE GREAT... 2019). Although the information collected by technology companies alone had enormous economic value, it is worth noting that when cross-referenced, it became capable of creating a behavioral profile of each user (NYBO, 2019, p. 146).

In this matter, the Facebook-Cambridge Analytica case is considered a major watershed regarding discussions of data analysis for behavioral profiling and its use for economic, political, and individual personality manipulation. In the words of Christopher Wylie – former research director of Cambridge Analytica – the company was characterized as a military and psychological manipulation contractor for information warfare, which comprised a complex web involving Facebook, Russia, WikiLeaks, the Trump campaign, and the Brexit referendum (WYLIE, 2019, p. 9).

As Brittany Kaiser points out in the documentary "The Great Hack", Cambridge Analytica had full knowledge that their targeting tool was considered a weapon, and they used it anyway to manipulate and make the world be seen through their lens (THE GREAT..., 2019). In a way that "new automated protocols are designed to influence and modify human behavior at scale as the means of production is subordinated to a new and more complex means of behavior modification" (ZUBOFF, 2019, p. 25).

Hence, Cambridge Analytica used aspects of users' individual personality – by illegitimately collecting information through the user's Facebook profile and friends – to shape a voter profile of each user. Based on this engineering, they were able to identify those they considered to be "influenceable", whom would be targeted with oriented advertising, in order to shape how they saw the world and thus entice their behavior in the 2016 election (THE GREAT..., 2019). In this regard, the electoral operation prepared by Cambridge was essentially responsible for the unexpected victory of Trump, who took advantage of this engineering of personal data to mobilize electoral public opinion,

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especially of those most susceptible to convincing, through the dissemination of fake news.

Thus, it is observed that the Cambridge Analytica controversy was an event that revolutionized the discussions about the way Big Techs manage users' personal information. On point, it is worth noting that the event highlighted the risks that the monopoly of technology giants can bring to the rights of individuals, in their intimate sphere and in relation to their dignity. In addition to demonstrating the economic and political power that these private companies wield; they also represent a threat to democracy.

Although this development was originally aimed at creating targeted marketing, the creation of a behavioral profile had several reflections on the personal life of the holder of the information, affecting much more than their purchasing pattern, but their interpersonal relationships and their psyches. Therefore, it is clear that Big Techs have relied on several factors, social and economic, in addition to technological development itself for their growth. In this sense, "technology is not and never can be a thing in itself isolated from the economy and society" (ZUBOFF, 2019, p. 21). Thus, the rise of the technological giants of Silicon Valley is grounded by the historical milestones that favored its exponential development.

The role of information as a means of optimizing economic development predates even the creation of the internet. However, it was due to technological changes that it was possible to glimpse a series of economic, social and cultural changes, which made possible an environment of radical transformation (BENKLER, 2006, p. 1), and is perceived as the "Internet Revolution" since "Internet is, above all, a cultural creation" (CASTELLS, 2001, p. 7).

Therefore, the creation of the "Informational Economy" is observed and understood as a phenomenon that operates as a kind of electronic nervous system in which information and personal data start to have a predominant role over the means of production (BIONI, 2019, p. 11). Thus, it is glimpsed that the change brought about by digital media is profound and structural, starting from the very foundations of how markets and liberal democracies have developed over the last two centuries (BENKLER, 2006, p. 1).

3. BIG TECHS MONOPOLY, BEHAVIORAL PROFILING AND "INSTRUMENTARIAN POWER"

Although monopoly is a culturally unacceptable practice – in which companies carried with them the virtue of competition – the technological giants barged in the market carrying not only technological innovations, but the longing for monopoly. Within this context, we witness a rupture of the traditional American market's virtues, as the Big Techs of the Silicon Valley perceive their concentration of power as a critical social asset, believing that it is the key to achieving global harmony and undoing the alienation of humanity (FOER, 2017, p. 18).

In the digital age, the global economy is increasingly characterized by data-driven processes that harness personal of data at their disposal to shape our online experiences and, by extension, our real-world behaviors, "instrumentarian power", in a way that Big Tech companies occupy a central role at the intersection of competition and data privacy.

