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CONTENTS

LEGISLATION ON ANTI-DISCRIMINATION IN THE PROTECTION OF HUMAN RIGHTS IN SOUTHEAST EUROPE

Zoran Filipovski, page 9-20

ABSTRACT

Anti-discrimination, ie, legislation to combat discrimination is an integral part of the legislation of the countries of Southeast Europe, especially in the countries of the Western Balkans. The integration processes of these countries are foundation for reforms in the rule of law, including the fight against discrimination. In this context, reforms undertaken in chapters 23 and 19, ie the judiciary and fundamental rights and employment and social issues, are aimed at harmonizing the laws of these countries with the EU legislation, which only suggests that legal protection against discrimination on gender, nationality, religion, sexual orientation or political affiliation is guaranteed by national laws in the countries of Southeastern Europe. In this scientific work will be presented the situation of human rights and freedoms in the countries of southeastern Europe, with a particular aspect of the cases relating to discrimination based on sex, religion, sexual orientation, with particular reference to political cases against discrimination, which is growing in the last period in this region. It will also be elaborated situations in which people who are victims of discrimination, because of lack of awareness about these social issues, rarely fail to complete the complex procedure of infringement granted to legal protection. Through the comparative analysis of the legislation of these countries with the legislation of the European Union, the reasons and factors wich prevent access to justice for victims of discrimination will be clarified.

Keywords: European Union legislation for the prevention of discrimination; political discrimination; reform processes in the countries of Southeast Europe in order to prevent discrimination.

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INTRODUCTION

Discrimination throughout history has had various forms in which it can be recognized, and in that context must be mentioned the discriminatory provisions valid in the United States in the 19th century, which allowed the segregation of the black population by limiting the corpus of their basic human rights. In this context, they were restricted to the right to participate in the elections, the right to work, which reduced the possibility of economic and social development. This type of systematic discrimination was an integral part of the apartheid policy in South Africa, which was abolished in the 1990s.

The most striking example of discrimination is the politics of genocide and the systematic destruction of a whole social group before and during the Second World War, victims of which were Jews, Roma, homosexuals, people with disabilities, and others. These examples show that discrimination is not only an individual phenomenon, but it can also receive wider, systemic dimensions. That is why many countries and the international community establish various mechanisms to combat all forms of discrimination, even when they appear in dimensions that are insignificant.

What will be the subject of elaboration in this paper and concerns the protection of human rights from all types of discrimination can not be accepted if it does not specify. From here discrimination in international and domestic literature is defined as the treatment of a person or group as separate, superior or inferior to the other, based on arbitrary criteria such as race, color, sex, language, religion, political persuasion or national and social origin. Racial discrimination always constitutes a violation of human rights, and is a distinction, exclusion, limitation or preference based on race, color, ancestor, national or ethnic origin which aims to distort recognition, enjoyment or performance under equal conditions, corpus rights and fundamental freedoms in the political, economic, social and cultural rights of man and citizen.

In some countries, besides these are listed other criteria for discrimination such as religion, political or other belief, social background, property, membership in trade union organizations, education, social status, marital

or family status, age, health status, handicap, genetic heritage , gender identity and expression, on sexual orientation (Law on Anti-Discrimination of the Republic of Croatia*)*.

Discrimination limits people's freedom. It limits the development of their abilities, self-determination and contributes to the development of a sense of humiliation, helplessness and injury. This situation adversely affects society as a whole, because discrimination hampers obstacles and prevents the development of individual talents, affecting productivity, competitiveness and overall economic development. Due to discrimination, social differences are increasing, which inevitably occurs state of disrupting social inclusion, cohesion and solidarity.

No society is immune to discrimination. Many people are exposed to a worse situation because of skin color, gender, sexual orientation, age, language, religion, health status, disability, education, financial status and for other personal attributes. The defrauding of their rights usually consists of unequal recognition, enjoyment and exercise of rights or the performance of duties in political, economic, social, cultural and other areas of social life (Neža Kogovšek and Brankica Petković**)**.

International law bans racial discrimination in a range of areas including education, health, and providing access to public goods and services. States have a positive obligation to prevent and punish any activities that are aimed at allowing racial discrimination, as well as to check their own legislation to no correlation with discrimination against ethnic groups living on their territory.

All of this suggests that discrimination, as a global phenomenon, has a negative effect on all aspects of life for the reason that leads to exclusion, marginalization and dehumanization.

Part of the scientific and expert public believes that the right to freedom from discrimination is a universal human right and defines it as an unacceptable and unjustified distinction of persons based on some of their characteristics.

2. CONSEQUENCES OF DISCRIMINATION

Victims of discrimination are pushed to the brink of society. Marginalization and social exclusion of certain groups, which often are passed generation, are direct consequences of discrimination. It has a negative effect not only on the discriminated person or group, but the whole society, because it causes imbalances and damage it.

Various seemingly harmless kinds of discrimination, often a foundation for the development of other, more serious forms of discrimination, and therefore society should be tackled at an early stage of the manifestations of this phenomenon. An illustrative example is apartheid, which began by dividing toward racial affiliation of the people, and then continued resettlement and certain areas, banning marriages and limit the transfer of property between members of different groups. Discrimination changed shape and became a segregation that was evident with the prescribed provisions on separate lines waiting for buses, individual seats on benches in parks, separate toilets and fountains. Thus, discrimination on the basis of race entered all the pores of social life.

What is essential is that the impact of discrimination has negative repercussions on social and economic development that can be far-reaching and long-lasting, and lead to an increase in chronic illnesses, depressive conditions and an increase in suicidal behavior in certain social groups (Neža Kogovšek and Brankica Petković**)**.

3. INTERNATIONAL LEGAL FRAMEWORK FOR PROTECTION FROM DISCRIMINATION

The onset of a systematic fight against discrimination is linked to the demands for the abolition of slavery and the demands for equal rights for women. This trend continues in the 20th century, with the movement for civil rights in the United States through feminist, gay and lesbian movements, as well as numerous actions and initiatives of civil society such as boycotts, protests and other forms of civil disobedience through which discriminated groups fought for equality.

Since its inception, the United Nations Organization as a fundamental international governmental organization has achieved visible results in

setting legal standards for the protection of the corpus of secular freedoms and human rights on an international scale. Bearing this in mind, the principle of equal treatment and the right to non-discrimination constitute the foundation for this intergovernmental organization and are incorporated into the most important of its documents, such as: The Universal Declaration of Human Rights; The UN Convention on the Elimination of All Forms of Racial Discrimination (CERD) and the UN Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW); The International Covenant on Civil and Political Rights; International Covenant on Economic, Social and Cultural Rights; Convention on the Rights of the Child, as well as the Convention against Torture and Other Cruel, Inhuman and Degrading Treatment or Punishment (Analysis of the Mechanisms for Prevention and Protection against Discrimination in the Republic of Macedonia, 2012*)*.

The first article of the Universal Declaration of Human Rights states that "all human beings are born free and equal in dignity and rights". The principle of equality is also incorporated in the provisions of Articles 2 and 7 of this Declaration: „*All firsts and slaves mentioned in this Declaration belong to all people, regardless of their differences, as follows: race, gender, sex, language, religion, other political or abusive, social or other social, personal, rational, or other status"*, ie article 7, *"All people are equal before the law and all are entitled, without any discrimination, to equal protection by law. Everyone is entitled to equal protection against any discrimination which is inconsistent with this Declaration and from any incitement to such discrimination".* Its universality is reflected in the fact that it is the foundation of increasingly international, regional as well as national treaties dealing with the protection of human rights and freedoms.

