

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

FACULTY OF ECONOMICS AND MANAGEMENT DEPARTMENT
OF SYSTEM ENGINEERING



DIPLOMA THESIS

Institutes of Copyright and Information Technology

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(Master's in informatics)

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Objectives of thesis

The objectives of the thesis are to protect the Information technology rights of an author under Copyright Law. I have discussed more in details about 1991 the Berne Convention for the Protection of Literary and Artistic Works acknowledges the cross-border Key points, Scope, Authorship, Exclusive rights of the rights-holder, Limitations of those exclusive rights (no need for prior authorization from the rights-holder), Decompilation, EU countries measures of copyright. By this Act, the author will get more accurate protection against infringement of their information technology and intellectual property rights.

Methodology

As to the methodology, it will consist to control of legal information is increasingly at the center of legal and administrative disputes, raising questions of sovereignty and secrecy of information rights over research. Also, methodological choices will include efforts to negotiate principles for controlling intellectual property suggests the problems of establishing such principles in the context of the changing role of copyright law.

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Decompilation, Intreoperability, Commercial purposes, Reproduction

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BAINBRIDGE, D. I. Introduction to information technology law. Harlow: Pearson Education Limited, 2008. ISBN 978-1405846660.

Henry, Nicholas L. "Copyright, Public Policy, and Information Technology." Science, vol. 183, no. 4123, 1974, pp. 384–391. JSTOR, www.jstor.org/stable/1737052.

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ROSEN, L. E. Open source licensing : software freedom and intellectual property law. Upper Saddle River, NJ: Prentice Hall PTR, 2005. ISBN 0131487876.

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Declaration:

I declare that I have worked on my Diploma thesis titled “Institutes of Copyright and Information Technology” by myself and I have used the source mentioned at the end of the thesis. As the author of the diploma thesis, I declare that the thesis does not break copyrights of any their person.

31/03/2024

Signature

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Summary

This diploma thesis aims to study legal conditions in national and European legislative frameworks, as well as to present complicated information about intellectual property and its protection in the European Union (EU). This thesis will attempt to address the questions of whether intellectual property rights (IPRs) are adequately protected in the European Union (EU) and what drives consumer demand for counterfeit goods.

The thesis looks at the methods used to spread information and learning in order to achieve those targets. The overview will cover explanations, categorization, and a review of the legal frameworks around intellectual property. The goal of Intellectual Property Rights (IPR) is always to safeguard the rights of creators. While the recognition of writers' rights in their works marked the beginning of this protection, modern technology has fundamentally changed the nature and use of works. The evolution of intellectual property rights (IPR) history also demonstrates how the state gradually acknowledged the author's original intellectual effort and awarded them limited proprietary rights. This thesis examines the moral and economic rights of writers of various kinds of works as well as the judge's perspective on how those rights should be understood.

Keywords

Intellectual property, intellectual property rights, counterfeit goods, piracy, intellectual property protection.

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List of abbreviations

EU	European Union
EC	European Communities
EUIPO	European Union Intellectual Property Office
WIPO	World Intellectual Property Organization
IP	Intellectual Property
IPR	Intellectual Property Rights
WTO	World Trade Organization
PPH	Patent Prosecution Highway
SME	Small and Medium Enterprise
OHIM	Office for Harmonization in the Internal Market
IPO	Intellectual Property Office
CTM	Community Trade Mark
OECD	Organization for Economic Co-operation and Development

1 Introduction

Innovating, growing, being competitive, and creating jobs are all fueled by intellectual property (IP) in Europe. European innovation is essential to ensuring that the European Union (EU) can continue to play a leading role in the world in the creation of sustainable solutions to deal with shared challenges brought on, for example, by consumer safety, urbanization, digitalization, climate change, a lack of food and clean water, a growing elderly population, and health problems. The basic intangible knowledge-based assets that are necessary for European companies' investments and attempts to offer concrete answers to society are protected by intellectual property (IP). One of the key foundations of the EU's industrial competitiveness should be intellectual property (IP) because it creates economic opportunities.

Though innovation may begin with an idea, it is not finished until its products are sold. To enable the commercialization process, all types of IP are required. Trademarks will help an idea reach the market while patents and trade secrets will safeguard it. European businesses use innovation to provide high-quality goods, distinctive services, or new creations. They associate it with their brands, for which they file trademark applications. The purpose of a trademark is to communicate the necessary distinctiveness of a product to get market recognition. Customers will connect the brand with the quality and reputation of the goods. All of the company's goods and services profit from this connotation, which also enables the latter to live up to clients' high standards for authenticity and quality. Around 90% of EU commerce with the rest of the world is made up of IP-intensive industries, creating a €96 billion trade surplus for the EU (Euipo, 2016).

intellectual property (IP) is essential for increasing the competitiveness of European enterprises and serving as a source of income. IP rights that are well-managed and successfully utilized give businesses a significant competitive edge. In this sense, it's also crucial to consider how IP rights interact with competition law. Large corporations submitted 71% of the patent applications from European nations in 2018, Small and Medium Enterprise (SMEs) and individual inventors submitted 20%, and universities and public research bodies submitted 9% (Euipo, 2016).

For thousands of years, people have been inventing. Humans depend on inventions to make life easier, to improve the appearance of commodities, and to make work more bearable. The fact that practically all of humankind's greatest discoveries were initially utilized for war and violent conflict is quite interesting. Even throughout the Cold War, rather than engaging in open combat, the United States and the Soviet Union fought to advance science and technology.

On the other hand, the recent century's rapid industrial expansion encouraged individuals should start protecting their inventions. Consequently, safeguarding intellectual property has emerged and continues to be a major issue. Maintaining the ideals that they contributed to creating is very motivating for innovation engineers. But when technology for freight and trade internationally developed, the subject attracted significantly higher levels of interest compared with it would in earlier times. The Guarding of Intellectual Property as we know it today started with the founding of the initial intellectual property organizations. Founded in 1967, the World Intellectual Property Organization represents one of the biggest and most important. By comparison, the Czech Property and Industry the Department was initially known as the Patent Department and the organization's existence began in the year 1919. The 50-year difference in formation dates back to the time when there were simply locally based and national agencies. However, as commerce grew progressively global and globalization. there was a demand for overseas and all over the globe locations.

Attempts for European Unification emerged in the wake of the Second World War. The European commercial partnership was established in 1952. The European Union came into being in 2007 following centuries of EU initiatives to merge. After sixty years of coordinated endeavors, the EU unified market currently consists of 28 nations which are members. It is highly attractive, but unfortunately, it is also an ideal destination for infringement and the selling of fake products, with five hundred million buyers in one region.

Despite the fact that there are archives covering hundreds of thousands of ideas now available, inventions, artwork, etc. on a national, continental, or international level, during the last ten years, the growth of fraudulent items and illegal activity have reached hazardous percentages and has

evolved into a significant and harmful factor of trade across borders (Chaudhry, Zimmerman, 2013).

Accreditation is only the first step in securing intellectual property. The initial line of defense when it comes to affected, missing, or duplicated intellectual property is the justice system. European continent's integration project remains in progress. A large number of court cases are transitioning initially strictly national to becoming more closely European. Intellectual property is a topic on which European organizations such as the European Commission are completely engaged. It should be easier for researchers to defend their proprietary interests on the borders of the EU thanks to the existing judicial system. This research paper will, among other things, focus on the legal climate in the EU.

On the other hand, the availability of clients in the sector for counterfeit goods underlines the viability of such sellers. Such things might be purchased for a variety of fictitious reasons, including cost, status, a passing fad in fashion, etc. Based on survey data, it will be possible to determine if individuals prefer to buy authentic or fake goods and why they do so.

The majority of customers as well as citizens in general are aware of the drawbacks of any kind of assistance for this sector. A multitude of entities and associations are dedicated to preserving intellectual property and fostering collaboration on knowledge across all parties involved. It is imperative to steer clear of doing business with counterfeit items because many of these assets are linked to unfavorable working conditions, including exploitation of kids, insufficient repayment terms, tireless labor, etc. The WorldDay of Intellectual Property, observed by all WIPO members on April 26, is becoming increasingly significant to the general public (mkcr, 2016). Consumers today live in a "branded world" where trademarks of all types are everywhere. Although they are not a part of the modern economy, since the industrial revolution, their protection has been crucial to the expansion and development of business (Rosler, 2007).

The fundamental objective of the European Union (EU) is to ensure unrestricted competition while fostering a harmonic growth of economic activity within the common market. The goal of developing

EU trade mark legislation was to give consumers more freedom of choice by allowing them to distinguish between the products and services of rival companies. The Commission claims that strong brands are essential to the European economy today. Therefore, to properly defend trade marks against infringements, robust protection is needed (Euiipo, 2016).

2 Objectives and Methodology

2.1 Objectives

Providing comprehensive knowledge on intellectual property policy and its enforcement in the EU is the main objective of the research. Circumstances of infringement of intellectual property rights and customer preferences that have been properly handled will be responded to in addition to the law. The purpose will be accomplished by gradually raising awareness of intellectual property rights and the measures taken by the EU and the Czech Republic to protect them.

The following research topics will be based on the results of the thesis:

- Is the intellectual property protection granted by the European Union good enough?
- What are the main factors influencing the market for fake things?

2.2 Methodology

The data used to compile this thesis came from the mentioned documentation, legal documents, press releases, newsletters, and internet properties. Due to the frequent changes in EU legislation, it is imperative that one works with real press releases. As a consequence, an important component of the research paper relies on the use of data from digital resources. This research paper seeks to provide viewers with comprehensive knowledge on intellectual property so that they're able to effectively represent it in the EU. Moreover, modifications will be proposed considering the existing protocols and development within the European Union.