In light of this, the US House of Representatives not only produced sufficient evidence of the

dominance exercised by Silicon Valley giants, but also observed that these companies control the market in their respective sectors while competing only with each other. This position allows Big Techs to dictate rules to other companies while maintaining a power game within their own regulations (US HOUSE OF REPRESENTATIVES, 2022, p. 2). In this regard, Morozov (2018, p. 146) asserts that the rapid rise of digital platforms has produced a parallel, virtually invisible, privatized welfare state.

Regarding Big Techs, it is understood that the control of a platform over data not only consolidates its dominant position – as it allows platforms to adapt their services according to demand – but also confers an advantage over other lines of business (KHAN, 2016, p. 785). Furthermore, the Brazilian antitrust authority, Conselho Administrativo de Defesa da Concorrência (Cade), in its working document on competition in digital markets, concluded that Big Techs possess all the characteristics that consolidate their market power, enabling them to earn economic rents without facing threats from new competitors. Not only, it was possible to verify that the entry of new competitors into markets already dominated by Silicon Valley giants has been extremely difficult, allowing them to charge high prices, reduce product quality, and invest less in innovation without the risk of losing consumers (LANCIERI; SAKOWSKI, 2020, p. 34).

Additionally, the Silicon Valley giants, as dominant platforms, have in many cases also integrated into adjacent businesses in such a way as to act as key intermediaries for both third-party companies, typically smaller ones, and their direct competitors. In this context, based on the compilation of numerous significant reports by the US House of Representatives, it was not only possible to identify but also to document the monopoly power exercised by the Silicon Valley giants and how these dominant platforms can exploit this dual intermediary role through data exploitation, self-preferencing, appropriation of key technologies, and abrupt changes in platform policies (US HOUSE OF REPRESENTATIVES, 2022, p. 30).

Under this matter, and parting from another perspective, while each Big Tech acts as a monopolist in its respective field, it's conceivable to argue that their overall market behavior might appear inconsistent with that of a monopoly, suggesting the existence of some form of oligopoly among the technology giants as a whole. From this perspective, an "alternative concept for characterizing the state of large-scale technological competition as that of 'moligopoly'" (PETIT, 2020, p. 153) arises, in which Big Techs compete against each other, or on a smaller scale, against smaller companies.

Despite these noteworthy outlined inconsistencies, it would still be unreasonable to disregard the power exercised by Big Techs, in the process of its characterization as a monopoly. As a matter of fact "even if a company does not operate alone in the market, it may still hold such (i.e. significant) economic power that it can act independently and with indifference to the presence or performance of other players (FORGIONI, 2022, p. 268). As long as Big Techs control key distribution channels and act as gatekeepers, a large swath of businesses across the US economy – and the world – will remain dependent on them to access users and markets.

At last, the monopolies of Big Techs are characterized by various instances of power that go beyond the realm of economics and into social and political aspects as well. To the point, the issue with the techno-utopian stories propagated by Silicon Valley is that they tend to overlook the full extent of the current crisis and fail to acknowledge the impact of their own agendas on their social and political rhetoric (MOROZOV, 2018, p. 162). As a consequence, this lack of transparency regarding their intentions and motives undermines the credibility of their narratives and hinders

the development of more nuanced and effective solutions to the challenges posed by technology in society. Therefore, the dominance exerted by technology giants, both in economic and social-political aspects, is sufficient to characterize their monopolies.

The high costs and large network effects constitutes real barriers to the entry of new players in the digital markets already dominated by the tech giants, in face of the enormous difficulty to offer goods or services on a competitive level or even enter the market (KOURY; OLIVEIRA, 2022, p. 97). Subsequently, the Cade concluded that Big Techs hold all the characteristics that consolidate their market power, so as to allow them to earn economic profits without being threatened by new competitors. In addition, it was possible to verify that the technological giants to have the power to charge high prices, lower the quality of their products and invest less in innovation without the risk of losing consumers (LANCIERI; SAKOWSKI 2020, p. 34).