Confirming the commitment of the United Nations to protect discrimination is the UN Convention on the Elimination of All Forms of Racial Discrimination (CERD) and the UN Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). In the provisions of this document through Article 2 "*Member States condemn racial discrimination and commit themselves by all appropriate means and without delay to implement policies that aim to abolish all forms of racial discrimination and to promote understanding between all races"*

this intergovernmental organization substantially advocates the elimination of racial discrimination in all its forms.

The protection of human rights and freedoms and the suppression of all forms of discrimination through the provisions of the Articles of 1966 of the International Covenant on Civil and Political Rights are made possible through the protection of civil and political rights. Article 2 reads: *"Each State Party to the present Covenant undertakes to respect and guarantee the rights recognized in the present Covenant to all persons within its jurisdiction, without prejudice to any grounds, such as race, color, sex, language, religion, political or other belief, national or social origin, property, birth or other status", the principle of non-discrimination, is further addressed in Article 26 of the Covenant, which states:" All persons are equal before the law and are provided without discrimination the right to equal protection before the law. To this end, the law will prohibit any discrimination and guarantee to all persons equal and effective protection against discrimination on any grounds such as race, color, sex, language, religion, political or other belief, national or social origin. , property, birth or other status".* Some other articles such as Article 7 (right to freedom from torture and other inhuman or degrading or degrading treatment or punishment), Article 16 (right to be recognized as a person before the law), Article 23 (right to form a family) and others, underline the importance of the right to liberty, dignity and equality of the people before the law.

This international document was signed on 18 January 1994, while the Optional Protocol to the International Covenant on Civil and Political Rights was ratified by the Republic of Macedonia on 12 December 1994. The 1966 International Covenant on Economic, Social and Cultural Rights is another instrument of the United Nations to promote and protect basic human rights. The importance of the principle of non-discrimination is explicitly emphasized in Article 2 of the provisions of this document, which stipulates that States Parties will take actions to ensure that the rights set forth in this international document are exercised without discrimination on any grounds such as race, skin color, gender, language, religion, political or other beliefs, social origin, property.

Unlike international documents that prohibit activities aimed at discriminating against certain human rights and freedoms, fundamental

documents or sources of European non-discrimination law appear in European Union Law and the European Convention on Human Rights (ECHR). Council of Europe; The European Social Charter; Council of Europe Convention on Action against Trafficking in Human Beings; Framework Convention of the Council of Europe for the Protection of National Minorities; Charter of Fundamental Rights and the EU Non-Discrimination Directive.

It must be acknowledged that a clear distinction cannot be made internationally with EU legislation in the field of protection against discrimination as all EU Member States are signatories to the UN human rights treaties, which contain prohibition provisions. on discrimination. All of these agreements recognize the protection against discrimination in securing, protecting and promoting rights.

It must be acknowledged that no clear distinction can be made between international and Union law on protection against discrimination because all EU Member States are signatories to UN human rights treaties, which contain prohibition provisions. on discrimination. All of these agreements recognize the protection against discrimination in securing, protecting and promoting rights.

The term "European non-discrimination legislation" suggests that there is a single European system of rules relating to non-discrimination. However, it is made up of different sources: law that focuses on the European Convention on Human Rights and EU law. These two systems have different origins, structures and goals, but although the two systems operate separately, there are numerous links between them. The Court of Justice of the European Union (CJEU) refers to the ECHR and the European Social Charter (ESC) as guidelines for interpreting EU law. Both acts are mentioned in the framework of the EU treaty: the provision of Article 6 of the Treaty on European Union (TEU) explicitly recognizes the ECHR as a source of inspiration for the development of fundamental rights in the EU, while the provision of Article 52 of the Charter the EU stipulates that the meaning and scope of the relevant rights of the Charter are the same as those laid down in the ECHR (although EU law may provide greater protection).

The Treaty of Lisbon contains a provision obliging the Union to accede to the European Convention on Human Rights, and amendments to Protocol 14 to the ECHR make it possible (*Handbook on European non-discrimination law, 2018).*

4. ANTI-CRIMINAL REGULATION AND MEASURES IN SOUTH-EAST EUROPEAN COUNTRIES

Anti-discrimination is enshrined in the constitution of the countries of Southeast Europe (SEE) and is enshrined in their substantive law. SEE countries face a reaffirmation of a strong focus on the "basics" principle and reform priorities in key areas of the rule of law, including the fight against discrimination. Concerning the priorities arising from the EU accession process, the SEE countries have implemented reforms to comply with the relevant EU legislation in the areas of judiciary and fundamental rights and employment and social issues. Accordingly, legal protection against discrimination on the grounds of sex, nationality, religion, sexual orientation and political affiliation is most guaranteed by national laws in the SEE countries.

In the Republic of Northern Macedonia, legislation on protection against discrimination also existed before codification of the legislation on discrimination and the adoption of the Law on Prevention of Discrimination. Today, apart from the existing anti-discrimination legislation, such provisions can be found in the Constitution and other national laws such as Law on Protection against Harassment in the Workplace; Law on Equal Opportunities for Men and Women, Law on Labor Relations, Law on Protection of Children; The Criminal Code; Law on Child Protection, Law on Political Parties; Law on Misdemeanors; Law on Civil Procedure; Law on the Ombudsman.

The National Strategy for Equality and Non-Discrimination on the Basis of Gender, Age, Ethnicity, Mental and Physical Disability is a strategic document that defines the goals, measures, indicators, key policy makers for promoting equal rights and equal opportunities in different areas of life, stakeholders and all stakeholders in the establishment of the principle of equality and non-discrimination in the Republic of Northern Macedonia. The purpose of this national document is to improve the status of the most vulnerable categories of citizens in society and to ensure continuous development in achieving equality and non-discrimination.

For the realization of the strategic goals, a Commission for Protection against Discrimination has been established, which first of all has to deal with possible cases of discrimination in the public and private sectors. Its core responsibilities are:

- *Act upon complaints, provide opinions and recommendations on specific cases of discrimination;*
- *Provides the complainant with information about his or her rights and opportunities to institute judicial or other protection proceedings;*
- *To initiate proceedings before the competent authorities for violations of this law;*
- *To submit an annual report to the Parliament of the Republic of Macedonia. Macedonia;*
- *To inform the public on cases of discrimination and take actions to promote and educate equality, human rights and non-discrimination;*
- *To monitor the implementation of this law, initiate amendments to the regulations for the implementation and promotion of the protection against discrimination.*

In the Republic of Croatia, the Law on Prevention of Discrimination was enacted in 2009, and it can be seen from the analysis that since then the case law has been insignificantly small and characterized by a small number of cases before the judicial authorities. This law specifically lists areas that prohibit any activity that would cause discrimination on the basis of race or ethnicity, color, sex, language, religion, political or other opinion, national or social origin, property status, membership in trade unions, education, social status, marital status, age, health status, handicap, genetic inheritance, gender identity, expression and sexual orientation and more. Discrimination has various manifestations that are incriminated in specific misdemeanor provisions in the Criminal Code: Violation of Citizens' Equality and Racial and Other Discrimination.

