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**EU regulations regarding digital businesses, such as
GDPR, DMA, and DSA, impose a
disproportionate administrative burden,
compliance costs, and commercial risks on
entrepreneurs operating in the EU on digital
platforms.**

Bachelor thesis

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DDECLARATION OF HONOUR:

I declare that this thesis is my own work, and that all references to, or quotations from, the work of others are fully and correctly cited.

(Signed).....

RIGA, 2023

ABSTRACT

The growing concern of Big Tech influence in the EU and imposed regulation-GDPR has put a significant administrative burden on Big Tech companies and entrepreneurs within the EU as GDPR non-compliance fines have varied from one EU MS to another. Although GDPR attempted to solve previous e-Directives issues, it failed to seek harmonization among EU Member States, as the enforcement and implementation of the GDPR have been left to each MS DPA that has implemented GDPR in accordance with their national laws that have further led to fine unsynchronized systems and disproportionate penalties for non-compliance. The companies that do not obtain the resources to comply with GDPR receive high fines, leading to limited innovation, entrepreneurship, and consumer choice in society. GDPR lacks harmonization among EU Member States and it fails to strive balance between consumer and company interests.

Keywords: Big Tech, DPA, non-compliance, GDPR, harmonization, EU.

SUMMARY

Given the size and power of Big Tech companies, they are subjected to many concerns about monopolies, surveillance, and market power they obtain. These concerns have led to the adoption of EU regulations, such as GDPR, DMA, and DSA.

The core objective of the following thesis is to determine whether these regulations impose administrative burdens, high compliance costs, and commercial lists for big platform businesses operating in Europe. An answer is provided by conducting doctrinal and comparative legal research to examine existing legal frameworks of the regulations, laws, and case-law concerning Big Tech limitations. Secondary sources are to outline various legal researchers and scholarly opinions in the context of a critical analysis of each of the regulations mentioned above.

The thesis is divided into three main chapters. The first chapter addresses e-commerce's historical development and provides an in-depth description of its leading world players. The first chapter aims to create a broader background of the issue raised and introduce the reader to the importance of the digital economy. In addition, people's subjugation and dependence on the Big Tech companies and their technologies, products, and services provided.

The second chapter is the essential part of this thesis as it examines all three regulations adopted by the EU. However, this thesis has emphasized the GDPR, as it has come into force and there are legal precedents. Therefore the analysis provided is more specific and based on case-law precedents. The author emphasizes the cornerstones and legal gaps in GDPR that further disbalance consumer and company interests. Furthermore, a closer look has been taken at MS DPAs and analysis of their approach in the implementation and enforcement process. Chapter two's second and third parts are devoted to DMA and DSA exploration. The author attempted to provide possible problems that can arise by finding similarities with GDPR, which is already facing these issues. Although, DMA and DSA analysis is more superficial as there are no legal precedents as these regulations will only enter into force in the future.

In the third chapter, the author summarizes the main issues with the GDPR by raising awareness of the importance of preventing these problems. Inter alia, the author suggests it provides possible solutions that could be done to solve the issues raised and strike a balance between consumer and company interests.

The final pages of this thesis are devoted to providing conclusions, answering the hypothesis proposed, and suggesting what could be done more to contribute to this topic and what areas can be researched in the future.

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LIST OF ABRIEVIATIONS

- **EDI** - Electoronic Data Interchange
- **TCP/IP** -Transmission Control Protocol and Internet Protocol TCP/IP
- **SSL** - Secure Socket Layer
- **AI**- artificial intelligence
- **SaaS**- software-as-a- service
- **IaaS**- infrastructure- as – a – service
- **EC** - European Commission
- **EU**- European Union
- **GDPR**- General Data Protection Regulation
- **MS**- Member States
- **DPO**- Data Protection Officer
- **CJEU** -Court of Justice of the European Union
- **DMA**- Digital Markets Act
- **TFEU** -Treaty of Functioning of Europe
- **e-Privacy Directive** - European Parliament and of the Council Directive 2009/136/CE of November 25, 2009.
- **DSA**- Digital Service Act
- **ECD**- Commerce Directive’s
- **Charter**- Charter of Fundamental Rights of the European Union
- **EDPB**- European Data Protection Board
- **EEA**- European Economic Area
- **WP29**- Article 29 Working Party
- **ECB**- European Central Bank

- **Schrems II** - *Data Protection Commissioner v. Facebook Ireland and Maximilian Schrems*, no. C-362/14, (6 October 2015).
- SCCs- standard contractual clauses

INTRODUCTION

Big Tech companies known as Amazon, Apple, Microsoft, Google/ Alphabet, and Facebook/ Meta are major players in the digital economy and, with their technological developments, have changed the perception of people's digital, physical, social, political, and cultural environments. Given the size and power of Big Tech companies, they are subjected to many concerns about monopolies, surveillance, and market power they obtain. EU has raised great concerns that US companies conquer and define the European market, making it even more complicated for domestic companies to enter the market. Especially the COVID-19 crisis has promoted these concerns, as the pandemic made people even more dependent on Big Tech-provided technologies and services. EC has developed three complex regulatory frameworks, particularly GDPR, DMA, and DSA, which are designed to mitigate Big Tech company's dominance over domestic businesses and protect consumers. These regulatory frameworks aim to cover different areas of EU law. GDPR covers data privacy and security law, DMA covers competition law and aims to limit large online platforms from abusing their market power, and DSA aims to protect society in the online environment by promoting digital services harmonization across the EU.

In this research, the author will concentrate on GDPR analysis as it came into force in 2018. It is possible to analyze how this regulation works in practice, while DSA and DMA will only come into force in several months. While it may initially seem that the abovementioned regulations will promote clarity, diminish, and solve the current concerns, they raise other substantial problems that instead put an administrative burden on Big Tech and digital businesses operating in Europe. Keeping in mind that GDPR has been in force for nearly four years, Big Tech has received fines amounting to 2.427 billion dollars for breaching provisions of the regulations.¹ GDPR is a very complex and detailed regulatory framework obtaining 100 Articles. Furthermore, the enforcement and implementation are left to each MS DPAs, which are implementing and enforcing this regulation on the grounds of their national legislation. In addition, for the company to bind with these provisions laid down in GDPR asks for significant investments such as human and monetary resources. This leads to the research question of this Bachelor thesis whether the regulations implemented by EU impose a disproportionate

¹ Zandt, Florian. "Infographic: Big Tech, Big Fines." Statista Infographics. Statista, January 6, 2023. Available on: <https://www.statista.com/chart/25691/highest-fines-for-gdpr-breaches/>. Accessed: March 21, 2023

administrative burden, compliance costs, and commercial risks on Big Tech and entrepreneurs operating in the EU on digital platforms?

To answer the presented research question, the author of this thesis will use three legal research methods. The first is the doctrinal research method. The research will be based on GDPR, DSA, and DMA, as well as various law journals, scholarly opinions, academic works, national member state legislation, and case law analysis. Further, the author will use a comparative method to outline the legal gaps in GDPR enforcement and implementation of different MS legislation. Last but not least, the author will use an analytical approach to identify reasons for the different approaches taken in each MS.

The aim of this thesis is to determine whether the compliance and non-compliance costs and commercial risks faced by businesses operating in the digital economy in the EU can be justified. The author aims to identify challenges and issues that companies face and may meet in the future. Further, determine the root of this disproportionate administrative burden to provide possible solutions to the problems raised.

While this study maps out the core objectives, challenges and problematics of the GDPR, DSA, and DMA implemented by EC, in the context of GDPR implementation, it fails to take a closer look at the European Member State national legislation regarding data and privacy law that work as a cornerstone for a different approach in each states DPA and fine system. Further, the scope of the application and analysis of GDPR in this research will emphasize the fine system instead of the study of the provisions themselves.

This thesis consists of three parts. In the first part, the author will address: i) the historical development of the digital economy as such; ii) the role of Big Tech companies in the digital economy by characterizing each of them and determining their outstanding technologies and strategies. The second chapter introduces i) the legal concept and general overview of GDPR, a) the influence on entrepreneurship, compliance, and non-compliance costs; b) legal gaps; c) national DPA analysis and most common violations and fine amount. Further, the author will address ii) DMA's key provisions, compliance, and non-compliance costs; a) legal gaps of DMA. Additionally, the author will introduce iii) DSA key provisions and non-compliance costs; a) potential challenges of DSA. The last subchapter of the second part will be devoted to the sharp conclusion of the above-mentioned regulatory frameworks. The third part will discuss core issues and provide possible solutions.

1. E-commerce's nature, structural essence, and characterization of leading players operating in the digital economy.

In 30 years, the concept and understanding of business have completely changed due to the rapid development of technology. Nowadays, most businesses operate in a digital economy, and it is almost inevitable for consumers to escape the presence of the digital world. The five most influential companies are used all over the world and are considered e-commerce phenomena.

Consequently, this chapter will examine the development of e-commerce and emphasize the main cornerstones that have contributed significantly to technology development. Further, the author will provide an in-depth analysis of each of the Big Tech companies, their business models, and reasons for being listed in the list of the world's most successful companies.

1.1 Historical development of e-commerce and digital economy

The origins of e-commerce and the digital economy can be traced back to the early days of development of the development of Internet. More precisely, in 1990s, along with the internet evolution, countless possibilities arose with a strong emphasis on communication and information sharing.² After some time, businesses noticed the prospective of internet as such and used it to their advantage. Initially, companies used the internet to interact with their potential customers and disclose information about their products. Later, companies began to use internet to receive orders and to distribute their products or services.³ Technology has fundamentally changed the way companies interact with customers. Further, the author will stipulate main technology cornerstones that have improved the development of the digital economy and e-commerce.

² Santos, Valdeci Ferreira dos, Leandro Ricardo Sabino, Greiciele Macedo Morais, and Carlos Alberto Goncalves. "E-Commerce: A Short History Follow-up on Possible Trends." *International Journal of Business Administration* 8, no. 7 (October 26, 2017): 130. Available on: <https://doi.org/10.5430/ijba.v8n7p130>. Accessed: March 7, 2023. p.130,para.2.

³ *Ibid.*

The first cornerstone that changed the concept of internet can be traced back to the 1960s when businesses began to use primitive computer networks for electronic transactions through Electronic Data Interchange (hereinafter referred to as EDI).⁴ Electronic data interchange is the electronic exchange of business documents and information between two business entities.⁵ EDI replaces humanly readable records with machine-readable, electronically coded documents. In other words, it provides an automated exchange of data, reducing the need for manual data entry, as well as reducing errors and increasing the efficiency of business transactions.⁶ At the same time when EDI was developed military field developed the ARPAnet network in order to share information during a probable nuclear attack. Consequently, ARPAnet made the foundation of modern-day internet technologies such as Transmission Control Protocol and Internet Protocol (hereinafter referred to as TCP/IP).⁷ Furthermore, in the 1980's the invention of personal computers allowed users to exchange information and documents over networks such as BITNET and USENET, as well as CompuServe that provided boards and chat rooms.⁸ In 1984, CompuServe developed Electronic Mail which enabled users to make deferred purchases from more than 100 stores. In addition, in 1991, the National Science Foundation removed the ban on commercial use of the internet, which paved the way for Internet and significantly contributed to its evolution.⁹

The second cornerstone can be considered the invention developed the company Netscape. In 1994, Netscape 1.0 introduced the Secure Socket Layer (hereinafter referred to as SSL)- a web browser which allowed the personal encryption of personal information during online transactions. This browser allowed to access and steer the internet more efficiently.¹⁰ The introduction of SSL was a key component in order to combine e-commerce with online transactions, as security has always been enormously important for ensuring the efficient functioning of e-commerce technology base. It is possible to state that SSL promoted e-commerce to become a major trend in world trade.¹¹ During this time first worldwide e-commerce platforms such as Amazon and eBay, were established, paving the way for online retail.¹²

The Dot-com Bubble in the late 1990s laid the foundation for modern industry. Dotcom Bubble a.k.a. the Internet bubble, was between 1995- 2000, characterized by significant and rapid increase in the stock market's valuation in Internet service and technological field. Investors poured money into start-ups with small profitability and unsustainable business models, which resulted overvalued shares that are far exceeding traditional assessment factors like current assets, revenues, and debts.¹³ However, disregarding the fact that many companies bankrupted, e-commerce sales continued to increase during the Dot-com Bubble, suggesting

⁴ Baltijapublishing.lv. "View of HISTORY of FORMATION of E-COMMERCE ENTERPRISES as SUBJECTS of INNOVATIVE ENTREPRENEURSHIP," 2023. Available on: <http://baltijapublishing.lv/index.php/threeseas/article/view/850/901>. Accessed: March 7, 2023. p.85.

⁵ Shahzad, Salman, and Eduard Heindel. "WHAT IS EDI and HOW DOES IT WORK? Term Paper," n.d. Available on: https://webuser.hs-furtwangen.de/~heindl/ebte-2011ws/How%20EDI%20Works_term%20paper.pdf. Accessed: March 7, 2023. p.4.

⁶ *Ibid.*,p.17.

⁷ *Supra* note 3.

⁸ *Supra* note 3.

⁹ *Ibid.*

¹⁰ *Ibid.*

¹¹ *Ibid.*

¹² *Ibid.*,p.86.