Also, it is worth noting that the Silicon Valley giants, as dominant platforms, have in many cases also integrated themselves into adjacent businesses in such a way as to act as key intermediaries for both usually smaller third-party companies and their direct competitors and how these dominant platforms can exploit this dual role as intermediaries, through data mining, self-preferring appropriation of key technologies, and abrupt changes in a platform's policies. Not only that, “dominant platforms exploit this gatekeeper power to dictate terms and extract concessions that third parties would not consent to in a competitive market” (US HOUSE OF REPRESENTATIVES, 2022, p. 29).

Understanding the way in which Big Techs have instrumentalized such power is essential to realizing the extent of the impacts resulting from their market dominance. As data controllers, digital platforms have the option to make use of personal information in ways that are more or less beneficial to users. So while tech giants can use data to improve offerings and make service faster and more individualized, they also have the power to simply collect and store data for its value or competitive advantage (SHELANSKI, 2013, p. 1689). The monopoly of technology giants represents more than an economic threat, it represents a threat to democracy as we know, and as Big Techs consolidate their monopoly and acquire even more power, the bigger they get, including parallelly to the Govern State.

On point, there is no doubt that Big Techs can either choose to establish strict security and privacy standards to protect users' data, or to deprioritize data protection and so use the personal information for their own benefit and against the interests of the data owners. Therefore, since the technology giants have the power to determine how they will dispose of individuals' personal information – regardless of how damaging it is to the privacy of the users – and still succeed in keeping them as consumers, this feature is proof of the power and market dominance of platforms in the digital economy.

In this matter, taking as a historically premise that the ability to control information has been a fundamental factor in shaping the distribution of power within societies (DONEDA, 2020, p. 34), it is observed that the way in which companies carry out the extractive operations of user data, starting from a qualitative perspective, represents a direct expression of their monopolistic power (SRINIVASAN, 2019, p. 44). As such, a company's dominance over a certain digital market segment allows it to abuse consumers' privacy without losing customers – if they do not wish to renounce the service in its entirety, as they have no choice but to submit to fragile data protection standards – highlights that every single promise made by Big Techs is made so that we can only enjoy it to the

fullest if we surrender completely and give up our privacy (MOROZOV, 1984, p. 171).

Continuously, it is worth noting that "the fact that the product is free falsely diverts attention from what antitrust policymakers and economists are most comfortable paying attention to: price" (SRINIVASAN, 2019, p. 44). However, it should be kept in mind that "a platform's ability to maintain strong networks while degrading user privacy can reasonably be considered equivalent to a monopolist's decision to raise prices or reduce product quality" (US HOUSE OF REPRESENTATIVES, 2022, p. 40). In the absence of genuine competitive threats, the dominant company offers fewer privacy protections than it would otherwise, with the aim to extract more data, and further consolidate its dominance.

Nevertheless, the Silicon Valley giants use abusive practices – by exploiting their role as intermediaries – in order to strengthen and expand even more their dominance. Whether through self-preference, predatory pricing, or exclusionary conduct, Big Techs have exploited their power in an effort to become even more dominant, making it impossible for potential competitors to emerge and develop that could challenge their dominance. Therefore, the monopolization of public markets can lead to the establishment of a "private government", controlled by a small group of people who hold the monopoly, as corporations, once merely an efficient tool employed by individuals to conduct private business, have become an institution that has brought such a concentration of economic power capable of dominating the State (U. S. SUPREME COURT, 1933).

As the surveillance capitalism, the market-oriented structure of the digital economy, behaves as "a coup from above, not an overthrow of the state but an overthrow of the people's sovereignty and a prominent force" (ZUBOFF, 2019, p. 33) in the dangerous trend toward democratic deconsolidation. Hence, the technology giants have managed to develop a digital apparatus by which they impose their will, and exert their influence through a tangible, computational, interconnected puppet that observes, calculates, and alters human conduct. They use this infrastructure to establish a method of characterizing and – specially – modifying behavior, which it is called "instrumentarian power", replacing the traditional practice of soul engineering with behavior engineering.