According to this law, in the Republic of Croatia the Ombudsman is responsible for combating discrimination, and in such cases victims of discrimination are obliged to report it to this or the Special Ombudsman. The Ombudsman can act on complaints about actions that have taken place since January 2009, and within its powers prepares cases with all the evidence and necessary documents and informs victims of discriminatory treatment of their rights and obligations and the possibility of judicial protection.

Article 21 of the Constitution of the Republic of Serbia establishes the principle of equality whereby it is emphasized that everyone is equal before the Constitution and the law and that everyone has the right to equal protection without discrimination. According to constitutional provisions, any discrimination, direct or indirect, on any grounds, particularly on race, sex, nationality, social origin, birth, religion, political or other opinion, property status, culture, language, age, mental or physical disability.

Prior to the enactment of the Law on Prohibition of Discrimination, the Republic of Serbia had adopted the Law on Protection against Discrimination of Persons with Disabilities, and three years later in April 2009, the Law on Prohibition of Discrimination was adopted. The Law provides successful and effective protection as well as prohibition of discrimination in the legal system in the Republic of Serbia.

Unlike from other countries in Southeast Europe and the Western Balkans in this law is inserted and hate speech as a ban on expressing ideas, information and opinions that incite discrimination, violence and hatred against a person or group of persons because of their personal characteristics . In this context, the provisions of the law prohibit any act aimed at harassment or torture aimed at violating dignity and creating a hostile and humiliating atmosphere.

This legal solution also covers special cases of discrimination related to discrimination in the proceedings before the public authorities, discrimination in the field of labor disputes, discrimination in the provision of public services as well as use of public facilities and premises, prohibition of religious discrimination, discrimination. in the field of education, sex discrimination, discrimination of children and discrimination on the grounds of sexual orientation.

Victims of discrimination for Protection of equal rights can turn to the Equality Trustee as an independent, public institution that seeks to protect citizens from any form of discrimination. It is a particularly independent and impartial body tasked with co-ordinating activities related to the prohibition of discrimination and has the authority to impose appropriate measures on the authorities and persons carrying out acts constituting acts of discrimination.

CONCLUSION

From the analysis of the legislation of the EU member states, as well as those with candidate status belonging to the Western Balkans region, can conclude that they have similar legislative solutions for protection against discrimination. The protection system in most countries is similar in that citizens are not able to exercise their rights as victims of discrimination without legal action before the Ombudsman and the courts.

There are two levels of protection against discrimination that institutions can take. It is about protecting employees in the institutions against discrimination, and the second one about protecting the users of the services or services of the institution / company against possible discriminatory behavior of employees.

In the Republic of Northern Macedonia the Ohrid Framework Agreement is a foundation for resolving discrimination on the grounds of ethnicity, but awareness of other forms of discrimination is not very high.

To overcome this problem, which is not very different in the Western Balkan countries, even in some of the countries that are almost EU member states, the need to promote the informational and educational role of the media is essential. Only socially responsible, accessible and objective media are necessary to improve the level of social inclusion and improve the situation of discrimination in the Western Balkans.

Only sensible and inclusive media can become important social actors in the fight against discrimination. To achieve this, it is necessary to replace the sensationalist approach with socially responsible ones and to constantly promote the idea of human rights and equal opportunities for all citizens.

It must be acknowledged that the continuous capacity building of the institutions responsible for preventing and protecting against discrimination, as well as the full specialization and professionalism of quasi-judicial institutions and courts, is essential for achieving effective protection against discrimination.

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FOLLOW THE CROWD WITHOUT CONSIDERING WHY: PASSIVE FOLLOWERS IN ORGANIZATIONS

Kalina Sotiroska Ivanoska , page 21-28

ABSTRACT

The concept of followership, the identification of styles of followership styles and the structuring of power in follower-organized organizations are relatively new paradigms, as the point of view is that followership is an influential factor independent of leadership. This study is concentrate on passive followership style among employees in the organization. The main features of passive followers are listed. Lastly, the practical implications of moving from passive to exemplary followers are given

Key words*:* followership, passive followers, leadership, organization

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INTRODUCTION

Despite the increasing interest in the follower and the followership over time, appropriate and clear definitions cannot yet be identified. The definition of followership and follower evolves as the number of studies focused on the concept of followership increases.

According to Shamir (2007) in the academic literature there are five different views on the relationship between leader and follower. From a standpoint of followers, they are seen as recipients of the influence of the leader, which means that the followers do not play an active role in the leadership process; they are only influenced by the leader's behaviour. Followers are then seen as moderators of the leader's influence. Therefore followers with their abilities, attitudes and motivations moderate the influence of leaders. According to the third way of looking at followers within literature, followers serve as a substitute for leadership so that followers' abilities, motivation, and norms can eliminate the need for leadership, providing the necessary guidance, motivation, and support. The fourth view identifies followers as constructors of leadership, which include three different aspects of leadership creation: leadership romance, when followers attribute power to leaders to establish control and understand the environment, then psychoanalytic product theories according to which leadership of projection and transfer to followers, with leaders symbolizing a father, mother, or other powerful figure, which reduces anxiety and provides psychological support to followers. This group also includes social identity theory, where the development of a leader's charisma is linked to the group's prototype, and the leadership position is attributed to the one who exhibits the most typical group behaviour and characteristics. In the fifth way, researchers view followers as leaders. These include all approaches that disagree with the distinction of leader and follower; hence leadership is not a role but a function or activity that can be performed by any member of the group or organization. A radical view would be that everyone could be both a leader and a follower, while a milder view would be that the leadership of the group could rotate with each member depending on their skills and needs.

Seeking appropriate alternatives to negative connotations of followers, most often authors use the terms partners, participants, and collaborators (Uhl-Bien, 2006). The term constituent or component is commonly used by authors who analyse leadership in a political or micro politic context

(Birnbaum, 1988; Eddy, 2010; Gardner, 1990; Glasman & Heck, 1996). Although these authors strive for political correctness, many authors define the term follower as a neutral term. The term subordinate, Yukl (2006), is used to denote the existence of a formal authority of the leader over those under his influence. Since the early eighties of the twentieth century, the term followers has become increasingly used as a synonym for subordinates, a breakthrough from the traditional managerial discourse of supervisor-to-subordinate. However, the term subordinate is still used, as in Northouse's book (2008), in the index of notions for the term follower it is written see subordinates.

The main question posed by twenty-first-century organizational psychologists is not how leaders and followers differ, but how leadership models can be reformulated to treat all members of the system, both leaders and followers (Hackman & Wageman, 2007).

Traditionally, leaders have been identified as the creators and initiators of renewal and change, while followers are only implementers (Avolio, 2007).

Hollander (1974; according to Baker, 2007) explains the view of followers in the seventies of the twentieth century as "non-leaders ... essentially passive remaining category". Baker (2007) describes the general belief that followers simply obey orders. A similar view holds Frisina (2005; according to Hoption, Christie, & Barling, 2012) that followers are people who lack ambition and motivation. Alcorn (1992) presents followers as sheep subordinates who are unimaginative and forever stupid. Berg (1998) states that participants in his leadership and follow-up workshops in the early nineties of the twentieth century used the words "sheep", "passive", "obedient", "servants", "lemmings" (people without their own). He attributes these negative associations to organizational and psychological humiliation of the follower's role.