¹³ "Dot-Com Bubble | Definition, History, & Facts | Britannica." In *Encyclopædia Britannica*, 2023. Available on: <https://www.britannica.com/event/dot-com-bubble>. Accessed: March 8, 2023.

that e-commerce was a growing industry.¹⁴ Furthermore, after the Dot-com Bubble Amazon and eBay sales increased steadily and continued to thrive in e-commerce.¹⁵ Additionally, the growth of businesses that work in e-commerce were limited by privacy, security, universal access issues, and internal fraud. During this period, consumer protection, contracts, user accounts and privacy have become a significant issue for e-commerce.¹⁶

Mobile commerce, a.k.a. M-commerce, marks a new era of e-commerce. M-commerce refers to using mobile devices or wireless PDAs to conduct business transactions. Rise of m-commerce, in 2001, offered consumers greater accessibility and convenience to do businesses anywhere and at any anytime. Furthermore, the increase in diversification of the global internet population made e-commerce necessary and feasible on a global scale, leading to business expansions overseas.¹⁷ Undeniably, the rise of mobile devices in 2001 can be considered the most significant milestone in e-commerce as it changed the exclusive access and use of the internet.¹⁸ The number of mobile users increases yearly. According to statistics in 2021, the number of mobile devices operating worldwide stood at 15 billion and is expected to reach 18,22 billion by 2025.¹⁹ Statistics powerfully show that m-commerce area will continue to grow and become even more essential part of businesses.

Last but not least is the rise of social media, a.k.a. social commerce. Social commerce, by definition, is

“The use of Web 2.0 applications and social media to facilitate the interactions of individuals on the Internet to support consumers' acquisition of services and products (Liang and Turban, 2011). In another definition, social commerce is given as any commercial application based on the Internet which supports social interaction and user content generation through social media in order to support individuals in their purchasing decisions”²⁰

S-commerce can be considered as a subset of e-commerce in which the elements of social media are used for interaction with customers and business promotion purposes such as recommendations, reviews, ratings etc.²¹ Rise of s-commerce allowed businesses to create additional value by receiving consumer ratings, reviews of products and services and in the same time increasing engagement of the platforms.²² According to D. Leither, s-commerce can be defined as the manifestation through different types, such as peer- to peer platforms as Etsy and eBay in which users can interact directly to each other and buy and sell through the

¹⁴ Yan Tian and Concetta Stewart “ History of E-Commerce”. 2006. Available on: https://www.researchgate.net/profile/Yan-Tian-4/publication/314408412_History_of_E-Commerce/links/6123fe3b0c2bfa282a66987d/History-of-E-Commerce.pdf Accessed: March 8, 2023.p.4.

¹⁵ *Ibid.*,p.5.

¹⁶ *Ibid.*

¹⁷ *Ibid.*

¹⁸ *Ibid.*

¹⁹ Statista. “Number of Mobile Devices Worldwide 2020-2025 | Statista.” Statista, 2020. Available on: <https://www.statista.com/statistics/245501/multiple-mobile-device-ownership-worldwide/>. Accessed: March 13, 2023.

²⁰ Hajli, Nick, and Julian Sims. “Social Commerce: The Transfer of Power from Sellers to Buyers.” *Technological Forecasting and Social Change* 94 (May 2015): 350–58. Available on: <https://doi.org/10.1016/j.techfore.2015.01.012>. Accessed: March 13, 2023.p.350,para.1.

²¹ Attar, Razaz Waheeb, Ahlam Almusharraf, Areej Alfawaz, and Nick Hajli. “New Trends in E-Commerce Research: Linking Social Commerce and Sharing Commerce: A Systematic Literature Review.” *Sustainability* 14, no. 23 (November 30, 2022): 16024. Available on: <https://doi.org/10.3390/su142316024>. Accessed: March 13, 2023.p.3.para.4.

²² *Ibid.*

platform. Furthermore, there are social networks such as Facebook, Pinterest, Twitter etc. which advertise and sell products on the company's page. Then there are companies like Amazon, Alibaba and Aliexpress, where the information and accessibility of products are aggregated in terms of reviews, purchase history, feedback, and recommendations.²³

1.2 BigTech Companies

Big Tech companies, which include Amazon, Apple, Microsoft, Google/ Alphabet and Facebook/ Meta, are major players in world's economy, society, and political systems.²⁴ These companies are obtaining relatively new business models that are based on online platforms and combine data accumulation and artificial intelligence (hereinafter referred to as AI). Moreover, these Big Tech companies control customers, competitors, business partners as well as the labour force beyond the employees that work in Big Tech companies.²⁵ Additionally, Big Tech company's business model is based on advertising and data collection, which provides an opportunity to sell their information further to big corporations. Big Tech controls major channels of communication- personal, political, delivery of news as well as the avenues of commerce.²⁶ Big Tech companies are facing political and public scrutiny because of the concerns about monopolies, surveillance, and market power they obtain all over the world.²⁷ In the following paragraphs, the author will stipulate business models, strategies and evolution of each of the Big Tech companies.

Currently Amazon.com is the leading e-commerce firm in the world.²⁸ From 2004 to 2022, Amazon.com's sales have increased tremendously. Notably, in 2022 Amazon's net sales revenue reached 514 billion US dollars, up from 470 billion US dollars in 2021.²⁹ Amazon was originally founded in 1994 and began its business as an online bookseller. In September 1995, Amazon was selling 20 000 US dollars per week. Further, in 1998 Amazon diversified its range of products by adding electronics, music, videos, and other goods. That led to Amazon's geographical expansion and creation of the first international sites, such as Amazon.co.uk and Amazon.de. The main goal of Amazon's strategy was to "get big fast" and become the biggest mass merchandiser in the e-commerce world.³⁰ In general, Amazon's

²³ *Ibid.*

²⁴ Birch, Kean, and Kelly Bronson. "Big Tech." *Science as Culture* 31, no. 1 (January 2, 2022): 1–14. Available on: <https://doi.org/10.1080/09505431.2022.2036118>. Accessed: March 14, 2023.p.1,para.1.

²⁵ Science as Culture. "Big Tech and Labour Resistance at Amazon," 2022. Available on: <https://www.tandfonline.com/doi/full/10.1080/09505431.2021.1937095>. Accessed: March 15, 2023. p.29.,para.1.

²⁶ Hawley, Josh. *The Tyranny of Big Tech*. (Rgnery Publishing, A Division of Salem Media Group, Washington D.C.). Available on: https://books.google.lv/books?hl=sv&lr=&id=z_oVEAAAQBAJ&oi=fnd&pg=PT2&dq=Big+Tech+companies+Amazon,+Facebook&ots=yxtJUJl3ru&sig=idN87vdNwoPiRfKgwWOYmm5hP30&redir_esc=y#v=onepage&q=Big%20Tech%20companies-%20Amazon%2C%20Facebook&f=false Accessed: March 16, 2023. P.3.

²⁷ Birch, Kean, and Kelly Bronson. "Big Tech." *Science as Culture* 31, no. 1 (January 2, 2022): 1–14. Available on: <https://doi.org/10.1080/09505431.2022.2036118>. Accessed: March 14, 2023.p.4,para.1.

²⁸ Ritala, Paavo, Arash Golnam, and Alain Wegmann. "Coopetition-Based Business Models: The Case of Amazon.com." *Industrial Marketing Management* 43, no. 2 (February 2014): 236–49. Available on: <https://doi.org/10.1016/j.indmarman.2013.11.005>. Accessed: March 14, 2023.p.237,para.1.

²⁹ Statista. "Amazon Annual Net Sales 2022 | Statista." Statista, 2022. Available on : <https://www.statista.com/statistics/266282/annual-net-revenue-of-amazoncom/>. Accessed: March 14, 2023.

³⁰ Ritala, Paavo, Arash Golnam, and Alain Wegmann. "Coopetition-Based Business Models: The Case of Amazon.com." *Industrial Marketing Management* 43, no. 2 (February 2014): 236–49. <https://doi.org/10.1016/j.indmarman.2013.11.005>. Accessed: March 14, 2023.p.241.

success can be assigned to a combination of factors, such as its focus on customer, investments in logistics and technology as well as the “get big fast” strategy that led to rapid expansion of geographical markets and product categories and become dominant of online world.³¹ Amazon’s headquarters are in North America, due to its location Amazon has wider range of services in North America than worldwide.³² Currently, in 2022 Amazon generates the majority of its net revenues through online retail product sales, cloud computing services, retail subscription services like Amazon Prime and third party retail services. Amazon also known as lowest-price market, offers to purchase goods at a discounted price. In 2022 Amazon’s brand worth reached 281 billion US dollars, exceeding world giants like Walmart, Ikea, Alibaba, and eBay.³³ However, in 2023 Amazon became the most valuable brand worldwide, reaching 299.3 billion brand value worth, followed by Apple with 297.5 billion worth.³⁴

Apple is one of the largest technology giants in the world by revenue and has a significant impact on the global economy. In 2022, Apple’s total net sales amounted to 394 billion US dollars, which marked an increase from the historical record in 2020, which was 274.52 billion US dollars.³⁵ Apple was founded back in 1976 by Steve Jobs, Steve Wozniak and Ronald Wayne. The company is based in Cupertino, California, United States.³⁶ Apple is known for manufacturing and selling electronics, computer software and online services. The Mac computer, iPad, iPhone, and Apple Watch are considered as the most revolutionary products.³⁷ Additionally, Apple offers a wide range of services and software, such as iTunes, Apple Music, iCloud and Apple Pay. Apple has succeeded in the highly competitive personal computer industry by differentiating itself from competitors by focusing on design, quality and superior customer service.³⁸ Apple products are essential products and services for most businesses, households, and entertainment venues. It continues to develop new high-tech products to the consumer electronics market.³⁹ There are different opinions about Apple’s key of success; some say that Apple’s success is mostly attributed to advertising and marketing as well as the education background of the founders has played a significant role in the formation of Apple. However, the most common opinion is that the combination of a lot of factors, such

³¹ *Ibid.*

³² *Ibid.*

³³ Statista. “Amazon Annual Net Sales 2022 | Statista.” Statista, 2022. <https://www.statista.com/statistics/266282/annual-net-revenue-of-amazoncom/>. Accessed: March 16, 2023.

³⁴ Statista. “Most Valuable Brands Worldwide 2023 | Statista.” Statista, 2023. Available on: <https://www.statista.com/statistics/264875/brand-value-of-the-25-most-valuable-brands/>. Accessed: March 16, 2023.

³⁵ Statista. “Apple Revenue Worldwide 2022 | Statista.” Statista, 2022. <https://www.statista.com/statistics/265125/total-net-sales-of-apple-since-2004/>. Accessed: March 16, 2023.

³⁶ Shea, M. Theresa. *Steve Jobs and Apple*. (The Rosen Publishing Group, Inc, New York). Available on: https://books.google.de/books?hl=sv&lr=&id=4EEDiM9b-0sC&oi=fnd&pg=PP1&dq=evolution+of+apple+company+history&ots=rKyOdL_a42&sig=rXivd-hj-w9LcSOdc91h3NSzAKQ&redir_esc=y#v=onepage&q&f=false Accessed: March 16, 2023. p.105.

³⁷ *Supra* note 34.

³⁸ Masi, Brian. “Strategic Analysis of Apple Inc.” December 15, 2009. Available on: <https://tinyurl.com/ywtdt83x9> Accessed: March 18, 2023. p.3.

³⁹ Kubilay, İbrahim Atakan. “The Founding of Apple and the Reasons behind Its Success.” *Procedia - Social and Behavioral Sciences* 195 (July 2015): 2019–28. Available on: <https://doi.org/10.1016/j.sbspro.2015.06.222>. Accessed: March 16, 2023. p.1.

as social, economic, and technical environments they operated in, has led to the great success of Apple.⁴⁰

Continuing with Microsoft, which is one of the world's biggest and most successful Tech companies. Microsoft develops and sells consumer electronics as well as various enterprise and consumer hardware, software, and services. Microsoft was founded in 1975 by Bill Gates and Paul Allen in Albuquerque, New Mexico. However, since 1986 company has been based in Redmond, Washington. Historically, most of the Microsoft revenue has been generated from the commercial licensing of its software and different operating systems, such as Microsoft Word, Microsoft Excel, and Microsoft Powerpoint. It should be noted that the most recent Microsoft gaming consoles have gained huge success, particularly with Xbox One gaming console, which has been purchased by millions. Recently, there has been significant shift to the cloud that led to a big transformation in the tech industry. Microsoft is one of the major cloud service providers and plays a significant role in both the software-as-a-service (hereinafter referred to as SaaS) market and infrastructure-as-a-service (hereinafter referred to as IaaS). Microsoft's main competitors in cloud market are other tech giants such as IBM, Amazon, and Salesforce.⁴¹

Another Big Tech giant is Facebook, which was the first social media platform that reached huge success on a global scale. Facebook was founded in February 2004 by Mark Zuckerberg. Firstly, the app was available only for Harvard students in the USA with valid e-mail address. Later, Mark Zuckerberg with improving and developing many functions of the app such as Facebook Pages, Facebook Content, comments, recommendations, "Like it" Button, etc., making Facebook accessible and intriguing to all over the world.⁴² Since 2004 that Facebook has made a lot of upgrades in order to keep up with the technology development. Facebook's major rebranding happened in year 2021 when parent company Facebook Inc. became Meta Platforms. Now Meta's subsidiaries are apps like WhatsApp, Instagram and Facebook Messenger. The latest data in January 2023 shows that Facebook reaches three billion monthly active users (MAU).⁴³ In recent years Facebook has faced many challenges regarding misleading, false, and harmful content. Particularly, in 2022, 1.3 billion fake accounts were detected and removed from Facebook, and 6.4 millions posts were contained bullying and harassment content.⁴⁴

Last but not the least, among the Big Tech giants is Google, based in California, USA. Google is a multinational internet company that provides various digital services and products like software, online advertising and search as well as cloud computing. In January 2023, Google Search's worldwide market share in leading search engines amounted to 84.69 percent.⁴⁵

⁴⁰ Bjarin, Tim. "Apple's Key to Success Goes beyond Products and Services and Includes World Class Operations." *Forbes*, August 10, 2022. Available on: <https://www.forbes.com/sites/timbjarin/2022/08/09/apples-key-to-success-goes-beyond-products-and-services-and-includes-world-class-operations/?sh=929481022ec3>. Accessed: March 16, 2023.