Regulations from EU member states need to be harmonized, yet there are still issues. There are strong safeguards in place in the European Union (EU) to protect all intellectual property, especially creative works, but issues with maintaining prior permission and enforcing intellectual property laws in general still exist. Thus, increasing public trust in intellectual property governance across the EU is the goal. With a focus on the EU legal system in general and Czech policy specifically, this research paper aims to examine the existing EU legal framework as well as the

currently in effect Directive 2004/48/EC and Regulation No. 2015/2424, which went into effect on March 23, 2016.

3 Aim of the DT

Examining national and European regulatory regimes is one of the main objectives of this diploma research, in addition to provide comprehensive knowledge on intellectual property and its protection in the EU. The primary issues this research study seeks to answer are: what drives consumer demand for fake goods, and to what extent is EU intellectual property protection adequate? We briefly go over the following facts concerning intellectual property and protections:

- **Berne Convention (1886)**
- **Roman Convention (1964)**
- **World Trade Organization (WTO) ‘TRIPS’ Agreement. (1994)**
- **United Nations Educational Scientific Property Organization (UNESCO) Paris Convention (2005)**
- **World Intellectual Property Organization (WIPO) treaties (WIPO Copyright Treaty and WIPO Performance and Phonograms Treaty) (1996)**

And also, European Union (EU) Legislatives acts:

- **Council Directive 93/83/EEC;**
- **Directive 96/9/EC of the European Parliament and the Council;**
- **Directive 2001/29/EC of the European Parliament and the Council;**
- **Directive 2001/84/EC of the European Parliament and the Council;**
- **Directive 2004/48/EC of the European Parliament and the Council;**
- **Directive 2006/115/EC of the European Parliament and the Council;**

The third and last listed property—intellectual property—will be the main focus of this thesis. The concealed categories of Intellectual Property (IP), including patents, trademarks, industrial designs, and copyrights, are referred to as "IP."

The development of digital technology and the creation of a networked environment, like the Internet, have had a significant impact since the last decade of the 20th century on the patterns of creation, modification, distribution, and consumption of creative works available in digital formats. Internet users and, more generally, owners of inexpensive digital devices (like current personal computers) have been able to play the role of creator, re-creator, and extensive distributor of this specific kind of information within this new, borderless environment. The economics of creativity, dissemination, and copyright have changed as a result of digitization in the following ways:

- lowering in a significant way the cost of producing accurate copies of a work;
- enabling the quick, simple, and affordable distribution of these reproductions; and
- making technologically advanced equipment and instruments accessible, which lowers the cost and simplifies the process of creativity.

Modern copyright legislation, which permits the sealing of digital works protected by copyright but forbids the production, marketing, possession, and use of technologies that have the potential to get around and/or decrypt technological protection measures and so-called digital rights management systems, appears to be in conflict with the technology-enabled diffusion of digital creativity that is occurring today.

Information technology deals with the procedures and tools that make it easier to create, select, sort, store, present, and deliver knowledge. The need for the introduction and enactment of the copyright legislation was brought on by the misuse of technology. This thesis examines the judge's actions and demeanor when assessing the moral and financial rights of authors of various sorts of works. This argument ultimately leads to new investigative chapters that go outside the purview

of copyright rules and offer a logical foundation for addressing the problems and reorganizing the relationship between copyright and technology.

How does the Commission assist Member States with the Copyright Directive's implementation?

In the course of the transposition process, the Commission has assisted the Member States technically through routine meetings and bilateral contacts. In order to assist Member States in implementing the new regulations regarding the use of protected content by online content-sharing service providers and to promote the growth of the licensing market between rightsholders and online content-sharing service providers, the Commission has also released guidance on Article 17 of the Copyright Directive (European Commission, 2021).

According to Article 17, some online content-sharing service providers must get permission from rightsholders before allowing content to be submitted to their websites. They must act to prevent unauthorized uploads if no authorization is granted. The guidance's main goal is to assist in the accurate and consistent transposition and application of Article 17 throughout the Member States, with a focus on the requirement to ensure a proper balance between the various basic rights of users and rightsholders (European Commission, 2021).

Additionally, the recommendations will assist market participants in better adhering to national laws that implement Article 17. It offers helpful guidelines on how to implement the key aspects of Article 17, such as the best efforts that service providers must do to secure authorization, prevent unauthorized uploads, and protect legal uses while maintaining the balance that Article 17 achieves (European Commission, 2021).

How does the Directive ensure that writers and performers are paid fairly?

The Directive intends to improve the contractual relationships between content creators (authors and performers) and their producers and publishers by increasing transparency and maintaining a sense of proportion.

The Directive includes five steps to support the situation of authors and performers, including:

- A commitment to paying authors and performers fairly and in accordance with their work;
- A responsibility to be transparent in order to provide authors and performers with greater information about how their works and talents are being used;
- A provision that allows for contract adjustments in the event that the original remuneration agreed upon proves to be disproportionately low in comparison to the success of the author's or performer's work;
- A procedure for revocation of rights that enables authors to reclaim them when their works are not being used for commercial purposes; and
- A process for authors and performers to resolve disputes (European Commission, 2021).

There are mostly with the legal harmonization between EU member states. Even if there are strategies for protecting inventions and any intellectual property within the EU, issues with older registration and its protection still exist. The entire description of the work, the findings, and the author's comments and suggestions were covered in the conclusion of the Diploma thesis.

4 Literature Review

4.1 Copyright Definitions

Authors of creative works are granted the only right to use and distribute their creations for a certain amount of time by the legal notion of copyright. A book, a picture, a song, or a piece of software are examples of physical works that are literary, artistic, or other creative expressions. Authors can profit financially from their works and stop others from using them without permission by using copyright protection, which gives them control how their works are used, replicated disseminated and altered.

The EU member states copyright laws have their roots in global treaty legislation. International laws consist of:

- Berne Convention (1886)
- Roman Convention (1964)
- World Trade Organization (WTO) 'TRIPS' Agreement. (1994)
- United Nations Educational Scientific Property Organization (UNESCO) Paris Convention (2005)
- World Intellectual Property Organization (WIPO) treaties (WIPO Copyright Treaty and WIPO Performance and Phonograms Treaty) (1996)

Depending on the national law and legal traditions of each Member State of the European Union, different rights are guaranteed to creators of original works. Yet, national laws are progressively convergent through international treaties and Union legislation, which harmonies the diverse rights of writers, performers, producers, and broadcasters, even if copyright law in the European Union is still primarily national law. European Union (EU) Legislatives acts:

- Council Directive 93/83/EEC;
- Directive 96/9/EC of the European Parliament and the Council;

- Directive 2001/29/EC of the European Parliament and the Council;
- Directive 2001/84/EC of the European Parliament and the Council;
- Directive 2004/48/EC of the European Parliament and the Council;
- Directive 2006/115/EC of the European Parliament and the Council;
- Directive 2006/116/EC of the European Parliament and the Council;
- Directive 2009/24/EC of the European Parliament and the Council;
- Directive 2011/77/EU of the European Parliament and the Council;
- Directive 2012/28/EU of the European Parliament and the Council;
- Directive 2014/26/EU of the European Parliament and the Council;

These are the intellectual properties:

- Literary, scientific, and creative works
- The creative process in performance
- Acoustic recordings and media broadcasts,
- Brevets including all biological pursuits,
- Scientific breakthroughs,
- Blueprints for building
- Commercial and industrial branding

Rather than trying to describe intellectual property, the Global Organization for Property Rights enumerates the items that follow as being covered by IP rights.

Intellectual work in the arts, sciences, literature, and manufacture not only enriches society in general but also provides protection from unfair competition. The idea of preserving intellectual property was first acknowledged in 1883 by the Convention of Paris on the Preservation of Business Property and the 17th Berne Agreement on the Maintenance and Preservation of Works of Literature and Article the World Intellectual Property Authority is responsible for supervising these agreements (Cantatore and Johnston, 2016, p. 71).

Generally speaking, nations have laws protecting intellectual property (IP) for two main purposes: first, to provide permitted purpose to the privileges of producers and entrepreneurs in their concepts and methodologies, while balancing this opposed to the general demand for availability of items and methodologies; and second, to boost creative thinking and innovation and therefore promote the expansion of community and the financial system.

Copyright covers literary works such as novels, music, paintings, sculptures, films, and technical works like computer programs and electronic documentation. Rights connected to certain languages are often known as creators' rights. Despite significant collaboration, the growth of powers throughout time has resulted in various international legal systems. In the context of art and creative items, copying a one-of-a-kind work is called "property" and can only be done so by the author or with permission. The word "authorship" indicates the process of creating an artistic creation, emphasizing that composers have certain rights in nearly every field that are sometimes cited as personal freedoms, such the right to prohibit misappropriated copies of their original creation and to utilize it only in their ideas. These are rights that authors may use. Other liberties, including the privilege to reproduce items are used by outsiders with permission from the original author (Fishman, 2017, pp. 1-4).

Two kinds of defense are provided by royalties. The utilization of these combinations by others can bring revenue to the proprietors of commercial interests. Researchers and producers have an ethical obligation to take certain measures to protect and maintain their association with what they produce. The inventor or designer may utilize commercial privileges, or perhaps they may be transmitted. Numerous jurisdictions forbid the surrender of individual liberties. Because of their legal privileges, writers can profit when others use their writings. It is morally permissible for writers and architects to implement some auctions to protect and sustain the link to their work (Safner, 2016, pp. 121-137).