Carsten & Uhl-Bien (2012) note, followers are active participants in the leadership process, emphasizing their essential importance in creating leadership. In their research, they have attempted to assess the extent to which followers see their role as partnering with leadership, identifying and solving problems, and bringing forward new and creative ideas that improve efficiency. The findings of the research indicate that there is a positive relationship between beliefs about leadership creativity and communication upward, that is, communication with leaders, as constructive resistance and the right to vote. They define constructive resistance as a form of objection or disagreement, which involves

challenging the leader to seek involvement in the action and working together with the leader to devise a more appropriate plan. Further, they found that followers who had lower beliefs about productivity spoke more when they perceived a higher quality of relationship with the leader and perceived an autonomous work environment. Conversely, followers with stronger beliefs in productivity speak as much as followers with weaker beliefs in productivity, regardless of whether the context was favourable or unfavourable. With this research, the authors suggest that the basics of sequencing can be broadened by understanding the co-production of leadership.

Burns (1978; according to Northouse, 2008) noted that leadership discussions are sometimes defined as elitist given the power with which leadership relates, as well as the importance attributed to leaders in the leader-follower relationship. Leaders are no more important than followers, leaders and followers are two sides of a coin.

FOLLOWERSHIP TYPOLOGY

The first typology of followership is provided by Zaleznik (1965). Zaleznik (1965) proposes a typology of followers based on Freud's point of view, while attempting to develop Zaleznik's 2x2 model of followership, where he performed comparisons based on the dimensions of activity / passivity and dominance / submission. In this way, there are obtained four quadrants of this model, namely four types of followers: impulsive followers, compulsive followers, masochistic followers, and withdrawn followers. This typology of subordinates/followers is introduced both as a means of helping leaders better understand how to deal with followers, but also as providing direction to followers who aspire to positions of leadership.

Although Zaleznik provided the first typology, clearly the most cited early work on followership is that of Robert Kelley (1988; according to Uhl-Bien et al., 2014). Kelley identified followership styles based on an assessment that measures independent thinking and actively carrying out the role of the follower (Kelley, 1992).

People spend most of their time as followers, so it seems logical that their functioning as followers, for the most amounts, has an impact on job satisfaction. People who do their job well feel better overall in life than people who are not very happy with their job performance.

Kelley from his work experience has noticed the problem most employees are faced with, how to do their job best, following when they have little insight into, how to handle the role of follower? Accordingly Kelley designed a questionnaire to determine the style of followership and discover each follower's strengths, as well as identify the followership skills to be developed. Asking employees about followership styles, he received two types of answers, one that followers are a flock of sheep who do not know where to go, and the other that followers are an obedient flock of sheep who cannot say no to their leaders.

Examining employees with more detailed information, describing themselves, how they do their job, what makes them the best or the worst team workers, what sets them apart from others, what makes them happy or unhappy summarized the results and identified several styles of followership. Reveals a map of how to be a better apprentice, student, mentor, colleague and part of the team. The style of followership is based on two dimensions: active engagement, which ranges from activity to passivity and independent thinking, which ranges from independent, critical to dependent, uncritical thinking. The categories of follower styles are not personality traits but determine how the individual plays the follower role. In different circumstances, different sequences of styles can be used. Kelley defined five styles of followers: alienated followers, conformist, passive, pragmatic, and exemplary followers.

PASSIVE FOLLOWERS

Passive followers support leaders, their judgment and opinion, take on activities only to which the leader instructs them. They work under the supervision of a leader. Passive followers are part of a mass that agrees with the boss's mind without thinking. According to their personal efforts, they will never take them away, they think that they should not waste their time, energy and the ideas of putting them before the leader, because the leader will certainly do what he thinks and therefore the leader and the group should follow best. Passive followers lack initiative and a sense of responsibility, and they need someone to persistently directs them and tell them what to do.

Leaders believe that passive followers are such because of their personality characteristics. They describe passive followers as lazy, incapable, unmotivated and without ideas. There are extremely passive

followers who have the "herd instinct," that is, to be sheep. They cannot act without the leader, so they cling to him.

According to Kelley (1992), passive followers are those who have not developed the following skills. Whereas, another group of passive followers are those who do not want to be followers, and when they find themselves in the role of followers, they are confined to themselves and do not use their intellectual abilities. Passive follow-up is often a response to the leader's expectations. When a leader treats his followers as sheep, he will get what he expects and the followers will behave like sheep. When a leader sends a message to his followers that they will be guilty if they make a mistake, the followers will not experiment, not engage in new projects, express their views and ideas, do not want to take risks because they are likely to do mistake for which they will be responsible. So they will accept the leader to give orders and thereby bear responsibility.

Leaders, who take responsibility for everything, make decisions by themselves and persistently encourage, attract followers who fit into a passive role.

Dependent, uncritical passive followers are cast as being reluctant to voice personal reservations, remaining spectator-like and contributing little.

The passive follower is opposite of exemplary follower, is identified by a computed score that is low on independent thinking and low on active engagement. Passive followers do not provide voluntary or constructive efforts towards the organization's success (Li, Chiaburu, Kirkman, & Xie, 2013). Passive followers tend to tire out leaders and teams due to their lack of willingness to participate in workloads, and they are not actively engaging in their tasks (Kelley, 1992). Based on Gallup's (2007; according to Rook, 2018) definition of engagement, a passive follower would have minimal engagement or be not engaged. Moreover, based on Etzioni's (1961; according to Rook, 2018) types of involvement, the passive follower would be considered alienative in that the follower's intrinsic value for output would be dependent upon the leader and/or organization. The passive follower is the most commonly quoted perception of followership in that it has long been assumed that followers are passively molded by leadership (Hall & Densten, 2002; according to Rook, 2018). Organizations and teams agonize with passive followers due to the lack of autonomy in which they can work and its direct drain on personnel resources required to oversee the actions and productivity of the passive follower (Rook, 2018).

Moving from passive to exemplary style of followership

Passive followers can learn to be exemplary followers, but they need to understand that following someone is not just sending without thinking or being passive or just an observer. This means that they need to learn to invest in themselves and their abilities for the purposes of the organization, as well as to learn to think independently and critically.

Encouraging the implementation of followership development programs is encouraged, to take the initiative to establish or reinforce the existing values within the organization, to model the role of effective followers and to start the mentoring process. This study has significant implications for what the organization prefers from its employees, from passivity, subordination and obedience to proactivity, how co-leadership or partnership and how their styles of succession fit into the organizational climate. It is recognized that the organization should not only aspire to exemplary followers, but to consider the integration of followership and leadership styles

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APPLICATION OF THE COMPUTATIONAL GEOMETRY ALGORITHMS IN THE SOFTWARE PACKAGE MATHEMATICA

Aybeyan Selimi, page 29-46

ABSTRACT

Computational geometry is a branch of computer science that discusses algorithms for solving geometric problems. It considers such tasks as triangulation, building a convex hull, determining whether one object belongs to another, finding their intersection, etc. Computational geometry algorithms operate with the geometric objects with the point, a segment, a polygon, and circles. Two important algorithms of computational geometry that have many applications are Delaunay triangulation and the Voronoi diagram. The Voronoi splitting is used in computational materials science to create synthetic polycrystalline aggregates. In computer graphics is used for randomly splitting surfaces. These algorithms are used in a gold method or the area stealing method for interpolating a function in 2D. In this paper, are shown three implementations of the Delaunay triangulation and Voronoi diagram in the software package Mathematica.

Keywords. Computational geometry, Voronoi diagram, Delaunay triangulation, polygon, convex hull and algorithm.