In this context, the instrumentarian power aims at organizing, enticing, and tuning the whole social body in order to obtain some kind of social confluence that replaces the role of politics and democracy with group pressure and computational certainty, resulting in the extinguishment of our perception of reality and the purpose of individual social existence. Therefore, the instrumentarian power configures a real democratic threat by continuously renewing capitalism's grip on society's learning division, leading to a constant erosion of our freedom (ZUBOFF, 2019, p. 389).

For this reason, the concern about the consolidation of Big Techs' monopolies is in the political as well as the economic sphere, given that technology giants threaten the ideal of a democracy whose power is distributed and decentralized (PETIT, 2020, p. 6). Therefore, without a doubt, Big Techs have real influence over the economy, politics, and the most aggravating, the individual, since their power is instrumentalized in order to conduct the users' behavior in their favor. In a way that the structuring of a new type of commerce is observed and relies on interference in the waiting of the personality by means of behavioral modification, from which it remakes human nature in the name of the certainty of profit.

4. COMPETITION REGULATION IN THE INFORMATIONAL ECONOMY

Once established the premises of the Big Techs' monopoly power in the digital economy, it is essential to analyze the impacts resulting from this dominance and seek solutions that restore users' autonomy over their data, restore democracy, and foster a market composed of fair competition. Although the antitrust enforcement focused on innovation increased since late 20th century, evidenced by the 1995 federal guidelines on intellectual property licensing (KOVACIC; SHAPIRO, 2000, p. 57), in the case of Big Techs, it is possible to observe that these companies command the market, each in their respective field, while competing only among themselves.

At first, technology companies' invasions of privacy were allegedly fueled by the absence of specific legislation – both data protection and antitrust – that placed limits on the advance of platforms, in addition to the alleged reciprocal interest of technology companies and government intelligence in abusive surveillance practices (ZUBOFF, 2019, p. 31). However, as the social, economic, political consequences of technological monopolies became more evident and recurrent, the need for a more active state intervention was realized.

From this perspective, the monopoly of Big Techs treats personal data way more aggressively than in a scenario where there would be a solid market competition and competitiveness, to the point that their domination over the market not only consolidates their economic power, but also defaces privacy (US HOUSE OF REPRESENTATIVES, 2022, p. 40). This is a relevant discussion "as existing antitrust laws must remain the primary rules for the protection of market competition and no radical reform is needed" (PETIT, 2020, p. 7).

In this context, it is noted that competition regulation, especially in the digital markets, plays a very important role as a mechanism for preserving privacy and protecting personal data. In fact, the same way Glaeser and Shleifer (2003, p. 403) pointed out that regulation emerge "as a political response to the failure of private litigation to keep up with the community idea of justice", Regulation can also be seen as a political response to the market's inability to self-regulate fairly and effectively, aiming at the community's well-being, serving as a mechanism designed to promote the community's interest and ensure that principles of equity are preserved.

Thus, it becomes evident that competition regulation, particularly in digital markets, assumes a critical role in safeguarding both privacy and personal data. As a matter of fact, it should be emphasized that – while the scenario with insufficient competition alone may lead to reduced product quality in many markets – this loss due to monopolization is even more pronounced in digital markets and in turn damaging to privacy and data protection, since product quality in digital media is often itself the relevant locus of competition. Therefore, "without transparency or effective choice, dominant firms may impose terms of service with weak privacy protections that are designed to restrict consumer choice" (US HOUSE OF REPRESENTATIVES, 2022, p. 42).

A concrete example of the statement was the controversial update of WhatsApp's Terms of Use and Privacy Policy in Brazil, announced in early 2021. In light of this episode, Telegram – WhatsApp's biggest "competitor" communication platform – had in August of that year a peak in downloads, reaching the 1 billion users' mark (ROSA, 2021). It should be noted, however, that despite the uproar involving the referred controversy, just in a matter of a few days, everyone went back and continued using the application normally, as such permeate as the main means of communication

of Brazilians. Notwithstanding the weak privacy policy – widely known by the society – a few months later WhatsApp announced a new tool to users, enabling payments and transfers through the app, the "WhatsApp Pay" (INSTITUTO MILLENIUM, 2021). The new tool was easily introduced, even in the face of the security instability regarding data protection by the platform, serving as an example of how a monopolistic company can put users at risk, and still remain in control.