4.1.1 Financial Accountability

When using the land, its owners are required to take other formally acknowledged organizations with the neighborhood's entitlements and purposes into account. So, the owner of a copyrighted piece of work has control over how to treat it and can prevent unauthorized use by others. According to national laws, as long as they respect the liberties and desires of others, strangers are free to use the products owned by unique invention proprietors. The majority of copyright laws state authors or owners of other rights have the authority to approve or forbid certain actions in connection with their work. Owners of the rights are either accepted or rejected (Herman, 2018, pp. 407-432).

- to copy the work and turn it into various media, including audio files or printed diaries,
- to distribute the works documentation,
- to perform official task
- to publish or other inform the viewer of the role,
- to formulate it in several phrases,
- Economic right holders under have the potential to profit from commercialization of their creations. This might usually happen if the patents had been traded or if someone else was given authorization to use the work. When a work is protected by copyright, it is the property of the authority to approve or forbid the prior acts.
- Any kind of task duplication is encompassed by the term "reproduction". For example, photocopy, transcribing, writing or publication, or capturing music that are classified.
- Allocation an assignment is published in public copies. A work of fiction sale in a bookshop is one representation of one that may be represented.
- Sale of copies, such as those produced from a resale store are exempt from this adjustment as long as the work remains accessible for general viewing, is not prohibited.
- Leasing and lending encompass renting out government records in whole or in part. For example, you can borrow a CD from the library or a video store.

- Performance encompasses demonstration, official activity, or task completion. It would entail seeing a play in person and making audio or video records. This responsibility is not included in the presentation of literary, tragic, scholarly, or musical creations.
- Public responsibilities are transferred electronically as part of communication with the community. This would entail publishing the work online.
- The modification of a job is considered adaptation. These include adapting a book into a movie, transcribing music, translating something into another language, or adapting a computer program into a new language or software template (Safner, 2016, pp. 121-137).

The financial liberties of the author are subject to short-term restrictions. In Europe and other countries, the customary period starts on the final day of the year that follows the creator's death and lasts for a period of seventy years. Furthermore, the duration of confidentiality is computed from the moment of accessibility and, if the work of art was not released by the date of perseverance, from the current of its first the accessibility for works to which the legislation offers entitlements to a writer, a generating work, an unidentified work, or individuals other than the creator; in the case of co-authored works, the duration of the guarantee is established by the time of death of the last co-editor (FAVALE, et. al., 2015).

4.1.2 Moral rights

The following privileges must be obtained to writers by attendees in the Berne Agreement, as per Article 6b (wipo, 1967) the ability to declare the legitimacy of a project, also known as the right to parentage or the correct to be obtained the title; or the legitimate to object to any inaccuracy, alteration, or other variation of works that could influence the status or valuable of the initial author. It is commonly acknowledged that writers' privacy rights are comparable to or equivalent to those provided by local legislation. As per Besek, Gervais, Schultz, and Claggett (2016), the above freedoms need to exist independently of the writers' financial rights, as stated by the Berne Convention (Besek, Gervais, Schultz, Claggett,, 2016, p. 6).

Authors of creative writings and writings "shall be accorded the exclusive right to compose and authorize the interpretation of their works during the period of time where their ownership interests

in original writing are protected," according to Article 8 of the Berne Convention. According to Berne Convention Article 9, the sole authority for authors of creative and literary works to provide permission for their works to be reproduced is via them. With the exception of Article 6a of the Berne Convention, Articles 1–21 of the Law and its Appendix establish the sole rights recognized by the Agreement on the Trade-Related Features of the Rights in Intellectual Property.

Only individual writers should be awarded moral rights; otherwise, they would be governed by an assortment of domestic laws even after they transfer their economic rights. For instance, even when a film producer or editor owns the commercial rights to the work, the personal author often retains their personal rights. They frequently go on to imply that since they are so distinctively cerebral and intellectual to the person who creates them, they can have economic value through exploitation. Authorship objects therefore need to be protected in a different way than other types of estate. This non-economic interest is sustained by moral freedom. A moral right can only be acknowledged in literary, creative, artistic, intellectual, and graphic works. Moral liberties, unlike economic rights, cannot be acquired or transferred in any other way. However, the owner may choose not to exercise such rights. The freedom to assign refers to the right to claim authorship of a work. There are four internationally recognized rights to personal freedom. Before connecting, this privilege must be authenticated (Bambauer, 2015).

It must be recognized that in the event that a work is summarized, removed, changed, or modified in a way that distorts or mutilates the work or compromises the author's standing or honor, the author retains the right to accept the adverse evaluation of the work. the obligations of not being listed as the author of a work that you did not contribute to. Incorrect attribution, for example, might prevent a well-known author from being attributed as the author of a work he did not write. Under the right to privacy of certain documents and motion pictures, a person can block the publication of a photo or video for both personal and governmental reasons. Conscience freedom of the author Individual freedoms protect the author-practice relationship permanently, unlike the author's financial rights. These rights should not be abandoned because they are inalienable and cannot be transferred (Gu, 2018).

The opportunity to limit or allow someone taking advantage of these privileges exists with the permission of the publisher. Adding the relevant provision to the agreements allows you to do this. The user must fill out the request for and substance of this piece, use it appropriately, note the date of publishing, and monitor its usage. nevertheless, using a work that has been granted consent, must credit the creator or use a false identity. Those include the attribution of the author's authority, which is another name for plagiarism, the absence of the name of the author, which is common in publications, and the modification of the images—their reduction, extension, or structures. This is the important time to remind out that there are two requirements that must be fulfilled before a job modification is taken into consideration: the adjustments must be made due to an evident need, and the author cannot legally object. When a job is technically inadequate or not appropriate for a certain media, this is the problem (Joyce et al., 2016, pp. 1-8).

During the discussion of moral concerns related to the confidentiality of intellectual property, the independence of creators to supervise, defend, and execute the imaginative concept which is solely created intellectual property are brought up. Corporate rights in any kind of intellectual property may be used to safeguard creative works such as theater productions, musicals, film, and literature. In cases where multiple parties actively participated in the creation of a position, authority itself can serve as a unifying element. We employ the word "author" in the same way as the 2000 Copyright Management Agreement. It was believed that the creator was someone who provides a material work that was covered by copyright. They can all be included under the terms "creator," "performer," "visual programming artists," "skilled workers," "entertainer," and even "developer" (Atkinson and Fitzgerald, 2016).

Each item that is protected by copyright has freedom of conscience both now and in the future. As was earlier noted, the writers' ethical asset is unique as it cannot be transferred, authorized, distributed, or eliminated of. Consent may be granted, nevertheless, to infringe upon the author's rights. The author may provide permission for a different person to not designate them as the job's recipient, to designate it to another creator, or to change or duplicate the work in any other manner. The majority agree that violating someone's personal rights can sometimes result in financial benefit, typically at a cost. Finding an acceptable compromise among the protection of unique capabilities and maintaining of fundamental liberties such as the liberty of free expression is

constantly a concern for intellectual property law, when comparing the junction of humanitarian and economic concepts. In addition to operating as an important arbitrator for the relationship between owner privileges and user privileges, the public is shielded from sole responsibility for the privilege to alter and use materials for purposes necessary for cultural communication and collaboration by the balancing provided by the Copyright Act (Bambauer, 2015).

Public relations campaigns, mocking, and private investigations and studies are a few instances of government-sponsored activities that are shielded from legal action under equitable trade laws. The fair dealing and related laws appear to shield the established business classes from liability for infringement of intellectual property, though not always. This increases the possibility that even if a person is not responsible for copyright infringement, a claim for personal freedoms may nonetheless take precedence if the allegedly harmful use of the author's character.

4.2 General Definitions of Intellectual Property

Property refers to a person's ownership of a good, law, or other worth. Three different forms of property exist:

- Customizable property
- Not customizable property
- Intellectual Property

Intellectual property, the third and conclusive enumerated item, is going to be the primary subject of this research. We offer to all forms of concealed private property, such as patents, trademark, copyrights, and industrial designs, as “Intellectual Property”.

The title to property known as technological rights provide the owner unrestricted control over the items that are controlled. They are covered by the main concurrent statute. Intellectual property rights are linked to this the owner. The term industrial rights lead to two types of demands. It has

the right to make demands based on both the special defense (personal policy) and the legal prohibitions afforded to it (generic policy) (Jakl, 2011 a).

4.2.1 IP and Its Advantages

Ip promotes imaginative thinking, creative thinking, and knowledge exchange, which are the cornerstones of development, economic growth, and employment. Intellectual Property (IP) protection strikes a balance between society's and innovators' interests. Future society will require significant R&D investments to address issues including the growing need for healthcare, clean energy, and the improvement of the global food system. Inventions and technology can be traded with legal certainty between universities, research institutions, Small and Medium Enterprises (SMEs), governmental organizations, and larger enterprises thanks to IP protection, which supports both proprietary and open innovation. 96% of Europeans concur that IP protection is crucial (euipo, 2016).

Films, music, art, and architecture are just a few examples of the artistic production and cultural expression that IP promotes and fosters. IP rights are essential to the commercial success of their owner and have made Europe a global hub for cultural and artistic output. The innovations of the past can be expanded upon by upcoming generations. Employers with Intellectual Property Rights (IPR) protection employ more people than those without IPR protection.

Companies that register IP rights earn about 28% more money per employee and pay 20% more on average than companies that do not (euipo, 2016).

4.2.2 IP in the global Dimension

Global competition to promote domestic growth and employment via an IP system that encourages innovation is rising quickly. Businesses in the European Union (EU) are up against fierce competition from rivals in foreign countries, thus they require a fair playing field, or the application of the same IP rules everywhere. In some third world nations, the IP environment is becoming

more difficult for inventors, both indigenous and international. Asia accounted for 50.5% of all PCT applications submitted in 2018. With 53,345 applications submitted in 2018, China overtook the United States as the second-largest PCT applicant globally (wipo, 2018).