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1. INTRODUCTION

Computational geometry is a descendant of classical geometry and computer science. It is part of algorithms that deal with the development and analysis of efficient algorithms and data structures suitable for solving geometric problems (Selimi et. al, 2019). Particularly are important the geometric problems where brute force solutions are not practically usable (Janičić, 2016). Computational geometry as a discipline is developed thanks to problems and applications in computer graphics, computer vision, robotics, databases, geographic information systems, CAD / CAM systems, molecular biology, etc. Some of the specific applications are applications in virtual reality, motion planning, collision detection, drug design, fluid dynamics, etc (Selimi et. al, 2018). The field of computational geometry usually deals with problems in the Euclidean plane or space and involves the availability of elementary operations such as: checking that the point belongs to a straight / circle, whether they are straight-cut, and the like.

In this paper we implement the computational geometry algorithms in software package Mathematica. Mathematica is the world's only fully integrated environment for technical computing (Wolfram, 2013). It is developed in programming language Wolfram.

The Mathematica program is divided into two parts, the kernel, and the front end. The kernel interprets the expressions in Wolfram language and gives the resulting expressions. The front end, designed by Theodore Gray, has a graphical user interface, which allows the creation and modification of documents containing program code with prettyprinting, formatted text along with results including mathematics, graphics, graphical user interface components, tables, and sounds. All content and all formatting can be algorithmically generated and interactively

modified. Most standard text editing options are supported. It also contains a spell checker but does not do this in parallel as the user enters the text.

Documents can be structured using a cell hierarchy, which allows for document sharing and sketching, and supports automatic number indexing. Documents can be displayed as a slide show for presentations. Notebooks and their contents are presented as expressions in Mathematica that can be created, modified or analyzed by Mathematica. This allows conversion to other formats such as TeX or XML.

The front features development tools like debuggers, add-ons, and automatic syntax coloring. Among the alternative front ends is Wolfram Workbench, an integrated Eclipse-based development environment, first shown in 2006. It provides tools for project-based Mathematica code development, including audit management, debugging, profiling and testing (https://www.macworld.com). The Mathematica Kernel also has a command line for the front end (https://reference.wolfram.com). Other interfaces include JMath, based on the GNU readline (http://robotics.caltech.edu), and MASH, which runs standalone Mathematica programs (with arguments) from the UNIX command line. Wolfram Research has published a series of tutorials for beginners to familiarize the user with the user interface and the launche .

2. COMPUTATIONAL GEOMETRY ALGORITHMS

Computational geometry is basically a discrete discipline. Problems of computational geometry are generally the subject of research in other fields of science such as "*geometric modeling*". Computational geometry explores simple and easily approximating surfaces and geometric objects. The basic terms that appear in this discipline are the point and line segment, which then builds more complex structures.

Among the most important geometric figures of this discipline are the polygons in the plane, while in their space their generalization of polyhedra. Polygon is a closed geometric figure in a plane that is a finite collection of crossed line segments called the edges of the polygon. The points where the two edges meet are called vertices of the polygon. A set of all edges and vertices of a polygon is called the boundary of the polygon and is labeled with ∂P. In the Figure 1.1(a) is given polygon with nine edges joined at nine vertices. In the diagrams (b)–(d) are given objects that fail to be polygons. From Jordan curve theorem we know that the every simple closed planar curve separates the plane into a bounded interior region and an unbounded exterior. For this reason in this paper, polygons representing a special part of the Jordan curve theorem are analyzed.

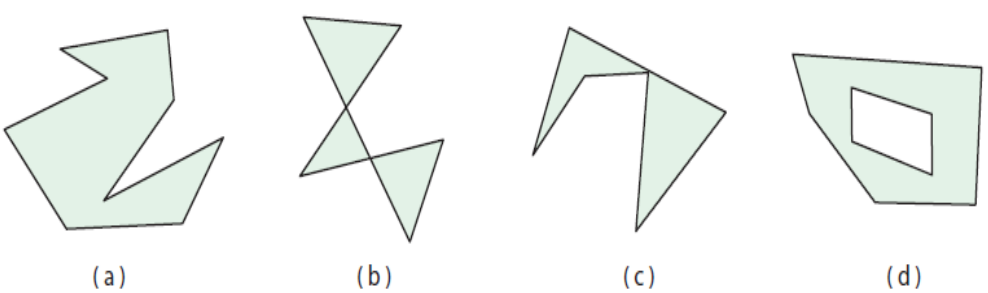


Figure 2.1. (a) A polygon. (b)–(d) Objects that are not polygons [17 ,pp.2].

Theorem 1. (**Polygonal Jordan Curve**) (Devadoss et al., 2011). *The boundary ∂P of a polygon P partitions the plane into two parts. In particular, the two components of $\mathbb{R}^2 \setminus \partial P$ are the bounded interior and the unbounded exterior.*

Proof. Let *P* be a polygon in the plane. We first choose a fixed direction in the plane that is not parallel to any edge of *P*. This is always possible because *P* has a finite number of edges. Then any point *x* in the plane not on ∂P falls into one of two sets:

1. The ray through x in the fixed direction crosses ∂P an even number of times: x is exterior. Here a ray through a vertex is not counted as crossing ∂P.
2. The ray through x in the fixed direction crosses ∂P an odd number of times: x is interior.

Notice that all points on a line segment that do not intersect ∂P must lie in the same set. Thus the even sets and the odd sets are connected. And moreover, if there is a path between points in different sets, then this path must intersect ∂P.

2.1 Triangulation

Definition 1. A *triangulation* of a polygon P is a decomposition of P into triangles by a maximal set of non-crossing diagonals (Devadoss et al., 2011).

Here the word *maximal* has the mean that there is no other noncrossing diagonal which is in the set of triangulations of a geometric figure. Figure 2.3 shows three different triangulations of the polygon. There are several questions asked for triangulation of the polygon.

- What is the number of different triangulations of a given polygon?
- How many triangles consist each triangulation of a given polygon?
- Does every polygon always have a triangulation?
- Must each polygon have at least one diagonal?
- We start with the last question.

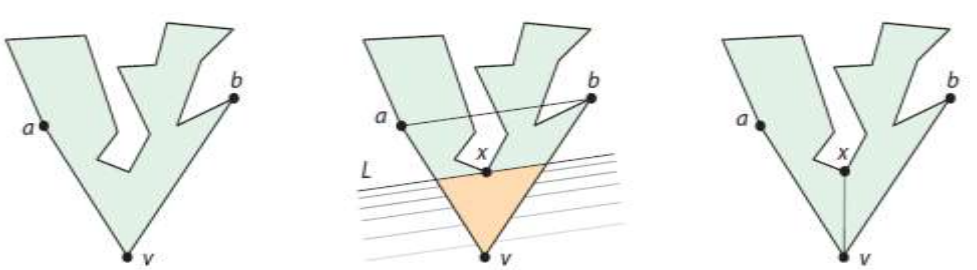


Figure 2.2. Finding a diagonal of a polygon through sweeping [17, pp.4].