The dominance of Big Techs over certain segments, such as the case of WhatsApp – coupled with the lack of a real competitor – weakens privacy and data protection, and inevitably the user, since the latter is held hostage to the determinations and impositions of this monopoly. Antitrust laws have the potential to ensure fair competition among companies, and consequently provide data subjects with more autonomy and power over their information. It is given that "if two firms in a market are owned by the same people, those firms likely have less motivation to compete vigorously than would two firms owned by different people" (SHAMBAUGH; NUNN; BREITWISER; LIU, 2018, p. 12).

Fundamentally, Competition Law – understood in its true sense as a means of structural combat to power situations – as a way to guide and transform the operation of markets, exactly by fighting dominant economic power, since, above all, fighting economic power and its abusive exercise is nothing more than fighting the excluding individualism in market relations (SALOMÃO FILHO, 2021, p. xi). As seen, beyond the technological development itself, the real merit behind the rise of technological giants is in the deep relations established between companies and users, which began with "its disregard for the boundaries of private human experience and the moral integrity of the autonomous individual" (ZUBOFF, 2019, p. 24).

Among the several ways that one can endure to suppress competitors in a specific market segment, the "buy-or-bury" illegal practice stands out as a "common" tactic employed by the tech giants to maintain their dominance, especially after numerous failed attempts to develop innovative features, as occurred with the social networking giant Meta, formerly known as Facebook (FTC..., 2021, para. 1). In advance, it is important to remember that Facebook is still a social network with a user base of over two billion people – and alone has control over 80% of the time the average user spends using social media – making the platform one of the most powerful method of personal discourse, which is a clear reflection of its monopoly power in the social media segment and evokes the sense that others social networks with fewer users don't even have a chance to compete (SRINIVASAN, 2019, p. 45).

It is in this precisely context that Meta had acquest two of its biggest rivals: Instagram, in 2012, and WhatsApp, in 2014. Notwithstanding the company's attempt to deny its monopoly and its anti-competitive practices, it is a fact that Meta, since its founding, has acquired over 90 companies, most of which were startups and while on the surface many of these mergers may have – at least appeared to have – positive economic benefits, they inevitably provide a strategic means for dominant firms to solidify and protect their dominance (GLICK; RUETSCHLIN, 2019, p. 4). This underscores the fact that the company consolidated its monopoly, severely by hampering the ability of its competitors to even exist in the same segment. Such a fact that aligned with the purchase of the small innovative companies that have the potential to eventually become a competitor, Meta has vitiated the entire competitive process, annihilated competition and limiting consumer choice (FTC..., 2021, para. 5).

Therefore, the concern regarding the containment of monopolies and their role in protecting privacy and personal data protection is evident. However, it is necessary to keep in mind that competition regulation by itself is not capable of promoting privacy and personal data protection,

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since market competitiveness alone is not capable of ensuring that Big Techs develop a commitment to care about the treatment of users' personal information (PETIT, 2020, p. 246). Nevertheless, it doesn't mean that the antitrust laws don't have significant value in addressing the privacy and data protection issue as part of its regulation – as does by tackling monopolies – particularly given that "entrenched power of firms with weak privacy protections has created a kill zone around the market for products that enhance privacy online" (US HOUSE OF REPRESENTATIVES, 2022, p. 37).

Competition regulations targeted at digital markets are being increasingly discussed and implemented worldwide. The DMA designed by the European Union serves as a prime example of such regulation. The DMA identifies gatekeepers who offer core platform services and possess significant economic power (EUROPEAN UNION, 2022, p. 2). This novel instrument departs from conventional measures of market intervention, as it considers not only a company's dominance in the market but also its qualitative characteristics and the services offered. As well explained by Forgioni (2022, p. 188) "the European Union sees the opening, the possibility of access, the competition and the competitiveness structure of the market as mechanisms capable of promoting economic welfare, competitivity and integration of the markets in its territory".