⁴¹ Statista. "Topic: Microsoft." Statista, 2022. Available on: https://www.statista.com/topics/823/microsoft/#dossierContents_outerWrapper. Accessed: March 16, 2023.

⁴² Knut Linke, University of Applied Sciences Kufstein 2011. "Generation Facebook?- The History Of Social Networks". Available on: <https://tinyurl.com/4fxapt6> Accessed: March 21, 2023.p.4;5.

⁴³ Statista. "Topic: Facebook." Statista, 2023. Available on: <https://www.statista.com/topics/751/facebook/#topicOverview>. Accessed: March 21, 2023.

⁴⁴ *Ibid.*

⁴⁵ Statista. "Topic: Google." Statista, 2023. Available on: <https://www.statista.com/topics/1001/google/#topicOverview>. Accessed: March 21, 2023.

In 2015 Google's parent company became American conglomerate Alphabet Inc. In 2023 Alphabet's market capitalization amounted to 1.22 trillion US dollars. Google's core product is Google Search. However, the company has significantly broadened its products and services. Notably, its wide range of products and services include Youtube, Chrome browser, the operating system ChromeOS, the online payment system Google Pay, hardware Chromecast and the company's series of mobile devices. Currently Google's core focus is put on machine learning and AI. Additionally, Alphabet Inc. is ranked among one of the leading patent owners in the field and has acquired various AI startups.⁴⁶

Undeniably, in the last years, especially in the recent COVID-19 crisis, Big Tech companies have reached explosive growth, as COVID-19 intensified dependence on smart devices in order to stay in touch with people's personal as well as the professional worlds. Furthermore, this has led to giving even more power and market dominance to Big Tech companies.⁴⁷ This has caused great concern that existing regulatory frameworks and tools are ill equipped to tackle this new type of threat to market competition in the digital economy.⁴⁸ Therefore European Commission (hereinafter referred to as EC) is seeking ways how to improve and adapt EU competition rules in the digital economy. In 2020 EC stipulated that the tech and digital fields should be prioritized, and new a approach must be adopted in order to regulate Big Tech companies. However, the concerns of Big Tech market power, data protection, and dominance not only raised concerns in Europe but in USA as well.⁴⁹ Firstly, EC adopted General Data Protection Regulation (GDPR), followed by following novel initiatives such as Digital Services Act (DSA) and Digital Markets Act (DMA)⁵⁰.

2. Legal regulation of Big Tech within EU

It is evident that the Big Tech power obtained in the digital economy allows them to determine their own rules in the market. Therefore EC has developed three regulatory frameworks to tackle the most severe abuses in the digital economy and diminish their power. The three regulatory frameworks examined below are designed to deal with different trigger points.

In this chapter, the author will provide an in-depth analysis of these regulations' legal framework and impacts on entrepreneurship, compliance, and non-compliance costs. Inter alia, emphasis will be put on the critical analysis and the consequences of future in-action.

2.1 Legal concept and general provisions of GDPR

General Data Protection Regulation (hereinafter referred to as GDPR) of the EU came into force on May 25, 2018.⁵¹ The three main objectives are laid down in Art. 1 of Regulation

⁴⁶ *Ibid.*

⁴⁷ Jacobides, Michael G. "Regulating Big Tech in Europe: Why, so What, and How Understanding Their Business Models and Ecosystems Can Make a Difference." *SSRN Electronic Journal*, 2020. Available on: <https://doi.org/10.2139/ssrn.3765324>. Accessed: March 21, 2023. p.9.

⁴⁸ *Ibid.*

⁴⁹ *Ibid.*

⁵⁰ *Ibid.* p.12.

⁵¹ "The General Data Protection Regulation (GDPR) an EPSU BRIEFING," n.d. Available on: https://www.epsu.org/sites/default/files/article/files/GDPR_FINAL_EPSU.pdf. Accessed: March 29, 2023.

(EU) 2016/679 of the European Parliament and of the Council a.k.a. General Data Protection Regulation, particularly stating that:

1. This Regulation lays down rules relating to the protection of natural persons with regard to the processing of personal data and rules relating to the free movement of personal data.
2. This Regulation protects fundamental rights and freedoms of natural persons and in particular their right to the protection of personal data.
3. The free movement of personal data within the Union shall be neither restricted nor prohibited for reasons connected with the protection of natural persons with regard to the processing of personal data.⁵²

Inter alia, GDPR is primary EU law that sets out mandatory rules for companies and organizations that operates within Member States (hereinafter referred to as MS) of the EU regarding the use of personal data in an integrity-friendly way. Personal data includes information of an individual such as name, phone number, address, interests, health, online behaviour, information about purchases and any other data that identifies an individual.⁵³ As regards to scope of application- GDPR applies in all EU MSs.⁵⁴ Each MS is obligated to comply with it. Legal scholars believe that GDPR significantly differs from existing legal frameworks in EU personal data protection since GDPR is a regulation, rather than a directive. Among other things, it established a clear signal to the MS of a immediate action in data protection field.⁵⁵

Furthermore, GDPR established new obligations for businesses such as assigning a Data Protection Officer (hereinafter referred to as DPO), managing the citizen's and individual rights efficiently, informing citizens and customers of their activities in a transparent manner, regulating the responsibility between Buyer (Controller) and Supplier (Processor), keep data inventory, examine possible risks and impacts on citizens' rights for the intended use of personal data and set up processes to manage data breach within the 72 hour time frame.⁵⁶

This Regulation establishes a broad road map for businesses, operating in the digital economy. Overall there are nine obligations the data controllers have to bind by. For instance, under Article 30 of GDPR, data controllers are obliged to keep detailed records of their processing activities. This record must include the information about which data is processed, who has the access to it, how long it has been stored, and what security measures have been used.⁵⁷ According to Article 20 of GDPR, the data controller must incorporate a data protection

⁵² The European Parliament And The Council Of The European Union. "On the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of Such Data, and Repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA Relevance)," 2016. Available on: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679>. Accessed: March 29, 2023. p-32.

⁵³ GDPR Summary. "GDPR Summary," December 6, 2020. Available on: <https://www.gdprsummary.com/gdpr-summary/>. Accessed: March 29, 2023.

⁵⁴ *Ibid.*

⁵⁵ Politou, Eugenia, Efthimios Alepis, and Constantinos Patsakis. "Forgetting Personal Data and Revoking Consent under the GDPR: Challenges and Proposed Solutions." *Journal of Cybersecurity* 4, no. 1 (January 1, 2018). Available on: <https://doi.org/10.1093/cybsec/tyy001>. Accessed: March 29, 2023. p.1.

⁵⁶ *Ibid.*

⁵⁷ Information & Communications Technology Law. "The European Union General Data Protection Regulation: What It Is and What It Means," 2019. Available on: <https://www.tandfonline.com/doi/full/10.1080/13600834.2019.1573501>. Accessed: March 29, 2023. p.85. para.2.

policy that determines all the safety measures of data protection and possession.⁵⁸ Additionally, under Article 12 of GDPR requires data controller to be transparent and provide information in a way which every individual could understand.⁵⁹

It is essential to mention and examine in detail the evolution of the ‘right to be forgotten’ as it has been incorporated in GDPR. Article 17 of GDPR incorporates the principle of ‘right to be forgotten’, which arose in 2010, in the case *Google Inc. v Spain*.⁶⁰ Case *Google Spain v. AEPD and Mario Costeja Gonzalez*⁶¹ issued May 13, 2014, by the Court of Justice of the European Union (hereinafter referred to as the CJEU), regarding violation of Spain’s data protection laws.⁶² This judgement provided a remarkable significance for EU fundamental rights law, data protection law and, Internet as such. Inter alia, the Court acknowledged the right under European Union Data Protection law Directive 95/46 for individual to suppress Internet search engine links, in other words, a ‘right to be forgotten’.⁶³ Particularly, the dispute was brought up by Mr. Costeja Gonzalez whose name was mentioned in two announcements in a Spanish newspaper concerning attachment proceedings in a real estate auction caused by social security debts. Additionally, at the time when newspaper became available via online, the announcements were accessible through Google search.

Mr. Gonzalez complained to Google Spain SL, asking to delete the references to the announcements produced by the Google search engine. Additionally, when newspapers became available online, the reports were accessible through Google search. As a result, Spanish Data Protection Agency (DPA) validated the complaint raised by Mr. Gonzalez and ordered Google to ensure that Mr. Gonzalez's data is no longer available in the Google search engine. Although, Google appealed DPA's decision to the Spanish Audencia Court, which rejected Google's appeals and referred to the CJEU for a preliminary ruling.⁶⁴ CJEU decision determined that individuals have the right to request that search engines delete links containing information that is inadequate, irrelevant or excessive. As a response, Google established a governance mechanism that allowed individuals to request that data about themselves must be deleted.⁶⁵ Inter alia, Google did not receive any fine and this CJEU ruling rather developed jurisprudence for individuals located in the EU, to request the removal of information from search engines.

⁵⁸ *Ibid.*, para.4

⁵⁹ *Ibid.*, para.5.

⁶⁰ Villaronga, Eduard Fosch, Peter Kieseberg, and Tiffany Li. “Humans Forget, Machines Remember: Artificial Intelligence and the Right to Be Forgotten.” *Computer Law & Security Review* 34, no. 2 (April 2018): 304–13. Available on: <https://doi.org/10.1016/j.clsr.2017.08.007>. Accessed: March 29, 2023.

⁶¹ Case *Google Spain v. AEPD and Mario Costeja Gonzalez*, case nr,C-131/12 (May 13,2014) Available on: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A62012CJ0131>

⁶² Von Danwitz, M, J Safjan, E Malenovský, A Levits, A Caoimh, M Arabadjiev, A Berger, E Prechal, and Jarašiūnas, 2014. Available on: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:62012CJ0131&from=EN>. Accessed: March 29, 2023.p.106.

⁶³ Kuner, Christopher. “The Court of Justice of the EU Judgment on Data Protection and Internet Search Engines: Current Issues and Future Challenges.” *SSRN Electronic Journal*, 2014. Available on: <https://doi.org/10.2139/ssrn.2496060>. Accessed: March 28, 2023. p.1.

⁶⁴ *Ibid.* p.4.

⁶⁵ Cofone, Ignacio.” *Google v. Spain: A Right To Be Forgotten?* (2015), p.5, available on: https://heinonline.org/HOL/Page?collection=journals&handle=hein.journals/chkji15&id=5&men_tab=srchresulits. Accessed: March 23, 2023. p.5.

Five years after Google v Spain case the territorial scope continued to confuse individuals⁶⁶ consequently the ‘right to be forgotten’ territorial scope was determined in September 14, 2019 in the Court’s judgment- *Google Inc. v. Commission nationale de l’informatique et des libertes* (CNIL)⁶⁷. The Court of Justice ruled that under EU law there is no obligation for Google and other search engine operators to apply the ‘right to be forgotten’ globally, in other words, the right applies only within the Member States of EU, emphasizing that EU residents which are located outside of the EU are out of the scope of application.⁶⁸

2.1.1 Impacts on entrepreneurship, compliance and non-compliance costs.

While GDPR aims to signal digital businesses to act carefully about their data practices, it also puts significant administrative and compliance challenges, as the regulation consists of 99 detailed and complex provisions. It should be mentioned that with the introduction of GDPR, the question of balance arose, specifically- at what point will the action be characterized as “freedom of expression,” and at what point will it already be considered as a violation of personal data regulation?⁶⁹ To quote O’Hara and Shadbolt “The point about privacy is that it raises hard cases; people want privacy for perfectly good reasons, and others want information for equally good reasons”⁷⁰ This regulation is primarily concentrated on EU citizens; however, the most significant challenges face companies and organizations that operate in the European market or provides services and hold access to information containing personal data of individuals. Under GDPR, the consumer is entitled to a high degree of control like withdrawal consent (Art.7), ‘right to be forgotten’(Art.17), etc. It is possible to state that companies and organizations who have adopted stricter security measures and standards that comply with GDPR are more likely to obtain a competitive advantage over their competitors.⁷¹

To comply with GDPR, companies were obliged to conduct a thorough internal assessment for their data placement and platforms, such as websites, databases, information systems, data processing platforms as well as data warehouse in order to understand where the personal data is placed and collected.⁷² Moreover companies that have employees from EU or living in EU also are subject to GDPR hence companies need to handle their employees’ personal data like health and safety reports, medical information, tax details and many more. Consequently, to meet the requirements of this regulations companies are required to invest in human resources and technology upgrading in their online platforms.⁷³

⁶⁶ Samonte, Mary. “Google v. CNIL: The Territorial Scope of the Right to Be Forgotten under EU Law.” *European Papers - a Journal on Law and Integration* 2019 4, no. 3 (January 27, 2020): 839–51. Available on: <https://doi.org/10.15166/2499-8249/332>. Accessed: March 23, 2023. Para-2.