Business Europe wants the EU to maintain a robust, high-quality, and coherent IP policy when it comes to holding high-level political meetings, as well as addressing any bilateral trade deals or potential World Trade Organization (WTO) rule amendments, to ensure that this competition is fair on a global scale. Any attempts to restructure bilateral and multilateral trade agreements, particularly at the World Trade Organization (WTO) level, should guarantee the maintenance of strict and uniform intellectual property norms. The EU ought to work to reclaim its role as the "standard setter" on the international stage.

The IP offices are working together to simplify regulations and procedures in response to global problems. Business Europe believes that the current IP5, TM5, and ID5 collaboration framework among the IP offices of Europe, Japan, South Korea, China, and the United States is the best course of action. Its emphasis on joint initiatives aimed at harmonizing IP practices and standards ought to keep producing quantifiable benefits for European companies. The Patent Prosecution Highway (PPH) initiatives are appreciated by Business Europe as well. However, the effectiveness of this system would likely benefit from more confidence in the outcomes of IP offices' examinations (euipo, 2016).

4.2.3 IP and modern technology

The digital revolution and the acceleration of technical advancement both present new opportunities and problems for the IP environment. Future policy discussions should include discussion of emerging technologies like 3D printing, artificial intelligence, 5G, the Internet of Things (IoT), and data management. Business Europe implores the incoming Commission and European Parliament to maintain efforts to strike a good balance between robust IP protection and legal certainty that fosters the development of new technologies.

For instance, 3D printing technology will be essential to preserving Europe's position as the manufacturing leader of the globe. It will be used more and more in design and manufacturing procedures in industries as various as auto manufacturing, aviation, mechanical engineering, and medical equipment. It will also provide obstacles to the preservation of IP rights at the same time. A new type of IP rights is already being created by emerging 5G-based devices and services. New prospects and their entire impact should be understood by policymakers and European businesses (wipo, 2018).

Examining these trends at both the national and European levels is essential to ensuring the preservation of IP rights and facilitating ongoing technological advancement. It's critical to ensure that regulations are uniform. Emerging technologies like 3D printing are entangled with legal issues including product liability, copyright, intellectual property rights, environmental regulation, and trade laws. These regulations may need to be modified in light of real-world experiences and after consulting with relevant parties. The guiding idea ought to be technological neutrality (wipo, 2018).

4.2.4 Enforcement

Despite the fundamental importance of protecting IP, innovative businesses, and in particular SMEs and start-ups, still experience some problems when trying to protect their inventions and creative content. IP right enforcement - often linked to the fight against piracy and counterfeiting - has proven to be more challenging and sometime ineffective if infringement activities are happening in digital and global contexts. The amount of counterfeit and pirated goods imported into the EU in 2016 was EUR 121 billion, or up to 6.8% of total imports, compared to 5% in 2013 (oecd, 2019).

Business Europe urges the Commission to uphold and strengthen its commitment to combating counterfeiting, piracy, the illegal transfer of technology, and other unlawful practices or restrictions on contractual freedom that ultimately would deprive IP right holders of their

legitimate rights or hinder the IP right holders' ability to exercise those rights in order to ensure a strong, effective, and reliable IP framework.

For instance, the European Observatory on Infringements of Intellectual Property Rights should be given greater practical and extra responsibilities to support national and EU-level initiatives to combat piracy and counterfeiting. The Observatory could be used as a tool for sharing data on real-world instances and best practices among responsible authorities in addition to distributing studies and statistics. Given that they are familiar with the Observatory's cases and processes and may offer value to these enforcement efforts, it is crucial that IP right holders remain participating in the Observatory's activities. Customs registered around 60,000 detention instances in 2017. The equivalent real products are thought to be worth more than 580 million euros (Euipo, 2016).

IP enforcement ought to be prioritized globally as well. Any time the Commission speaks with its international partners, it should make sure that IP enforcement is covered. The first step would be to exchange best practices and increase awareness of the value of creating and implementing a strong IP enforcement policy. It is important to identify potential collaborative strategies and solutions to address this issue. Business Europe specifically asks the Commission to support China (and other relevant Asian and African nations) in making sure the planned changes to their IP enforcement and protection system are intended to provide legal clarity, create efficient and transparent procedures, and protect intellectual property. Up to 3.3% of global trade was made up of 509 billion USD in 2016 in the international trade of fake and pirated goods. This total excludes domestically made and consumed counterfeit and pirated goods as well as illegally obtained digital goods that are sold online (oecd, 2019).

4.3 Historical Perspective

James Fraser's book, which was written in 1860 in London, serves as a concrete illustration of people's desire to protect their inventions and concepts. The primary subjects covered in this publication are the laws pertaining to artistic copyright, copyright for concepts, and property regulation and implementation (Fraser, 1860).

History-speaking, intellectual property formation may be viewed as a never-ending procedure. Everyone has a constant propensity to invent new items and improve upon the ones they already have. The nature of humans has always incorporated inventiveness and intelligence. In the past, intellectual property, or literary rights, were primarily connected with literary works and the visual arts. However, useful ideas in the industry were referred to as "industrial purposes asset".

- IP oversight and accreditation,
- Profitability or permission of intellectual property,
- Dealing with disputes when companies create or distribute comparable items.

Stim asserts that ownership of intellectual property does not imply won't have to deal with plagiarism. However, it gives him the chance or the tools he needs to defend his intellectual property and bring an intruder to court. This is typically regarded as one of the key benefits of IP ownership. On the other hand, illicit conduct will undoubtedly if the rightful owner of the intellectual property takes no substance to stop it (Stim, 2014).

4.4 Classification of intellectual property

Kur and Dreier (Kur, Dreier, 2013) identify the following categories of intellectual property (Kur, Dreier, 2013):

- Copyrights
- Related rights
- Patents
- Industrial designs
- Trademarks

Each of the IP classes that were previously mentioned is distinct. The primary distinction is the absence of published copyrights. However, brand names, patents, and designs for companies all

need to be authorized in data storage facilities. Additional information on each type of intellectual property is provided in the sections that follow.

Every single prospective IP needs to meet the above parameters to be eligible to be registered. There aren't many variations in these foundations, even though there are distinctions across member nations. Generally speaking, there are:

- Novel, inventive, and useful inventions are the only ones that qualify for patent protection.
- A though needs to be original in order to be protected by legal rights,
- In order for items and offerings to be recognized and distinguished, hallmarks need to be unique (Kur, Dreier, 2013).

4.5 Similar rights and adjoining rights

In order to encourage people, small and medium enterprises (SMEs), start-ups, and companies to engage in creative and innovative activity, the IP legal framework grants them limited exclusive legal rights to the outcomes of their inventive and creative works and enables them to exercise these rights and share those outcomes, for example through licensing.

According to Peggy and Zimmerman (2013) copyright is *“an exclusive right or conferred by the government on the creator of a work to exclude others from reproducing it, adapting it, distributing it to the public, performing it in public, or displaying it in public. Copyright does not protect an abstract idea. It protects only the concrete form of expression in a work. To be valid a copyrighted work must have originality and possess a modicum of creativity “* (Peggy, 2013).

4.6 IP and the importance of SME

There is intellectual property everywhere. Innovation is produced not only by large corporations but also by SMEs. According to the European Commission, small and medium enterprises (SME) are businesses with fewer than 250 employees and annual sales of under 50 million euros. Since

small and medium enterprises make up 90% of all companies in the European Union (EU), it is imperative that they are taken into regard (European Commission, 2016).

It is advisable for small and medium-sized enterprises (SMEs) to consider safeguarding their trade names or trademarks. Businesses may wish to protect their customer records in addition to their novel ideas, unique designs, and concealed transactions. Every single small and medium-sized in this circumstance should think about the best course of action to preserve their intellectual property along with methods to make the most of it. Well-chosen intellectual property protection can have a significant impact on future firm competitive strategy and development. Design, packaging, marketing, delivery services, and a number of other factors can give a company an edge over rivals. In the future, business intellectual property may be assessed and sold as a license or franchise (WIPO, 2016).

4.6.1 Innovation and Business Development

60% of SMEs claim to have innovated their business during the last three years. Seventy percent of those advances were deemed original to the SME alone, 21% novel to the market, and 3% novel to the entire world. Innovations are introduced more frequently by registered IPR owners (77%) than by non-owners (57%).

Compared to non-IPR owners (29% vs. 20%; 6% vs. 3%; respectively), registered IPR owners who had made an innovation were more likely to indicate that their company had been the first to make an improvement in their market. Registered IPR owners, however, are less likely than non-IPR owners to claim that the innovation has previously. Business and trade facilitators, which are utilized by 73% of SMEs, are the most popular source for information that SMEs turn to for the development of their businesses, followed by public authorities or organizations, which are used by 65% of SMEs (Euipo, 2016).

4.6.2 Use of IP protection measures

Compared to 35% of SMEs that do not own IPRs, 75% of IPR-owning SMEs rate their familiarity with IPRs as being five or higher on a scale from 0 to 10. 10% of SMEs claim to have IPRs that are registered. The information from the 2021 IPRs and the firm performance in the EU Firm-level analysis report are congruent with this. The most prevalent sort of registered IPR, which is owned by 6% of SMEs, is a national trade mark. EU patents and trademarks come in second (4% each) (euipo, 2016).