Lemma 2. (Devadoss et al., 2011) *Every polygon with more than three vertices has a diagonal.*

Proof. Let v be the lowest vertex of P; if there are several, let v be the rightmost. Let a and b be the two neighboring vertices to v. If the segment ab lies in P and does not otherwise touch ∂P, it is diagonal. Otherwise, since P has more than three vertices, the closed triangle formed by a, b, and v contains at least one vertex of P. Let L be a line parallel to segment ab passing through v. Sweep this line from v parallel to itself upward toward ab; see Figure 1.4. Let x be the first vertex of the closed triangle abv, different from a, b, or v, that L meets along this sweep. The (shaded) triangular region of the polygon below line L and above v is empty of vertices of P. Because vx cannot intersect ∂P except at v and x, we see that vx is diagonal.

Theorem 3. (Devadoss et al., 2011) *Every polygon has a triangulation.*

Proof. We prove this by induction on the number of vertices n of the polygon P. If $n = 3$, then P is a triangle and we are finished. Let $n > 3$ and assume the theorem is true for all polygons with fewer than n vertices. Using Lemma 1.2, find a diagonal cutting P into polygons P_1 and P_2. Because both P_1 and P_2 have fewer vertices than n, P_1 and P_2 can be triangulated by the induction hypothesis. By the Jordan curve theorem (Theorem 1.1), the interior of P_1 is in the exterior of P_2, and so no triangles of P_1 will overlap with those of P_2. A similar statement holds for the triangles of P_2. Thus P has a triangulation as well.

We know that every polygon has at least one triangulation. Next, we show that the number of triangles in any triangulation of a fixed polygon is the same. The proof is essentially the same as that of Theorem 1.4, with more quantitative detail.

Theorem 4. (Devadoss et al., 2011) *Every triangulation of a polygon P with n vertices has n − 2 triangles and n − 3 diagonals.*

Proof. We prove this by induction on n. When $n = 3$, the statement is trivially true. Let $n > 3$ and assume the statement is true for all polygons with fewer than n vertices. Choose a diagonal d joining vertices a and b, cutting P into polygons P_1 and P_2 having n_1 and n_2 vertices, respectively. Because a and b appear in both P_1 and P_2, we know $n_1 + n_2 = n+ 2$. The induction hypothesis implies that there are $n_1 − 2$ and $n_2 − 2$ triangles in P_1 and P_2, respectively. Hence P has $(n_1 − 2) + (n_2 − 2) = (n_1 + n_2) − 4 = (n + 2) − 4 = n – 2$ triangles. Similarly, P has $(n_1 − 3) + (n_2 − 3) + 1 = n − 3$ diagonals, with the +1 term counting d.

In many algorithms and proofs, a special triangle should be included which is often used in the start of recursion or initial induction. The place of these special triangles in computational geometry is often used "*ears*". Three consecutive vertices *a, b, c* form an ear of a polygon if *ac* is a diagonal of the polygon. The vertex *b* is called the ear tip.

Corollary 5. (Devadoss et al., 2011) *Every polygon with more than three vertices has at least two ears.*

Proof. Consider any triangulation of a polygon P with $n > 3$ vertices, which by Theorem 1.4 partitions P into $n − 2$ triangles. Each triangle covers at most two edges of ∂P. Because there are n edges on the boundary of P but only $n − 2$ triangles, by the pigeonhole principle at least two triangles must contain two edges of P. These are the ears.

The proof of Theorem 4 leads to one approach for the triangulation of polygons. One diagonal is detected at each step and the problem is reduced to a smaller problem. If the polygon has n vertices, then this step has complexity $O(n)$. After this step, the problem can be reduced to a problem by n - 1, so the total complexity is $O(n^2)$. In some special cases,

for example, for a convex polygon, triangulation is trivial - for a convex polygon, it can be performed in time $O(n)$.

The idea, then, may be to first decompose it into convex parts and then apply triangulation to them. However, it is not easy to decompose a polygon into convex parts and, instead, the polygon will be decomposed into so-called monotone parts.

If the point set in general position is in convex position with all points on the hull then the number of triangulations of these points is the Catalan number (Saracevic, 2019).

2.2 Voronoi Diagram

A Voronoi diagram is the computational geometry concept that represents a partition of the given space onto regions, with bounds determined by distances to a specified family of objects. For example, Voronoi diagrams are useful in developing the system that needs to quickly respond to the customer which restaurant is closest to it at that moment. Many natural and social phenomena can be described and explained in terms of Voronoi diagrams: in anthropology, areas influenced by culture, in crystallography, the structure of crystals and metals, in ecology, competition between plants, in the economy, models of the market, etc (Janičić, 2016).

Knut's formulation: there are n posts in the city and each user uses the mail closest to him (for simplicity, it is assumed that the travel time to the mail is proportional to the Euclidean distance). The question is what an area served by a post looks like. If a new post is to be opened, where would it best be located? etc.

Definition 2. Let $P = \{p_1, p_2, \ldots, p_n\}$ be a set of points in the two-dimensional Euclidean plane. These are called the *sites.* Partition the plane

by assigning every point in the plane to its nearest site. All those points assigned to p_i form the *Voronoi region* $V(p_i)$. $V(p_i)$ consists of all the points at least as close to P_i as to any other site:

$$V(p_i) = \{x: | p_i - x| \leq | p_j - x| , \forall j \neq i\}.$$

This set is closed. Some points do not have a unique nearest site or nearest neighbor. The set of all points that have more than one nearest neighbor form the Voronoi diagram V(*P*) for the set of sites (O'Rourke, 1997). A Voronoi diagram is a set of branches and vertices of decomposition. Then when it is said that the Voronoi diagram is connected - it is meant that the set of branches is connected. The Voronoi diagram provides a wealth of useful information. For example, if the two areas are adjacent, then is expected the appropriate sites are to compete for clients in the border region (Janičić, 2016).

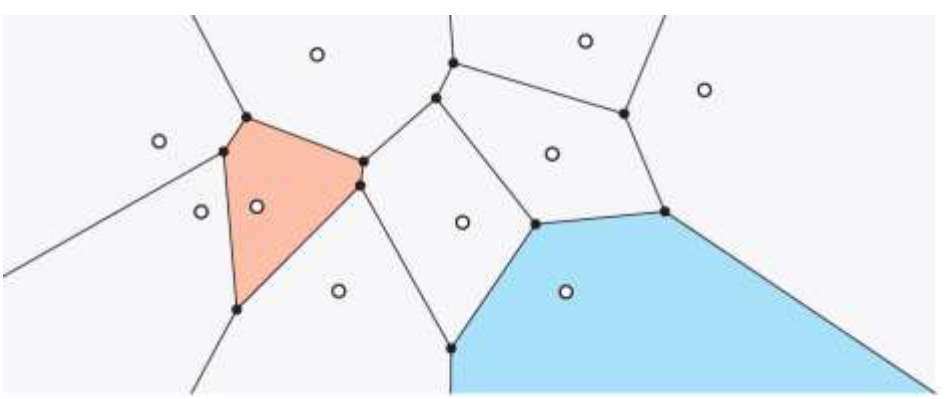


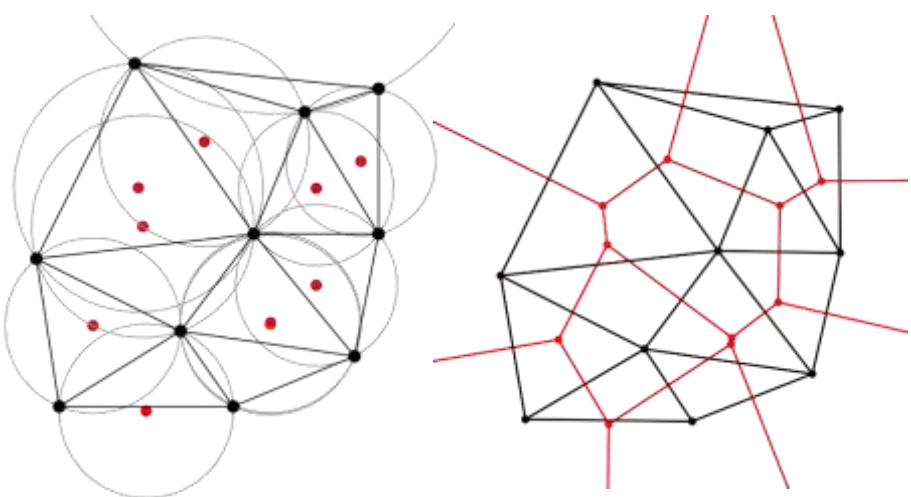
Figure 2.3 The Voronoi diagram for 10 sites (Devadoss et al., 2011, pp. 99).