⁶⁷ *Google Inc. v. Commission nationale de l’informatique et des libertes*, case nr.C-507/17.(September 24, 2019). Available on: <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:62017CJ0507>

⁶⁸ Samonte, Mary. “Google v. CNIL: The Territorial Scope of the Right to Be Forgotten under EU Law.” *European Papers - a Journal on Law and Integration* 2019 4, no. 3 (January 27, 2020): 839–51. Available on: https://www.europeanpapers.eu/en/system/files/pdf_version/EP_EF_2020_1_003_Mary_Samonte_00332.pdf Accessed: March 23, 2023. p.840.

⁶⁹ Politou, Eugenia, Efthimios Alepis, and Constantinos Patsakis. “Forgetting Personal Data and Revoking Consent under the GDPR: Challenges and Proposed Solutions.” *Journal of Cybersecurity* 4, no. 1 (January 1, 2018). Available on: <https://doi.org/10.1093/cybsec/tyy001>. Accessed: March 29, 2023. p.16.

⁷⁰ *Ibid.*

⁷¹ Journal of Global Information Technology Management. “The Impact of GDPR on Global Technology Development,” 2019. Available on: <https://www.tandfonline.com/doi/full/10.1080/1097198X.2019.1569186>. Accessed: March 21, 2023. p.1.

⁷² *Ibid.* para.4.

⁷³ *Ibid.* para.5,6.

Further, GDPR remarkably impacts emerging technologies such as cloud computing, AI and blockchains that are improving productivity and performance as well as promoting the economy as such. But it should be mentioned that these emerging technologies provide their value through massive amount of data and algorithms. For this reason, strict regulations of personal data may hinder the development of technology due to the high cost of compliance.⁷⁴

Particularly, fines for GDPR violations are tied to company revenue- for severe violations that are listed in Art. 83(5) of GDPR companies can receive fines up to 20 million euros or in the case of undertaking up to 4 % of their total revenues of the previous fiscal year.⁷⁵ Additionally, for less severe violations listed in Article 83(4) of GDPR companies can receive fines up to 10 million euros or in the case of an undertaking up to 2 % of their total revenue of the previous fiscal year.⁷⁶

2.1.2 Critical analysis of the GDPR

The author questions whether GDPR is the best solution for 21st centuries digital challenges and whether the requirements are adequate and proportionate for today's societies and freedoms. The author further will provide different researcher opinions that criticize this regulation, emphasizing that regulations sets out many gray areas that can be considered as contradicting. Particularly, in the context of the Internet, which consent should be considered as informed, unambiguous, specific, and free will? If it obtains social and personal need to access the Internet and services such as search engines and social networks and individuals are sharing information on their own will.⁷⁷ Furthermore, one argues that with GDPR, the EU separation Privacy and Data Protection, arguing that Privacy is more broader concept and cannot be looked separately from Data Protection. Both- Data Protection and Privacy are tools at for social justice, service freedoms, and non-discrimination.⁷⁸

Another criticism of GDPR is that 'right to be forgotten' along with other rights established in regulation are *ex post* rights by nature. Meaning that 'the right to be forgotten' can be used only when the personal data has already been processed, as the date of publication and request consideration and further removal can take a significant amount of time which reduces the protection of the privacy of a person.⁷⁹ Continuing that GDPR significantly affects and limits not only the existing cutting-edge technology companies but also those that will be created in the future and that will have to be limit their level of innovation in order to comply with GDPR and other EU regulations.⁸⁰ In addition, not only technology and entrepreneurship

⁷⁴ *Ibid.* para. 10-12.

⁷⁵ General Data Protection Regulation (GDPR). "General Data Protection Regulation (GDPR) – Final Text Neatly Arranged," October 22, 2021. Available on: <https://gdpr-info.eu/issues/fines-penalties/>. Accessed: March 21, 2023.

⁷⁶ *Ibid.*

⁷⁷ Poullet, Yves. "Is the General Data Protection Regulation the Solution?" *Computer Law & Security Review* 34, no. 4 (August 2018): 773–78. Available on: <https://doi.org/10.1016/j.clsr.2018.05.021>. Accessed: March 21, 2023. p.776. para.3

⁷⁸ *Ibid.* p.778. para.2.

⁷⁹ Kocharyan, Hovsep, Lusine Vardanyan, Ondrej Hamul'ák, and Tanel Kerikmäe. "Critical Views on the Right to Be Forgotten after the Entry into Force of the GDPR: Is It Able to Effectively Ensure Our Privacy?" *International and Comparative Law Review* 21, no. 2 (December 1, 2021): 96–115. Available on: <https://doi.org/10.2478/iclr-2021-0015>. Accessed: March 21, 2023. p.103. para.2.

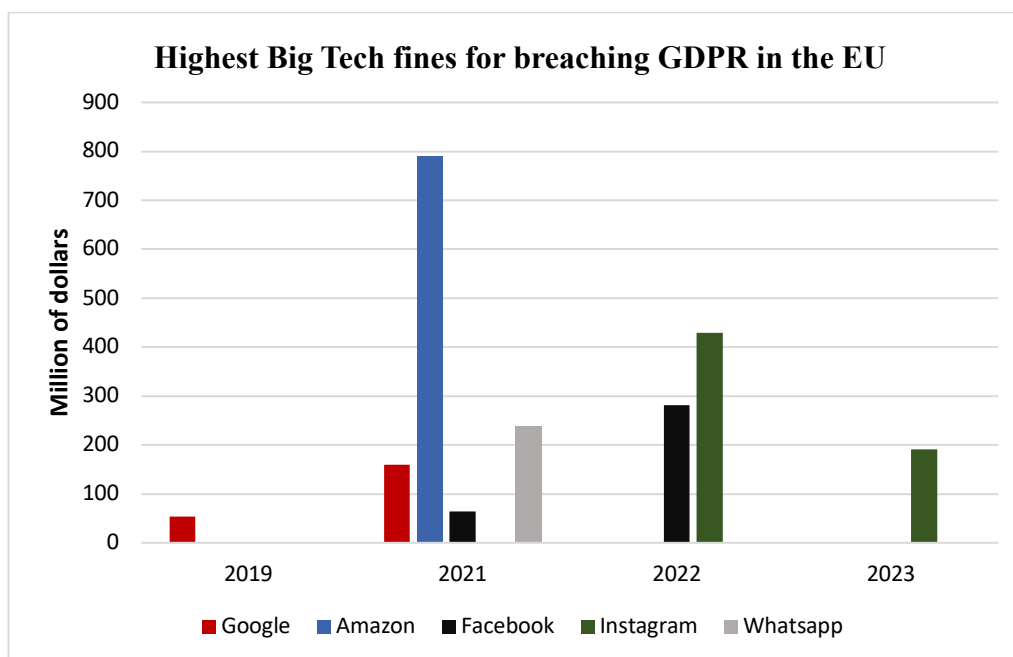
⁸⁰ Oluwayomi A. Ajibade. "A critical Appraisal of Big Data Analytics within the General Data Protection Regulation (GDPR) Landscape. June 2018. Available on: <https://www.researchgate.net/profile/Oluwayomi->

field is affected, as the GDPR legal effect goes way further than 27 EU Member States. Considerably, the territorial scope of GDPR follows the personal data it protects and for that reason, has a direct impact on organizations and businesses which are based in countries around the world.⁸¹ For instance, GDPR directly affects research fields, such as biomedical research whose core analysis relies on the use of individually identifiable information.⁸²

2.1.3 National DPAs analysis, most common violations and fine amount since 2019

GDPR has been in force for five years, and from 2019 to 2023, Big Tech companies have received fines amounting to a total of 2.427 billion dollars for breaching one or more articles of GDPR on META, Amazon, and Google platforms. According to *Chart 2.1.4* below, the META group, including Facebook, Instagram, and WhatsApp, has been fined 390 million dollars. Additionally, Amazon has received the highest good – 790 million dollars by Luxembourg’s data watchdog for “non-compliance with general data processing principles.”⁸³ Google was sanctioned for 212 million dollars. The latest data shows that so far, 1,546 individual breaches of GDPR have been detected.⁸⁴

Chart 2.1.4.1.



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The author decided to take a closer look at the types of violations, acceptable amounts, and EU states which have detected these violations and imposed fines. Consequently, according to *chart 2.1.4.2* shown below, an unequivocal leader among the countries of the EU regarding

[Ajibade/publication/330397864 A Critical Appraisal of Big Data Analytics within the General Data Protection Regulation GDPR Landscape/links/5c3df12d458515a4c7280742/A-Critical-Appraisal-of-Big-Data-Analytics-within-the-General-Data-Protection-Regulation-GDPR-Landscape.pdf](https://www.researchgate.net/publication/330397864_A_Critical_Appraisal_of_Big_Data_Analytics_within_the_General_Data_Protection_Regulation_GDPR_Landscape/links/5c3df12d458515a4c7280742/A-Critical-Appraisal-of-Big-Data-Analytics-within-the-General-Data-Protection-Regulation-GDPR-Landscape.pdf) Accessed: March 30, 2023.p.42.

⁸¹ Dove, Edward S. “The EU General Data Protection Regulation: Implications for International Scientific Research in the Digital Era.” *Journal of Law, Medicine & Ethics* 46, no. 4 (2018): 1013–30. Available on: <https://doi.org/10.1177/1073110518822003>. Accessed: March 30, 2023.

⁸² *Ibid.*

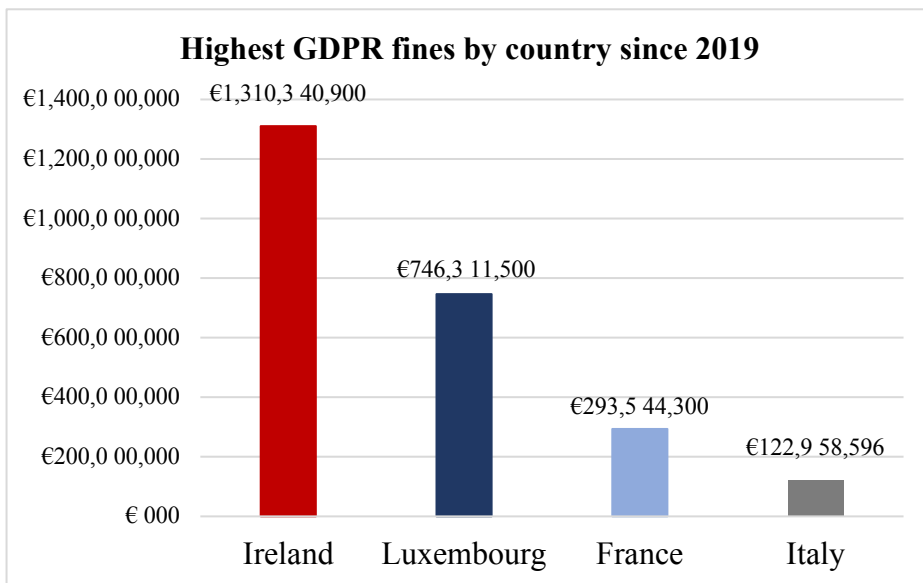
⁸³ , Florian. “Infographic: Big Tech, Big Fines.” Statista Infographics. Statista, January 6, 2023. Available on: <https://www.statista.com/chart/25691/highest-fines-for-gdpr-breaches/>. Accessed: March 21, 2023

⁸⁴ *Ibid.*

⁸⁵ Zandt, Florian. “Infographic: Big Tech, Big Fines.” Statista Infographics. Statista, January 6, 2023. Available on: <https://www.statista.com/chart/25691/highest-fines-for-gdpr-breaches/>. Accessed: March 21, 2023.

acceptable amount imposed is Ireland with 1 310 340 900 euro (at 24 fines), followed by Luxembourg with 763 311 500 euro (at 31 fines), France with 293 544, 300 euro (at 34 fines) and Italy with 122 958, 586 euro(at 257 fines). Additionally, the United Kingdom, Spain, Germany, Greece, Austria, and Sweden are also on the top 10 list of imposed fines that amount to millions. However, those fines are significantly smaller.⁸⁶ Moreover, according to *Chart 2.1.4.3*. Spain is the absolute leader in regards to the number of fines imposed in the EU; Spain has imposed 628 fines, amounting to 59 031 370 euros, followed by Italy with 257 fines, amounting to 122 968 596 euros, Germany with 144 fines, amounted, to 54 810 633 and Romania with 137 amounted in 748,250 euro. In Addition, Greece, Hungary, Norway, Poland, Belgium, and Cyprus are listed on the top ten list of the sum of fines imposed per country.⁸⁷

Chart 2.1.4.



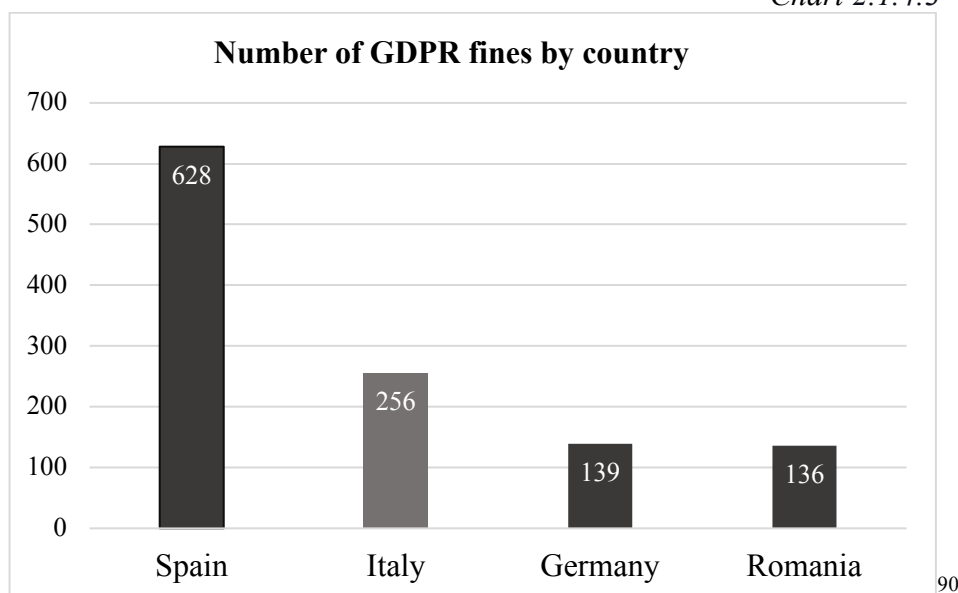
89

⁸⁶ Enforcementtracker.com. “GDPR Enforcement Tracker - List of GDPR Fines,” 2018. Available on: <https://www.enforcementtracker.com/?insights>. Accessed: April 19, 2023.