'Other alternative measures' (which includes domain names) are the most frequently employed other (non-registered) IP protection measures. These are the most often used type of IP protection mechanism, with 39% of SMEs reporting ownership. Trade secrets (19%), unregistered design rights (16%), and database rights (13%) come in second and third, respectively.

In order to make money, 45% of SMEs with registered IPRs have attempted to use their intellectual property, either directly (through sales or licensing) or indirectly (for example, by exploiting their registered IPR portfolio for business development). 36 percent of SMEs with registered IPRs have successfully generated revenue using those rights, compared to 11% of SMEs who have attempted but failed to do so (euipo, 2016).

4.6.3 IPR registration

The primary motivations for SMEs to register IPRs are to boost the value and reputation of their business (65%), ensure greater legal certainty (63%), and help prevent others from replicating their solutions, goods, or services (66%). The national IP offices of a single EU Member State (47% of SMEs with registered IPRs have done this) or the national IP offices of multiple Member States (31% of SMEs with registered IPRs) are where SMEs who have registered their IPRs have done so most frequently. Only 15% of SMEs having IPRs registered have done so with the European Union Intellectual Property Office (EUIPO) (Euipo, 2016).

A little more than half (54%) of SMEs that registered IPRs claim to have encountered obstacles. The most common complaint from SMEs was the registration fee, which they felt was expensive. This is consistent with the 2016 data, which showed that about half of SMEs reported facing challenges. 20% of SMEs with registered IPRs cited expensive IP agent fees as well as IP office fees as a challenge they faced. The registration process taking too long was the third most often cited issue (19%). 93% of SMEs with registered IPRs reported that the registration had a favorable effect. The three benefits that SMEs with registered IPRs most frequently indicated were enhanced long-term economic prospects (48%), greater IP protection (58%), and improved reputation or image of the organization (mentioned by 60% of respondents) (Euipo, 2016).

Last but not least, when examining SMEs that did not register IPRs, the most often cited justification is that they did not perceive any further benefits from doing so: 35% of SMEs cited this as their justification. The three other most common explanations were that they believed their intellectual property was not innovative enough for IPR registration (20%), that they lacked the necessary knowledge (19%), or that the registration requirements were not met (19%). Other explanations were reported much less frequently (Euipo, 2016).

Small and medium Enterprises (SMEs) were classified as registered Intellectual Property Rights (IPR) owners specifically if they possessed at least one of the following IPRs:

- Patents;
- Trademark;
- Industrial Design
- Registered Community Design
- Breeder rights/Plant variety rights
- Utility model;

4.7 Patent

Patents can be used to protect inventions, which are things, systems, or procedures that, in general, offer new ways to accomplish things or new technical solutions to problems. Inventions must be original, novel, and non-obvious (i.e., contain an innovative step) in order to be patented. All technological innovations, whether processes or products, are eligible for patent protection as long as they are novel, have a practical industrial application, and entail an inventive step (Maskus, 2000).

The process of converting research findings into a strong patent is what is meant by "patenting." The research is best tied to the patenting procedure. In order to safeguard their discoveries, inventors should constantly consider the market's competitive climate (Junghans, Levy, 2008).

The following rules apply when an innovation is the object of protection when an invention is protected through a patent. To qualify for a patent, an invention must be completely original, the subject of an inventive action, and useful in industry. The following are not covered by property defense: exchange of data, software applications, ideas related to science, algorithms, creative works, sport regulations and approaches, and aesthetics processes (Jakl, 2011 a).

To obtain a patent for a product, must meet the following criteria:

- The original author or their attorney,
- co-inventors characterized by their role in the development of the idea,
- In the event that the organization whom received the invention requests this privilege within a certain timeframe.

The submission of a patent application starts the process for awarding a patent. All legal requirements must be met in the application, and each use is restricted to a single innovation. Proposals have been recorded with the Office of Industrial Property of the Czech Republic in

Prague. Czech inventors are likewise welcome to apply to this institution for both European and foreign brevets.

After registering, the patent application process continues and may result in:

- application being declined
- putting an end to the application process
- The process of issuing and publicizing patents

At the same day it receives notice of being granted, a creation documentation become legally binding. Twenty years is the maximum duration for a granted patent, and the requirements dictate the extent of protection (Jakl, 2011 a).

4.8 Trade Mark

A trademark is a distinguishing symbol, design, or expression that links particular goods or services to a particular person or business, setting them apart from those of other businesses. It takes distinctiveness to defend a trademark. The word "trademark" applies to any phrase, title, icon, or item used, either singly or in mixture, by any individual or business to define and distinguish their goods from those manufactured or distributed by competitors and to indicate where the goods are created, particularly a distinctive item (Janis, 2013).

During Henry III's rule in England in 1266, the first trademark legislation was created, mandating that all bakers use a distinctive mark for the bread they sold. In the late 19th century, the first trademark laws of today were created. The world's first comprehensive trademark system was enacted in France in 1857. The system was altered by the Trade Marks Act 1938 of the United Kingdom, which established an examination-based procedure, allowed registration based on "intent-to-use," and established an application publication mechanism. A consent to use system, a defense mark system, a non-claiming right system, and "associated trademarks" were among the

other innovative ideas included in the 1938 Act, which used as a model for similar laws in other countries (Wikipedia, 2013).

Groves gives an example explanation a trademark in the Trade Mark Act (EUR-Lex, 2015): “Any sign capable of being represented graphically which is capable of distinguishing the goods or services or one undertaking from those of other undertakings” (Groves, 2011).

The 1957 Nice Convention created the 45 classifications that make up the Nice Classification (NCL) for corporations. Materials and services are categorized into classes 35 through 45 and 1 until 34, respectively. Class 25, for example, includes accessories including boots, costume and clothes. Instances of services that fall under Class 41 include athletics, recreational activities, guidance, and studying. The petition for an association trade mark ought to indicate the items or supplies that fall within each category's associated set of criteria.

Often, a company's greatest belongings are its trademarks. Visitors can identify businesses and their items thanks to trademarks. It distinguishes the brand's offering from competitors. It makes perfectly reasonable to safeguard it as a result.

Enterprises operating inside the European Union have the option of establishing their trademarks either in their country of origin or by registering a community trade mark (CTM) with the Bureau of Harmonization in the Internal Market (OHIM), which is acknowledged throughout the entirety of the EU. Effortless authentication, available only in a particular tongue, represents one of the benefits of community trade marks (CTMs). It is also possible for CTM to offer its owner exclusive rights in all of the present and future territories of the European Union (EU). Because of the trademark's legal status in the EU, more than fifty hundred million individuals have possession of it.

It is possible to register six distinct sorts of brands that can be entered, as defined by EUIPO:

- Work mark

- Figurative mark
- Figurative mark containing word elements
- Shape mark
- Shape mark containing word elements
- Position mark
- Pattern mark
- 3D mark
- Color (single) mark
- Color (combination) mark
- Motion mark
- Multimedia mark
- Hologram mark
- Sound mark (Euipo, 2016).

The European Union Secretariat Gazette published the legislation of the European No. 2015/2424 of the European Parliament and Council, which modifies the Europe-wide patent legislation. The preceding regulation will become operative on Wednesday, March 23, 2016. Although the Community trademark will henceforth be referred to as the European Union brand, and the agency will be renamed the European Union Intellectual Property agency (EUIPO). The European Trade Organization (EUIPO) licenses 120,000 trademarks annually (Euipo, 2016).

4.8.1 Trade Mark Protection

Upon registration, its owner is granted a limited monopoly that allows them to use the trade mark in connection with the promotion and sale of goods of the type(s) for which they are registered. Distinctive signs, however, are not seen as achievements that are deserving of protection as such, unlike inventions or artistic works; rather, the basis for protection lies in their ability to transmit information that enables consumers to make informed decisions. They condense enormous volumes of data into incredibly brief periods of time and space (Dinwoodie, 2008, p. 13).

4.8.1.1 Theory of Search-Cost

Giving some people the right to own property entails social costs, especially when that usage is for the common interest thus the law should balance competing interests. Economides contends that trademarks facilitate and enhance consumer decision-making, as well as their creation of incentives for businesses to make goods with attractive attributes even when those qualities cannot be seen before purchase, are the main justifications for their existence and protection. The "core rationale" for trade mark protection can be summed up as this (Economides, 1988).

Trademarks, like money, facilitate commerce. Consumers can use trademarks as quick indicators rather than having to research each possible purchase's features. Trademarks make it easier for consumers to return to earlier successes and steer clear of less successful products. Thus, the brand name lowers consumer search expenses from an economic standpoint. The primary prerequisite for trade marks to fulfill their economic function is the incapacity of competitors to use confusingly identical indications. The primary goal of trade mark legislation has been to stop consumer confusion and market deceit ever since it was established (Alexandra, 2010, pp. 203,204).

Trademark law does not, however, ostensibly eliminate confusion for the sake of doing so. Due to the monopoly, a business owner is also guaranteed to have a distinctive mark that may perfectly capture his reputation in the eyes of customers. Trademarks that are evaluated from a utility perspective improve social welfare and maximize the common good. Typically, trademarks are subject to unreasonable discrimination despite the fact that they have economic and social significance.

Trademarks' advantages in lowering consumer search costs depend on the manufacturer of the goods maintaining a constant level of quality over time and among customers. This means that a trade mark gives customers a trustworthy basis for comparing marked goods from a particular undertaking to their personal experiences in the past and to other information obtained via the study of marked goods. Here, it's important to highlight that few consumers are aware of or

concerned with the owner of the trademark. It's important that they connect the mark with a specific, albeit anonymous, source. The trade brand becomes, in their minds, a sign of constant quality, whether it is good or poor. As a result, the buyer is willing to pay extra for this consistency assurance because he anticipates getting the same satisfactions from using the goods. Trademarks gain reputation and goodwill via this process (Kamperman, 1993, pp. 406,407).