2.3 Delaunay Triangulation

In mathematics and computational geometry, a Delaunay triangulation (also known as a Delone triangulation) for a given set P of discrete points in a plane is a triangulation DT(P) such that no point in P is inside the circumcircle of any triangle in DT(P). Delaunay triangulations maximize the minimum angle of all the angles of the triangles in the triangulation; they tend to avoid sliver triangles (https://en.wikipedia.org/). In 1934

Delaunay proved that when the dual graph is drawn with straight lines, it produces a planar triangulation of the Voronoi sites *P* (if no four sites are co-circular), now called the Delaunay triangulation V(*P*) (O'Rourke, 1997). Delaunay triangulation and Voronoi diagram are dual structures. Generally, it is not obvious that using straight lines in the dual would avoid crossings in the dual; the dual segment between two sites does not necessarily cross the Voronoi edge shared between their Voronoi regions.

The circumcenters of Delaunay triangles are the vertices of the Voronoi diagram. In the 2D case, the Voronoi vertices are connected via edges, that can be derived from adjacency-relationships of the Delaunay triangles: If two triangles share an edge in the Delaunay triangulation, their circumcenters are to be connected with an edge in the Voronoi tesselation (https://en.wikipedia.org/).



a) ***b)***

Figure 2.4 *a*) The Delaunay triangulation with all the circumcircles and their centers (in red).

b) Connecting the centers of the circumcircles produces the Voronoi diagram (in red).

3. IMPLEMENTATION OF DELAUNAY TRIANGULATION AND VORONOI DIAGRAM IN MATHEMATICA

In this section, we give three different examples of implementations of the Delaunay triangulation and Voronoi diagram. The Computational Geometry package in Mathematica provides functions for solving these and related problems in the case of planar points and the Euclidean distance metric.

- *The optimization problem of Euclidean minimum spanning trees, Delaunay triangulations, and Voronoi diagrams.*

Computational geometry functions.

The convex hull of a set *S* is the boundary of the smallest set containing *S*. The Voronoi diagram of *S* is the collection of nearest neighborhoods for each of the points in *S*. For points in the plane, these neighborhoods are polygons. The Delaunay triangulation of *S* is a triangulation of the points in *S* such that no triangle contains a point of *S* in its circumcircle. This is equivalent to connecting the points in *S* according to whether their neighborhood polygons share a common side (https://reference.wolfram.com).

```
<<ComputationalGeometry`

data2D={{5.4,13},{6.7,15.25},{6.9,12.8},{2.1,11.1},{9.5,14.9},
{13.2,11.9}, {10.3,12.3},{6.8,9.5},{3.3,7.7},{0.6,5.1},{5.3,2.4},
{8.45,4.7},{11.5,9.6}, {13.8,7.3},{12.9,3.1},{11,1.1}};
```

convexhull=ConvexHull[data2D] (This gives the indices of the points lying on the convex hull in counterclockwise order.)

ConvexHull[{{0,0},{1,0},{0,0},{2,0},{1,1}}] (Duplicate points are ignored.)

(Shallow[#,{5,6}]&)[delval=DelaunayTriangulation[data2D]]
{vorvert,vorval}=VoronoiDiagram[data2D]; (This gives the counterclockwise vertex adjacency list for each point in the Delaunay triangulation. For example, the entry {1,{4,3,2}} indicates that the first point in data2D is connected in counterclockwise order to the fourth, third, and second points.)

While Delaunay triangulation need only specify the connections between points, Voronoi diagram must specify both a set of diagram vertices and the connections between those vertices. Another difference between the two functions is that while a triangulation consists of segments, a diagram consists of both segments and rays (https://reference.wolfram.com). For example, in the case of a Voronoi diagram, points in the interior of the convex hull will have nearest neighborhoods that are closed polygons, but the nearest neighborhoods of points on the convex hull will be open.

These considerations make the output of Voronoi diagram more complex than that of Delaunay triangulation. The diagram is given as a list of diagram vertices followed by a diagram vertex adjacency list (https://reference.wolfram.com). The finite vertices of the diagram are listed first in the vertex list. The vertices lying at infinity have head Ray and are listed last.

{First[vorvert],Last[vorvert]} (This assigns the list of Voronoi diagram vertices to vorvert and the Voronoi diagram vertex adjacency list to vorval.)

vorval//Short (Each entry in vorval gives the index of a point in data2D followed by a counterclockwise list of the Voronoi diagram vertices that comprise the point's nearest neighborhood polygon.)

vorval[[1,2]] (Here is the Voronoi polygon vertex adjacency list for the first point in data2D.)

vorvert[[%]] (This selects the coordinates of the polygon vertices from vorvert. The first two vertices have head List, while the last two have head Ray. Thus, the Voronoi polygon associated with the first point in data2D is open and is defined by a segment and two rays.)

Computing the Voronoi diagram using the Delaunay triangulation and the convex hull.

VoronoiDiagram[{{x_1, y_1}, {x_2, y_2}, ...}, *delval*]
compute the Voronoi diagram using the Delaunay triangulation vertex adjacency list *delval*

VoronoiDiagram[{{x_1, y_1}, {x_2, y_2}, ...}, *delval*, *convexhull*]
compute the Voronoi diagram using the Delaunay triangulation vertex adjacency list *delval* and the convex hull index list *convexhull*

VoronoiDiagram[data2D,delval]; (This computes the Voronoi diagram of data2D more efficiently by making use of the Delaunay triangulation vertex adjacency list)

VoronoiDiagram[data2D,delval,convexhull]; (Here the Voronoi diagram is computed using both the Delaunay triangulation and the convex hull.)

Computational geometry plotting functions.