⁸⁷ *Ibid*

⁸⁹ Enforcementtracker.com. “GDPR Enforcement Tracker - List of GDPR Fines,” 2018. Available on: <https://www.enforcementtracker.com/?insights>. Accessed: April 19, 2023.

Chart 2.1.4.3



Furthermore, the most common violations by total sum and number of GDPR are non-compliance with general data processing principles (Article 5 of GDPR), which amounted to 1 673 621, 279 euros (at 407 fines), the insufficient legal basis for data processing (Article 6 of GDPR), amounted in 431 322, 047 euro (at 524 fines), inadequate technical and organizational measures to ensure information security (Article 32 of GDPR), amounted in 376 730 019 euro (at 299 fines) and insufficient fulfillment of information obligations, amounted in 237 245 580 euro (at 163 fines).⁹¹ It is fair to state that fine levels vary depending on the state that has imposed the fine and the certain GDPR provision violation. Therefore, further author will analyse why fine levels differ from one EU MS to another, taking into account, that the fine system must be equivalent in all MS.

According to the data provided above in Charts 2.1.4.2 and 2.1.4.3, it is possible to conclude that Western European countries like Spain, France, Italy, the United Kingdom, Ireland, and Luxembourg have issued the most significant fines. Additionally, the fine levels mainly vary due to three key factors: GDPR implementation and enforcement in each EU Member State; enforcement actions taken by the EU DPA's; national data protection jurisdiction.⁹² Consequently, GDPR enforcement falls under EU Member State's DPA's jurisdiction. DPA's obtain considerable enforcement powers according to GDPR, such as the power to impose fines and mediates data subjects requests.⁹³ Western European countries, compared to Eastern European countries, have taken a more active approach in targeting predominantly multinational and Big Tech companies by imposing large fines. Moreover, the differences in GDPR interpretations and fines by EU Member State DPAs seem to be

⁹⁰ Enforcementtracker.com. "GDPR Enforcement Tracker - List of GDPR Fines," 2018. Available on: <https://www.enforcementtracker.com/?insights>. Accessed: April 18, 2023.

⁹¹ Enforcementtracker.com. "GDPR Enforcement Tracker - List of GDPR Fines," 2018. Available on: <https://www.enforcementtracker.com/?insights>. Accessed: April 18, 2023.

⁹² Brian Daigle; Mahnaz Khan, "The EU General Data Protection Regulation: An Analysis of Enforcement Trends by EU Data Protection Authorities," *Journal of International Commerce & Economics* 2020 (2020), p.3;4, available on: https://heinonline.org/HOL/Page?collection=journals&handle=hein.journals/jice2020&id=4&men_tab=srchresults. Accessed: April 18, 2023.

⁹³ *Ibid.* p.5,6.

inconsistent and reflective regarding EU data protection laws across Europe.⁹⁴ Data privacy scholars hold the opinion that the unequal enforcement and fine amounts of GDPR violations have led to significant uncertainty and changes in business models among not only in Big Tech companies but as well as most of the US companies that are operating in EU. Consequently, some firms have adapted to this divergence and raised awareness of GDPR guidance and regulation that is implemented by each DPA.⁹⁵

The Commission has introduced GDPR to reduce the power of Big Tech companies in the digital market. However, it should be mentioned that the existing competition laws laid down in the Treaty of Functioning of Europe (hereinafter referred to as TFEU) are still not harmonized within the European Union, as evidenced by the violations of the Big Tech companies that have been detected only in some countries. Therefore the author will further examine and investigate different EU member state regulations of companies operating in the digital environment.

According to Art. 83, “General conditions for imposing administrative fines” of GDPR requires that national DPAs must ensure that the issued fines are “effective, proportionate and dissuasive”, disregarding DPAs are still obtaining significant freedom to determine their own fine system.⁹⁶ Furthermore, many of the articles of GDPR, such as Art.5 “Principles relating to processing of personal data”⁹⁷ lay down the requirements for data processors and controllers that are widely open to considerable interpretation by the each national DPA.⁹⁸ It is fair to state that data protection laws in different Member States want to address and put significant awareness to different elements of GDPR.⁹⁹ For instance United Kingdom has been the most active of the violations respect to data breach notifications (Article 33 of GDPR).¹⁰⁰ United Kingdom’s Information Commissioner’s Office (ICO) imposed a fine to British Airways amounted in 410 million dollars and to Marriot 222 million dollars for data breach notification violations.¹⁰¹ In the case *Williams and Others v British Airways plc*¹⁰²

British Airways (BA) failed to process personal data in a way that secured appropriate security of the personal data, involving protection against unlawful processing, accidental loss, damage, and destruction using proper organizational and technical measures.¹⁰³ In addition, France’s DPA, CNIL is mainly focused on targeted advertising under Art.5 “Principles relating to processing of personal data” of GDPR rather than on breach of data notifications in firms

⁹⁴ *Ibid.* p.25.

⁹⁵ *Ibid.*

⁹⁶ Wolff, and Atallah. “Early GDPR Penalties: Analysis of Implementation and Fines through May 2020.” *Journal of Information Policy* 11 (January 1, 2021): 63–103. Available on: <https://doi.org/10.5325/jinfopoli.11.2021.0063>. Accessed: April 18, 2023.

⁹⁷ General Data Protection Regulation (GDPR). “General Data Protection Regulation (GDPR) – Final Text Neatly Arranged,” October 22, 2021. Available on: <https://gdpr-info.eu/art-5-gdpr/>. Accessed: April 18, 2023.

⁹⁸ *Ibid.*

⁹⁹ *Supra* note 92.

¹⁰⁰ Brian Daigle; Mahnaz Khan, "The EU General Data Protection Regulation: An Analysis of Enforcement Trends by EU Data Protection Authorities," *Journal of International Commerce & Economics* (2020), p.13, available on: https://heinonline.org/HOL/Page?collection=journals&handle=hein.journals/jice2020&id=4&men_tab=srchresul Accessed: April 18, 2023.

¹⁰¹ *Ibid.*

¹⁰² *Williams and Others v British Airways plc*, case nr. C-155/10, (15 September 2011) Available on: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A62010CJ0155> Accessed: April 18, 2023

¹⁰³ scott.fie@sourcedefense.com. “Securing Open Source.” Security Boulevard, September 2022. Available on: <https://securityboulevard.com/2022/09/british-airways-a-case-study-in-gdpr-compliance-failure/>. Accessed on: April 18, 2023

initial activity.¹⁰⁴ Italy's DPA, Garante per la protezione dei dati personali (Garante) follows France's CNIL example and target advertising companies via telemarketing, although initially, Italy was slower than other Western European countries in regards to imposed fines.¹⁰⁵

In Ireland, Data Protection Commission (DPC) found enforcement attractive as many major US digital services providers are basing their European headquarters there. Overall, DPC is focused on data breaches, lawful processing of personal data and transparency provision of user services agreements.¹⁰⁶ Despite the small market size, DPC's targets are wide as Big Tech companies like META platforms, Google, Apple, Amazon, Twitter are headquartered in Ireland.¹⁰⁷ It should be mentioned that Ireland has attracted a number of Big Tech companies to headquarter their EU operations due to its attractive tax models, access to officials and ease of securing investment.¹⁰⁸ In December 31, 2021 the restricted committee of the CNIL (Commission Nationale de l'Informatique et des libertés) fined the company Facebook Ireland Limited 60 million euros due to the website's failure- facebook.com, to meet French Data Protection Act.¹⁰⁹ Particularly, Facebook Ireland Limited has breached Art.82 of the French Data Protection Act which has been implemented in French national legislation from the European Parliament and of the Council Directive 2009/136/CE of November 25, 2009 (hereinafter referred to as the ePrivacy Directive).¹¹⁰ Article 82 of the DPA stipulates that

“any action through which an electronic communication service access or enters information in a user's terminal equipment (such as the storage of cookies) requires the user's consent. The user must be “ clearly and fully informed” of both the purpose of any such action and the means to oppose it.”¹¹¹

As regards to Eastern European DPAs they have mainly put their focus on domestically headquartered companies, government agencies and political parties as well as the small organizations.¹¹²

After analysis of several Member States DPAs, it is possible to conclude that each DPA has determined its target audience; in other words, provisions of GDPR and violations that they consider are the most important to detect. However, GDPR shows a huge legal gap in GDPR regarding penalty structure. On the one hand, GDPR determines the fines for each violation and provides guidelines on how these fines should be imposed. However, the data provided above prove that the fine system significantly varies and needs to be harmonized from one EU Member State to another. The author believes that the fines for violating GDPR will only increase as the technology field continues to grow and improve, taking into account, that Digital

¹⁰⁴ *Supra* note 96, p.15.

¹⁰⁵ *Ibid.* p.17.

¹⁰⁶ *Ibid.* p.20.

¹⁰⁷ *Ibid.*

¹⁰⁸ *Ibid.* p.21.

¹⁰⁹ Cnil.fr. “Cookies: FACEBOOK IRELAND LIMITED Fined 60 Million Euros | CNIL,” 2022. Available on: <https://www.cnil.fr/en/cookies-facebook-ireland-limited-fined-60-million-euros>. Accessed: March 29, 2023.

¹¹⁰ “RÉPUBLIQUE FRANÇAISE.” Available on: https://www.cnil.fr/sites/default/files/atoms/files/deliberation_of_the_restricted_committee_no_san-2021-024_of_31_december_2021_concerning_facebook_ireland_limited.pdf. Accessed March 29, 2023, p.4.

¹¹¹ IN. “France Watchdog Fines Google, Facebook €210M for Cookie Usage Violating Data Protection Laws.” Jurist.org. - JURIST - News, January 6, 2022. Available on: <https://www.jurist.org/news/2022/01/france-watchdog-fines-google-facebook-e210m-for-cookie-usage-violating-data-protection-laws/>. Accessed March 29, 2023.

¹¹² *Supra* note 96.p.21.

Markets Act (DMA) and Digital Services Act (DSA) will come into force next year. Moreover, as emerging technologies like artificial intelligence, cloud computing, blockchains, and many others will continue to develop and for them to become more efficient and successful, the use of data will be essential and inevitable as the vast amount of data and algorithms determine their efficiency and value. Thus a question arises- whether the profits derived from these technologies will be greater than the fines imposed by the EU by EC and national DPAs?

2.2 Overview, key provisions and compliance and non-compliance costs of DMA

One of the most discussed topics recently is the status of Big Tech platforms. In the EU, the issues not only arise from the fact that these Big Tech companies are dominant in the market but also that the majority of them are based in the US in that way, obtaining the power of the media and digital telecommunication channels. The idea that large platforms that obtain significant market dominance should be regulated separately was first presented in 2015 in the EU digital strategy in a rudimentary form; however, it first gained recognition in 2020. The current proposal contains two different regimes, adopted by two other instruments- Digital Markets Act (DMA) and Digital Services Act (DSA)¹¹³

Continuing with DMA, proposed by European Commission in December 2020, and European Parliament and the Council adopted it in March 2022 and entered into force on May 2, 2023.¹¹⁴ DMA is designed to tackle

“ the most salient incidences of unfair practices and weak contestability in the digital economy, responding to concerns about the data- derived dominance of US technology companies operating in Europe.”¹¹⁵

In other words, the regulation aims to diminish unfair practices by businesses that act like gatekeepers in the digital platform economy. DMA defines when a large online company can be qualified as a “ gatekeeper.” Notably, according to DMA, it is an online platform that ensures an important gateway between enterprises and consumers, whose position allows them to use their power over consumers and act as private rule makers¹¹⁶ Furthermore, DMA has designed three main criteria that bring a company under the scope of application of the DMA. Firstly, a company has to obtain a significant size that impacts the internal market, the company has to reach 7,5 billion euros in each of the last three financial years, or the average market capitalization has to reach at least 75 billion euros in the previous financial year in the European Economic Area (EEA) and has to provide a leading platform service in at least three European Union Member States¹¹⁷. Secondly, the company has to provide a top platform service to at

¹¹³ Savin, Andrej. “The EU Digital Services Act: Towards a More Responsible Internet.” Ssrn.com, February 16, 2021. Available on: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3786792. Accessed: March 21, 2023.p.10.para.2.

¹¹⁴ European Commission - European Commission. “Press Corner,” 2023. Available on: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_6423. Accessed: March 21, 2023

¹¹⁵ Bazenov, Philipp. “The Digital Markets Act (DMA): A Procompetitive Recalibration of Data Relations?” *SSRN Electronic Journal*, 2021.Available on: <https://doi.org/10.2139/ssrn.3970101>. Accessed: March 22, 2023.p.101.