According to George, brand names allow customers a way to take legal action if a product's quality falls short of their expectations. Thus, producers are encouraged to spend more money on exceeding customers' expectations. The owner's incentive to get a return on this investment also contributes to the quality assurance's driving force. The corporation will be more dedicated to producing high-quality goods as its brand reputation grows (George, 1970).

Trademarks are said to have a "self-enforcing feature" by Landes and Posner. Consumers and businesses both know they won't be taken advantage of when they are protected by the law, allowing them to further invest in their goodwill with the confidence that no one else will steal it (Landes, Posner, 1988).

4.8.1.2 Brand protection under trade mark law

Trademarks can be used for much more than only identifying the source of goods and services today, as is often understood. They are now considered assets in and of themselves, with the potential for profitable commercial exploitation, introducing a property-based justification for their protection. They are worthless unless the owner can use them to defend himself from competitors' opportunistic tactics.

A company's brand is frequently a sizable component of its value and increasingly its main source of income. Companies use sophisticated marketing strategies and are moving away from manufacturing "things" and toward selling "experiences" that connect with customers on a personal and lasting level. Trademarks are essential tools for delivering marketing messages that create distinctive brand identities. A lot of marketing communication focuses on psychological,

social, and cultural connections between a product and a person rather than on qualities like price or quality. The brand is frequently seen as existing independently of the useful product. The magnetic aura that resembles a human being surrounds the actual thing thanks to the former (The Economist, 2001).

Due to the distinctive information they convey, trademarks have the ability to change how customers behave and interact with products. Based on emotional or psychological factors, consumers may believe some trade-marked products to be superior to others of the same kind. These trademarks are more "salient" than others, or stick out more than others. This fact consequently has the potential to increase or stimulate customer demand for branded goods, leading them to command higher prices. This is the sign that a trade mark has evolved into a brand. Consumers in industrialized economies pay a higher price, but in exchange they receive a product that is personalized to their preferences and a larger selection of products (Chronopoulos, 2014, pp. 256-276).

The brand was referred to in O2 Holdings as the product that customers "choose to buy":

“Many decisions about brands are made by customers emotionally rather than rationally. Successful brands create a relationship of trust between the customer and the brand. Their value lies in brand awareness; perceived quality; brand association and loyalty” (O2 Holdings, 2006).

The "hedonistic" attraction and symbolism that marks convey to others frequently influence consumers' purchasing decisions. Consumers compete with one another for more admiring glances. The traditional methods of trade mark protection need to be reconsidered in light of this shift in marketing. The legislation governing trademarks has to be updated to safeguard more than only their capacity to serve as origin indicators for goods and services (Oddi, 1986).

The idea to broaden trademark protection was first put forth by Schechter, who claimed that the modern trademark's value lies in its ability to sell goods and services, and that the extent of its

protection is based on how distinctive and distinct from other marks it is thanks to its owner's efforts or ingenuity. Even in the absence of customer confusion, trade mark owners want more protection, claiming it would be unjust for someone else to profit from their efforts in creating the brand name. On the erroneous idea that they had an economic relationship with a rival, all of their investment might be lost (Schechter, 1927).

According to McKenna, the main goal of trade mark law is to safeguard a mark holder's interests by prohibiting competitors from dishonestly diverting his business. This strategy is consistent with the idea that trade marks in Europe protect the interests of distributors, manufacturers, and consumers equally (Mckenna, 2012).

Swan contends that the market has entered a new era when quality is typically taken for granted as a property of the items. Marketers therefore strive to meet consumer need for value propositions that address a variety of demands. Consumer expectation protection has been a key tool for developing, establishing, and securing increases in trademark rights. The primary function of trade marks, which is to identify the commercial source of products and services, has remained mostly consistent, but the protection's scope has grown to mirror how consumers increasingly view trademarks. The improvement of consumer choice now better serves the public interest (Swann, 2006).

To sum up, the net welfare balance is far from being clear-cut and much depends on the theoretical framework used. The more traditional approach is unwilling to accept trade mark protection that goes beyond the typical restrictions on preventing customer confusion. The greater protection of the quality, advertising, and investment trade mark functions is welcomed by the more liberal perspective.

4.9 Industrial Design

Industrial designs are protected in the Czech Republic by Law No. 207/2000, which is about the protection of industrial designs. The laws 59/2005, 221/2006, 501/2004, and 474/2004 have all revised this legislation. Regulation EC No. 6/2002 of December 12, 2001, which governs collective concepts, is in effect inside the European Union.

In essence, manufacturing design is the process of developing and producing produced things. Its primary aim is to give consumers the best possible value, functionality, and attractiveness from its goods. Manufacturing designs aim to offer an approach to design for an acceptable solution that takes designing usefulness, and visual elements into account in addition to economic, social, and financial issues (Hespe, 2007).

Like with other intellectual property, firms may decide either to defend their creativity only in the country where they perform operations or across the EU when it comes to industrial designs. If the company decides to maintain this design just within the nation, it is solely allowed to produce goods with it regardless of the nation of application. Nonetheless, they are free to copy it in all other member states of the EU. The guarantee period expiring, the service fee not being paid, and the proprietor giving up ownership are the three primary reasons why an industrial design is terminated (Jakl, 2011 a).

5. Institutions

The focus of numerous national and international organizations on intellectual property is found all across the world. The national intellectual property office is often separate in every nation. The ones from abroad have a good reputation. The most significant ones are some of those that are listed below.

Every one of the aforementioned organizations is able to support an inventor in safeguarding their patents. The following list of national and international organizations addresses IP certification and defense at the national, European, or global levels.

5.1 Czech Republic's commercial property office

The primary federal agency for intellectual property enforcement in the Czech Republic is the Industrial Property Office. The executive officer, who leads it, is chosen by the authorities. It's been around for a while; the Patent Office, the modern-day ancestor of the Industrial Property Office, was established. These are the primary jobs:

- Sharing industrial property information including global and foreign patent authorities,
- Determine any entitlements to use for business purposes and actively engage in negotiations with various governmental entities,
- It renders decisions about shareholder rights in court cases,
- Completes assignments in compliance with patent agent rules,
- Establishes, preserves, and makes available a global library of technical publications,
- Ensures adherence to global treaties and protocols concerning intellectual property, among which the Czech Republic is a contributor (upv, 2015).

As technology and innovation progress, so do the operations of the Industrial Property Office. As a major governmental organization, the Industrial Property Office is also the primary facilitator and guardian of the Czech Republic's ratification of worldwide intellectual property treaties. The development and maintenance of ownership of intellectual property is an additional. The final, but no less significant, function is providing out resources and acting as a specialized reference center (upv, 2015).

5.2 Intellectual Property of International Organization

As stated in its own description, the World Intellectual Property Organization (WIPO) is "a worldwide platform for intellectual property solutions, policymakers, understanding, and coordination." The contract establishment of the world intellectual organization on April 26, 1976, was done about the intention of guiding the development of intellectual property. The federation currently consists of 188 territories (WIPO, 2015). The headquarters of the world intellectual property organization are in Switzerland.

Each year, the World Intellectual Property Organization co-publishes the index known as the Global Innovation Index which assigns a country's economy a ranking based on its level of accomplishment and creative tendencies. GII is a top source of innovation right now. According to the 2015 GII research, Sweden, the United Kingdom, and Switzerland are the top three most advanced nations in Europe (Cornell university, Insead, and wipo, 2015).

Founded in 1893, the National broadening Learning Statistics Bureaux for the Defense of Intellectual Property (WIPO) in France was tasked with overseeing the provisions stipulated by the Berne Convention for the Preservation of Written and Visual Works and the Paris Convention for the Protection of Intellectual Property.

5.3 European Union's Intellectual Property Organization

Anyone interested in learning more about intellectual property will find a wealth of material on the EUIPO portal. They include links to information from other places as well as materials with enrollments and design components in Europe. Every single member country's legal guidance is accessible, including other crucial data might aid an IPR holder in establishing their right.

EUIPO is the new brand for the entity that used to be referred to as OHIM, or the Office for Harmonization in the Internal Market. The European agency responsible for managing EU intellectual property is the EUIPO. The company's headquarters are in Alicante, Spain.

Submissions for design registrations were accepted in 2004 and trade mark requests were accepted in 1996 by the EUIPO (OHIM), which was founded on September 1st, 1994 (Euipo, 2016).

5.4 The International Organization of Trading

Apart from intellectual property, the Global Trade Association also addresses various other issues. It draws in a far larger viewership. It's a corporation that opens for operations. They support governments in negotiating international accords and are in charge of establishing a framework for trading regulations. The administrative departments of each of the nations involved of the member countries get together, and their delegates frequently gather in Geneva. (wto, 2016a).

Geneva, Switzerland serves as home to the headquarters of the World Trade Organization, also known as WTO. It was established on January 1st, 1995. The World Trade Organization (WTO) had 162-member nations as of November 15, 2015.

The Worldwide commerce Organization's primary duties are:

- Managing trade deals with the Worldwide commerce Organization,
- Industrial Negotiations the forums,
- Resolving disputes involving commerce,
- Respect for local commerce ordinances,
- Technology guidance and support for developing countries,
- Collaborations with foreign groups (wto, 2016b).