The development of competition regulation in digital markets directly reflects on privacy and data protection enforcement, as it strives to restrain the dominance of Big Tech companies and underscores the state's willingness to interfere with market structures whenever necessary to ensure competitiveness (SALOMÃO FILHO, 2021, p. 28). In fact, the regulation of Digital Markets

> *would not only promote an increase of sales through smaller platforms but would also impact positively the market growth. It would strengthen confidence in the platform business environment. The benefits expected would enhance the potential of innovation amongst smaller businesses as well as improving the quality of service and therefore the consumer welfare. Once implemented, the foreseen interventions would reduce competitive asymmetries between gatekeepers and other platforms (BAGNOLI, 2021, p. 150).*

According to Recital 36 of the DMA, Big Techs – classified as Gatekeepers – possess an advantage resulting from the personal data treatment for online advertising purposes. This advantage creates a barrier to entry for smaller players, who will struggle to accumulate similar amounts of data. To prevent any undermining of competition, Gatekeepers "should enable end-users to freely choose to opt-in to such data processing and sign-in practices by offering a less personalized but equivalent alternative, and without making the use of the core platform service or certain functionalities thereof conditional upon the end-user's consent" (EUROPEAN UNION, 2022, p. 9).

At last, while competition regulations cannot guarantee privacy and personal data protection, they are essential to turning down the Big Tech's dominant power and promoting a more competitive market. The DMA is an example that by restraining the dominance of Big Tech and reducing competitive asymmetries between gatekeepers and other platforms, ultimately benefiting the market growth, innovation and consumer welfare, as well as privacy and users' personal data protection.

CONCLUSION

The rise of the Informational Economy and the dominance of Big Tech companies in digital markets have brought privacy and data protection to the forefront of consumer and regulatory concerns. As the importance of personal data continues to grow, there is a pressing need for new regulatory approaches to address the complex challenges posed by the digital era.

This article has explored how competition regulation can be used as a mechanism to protect privacy and data protection in the digital markets. To this purpose, it was demonstrated how the transformation of the economy with the rise of digital technologies happened, characterized by the increasing importance of data as a strategic asset, and the emergence of digital markets domination power by Big Tech companies. Afterwards was addressed the intersection between competition and data privacy concerns, focusing on the practice of behavioral profiling and the misuse of the "instrumentarian power".

To address these concerns, it was shown that competition regulation can play a vital role in protecting privacy and data protection in the digital markets, by promoting competitiveness and preventing anti-competitive behavior by dominant players. As such, competition law can help to create an environment where effective competitivity exists and motivates better standards for privacy and data protection between competitors' companies. As a case in point, the DMA of the European Union was chosen as a reference of how competition regulation can be used to address these issues. Hence, the DMA seeks to establish rules for large online platforms that have significant market power, imposing obligations related to data access and portability, and requiring transparency in data practices. By integrating privacy and data protection concerns into competition policy, the DMA represents a significant step towards creating a more sustainable and equitable digital economy, without overriding the already specific existing regulations addressing privacy and data protection, like the General Data Protection Regulation (GDPR).

Moreover, regulatory authorities can also play a role in promoting competition in the digital markets by enforcing antitrust laws and preventing dominant players from engaging in anti-competitive practices, such as abusing their market power or engaging in exclusionary conduct. By promoting competition, regulators can also help to reduce the risks associated with concentrated market power, including the potential for abuse of personal data.

Overall, this article provides insights into the complex relationship between competition regulation and privacy and data protection, highlighting the importance of a multidisciplinary approach to addressing these critical issues in the digital era. As the digital economy continues to evolve, it is essential that we continue to engage in robust discussions and collaborations to develop effective and balanced regulatory frameworks that prioritize privacy and data protection while also promoting competition and innovation.

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