¹¹⁶ European Commission - European Commission. “Press Corner,” 2023. https://ec.europa.eu/commission/presscorner/detail/en/ip_22_6423. Accessed: March 22, 2023

¹¹⁷ *Ibid.*

least 45 million monthly end users and at least 10 000 early active business users established in the EU. Thirdly, the company has to obtain a strong and stable position, meaning that the company, during the last three years, has satisfied the second criterion.¹¹⁸ These “gatekeepers” will be obliged to bind by 18 ‘do’s and don’ts’ that are drawn in DMA regulation.¹¹⁹

It is fair to state that DMA is a novel type of (ex ante) sectoral regulation, as it is based on competition enforcement experience in the past with the primary goal – to achieve fairness and contestability.¹²⁰ In addition, the obligations incorporated in DMA address four types of market failure: lack of transparency in the advertising market; restrained mobility of business users and consumers; platform envelopment; unfair practises.¹²¹ Moreover, Article 5 (f) determines that the gatekeeper which is offering an operating system must allow the user to choose any other search engine.¹²² Further Article 6 of DMA¹²³ lays down the obligation for gatekeepers that facilitate the entry of additional service providers, particularly Article 6(1) (b) which allows users to uninstall applications, Article 6 (1) (j) which determines that the entrant in the search engine market is entitled to obtain data from the gatekeeper and Article 6 (1) (e) which allows end users to switch applications easily.¹²⁴ Prohibited practices listed in Article 5 and Article 6 of the DMA have been assessed *as per se* harmful, meaning that the listed practices are self-executing. Contrary to competition law, in DMA there will be no case-by-case analysis of actual impact and effects, nor will there be a possibility by accused companies to provide efficiency defenses like pro-competitive and economic justifications to the responsible authorities.¹²⁵ Moreover, DMA did not aim to introduce new competition laws, but complement existing competition rules through harmonization of certain obligations for specific undertakings operating in the internal market.¹²⁶

2.2.1 Critical analysis of DMA

Innovation and competition scholars in digital markets hold the opinion that DMA is more focused on the assumption that the targeted prices within companies will have adverse effects on the competition as such while possibly abandoning secondary effects which provide major innovation, value creation and distribution trade-offs especially in the context of small and medium sized companies.¹²⁷ Hence, the DMA does not take into account any benefits provided

¹¹⁸ *Ibid*,

¹¹⁹ Larouche, Pierre, and Alexandre de Streel. “The European Digital Markets Act: A Revolution Grounded on Traditions.” *Journal of European Competition Law & Practice* 12, no. 7 (August 27, 2021): 542–60. Available on: <https://doi.org/10.1093/jeclap/lpab066>. Accessed: March 23, 2023.p.1.

¹²⁰ Chirico, Filomena. “Digital Markets Act: A Regulatory Perspective.” *Journal of European Competition Law & Practice* 12, no. 7 (September 8, 2021): 493–99. Available on: <https://doi.org/10.1093/jeclap/lpab058>. Accessed: April 20, 2023. p.1.

¹²¹ Giorgio Monti, "The Digital Markets Act: Improving Its Institutional Design," *European Competition and Regulatory Law Review (CoRe)* 5, no. 2 (2021), Available on: https://heinonline.org/HOL/Page?collection=journals&handle=hein.journals/core5&id=106&men_tab=srchresult_s. Accessed: April 19, 2023. p.91.para.2.

¹²² *Ibid*. p.91.para.3.

¹²³ Europa.eu. “EUR-Lex - 32022R1925 - EN - EUR-Lex,” 2022. Available on: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R1925>. Accessed: April 20, 2023.

¹²⁴ *Supra* note 116. p.91.

¹²⁵ Chirico, Filomena. “Digital Markets Act: A Regulatory Perspective.” *Journal of European Competition Law & Practice* 12, no. 7 (September 8, 2021): 493–99. Available on: <https://doi.org/10.1093/jeclap/lpab058>. Accessed: April 20, 2023. p.496.

¹²⁶ *Ibid*.

¹²⁷ Cennamo, Carmelo, Tobias Kretschmer, Panos Constantinides, Cristina Alaimo, and Juan Santaló. “Digital Platforms Regulation: An Innovation-Centric View of the EU’s Digital Markets Act.” *Journal of European*

to users from integration of various services which abstracts from innovation created by so called ‘gate keepers’ to improve offered service to all digital platform participants.¹²⁸ Furthermore, business model agnostic approach to digital platforms established in the DMA more likely will fail to consider essential role that platform governance and design play for the value creation.¹²⁹ It is possible to state that DMA represents some kind of paradigm shift from ex post analysis to ex ante regulatory burdens, in other words, disputes regarding antitrust liability will no longer be debated in courts and be replaced with regulatory obligations at the expense of innovation that is mostly created by Big Tech companies who are the main target of DMA.¹³⁰

Scholars believe that the thresholds in DMA are designed to catch big companies without considering the economic impact on their operating markets. Additionally, the fact that national DPAs are involved in the implementation and enforcement could put an administrative burden on market participants¹³¹ In regards to this argument, GDPR works as excellent proof that more likely each Member State DPA will interpret provisions according to their national competition laws or their primary target audiences. Furthermore, it should be kept in mind that the conducts targeted by the obligations in DMA are only sometimes harmful to consumers and, therefore, from a strict approach, might suffer consumers themselves. Some experts argue that DMA lacks gray lists, which would allow firms to show that there are pro-competitive effects of their practices.¹³² These strict obligations and prohibitions may result in innocuous practices that could fall under DMA and increase the probability of errors.¹³³ Additionally there are concerns with competition policy enforcement, as DMA might set precedents in several markets. The overlap between DMA and Article 102 TFEU could raise many problems. Because DMA does not require the EC to prove the harmful effects to end users, business users, and competition distortion as such, DMA grants EC substantial discretion.¹³⁴

Undeniably, DMA is sending an important signal to Big Tech companies emphasizing that the fight against data sharing abuses is a major priority for the European Commission and EU. For DMA to become a successful regulation fighting Big Tech company abuses, it will ask for Commission to harmonize and implement DMA in each of the Member State's national legislation. Remarkably, the Commission will have to engage with national competition authorities (NCAs), Member State data protection authorities (DPAs), and the European Data Protection Board (EDPB) to ensure that DMA implementation does not undermine the

Competition Law & Practice 14, no. 1 (October 17, 2022): 44–51. Available on: <https://doi.org/10.1093/jeclap/lpac043>. Accessed: April 2, 2023. p.45.

¹²⁸ *Ibid.*

¹²⁹ *Ibid.* p.51.

¹³⁰ Portuese, Aurelien. “The Digital Markets Act: European Precautionary Antitrust.” Itif.org, 2021. Available on: <https://itif.org/publications/2021/05/24/digital-markets-act-european-precautionary-antitrust/>. Accessed: March 23, 2023

¹³¹ De La Mano, Miguel, Valérie Meunier, Angelos Stenimachitis, and Zsolt Hegyesi. “THE DIGITAL MARKETS ACT back to the ‘FORM-BASED’ FUTURE?,” 2021. Available on: <https://www.compasslexecon.com/wp-content/uploads/2021/06/The-DMA-Back-to-the-Form-Based-Future.pdf>. Accessed: March 23, 2023. p.52.

¹³² *Ibid.* p.53.

¹³³ *Ibid.*

¹³⁴ *Ibid.*

fundamental rights of data protection Members State national and EU laws and regulations.¹³⁵ It should be mentioned that DMA's first designation of gatekeepers is expected in March 2023¹³⁶ and so far, data has yet to be available about the DMAs application in practice.

However, the impact of DMA will largely depend on how European Commission will use its new powers.¹³⁷ It is possible to state that for DMA to become a successful tool for tackling Big Tech abuses, it must take a significant amount of time, and so far, no engagement with NCAs, DPAs, and EDPB has not been made by the Commission.

2.3 Overview, key provisions and non-compliance costs of DSA

Moving on to Digital Services Act (DSA), published in Official Journal on November 16, 2022. All EU member states fall into the application of DSA and will apply from January 1, 2024.¹³⁸ DSA is designed to address illegal and harmful activity and content creation on digital platforms. DSA supplements e- Commerce Directive's (hereinafter referred to as "ECD") main principles for the regulation of online services that deal with third-party content and codifies existing self-regulatory practices initiated by digital platforms.¹³⁹ Furthermore, DSA bring to the light several legal innovations, such as

“ tiered system of due diligence obligations for intermediary services, the regulation of content moderation through terms of service enforcement, systemic risk assessment obligations for the most widely used platforms and search engines, and access to data for researchers. “¹⁴⁰

DSA's main goal is to ensure legal harmonization on the provision of intermediary services within the internal market by addressing and preventing various obstacles which arise from different national regulations. The rules intend to ensure the proper functioning of the internal market in the context of cross-border digital services, as well as provide supervision of digital services and cooperation between authorities in the EU, that way increasing growth in the internal market, innovation, and resulting trust.¹⁴¹ Additionally, DSA creates an excellent level of accountability and intermediaries for digital platforms by adapting rules of transparency, third party liability, diligence requirements and protection of minors in an online marketplace.

¹⁴²

¹³⁵Baschenhof, Philip “ The digital Markets Act (DMA): a Procompetitive Recalibration of Data Relations? Journal of Law, Technology and Policy, Volume 2022, Issue1.December 8, 2021. Available on: <https://shorturl.at/ltxT2> Accessed: March 23, 2023.p.153.

¹³⁶ Deloitte Netherlands. “The EU Digital Markets Act Is Here | Deloitte Netherlands,” July 8, 2022. Available on: <https://www2.deloitte.com/nl/nl/pages/risk/articles/digital-markets-act.html>. Accessed: March 23, 2023.

¹³⁷ Bazenov, Philipp. “The Digital Markets Act (DMA): A Procompetitive Recalibration of Data Relations?” *SSRN Electronic Journal*, 2021. <https://doi.org/10.2139/ssrn.3970101>. p.153

¹³⁸ Shaping Europe's digital future. “The Digital Services Act Package,” March 10, 2023. <https://digital-strategy.ec.europa.eu/en/policies/digital-services-act-package>. Accessed: March 23, 2023.

¹³⁹ Hoboken, van, Quintais, João Pedro, Naomi Appelman, Ronan Fahy, Ilaria Buri, and Marlene Straub. “Putting the Digital Services Act into Practice: Enforcement, Access to Justice, and Global Implications.” *Ssrn.com*, March 10, 2023. Available on: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4384266. Accessed: March 23, 2023.p.6

¹⁴⁰ *Ibid.*

¹⁴¹ Hoboken, van, Quintais, João Pedro, Naomi Appelman, Ronan Fahy, Ilaria Buri, and Marlene Straub. “Putting the Digital Services Act into Practice: Enforcement, Access to Justice, and Global Implications.” *Ssrn.com*, March 10, 2023. Available on: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4384266. Accessed: March 23, 2023.p.11,12.

¹⁴² *Ibid.*

Regarding provisions, Articles 3,4,5, and 7 of the DSA reflect 12-15 Articles of ECD. Although DSA has adopted several new articles, such as Article 5 (3), which states that hosting platforms should be held liable in cases of consumer distance agreements where a reasonable consumer would have assumed that the platform or service provides the product or service under their control.¹⁴³ Another novelty is Article 6 of DSA which introduces ‘Good Samaritan’ protections. Specifically, it states that service providers who would be held liable under Articles 3,4 and 5 would not be responsible if they, of one’s record, investigate, identify, detect, remove, or prohibit access to illegal content or otherwise aim to comply with EU law. Further, Article 8 of DSA requires the services providers to inform the relevant national authorities of measures they have taken to fight and address illegal conten.¹⁴⁴

The main reason why DSA was adopted is that Member States continuously adapt their national legal framework on intermediary rules, which leaves negative impacts on the EU’s internal market. Consequently, DSA aims to create a predictable and safe online environment that supports innovation and in which the fundamental rights enshrined in the Charter of Fundamental Rights of the European Union (hereinafter referred to as “Charter”) are successfully protected.¹⁴⁵ Moreover, it should be mentioned that DMA and DSA are part of the same box. They compliment each other.¹⁴⁶ It is clear that DSA will regulate all matter that have been previously regulated by national law, therefore after the netry into force Member States no longer free to do so.¹⁴⁷ Unlike GDPR, the DSA is not concerned only about the implementation of a single fundamental right, it rather takes into account an area of fundamental rights that often conflict with each other. Furthermore, scholars suggest that DSA should be seen as a great attempt to find a fair balance between conflicting fundamental rights and the provision of intermediary service.¹⁴⁸

DSA, in the same way as DMA, obtains extraterritorial effect by applying to service users not only established in the EU but each company that offers services within the EU.¹⁴⁹ Therefore, it is possible to state that the scope of application is very broad. Furthermore, regarding penalties for non-compliance, in the case of large online platforms and search engines, the Commission will take direct supervision and obtain enforcement powers. Failure to comply with DSA rules can result in fines of up to 6% of annual revenue.¹⁵⁰ However, DSA’s enforcement mechanism is not only limited to monetary fines, as the Digital Services Coordinator and the Commission will obtain the power to require instant actions in case of severe harms. In addition, if a service provider refuses to comply with obligations and thereby

¹⁴³ Savin, Andrej. “The EU Digital Services Act: Towards a More Responsible Internet.” Ssrn.com, February 16, 2021. Available on: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3786792. Accessed: April 20, 2023.p.5.para.5.

¹⁴⁴ *Ibid.* p.6.para.2,4.

¹⁴⁵ Wilman, Folkert. “The Digital Services Act (DSA) - an Ooverview.” *Social Science Research Network*, January 1, 2022. Available on: <https://doi.org/10.2139/ssrn.4304586>. Accessed: April 20, 2023.P-2.