Diverse forms of intellectual property are covered by it, such as hidden information, designs for products, inventions, geographic areas, confidentiality and associated freedoms, brand names, as well as incorporated network layout drawings. The Worldwide commerce Organization is responsible for overseeing the TRIPS agreement, which became effective on January 1, 1995, and is recognized as the most extensive multilateral agreement concerning intellectual property. Three main components make up this agreement: expectations, supervision, and resolving disputes.

Specifications determine the bare minimum protective measures that every individual state must provide. The penalties set of principles addresses implementing IP recourse through domestic processes (wto, 2016c).

6. Unjust competitiveness

"Unjust and frequently illegal attempt to gain unjust edge over competitors using untrue illegitimate or corrupt promotional activities" is the definition of unjust competition. Examples of unjust competitiveness involve the sale of goods underneath expenditures forging imitation goods, disposal goods, copying, misleading advertising, spreading rumors, and violating trade secrets or trademarks (Business, 2015).

Commercial operations that are prohibited by certain national laws are known as unfair competition. A legal challenge disregarding the offending party may be brought by someone who has been harmed by corruption. However, protection against injustice contest is mandatory under the Paris Convention (Groves, 2011).

The right to stop unauthorized copying as a whole is based on federal statutes, whereas the right to stop or get compensation for the sale of copies in an unjustly competitive manner is a common law right that, in general, is thought to have been created by the relevant states. When allegations of copyright infringement and unfair competition are combined into a single cause of action that falls under the purview of the federal court system, jurisdictional issues regarding unfair competition immediately surface, as well as the issue of which law the federal courts should apply. According to the World Intellectual Property Organization (WIPO), the self-regulation system has not been effective in combating unfair competition. As a result, in order to successfully avoid injustice, self-regulation must be complemented with a legal enforcement mechanism (wipo, 1967).

Acts of rivalry that are considered unfairly competitive are closely related to intellectual property. In addition to the national laws of each nation that deal with this subject, the Paris Convention

(1883) is enforceable in all of its signatory nations. Article 10 bis of the Paris Agreement is specifically pertinent to unfair competition (wipo, 1979).

The following are examples of unjust competitiveness as specified by the regulation:

- Deceptive promotion,
- Equivalent advertising,
- Incorrectly identified items and offerings,
- Being aware that there might be misunderstandings,
- Relying on the standing, merchandise, or solutions of an opponent,
- Impropriety,
- Districting pursuits,
- Violating secret contracts,
- Endangering one's own and client's well-being.

Parties whose rights were violated upon by injustice contest may bring the following claims against the infringer:

- Avoid attempting to fix the error,
- Pay out equitable compensation for any losses incurred and refrain from undue gain.

European Union legislation provides citizens in the EU with additional protection beyond that provided by state laws. The acts that are prohibited in the internal market as a whole are outlined in Directive 2005/29/EC of the European Parliament and adopted by the Council on May 11, 2005, regarding unjust competitiveness to purchaser activities. Considering some groups of individuals are more susceptible to merchandise policies than others, the EU decided to protect purchasers, either because of their credulity or mental or physical incapacity, or because of their age. As a result, Prior beforehand, throughout, and following a business exchange, this guideline protects the financial interests of customers.

As explained by the European Commission, strategies that strictly align with this:

- Disregard the instructions to guarantee an expert inquiry and;
- Possess a substantial potential to influence the typical a consumer purchasing patterns.

The Directive 2005/29/EC cited above categorizes deceptive acts into two groups:

- deceptive behavior
- misleading omissions

Any actions that have the potential to deceive the average consumer or hold faulty or fraudulent information are considered deceptive, even if the details provided is authentic. He wouldn't have decided to make the business decision if this had not happened. One example of such an activity is:

- the presence or qualities of the products,
- the presence or characteristics of the good,
- the main characteristics of the product (e.g., benefits, location of origin, and ease of use),
- The amount of commitment made by the supplier,
- The price or the existence of a certain financial benefit,
- The requirement for upkeep or repairs,

In contrast, misleading omissions are described by the European Commission in that "these arise when substance details that a typical consumer requirement according to the its proper context, to take an informed transactional work choice is missed or presented in an undetermined, incomprehensible, confusing, or unexpected behavior and therefore leads (or might cause) that consumer to make a decision concerning buying something they ordinarily would not have been able to."

7. Protection of Creative Works

There are many IP protection categories offered. Using references to agencies, the protection problem has been settled at the national level. Protecting intellectual property rights in the EU and elsewhere is becoming more and more important for a variety of open economy businesses. The role that immigration and right proprietors play in working together to protect intellectual property rights is covered in greater details in the following paragraphs.

7.1 Application of the regulation on IP in the Czech Republic

Two distinct categories exist for legal mechanisms for protecting intellectual property rights:

- Exclusive Methods
- Open Channels

Exclusive Methods Individual disputes are settled through legal channels. One way to do this would be to file a Municipal Court suit. The result of this action might be the complete eradication of counterfeit goods, the reimbursement of monetary losses, or the elimination of the offending activity. These conclusions are supported by the ordinances pertaining to intellectual property, the Contractual Code's provisions for unlawful rivalry, company identities, arrangements, and financial connections and the Civil Code's provisions regarding reparations and unlawful advantage (Jakl, Ladislav, 2011b).

Recommendations made by certain institutions solve exclusive methods. That is:

- The office for industrial Property establishes the level of secrecy and starts the procedures for invalidation and unlawfulness,

- Other official departments, like customs are in charge of overseeing activities underneath the radar, such stopping the introduction of fake products into the market for general sale or damaging them. Involvement of the police in violations (Jakl, Ladislav, 2011b).

8. The regulatory structure inside the European Union

The initial goals of European integration were primarily economic in nature. Jean Monet wanted the economic unification of opposing European nations to the point that it would be nearly impossible to launch a second World War in Europe. However, since then, the continent has come together even more. The European Union provides its member countries with legislation in addition to a single market, customs integration, and directives.

The duties and obligations of the European Union and its member states are delineated in the Lisbon Treaty. The conventions that regulate agreement have never issued a declaration like this before. Three primary categories were identified by the agreements on the functioning of the European Union that are capabilities: unique, exchanged and encouraging abilities. This explanation is important and serves an important purpose, even though it does not result in a major transfer of capabilities. There were many misconceptions and problems with previous national and European responses. The Lisbon Treaty enhances assurance and openness. Due to this continuous Europeanization and globalization, which affects several industries, we include the following:

- Ultimate strength or special abilities are described in Article 3. Because of its special powers, the European Union can pass laws and other rules which are valid in [articular sectors. Therefore, Member states of the EU are restricted to carrying out these Acts unless the EU grants them permission to do so. Accounting legislation, industrial supervision, immigration strategy, fisheries mitigation, and within market competition are all featured (TFEU, 2020),
- Alternatively, and associated are mentioned in Article 4, which acknowledges that the EU and the member nations can jointly enact new legislation in these fields. Participants are only allowed to use their separate powers to the degree that the EU

opted not to use either of them. It covers, among other issues, policy on vitality, consumer safety, violence, ecological issues, and the expansion of the European Union (TFEU, 2020),

- Assisting strength and capacities article 5 TFEU, which means the EU can only act to assist, coordinate, and supplement. In this case, the EU does not have parliamentary authority to pass laws, encourage member state activity, or obstruct member state action. Healthcare for the public, youthfulness, socioeconomic, and sport policies, as well as legal defense, are some of these skills (TFEU, 2020),

8.1 Directive (EC) 2004/48

Established on April 29, 2004, Directive 2004/48/EC of the European Parliament and Council governs the preservation of intellectual property rights in the EU.

According to the article 288 TFEU: “a directive shall be binding, as to the result to be achieved, upon each Member State to which it is addressed, but shall leave to the national authorities the choice of form and methods.”

The origin of this recommendation is not coincidental. During the same year, the EU had its largest expansion to that date. Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia were among the nations that were operational on the first of May. This writer claims that even if this law does not standardize IPR structures, the current countries that belong to the EU must conform to certain fundamental criteria for protecting intellectual property rights. These nations have lax implementation of patent rights and oversight (Chaudhry, Zimmerman, 2013).

The harmonization of intellectual property protection in the European Union (EU) can be seen as having started with this act. Harmonizing national legislation is another goal, since it ensures that intellectual property will have the same level of protection across the board in the internal market. This regulation has established a few unified privileges at the regional level. Both of these are

acknowledged as Social interaction Standards and Social interaction Properties right away by the European Commission (EC) (Euipo, 2016).

As previously stated, the main objective of Directive 2004/48/EC is to guarantee a uniform level of protection throughout the European Union; nevertheless, there are several additional objectives as well. that are:

- promoting inventiveness and commercial viability,
- The protection of jobs in Europe,
- Avoiding tax losses and market instability,
- Protecting people investors,
- Ensuring the upkeep of the public's safety (Directive 2004/48/EC , 2004).

9. Customs

The process of European integration had wide-ranging effects on national laws, businesses with operations on the continent, and many other institutions. One outcome of this ongoing process is the development of shared customs among EU member states. The EU Immigration Unification has ensured that there are no customs charges at border crossings between the member countries. The other advantages are the uniform mechanism for tariffs applied to products received throughout the European Union (European Union, 2016).

Among their duties are:

- Put regulation into place to guarantee client protection, well-being, and the ecology,
- exercise caution when exporting sensitive technology that may be utilized to make radioactive or biological weapons,

- Approach the issue of infringement and replica products from two angles. Originally, they protect patrons' wellness and well-being. Another viewpoint thinking is the protection of individuals who work for legitimate firms,
- Watch out for those who bring large quantities of cash when they travel to make sure they aren't hoarding it or evading taxes,
- Help law enforcement and immigration officials combat coordinated criminal activity and terrorist activity, including the illegal immigration of persons, guns, narcotics, and pornographic content,
- Save wildlife at risk of extinction, such as insects, plants, and songbirds,
- Protect the cultural heritage of Europe.

The European Union reports yearly steady results, with China accounting for two thirds of products confiscated for alleged intellectual property rights violations. On the other hand, the method of delivery for counterfeit items is rapidly expanding; 70% of them are sent via mail or courier (European Commission, 2014).

This makes issues become apparent. On the other hand, maritime transportation slowly declines each year. This phenomenon can be explained by the high success rate of exposing fake goods using this mode of delivery (European Commission, 2015).

9.1 Collaboration between customs and those who have rights

In accordance with EU regulations, the owner of the intellectual property may request that immigration act if there is an allegation of infringement. Either national or EU purposes may be submitted for these initiatives. Each last for a whole year. For immigration observation purposes, which can be lodged for the Czech Republic or the EU as a whole, the point for discussion is the Immigration Administration in Hradec Králové, the Czech Republic. When it comes to items that are not under customs supervision, requests for market surveillance that includes consumer protection measures are subsequently delivered to the regional customs office. Customs has guidelines on how to properly submit applications and engage with them since they view this

cooperation as being crucial to protecting Intellectual Property Office (IPR) (European Union, 2017).

According to statistics, the number of applications has doubled over the previous ten years, demonstrating the companies' and right holders' active interest in IPR protection. You can find specific numbers in the graph below. Since 2007, the number of applications has increased approximately linearly each year. Taking effect January 1, 2014, the new Regulation (EU) No. 608/2013 mandates that every one of the requests with dates that expire in 2014 have to be updated with new ones. The most likely reason for the decline in requests is that certain legitimate owners were affected and chose not to file new ones. (European Union, 2015).

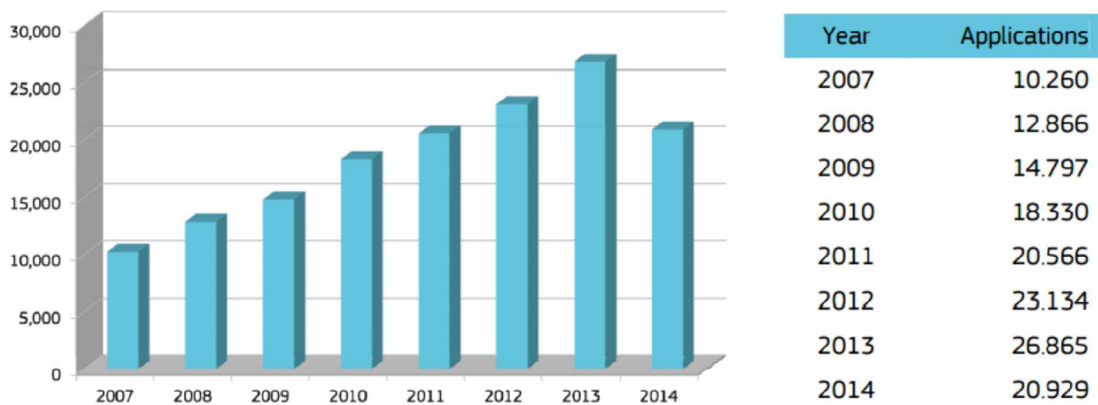


Figure 1: Application to customs supervision (years 2007-2014)

Source: European Commission. Report on EU customs enforcement of intellectual property rights: Results at the EU border 2014. European Union, 2015

2010 observed 79 112 instances of products seized by EU immigration, estimated to be valued 1,110,052,402. The ornaments and apparel at question in the above instances had a combined estimated worth of more than two hundred million euros. properties worth around hundred billion euros, wallets, and clutches, the equivalent of 94 million euros in gadgets, and 166 thousand euros

in sneakers (of all kinds). There were approximately 76 million more mobile phones and associated accessories. False cigarettes are almost worth 125 million euros. (Chaudhry, Zimmerman, 2013).

9.2 Interaction among customs agencies and copyright holders

The Council's Regulation (EC) No. 1383/2003 was repealed and new Regulation (EU) No. 608/2013 pertaining to the customs administration of intellectual property obligations was enacted by the European Parliament and Council in June 2013. The law has reinforced intellectual property security since it was put into effect on January 1st, 2015, and it is currently in force in all EU member states. The principal alterations resulting from regulations are:

- Amendment of mechanism for items accused of infringing intellectual property rights. Currently, without needing to file a lawsuit where the nature of the violation will be established, such things could be destroyed by customs control.
- A new method for more straightforward destruction of small quantities. If the IPR is violated and the right holder requests this course of action, it will be followed.

The EU guarantees that this new method would help tiny consignments reveal and destroy counterfeit items that are being sent by mail or courier services. As was discussed in the previous chapter, this mode of transportation is important. This new legislation is therefore both essential and beneficial (European Commission, 2016).

9.3 valuation of intangible and intellectual property

Throughout the entire process of protecting IP, understanding its worth is crucial. Though intangible, intellectual property often plays a key role in company operations. In a sense, it offers us an edge over other businesses. It is essential to differentiate among two distinct types of importance when evaluating intellectual property:

- Intrinsic value
- Exchange value

inherent worth the usefulness of an intellectual property or intangible resource to its holder can usually be considered. It may be defined as the overall usefulness during the life of an asset. But it could be difficult to accurately quantify the amount since the utility changes over time. Predicting potential revenue requires an understanding of the owner's choices and aspirations. It is more challenging to quantify intrinsic value since every entity has unique tastes and priorities that vary depending on its competitive edge, operational purpose, and other factors (Maly, 2007).

If an item is restricted in amount and has utilitarian value, it can be the subject of an exchange. Assets have alternative values. After that, it may be expressed in financial terms. The proprietor may put the object up for sale in order to determine its worth. The price will be set by supply and demand, providing there are other respondents offering. The exchange rate and the selling price of an asset should be equal in a perfect world. The problem lies in the fact that this intricate process of determining values does frequently accurately represent the asset's true value or selling price. Furthermore, the market's perpetual evolution causes the exchange rate to fluctuate as well.

According to (Maly, 2007), no hypothetical, perfect, or all-encompassing method exists to ascertain the exchange value for the reasons listed above. On the other hand, while estimating the exchange value, the accuracy and completeness of the information are critical factors that must withstand scrutiny.

There are numerous ways to determine the exchange value of an asset in practice. They have distinct input data requirements as well as varying mathematical tenets. Unfortunately, the majority of them are private because they fall under each valuer's knowledge domain. (Maly, 2007).

10 Conclusion

The focus of this diploma thesis was intellectual property rights in the EU. This thesis was developed in order to address two key questions: first, is the EU's legal framework appropriate? and second, what are the Which elements are the key drivers of the counterfeit products market? By assigning the surveys and utilizing relevant juridical studies, the goal was achieved. The comprehensive primary and secondary data that these approaches provided gave our diploma research a solid foundation.

Traditionally, confidential knowledge was not effectively protected. It took a lot of effort and time to successfully enforce intellectual property rights (IPRs). Counterfeiters now have an easier time seizing markets as global trade expands and markets become more globalized. The foundation of the European Union was one of the motivations for the dramatic improvement in conditions. Intellectual property owners must have improved terms for exploiting and protecting their rights under the general notion's requirements. In the past two decades, legislative agencies have issued several laws, regulations, and recommendations that have all changed the ecosystem's condition at the same time.

The European Union's (EU) policies on intellectual property protection were the focus of this degree's research. There was discussion of pertinent laws from the Czech Republic and the European Union. This portion of the discussion will entail a critical assessment of the conclusions and recommendations. Legal protection has improved during the past ten years on a positive note, according to an analysis of the legal environments in the Czech Republic and the EU, and these environments are starting to resemble one another. Almost all inventions have the ability to retrieve relevant data as well as IP certification and preservation. There is a growing convergence of legal surroundings and criminal justice systems across all EU member states as a result of the EC's inventiveness and implementation of law. The author thinks that overall, intellectual property rights and associated rights are quite well protected by EU law.

Nevertheless, there are still several areas that may use better. According to the author, Customs gives IPR holders the chance to collaborate, which might significantly help in revealing counterfeit

goods—a critical step. Information on customs is provided in Chapter Customs, including the necessity for IPR holders to submit their requests for particular surveillance. Using this application, which is legitimate for a year, the IPR proprietor may notify customs to check suspected goods. The products may be seized by customs if they can demonstrate that the consignment contains counterfeit or illegally obtained goods. The author thinks that companies and entrepreneurs that finance R&D need to be encouraged in general. These social organizations make it possible for mankind to gain from technological breakthroughs and life-improving innovations. The results, which are obtained from a thorough review of printed and online materials, as well as both primary and secondary information analysis, suggest that intellectual property owners may discover that defending their rights through consumer education is a successful strategy.

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Simultaneously, the accessible EUIPO or WIPO database demonstrates that judicial proceedings that are resolved typically include larger corporations. However, it is crucial that individuals and businesses follow by in order to protect their concepts, expertise, and other immovable property that comes from human creativity and entrepreneurship.

The EU is generally moving toward enacting as many protective laws as possible. There are still gaps, however, that allow these rights to be broken. As a result, it is critical to maintain and create the most favorable legal environment possible.

Studying each of the following sections makes it clear that the circumstances should improve for IPR holders. The EU works closely with IP offices and organizations, including customs. Future developments involving the unification of international bodies and regulations will be observed,

as they will likely lead to a breaking point in the quantity of counterfeit goods and a subsequent decline in their number.

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12 List of Table and figure

Table 1: Validity and origins of the effects of industrial rights protection