¹⁴⁶ *Ibid.* p.3.

¹⁴⁷ *Ibid.* p.16.para.4

¹⁴⁸ *Ibid.* p.20,21.

¹⁴⁹ John Quinn, "Regulating Big Tech: The Digital Markets Act and the Digital Services Act," *Dublin Law and Politics Review* 2, no. Finance Special Issue (August 2021), Available on: https://heionline.org/HOL/Page?collection=journals&handle=hein.journals/dublpr2&id=86&men_tab=srchresulits. Accessed: April 8, 2023..p.3.

¹⁵⁰ European Commission - European Commission. “Press Corner,” 2023. Available on: https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_2348. Accessed: April 8, 2023.

jeopardizes people's life and safety, the Commission can ask a court for a temporary suspension of their services.¹⁵¹

2.3.1 Critical analysis of DSA

It is fair to state that Art.8 “Orders to act against illegal content”¹⁵² of DSA gives almost discretionary and unilateral power to national administrative authorities to act against illegal content and impose a particular interpretation of standards of international freedom to third world countries.¹⁵³ As a result DSA may give government and national administrative authorities disproportionate power to censor online content and determine and stifle the freedom of expression. Furthermore, in the context of politics and corruption, DSA may intensify unfair competitive practices by political parties who obtain more extensive support from the government. Following Art.26, “Risk assessment”¹⁵⁴ and Art. 27 “Mitigation of risks”¹⁵⁵ of DSA, researchers claim that responsibilities and duties in the context of assessment and mitigation of systematic risks put the unnecessary administrative burden and disproportionate impact on the right to freedom expression. These articles incorporate complex regimes involving State bodies at the national and EU levels, and that makes the implementation and application of principles difficult that may lead to conflicts with national jurisdictions.¹⁵⁶

2.4 Conclusions

Firstly, all of the regulations, as mentioned earlier, place an administrative burden not only on Big Tech companies but on small businesses as well. Simultaneously to comply with the requirements, companies must introduce new human resources and monetary investments. Secondly, many small companies that do not obtain these resources will likely fail to comply, leading to limited innovation, entrepreneurship, and consumer choice. Thirdly, the author questions whether the fine system for non-compliance is mild, as shown above in the chart- Big Tech companies have already been fined 2.427 billion dollars, keeping in mind that GDPR came into force in 2019. Last, the author questions whether the regulators and governments, who have been given enormous power, obtain the necessary expertise to make informed decisions about complex issues arising in digital platforms.

¹⁵¹ *Ibid.*

¹⁵² Digitalservicesact.cc. “Article 8 - Orders to Act against Illegal Content,” 2020. Available on: <https://digitalservicesact.cc/dsa/art8.html>. Accessed: April 8, 2023.

¹⁵³ Barata, Joan, “The Digital Services Acts And Its Impact On The Right To Freedom Of Expression: Special Focus On Risk Mitigation Obligation”.2021. Available on: <https://libertadinformacion.cc/wp-content/uploads/2021/06/DSA-AND-ITS-IMPACT-ON-FREEDOM-OF-EXPRESSION-JOAN-BARATA-PDLI.pdf> Accessed: April 8, 2023. p.4.

¹⁵⁴ Digitalservicesact.cc. “Article 26 - Risk Assessment,” 2020. Available on: <https://digitalservicesact.cc/dsa/art26.html>. Accessed: April 8, 2023.

¹⁵⁵ Digitalservicesact.cc. “Article 27 - Mitigation of Risks,” 2020. Available on: <https://digitalservicesact.cc/dsa/art27.html>. Accessed: April 8, 2023.

¹⁵⁶ *Supra* note 135.

3. Potential solutions and further questions

After in- depth analysis of each of the EU Commission’s implemented regulations regarding digital businesses, the author will attempt to propose solutions for the challenges mentioned above and issues that companies are already facing and for those who will come into force. The main aim is to balance the company and consumer interests.

3.1 Implementation of amendments in GDPR

Although one of the main goals of GDPR was to remove the differences in the application and implementation of the Data Protection Directive.¹⁵⁷ It is fair to state that GDPR still lacks harmonization within all EU MS. The initial goal is only partly achieved. The data provided above in chart 2.1.4.2 and chart 2.1.4.2 perfectly shows the disproportionality of imposed fines. Mainly, Spain, which obtained the highest amount (629) of GDPR violations, has in total imposed fines amounted in 58,031,370 euros.¹⁵⁸ In contrast, Ireland, which has detected only 24 violations, has imposed fines amounting to 1,210,340 900 euros. Some might say that Ireland could be a better example as most of the Big Tech companies are headquartered in Ireland, and it is self-explanatory that the types of violations are more serious. Even though we don’t take Ireland as an example further follows, Luxembourg, with detected 31 fines, amounted to 746,311,500 euros, and France, with 34 detected violations, amounted to 293,544,300 euros.¹⁵⁹ If this evident fine disproportionality has appeared in GDPR, then the author questions where it the guarantee that it will not appear in practice when DSA and DMA will come into force, keeping in mind that provisions regarding exemplary system appear to be similar in all three regulations. Furthermore, it is fair to analyze GDPR specifically, as the data provided above works as undeniable proof for harmonization issues that must be tackled in the future.

Mainly, GDPR leaves extensive interpretation in the application of national laws as opening clauses such as Article 9(2) and Article 9(4) permit MS to go beyond the provisions.¹⁶⁰ Furthermore, implementation of GDPR varies from state to state, depending on what national rules are emphasizing on. Penalties must be effective, proportionate, and dissuasive. However, they do not clarify what types of sanctions must apply or if a data subject is entitled to receive compensation; it strictly depends on the private law of the MSs.¹⁶¹ Undeniably, it is fair to state that violations will only increase as cross-border data flows have been characterized as “hallmarks of 21st-century globalization” as well as “connecting blanket holding the global economy together.” Some might consider that solution concerning the reduction of GDPR violations could be a decrease in data used. However, the author believes that significant data flows are essential and inevitable. Moreover, Big Data provides value to organizations that

¹⁵⁷ Wolters, P.T.J. “The Security of Personal Data under the GDPR: A Harmonized Duty or a Shared Responsibility?” *International Data Privacy Law* 7, no. 3 (August 1, 2017): 165–78. Available on: <https://doi.org/10.1093/idpl/ix008>. Accessed: April 28, 2023. p.165.

¹⁵⁸ Enforcementtracker.com. “GDPR Enforcement Tracker - List of GDPR Fines,” 2018. <https://www.enforcementtracker.com/?insights>. Accessed: April 28, 2023.

¹⁵⁹ *Ibid*

¹⁶⁰ Fruzsina Molnár-Gábor, Julian Sellner, Sophia Pagil, Santa Slokenberga, Olga Tzortzatou, and Katarina Nyström. “Harmonization after the GDPR? Divergences in the Rules for Genetic and Health Data Sharing in Four Member States and Ways to Overcome Them by EU Measures: Insights from Germany, Greece, Latvia and Sweden.” *Seminars in Cancer Biology* 84 (December 1, 2021): 271–83. Available on: <https://doi.org/10.1016/j.semcancer.2021.12.001>. Accessed: April 28, 2023. p.278.

¹⁶¹ Wolters, P.T.J. “The Security of Personal Data under the GDPR: A Harmonized Duty or a Shared Responsibility?” *International Data Privacy Law* 7, no. 3 (August 1, 2017): 165–78. Available on: <https://doi.org/10.1093/idpl/ix008>. Accessed: April 28, 2023. p.168.

implement this technology in their decision making process, as well as it provides new ability to perform business via saving both human and monetary resources.¹⁶²

In addition, it is fair to state that GDPR tried to solve the previous data protection Directives' cornerstones but should have addressed them thoroughly as GDPR failed to reach harmonization along the MSs. The author considers that one of the solutions might be the introduction of GDPR amendments regarding fine amount and system. These amendments would determine a specific amount of fine for each type of violation, similar to administrative law and competition law, where fines derive from the severity and duration of the infringement. This would reduce the generality of GDPR and promote harmonization among EU MSs, as each MS would be obliged to incorporate the exact fine amounts for each violation. For instance, currently, for violations listed in Art. 83(5) of GDPR, the fines can be up to 20 million euros or, in the case of an undertaking, 4% .¹⁶³ The author suggests that for each of these violations, EC, after an in-depth analysis of the severity and harmfulness of these violations determine the amount of fine that the company or undertaking would be obligated to pay. Furthermore, GDPR would also comply with the principle that penalties should be proportional, dissuasive, and effective. Otherwise, now the EU Commission has abandoned this general and challenging goal in the hands of each MSs DPA.

In the context of fines, the author questions whether the division between undertakings and companies is the most effective differentiation. The author would suggest dividing companies regarding their size and market power, for instance, small and medium, and large enterprises. To determine which definition the company belongs to, it should be taken into account three factors, such as annual revenue, market power, and size of the company.

3.2 Role of European Data Protection Board

European Data Protection Board (hereinafter referred to as EDPB), established by GDPR, is an independent European judicial body whose main aims are to assist cooperation throughout the European Economic Area (hereinafter referred to as EEA) and ensure the proper application of data protection rules within it.¹⁶⁴ Firstly, EDPBs main tasks and duties are providing guidelines, recommendations to clarify and create standard practices of GDPR. Secondly, they adopt opinions that are addressed to the EC or the national Supervisory Authorities, as an example can be mentioned- they can advise the EC on any matter concerning the new proposed legislation in the EU or the protection of personal data. Thirdly, they obtain the power to issue binding decisions to the national Supervisory Authorities aiming to ensure consistent and proper application of GDPR.¹⁶⁵ Although EDPB does not enforce EU data protection laws or provide advice in individual cases. Moreover, EDPB emphasizes that advice in individual cases should be received from the National Supervisory Authority in the country where the issue has arisen.¹⁶⁶ On 25 May 2018, the EDPB approved and implemented already existing guidelines on GDPR that had been previously developed in the former Article 29 Working Party

¹⁶² Portela, Filipe, Luciana Moreira Lima, and Manuel Filipe Santos. "Why Big Data? Towards a Project Assessment Framework." *Procedia Computer Science* 98 (October 1, 2016): 604–9. Available on: <https://doi.org/10.1016/j.procs.2016.09.094>. Accessed: April 28, 2023.p-609.

¹⁶³ General Data Protection Regulation (GDPR). "General Data Protection Regulation (GDPR) – Final Text Neatly Arranged," October 22, 2021. Available on: <https://gdpr-info.eu/issues/fines-penalties/>. Accessed: March 21, 2023. Accessed: April 28, 2023.

¹⁶⁴ Europa.eu. "Who We Are | European Data Protection Board," 2018. Available on: https://edpb.europa.eu/concernant-le-cepd/concernant-le-cepd/who-we-are_en. Accessed: April 28, 2023.

¹⁶⁵ *Ibid.*

¹⁶⁶ *Ibid.*

(hereinafter referred to as WP29).¹⁶⁷ Similarly to EDPB, WP29 was an independent European judicial party that dealt with matters concerning the protection of privacy and personal data. WP29 was in force until the application of GDPR.¹⁶⁸ Although, in light of the implementation and application process of GDPR, certain questions arose which forced EDPB to develop additional guidelines.¹⁶⁹ Contrary to WP29, which obtained explicit and advisory status, the EDPB is empowered to issue a binding decision to ensure a consistent application specifically in Article 65(1) of GDPR described violations. However, in the case of other breaches of GDPR provisions, such as Article 65, EDPB opinions do not have binding nature. In addition, EDPB indirectly has a binding effect vis-a-vis on national DPAs.¹⁷⁰

3.2.1 EDPB'S criticism, legal gaps and potential solutions

EDPB attempted to provide step-by-step instructions to guide EU data exporters in transferring personal data to third countries. This roadmap was established consistent with the judgment of the Court of Justice of the European Union (hereinafter referred to as CJEU) Data Protection Commissioner v. Facebook Ireland and Maximillian Schrems¹⁷¹ (hereinafter referred to as Schrems II), handed down on 16 July 2020.¹⁷² In Schrems II case CJEU disabled the EU-USA Privacy Shield by upholding EC decision 2010/87 on standard contractual clauses (hereinafter referred to as SCCs) in regards the transfer of personal data processors located in third countries. Additionally, it emphasized that data transfers on the grounds of SCCs could be challenged by the national supervisory authorities, which obtain the power to suspend or prohibit them on a case-by-case basis and other rules regarding SCCs.¹⁷³ For the common issues faced in Schrems II case, EDPB failed to deliver the consistent solution for the issues arising in thousands of international data transferors and transferees due to lacking transparency for data subjects and creation of legal uncertainty.¹⁷⁴

Moreover, EDPB is subjected to significant and reasonable criticism due to several legal gaps and inconsistencies. Firstly, Article 70 of GDPR, "Tasks of the Board," of GDPR does not require enforcement strategies that would provide specific directions for DPAs.¹⁷⁵ In addition, legislators could have provided an EDPB with a task to adopt an annual strategy¹⁷⁶

¹⁶⁷ Christina Etteldorf, "EDPB on the Interplay between the ePrivacy Directive and the GDPR," *European Data Protection Law Review (EDPL)* 5, no. 2 (2019): 224-231 Available on: https://heinonline.org/HOL/Page?handle=hein.journals/edpl5&div=37&g_sent=1&casa_token=&collection=journals. April 28, 2023.p-224.

¹⁶⁸ Europa.eu. "Article 29 Working Party | European Data Protection Board," 2018. Available on: https://edpb.europa.eu/about-edpb/more-about-edpb/article-29-working-party_en. April 28, 2023.

¹⁶⁹ *Supra* note 160.

¹⁷⁰ *Ibid*

¹⁷¹ Data Protection Commissioner v. Facebook Ireland and Maximillian Schrems, no. C-362/14, (6 October 2015). Available on: <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:62014CJ0362> Accessed: May 2, 2023.

¹⁷² Ronco, Emmanuel, Natascha Gerlach, and Natalie Farmer. "Case Note: Recommendations of the EDPB Further to the CJEU's Schrems II Judgment: One Step Forward, Two Steps Back?" *Global Privacy Law Review* 2, no. 1 (February 2021). Available on: <https://kluwerlawonline.com/journalarticle/Global+Privacy+Law+Review/2.1/GPLR2021008>. Accessed: May 2, 2023. p-90, para-1.

¹⁷³ *Ibid*.

¹⁷⁴ *Ibid*.p-99.

¹⁷⁵ Hielke Hijmans, "How to Enforce the GDPR in a Strategic, Consistent and Ethical Manner," *European Data Protection Law Review (EDPL)* 4, no. 1 (2018): 80-84 Available on: https://heinonline.org/HOL/Page?collection=journals&handle=hein.journals/edpl4&id=87&men_tab=srchresults Accessed: May 2, 2023. p-81.

¹⁷⁶ *Ibid*.

that could promote greater consistency and accountability as national DPAs would be informed up to date about main EDPB's objectives and could attempt to deal with the most pressing problems. In regards to the implementation of the annual strategy can, be mentioned European Central Bank (hereinafter referred to as ECB), which each year publishes an annual strategy that emphasizes the core objectives and priorities that should be achieved within the following year. This helps to ensure that ECB is accountable and transparent.¹⁷⁷

Furthermore, if EDPB's strategy were changed every year, it would make GDPR even more effective and harmonized among EU MSs because it would be incorrect to claim that all problems related to GDPR can be solved immediately. Instead, it is a time-consuming process, and EDPB should concentrate on one or few issues at a time. Moreover, EDPB is criticized for lack of enforcement. Mainly, EDPB obtains limited enforcement as in any issue arising in GDPR except in Article 65(1), EDPB can only issue opinions which national courts are bound to take recommendations and guidelines to solve disputes brought before them.¹⁷⁸ Consequently, EDPB is EU instrument with a limited effect, not mandatory ensuring consistent application of GDPR within EEA. It does not contain any obligation to mention issues of broader EU interest to EDPB.¹⁷⁹

Digital economy and online businesses will develop, and the amount of them will significantly increase in the future. Also, most humans cannot imagine their life without the possibilities and opportunities offered by this online economy. The digital economy has contributed significantly to new and successful business models, products, services, etc. Moreover, the digital economy is the most critical driver of growth, job creation, and innovation.¹⁸⁰ The importance of effective and successful entrepreneurship guided by functional regulation is crucial. For this reason, the author would like to introduce the idea of allocating way greater legal force to EDPB that would contribute to finding a balance between company and legislator interests. Firstly, EDPB could issue binding decisions not only to cross-border issues listed in Article 65(1) of GDPR but also to issues arising in other areas. Undeniably, this would require expanding the competence and capacity of this judicial body. For example, the EDPB could act as a court of last instance, where the most significant cases with massive monetary disputes could be heard. In this way, the effective judicial practice would be created, on which the legal development of the GDPR could be based since, currently, no precedents for handling disputes are accumulated. EDPB would operate on a case-to-case basis and allow companies to prove that there might be pro-competitive effects and contributions to society. Additionally, It should be mentioned that the author doubts the current judicial institution's competence to deal with disputes of this magnitude because the Big Data industry is particular and develops rapidly.

¹⁷⁷ European Central Bank. "An Overview of the ECB's Monetary Policy Strategy." European Central Bank, July 8, 2021. Available on: https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview_monpol_strategy_overview.en.html. Accessed: May 2, 2023.

¹⁷⁸ *Supra* note 170.

¹⁷⁹ *Ibid.*

¹⁸⁰ Pahwa, Aashish. "What Is Digital Economy? - Importance, Types, Examples." Feedough, April 13, 2022. Available on: <https://www.feedough.com/what-is-digital-economy-importance-types-examples/>. Accessed: April 28, 2023.

3.3 Data minimization

It is fair to state to solve the problems regarding the high amount and number of fines that put an administrative burden on companies operating on digital platforms. It is essential for both sides- legislator and company, to create a compromise and confront each other. In other words, it is a two-way street. Therefore the author will suggest several solutions not only explicitly for Big Tech but for all companies that use Big Data and operate in a digital economy.

If companies do not collect or diminish the amount of specific personal information, the violations will diminish synchronously. Undeniably, the data minimization principle is incorporated under Art—5 (1) (c) of GDPR. However, solely ordering data controllers to collect less data is not a viable solution.¹⁸¹ To achieve this goal, more significant support from the legislator side is essential. Feasibly, EC could encourage this data minimization and help companies to achieve this goal in practice by issuing guidance documents to assist data controllers and ease processes.¹⁸² As an example can, be mentioned Dutch data regulator which has given a guidance document in regard copy information from identification documents. In addition, it is fair to state that this guidance was successful in minimizing the amount of those specific pieces of data.¹⁸³

Furthermore, Art.23(2) of GDPR states that data controllers must ensure ‘by default’ implementation mechanisms in which data minimization requirements are satisfied.¹⁸⁴ Again, it is evident that the rule is laid down, but there is no guidance on how to implement it. Additionally, the difficulties in complying with and carrying out Big Data analytics may lead to local entrepreneurs moving to other countries where they could develop their Big Data-related business models with guidance. Consequently, such an outcome would not protect privacy interests after all, as local EU residents move overseas and use their data analytic products and services.¹⁸⁵

To conclude, cooperation from both sides is essential. The author considers that EC has developed a complex framework to meet its goals, such as data minimization. However, there are no guidelines and support provided for the entrepreneurs.

¹⁸¹ Eduard Fosch Villaronga, Peter Kieseberg, and Tiffany C Li. “Humans Forget, Machines Remember: Artificial Intelligence and the Right to Be Forgotten.” *Computer Law & Security Review* 34, no. 2 (October 1, 2017): 304–13. Available on: <https://doi.org/10.1016/j.clsr.2017.08.007>. Accessed: April 28, 2023.p.311..

¹⁸² *Ibid.*

¹⁸³ *Ibid.*

¹⁸⁴ Md. Abdul Malek, "Bigger Is Always Not Better; less Is More, Sometimes: The Concept of Data Minimization in the Context of Big Data," *European Journal of Privacy Law & Technologies (EJPLT)* 2021, no. 1 (2021): 212-223, available on: <file:///Users/artalatisa/Downloads/2021EurJPrivacyLTech212.pdf> Accessed: April 28, 2023.p-222.

¹⁸⁵ Tal Z. Zarsky, "Incompatible: The GDPR in the Age of Big Data," *Seton Hall Law Review* 47, no. 4 (2017): 995-1020 <file:///Users/artalatisa/Downloads/47SetonHallLRev995.pdf> Accessed: April 28, 2023.p-1019.

Conclusion

Big Tech obtaining market power is undoubtedly a global issue that has recently received more attention. The Big Tech companies' dominance has risen significantly, especially during the COVID-19 crisis, where people's day-to-day activities relied on their offered services and products. The biggest concerns were brought up in the EU. Due to that, EC has implemented regulations, such as GDPR, DMA, and DSA, that limit Big Tech and global player market dominance and protect consumers' privacy and data. Although, it is fair currently to emphasize GDPR as we have seen precedents discussed in detail in this Bachelor thesis in how this regulation works in practice and define the main issues arising with the implementation and enforcement.

Before conducting the research, the author doubted the GDPR, as the enormous fines for non-compliance differed from one EU state to another. Therefore, the hypothesis questioned the GDPR, suggesting that the EU regulations, such as GDPR, DMA, and DSA impose a disproportionate administrative burden, compliance costs, and commercial risks on entrepreneurs operating in the EU on digital platforms. After in-depth analysis, the author has concluded several weaknesses of GDPR concerning its effectiveness, fine system, and compliance with the principle of proportionality.

The research raises several points where neither the company's claims are satisfied nor the consumer's. GDPR signals digital businesses to pay close attention to how to use and how much to store personal data. GDPR determines the rules of personal data storage and uses laid down in 99 complex provisions of GDPR. While it aims to limit the amount of data storage and determine in detail the rules of Big players in the digital economy, GDPR fails to strike a balance between consumer and company interests. Firstly, to bind by GDPR provisions, companies must make significant investments in monetary and human resources that require very high costs. Companies must introduce a Data Protection Officers (DPO) to manage individual activities effectively and in case of illegal actions, such as transparently managing

data breaches. Secondly, companies must change their internal systems and upgrade websites, databases, information systems, etc. Thirdly, as for consumers, the GDPR affects technology development as high-tech provide value and improve productivity, performance, and the economy as such through the massive amount of data and algorithms that some part of society, like researchers in field such as medicine, science, and others, are using on their daily basis to further contribute to the society. In other words, GDPR is limiting the storage of personal data to protect consumer rights and privacy. However, it fails to take into account the advantages Big Tech companies provides to society as such.

Next, the question arises, are fines for non-compliance effective, proportionate, and dissuasive? Big Tech companies nearly in 3 years have received fines amounting to 2.427 billion euros. The author questions whether the factors like pro-competitive effects and their technological contribution to society have been considered by imposing these significant fines. Undeniably, considering that each Member State DPA imposes the fines is more a matter of national legislation as GDPR does not determine any exclusions or violations that can be justified. However, this is a question for further research.

Continuing with the disproportionate GDPR fine systems in EU Member States. It is evident that GDPR should have considered existing data protection problems, such as inconsistencies and differences in national laws, before implementing the GDPR. Namely, the data protection laws differ in each country of the European Union; that is, each country has placed greater emphasis on specific violations and developed particular areas of data and privacy law during the historical formation of its legislative system. Consequently, with the introduction of GDPR, these issues came into an even greater light as the GDPR fine analysis provided in this research works as an excellent proof for different implementation, enforcement, and approach taken by each state. The differences in GDPR interpretations by DPAs have led to more significant ambiguity and disproportionality than before. Remarkably, each DPA authority has determined its target audience. For example, the United Kingdom has strictly concentrated on data breach notifications (Article 33), and France's and Italy's DPAs mainly focus on personal data procession (Article 5), etc. Therefore, it is possible to conclude that GDPR has a substantial legal gap in fine system. On the one hand, GDPR determines the fines for each violation and guidelines on how these fines should be imposed. On the other hand, each state DPAs obtains considerable power in interpreting and applying GDPR as opening clauses such as Article 9 (2) and Article 9 (4) of GDPR allow MS to go beyond the provisions laid down in GDPR. Therefore, the enforcement strictly depends on Member State national laws, leading further to disproportionate fines. The author believes that the DPAs hold key to GDPR success in this context.

Furthermore, in this research, the author critically looked at the other two regulations that will soon come into force concerning the legal regulation of Big Tech companies. After analysis of DMA and DSA, the author has come to several problems and similarities that have led to issues already arising in GDPR. First, DMA is focused on the assumption that targeted prices will adversely affect the competition while not considering the secondary products that can provide value creation, innovation, and distribution trade-offs. In other words, it lacks a gray area, allowing companies to show the pro-competitive effects of their actions, as prohibited practices laid down in Articles 5 and 6 are harmful per se, in contrast to competition law which allows companies to show actual impact and efficiency defense such as pro-competitive and economic justifications. In addition, DMA's implementation and enforcement, like GDPR, will be in the hands left on each state's competition authorities. However, DSA gives almost discretionary and unilateral power to national administrative authorities to censor

online content and determine and stifle the freedom of expression. In the context of corruption and politics, DSA may promote unfair competitive practices by political parties who obtain extensive support from the government. The author believes that the analysis of these regulations has been more superficial because these regulations have not yet entered into force, and it is difficult to predict what their consequences will be in the future and what approaches will be taken by each MS in DMA and DSA implementation and enforcement.

In the last part of this Bachelor thesis, the author proposed three different solutions for the issues raised. Firstly, the author emphasized the vast need to implement amendments in GDPR that would promote harmonization in fine amounts and systems. These amendments would determine a specific amount of fine for each type of violation, similar to administrative law and competition law, where fines derive from the severity and duration of the infringement. Secondly, the author proposed that European Data Protection Board (EDPB) should be given greater legal force, and their opinion would not obtain advisory status. Particularly that EDPB would contribute to more than just cross-border issues. In addition, EDPB could adapt its annual strategy and promote greater consistency and accountability of national DPAs as they would be updated about the main EDPB's goals and attempt to deal with the most pressing problems. Undeniably, it would be a time-consuming process, and emphasis should be put on one issue at a time to meet the common goals and solve the current issues. Thirdly, the author discussed the possibility of data minimization. The concept of data minimization is laid down in Article 23 (2) of GDPR, which states that data controllers must provide 'by default' mechanisms that minimize the data storage amounts. Consequently, the number of violations will decrease if this objective is satisfied. However, the author believes this should be achieved by more significant support from EC, which would provide guidelines to big data companies and cooperation that could lead to successful compliance with the data minimization principle.

Lastly, the author considers that the existing legal framework of GDPR obtains many legal gaps and does impose disproportionate administrative burdens, compliance costs, and commercial risks on entrepreneurs operating in the EU on digital platforms. The probable future consequences can harshly impact entrepreneurship and diminish technology development. EU is obliged to take action to solve the existing issues that Big Tech companies and large venues are facing, primarily due to differences in national legislation

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