PlanarGraphPlot[{{x_1, y_1}, {x_2, y_2}, ...}]
plot the Delaunay triangulation of the points

PlanarGraphPlot[{{x_1, y_1}, {x_2, y_2}, ...}, *indexlist*]
plot the graph depicted by the counterclockwise list of indices in *indexlist*

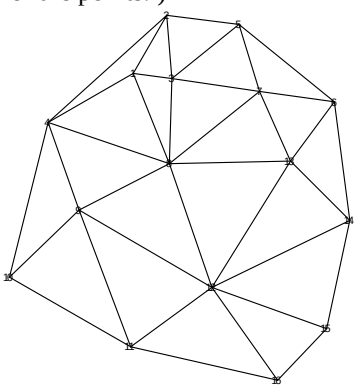
PlanarGraphPlot[{{x_1, y_1}, {x_2, y_2}, ...}, *val*]
plot the graph depicted by the vertex adjacency list *val*

DiagramPlot[{{x_1, y_1}, {x_2, y_2}, ...}]
plot the Voronoi diagram of the points

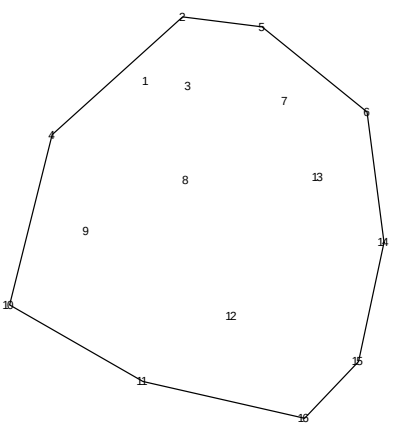
DiagramPlot[{{x_1, y_1}, {x_2, y_2}, ...}, *diagvert*, *diagval*]
plot the diagram depicted by the vertex list *diagvert* and the vertex adjacency list *diagval*

TriangularSurfacePlot[{{x_1, y_1, z_1}, {x_2, y_2, z_2}, ...}]
plot the surface according to the Delaunay triangulation established by projecting the points onto the x-y plane

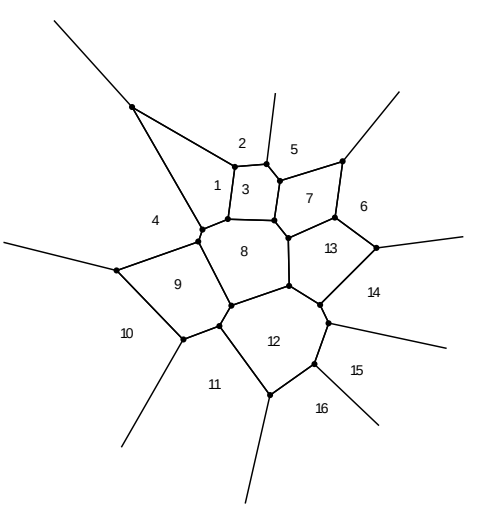
PlanarGraphPlot[data2D] (The default of PlanarGraphPlot is a plot of the Delaunay triangulation of the points.)



PlanarGraphPlot[data2D,convexhull] (This plots the convex hull of the points.)

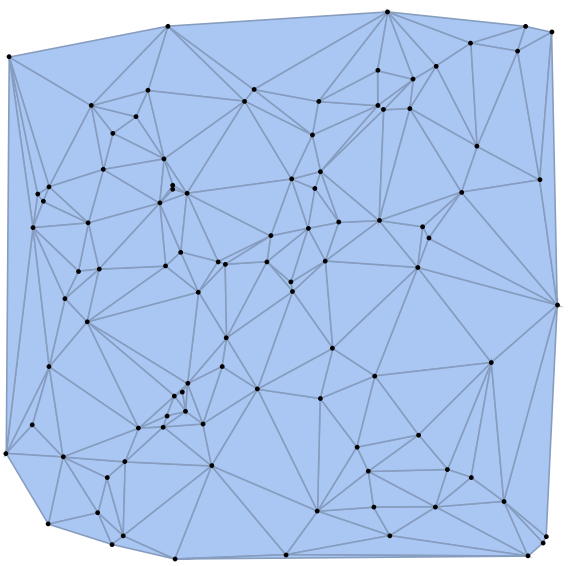


DiagramPlot[data2D] (The default of DiagramPlot is a plot of the Voronoi diagram of the points.)



- *A* 2D *Delaunay mesh from a list of points:*

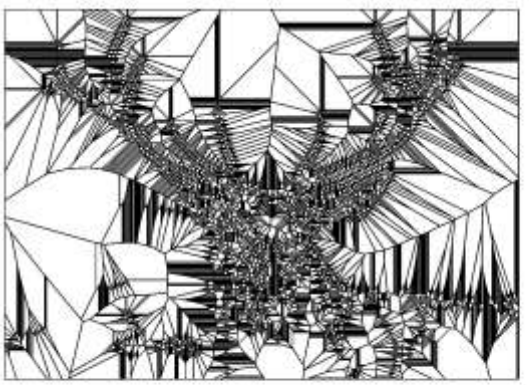
```
pts=RandomReal[{-1,1},{100,2}];
ℛ=DelaunayMesh[pts];
HighlightMesh[ℛ,Style[0,Black]]
```

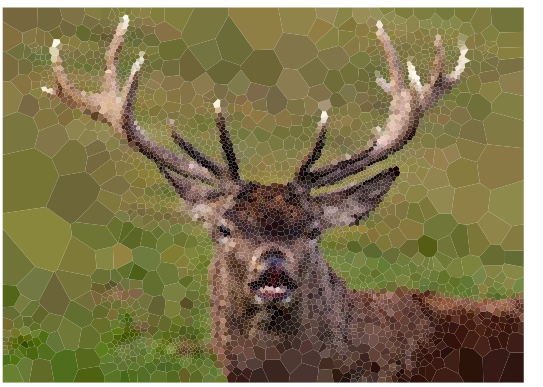


- *Delaunay mesh and Voronoi diagram of given image:*

img= 

```
edges=EdgeDetect[img,5]
imgBounds=Transpose[{{0,0},ImageDimensions[img]}];
vm=DelaunayMesh[ImageValuePositions[edges,White],i
mgBounds]
vml=NestList[DelaunayMesh[Mean@@@MeshPrimitive
s[#,2],imgBounds]&,vm,3]
Graphics[Table[{RGBColor[ImageValue[img,Mean@@p]
],p},{p,MeshPrimitives[Last[vml],2]}]]
```





4. CONCLUSION

An exhaustive list of Voronoi diagram applications today we see in programming, game development, and cartography. The numerous of the navigation systems in the developed game engines are based on the Voronoi diagram. The various geolocation software uses Voronoi diagrams. Geolocation reference systems use the Voronoi diagram to determine, for example, the nearest grocery store, for various search and analysis of the location.

Any geographical diagrams showing the distribution of something can be clearly illustrated with the help of colored Voronoi diagrams. This diagram made the transition of the needed indicator (for example, temperature) to be visible. Also, it can make various filter-photo handlers using the Voronoi diagram, getting some kind of mosaic.

There are many ideas of using the Voronoi diagram in architecture and design since it itself is a beautiful drawing, a kind of "geometric web", so there are many cases of using it as one of the main elements of a composition or even a frame all creation.

In archeology, Voronoi polygons are used to map the range of use of tools in ancient cultures and to study the influence of rival centers of trade. In

ecology, the body's ability to survive depends on the number of neighbors with whom it must fight for food and light.

Various kinds of grids (and skeletons) of objects in space are constructed using Voronoi diagrams and Delaunay triangulation.

The Voronoi diagrams are used in the combined influence of electric and short-range forces and help to determine the structure of molecules.

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DIGITALIZATION AND INDUSTRY 4.0

Fehmi Skender, .Ilker Ali, page 47-62

ABSTRACT

The innovations brought with the use of computers and communication technologies cause various and significant changes in every aspect of our lives.Industry 4.0 offers a wide range of processing, communication and production capabilities. Along with Industry 4.0, digitalization, data classification and conversion algorithms and software, also known as digitalization, are also developing with giant steps. With the process of digitalization, digital products such as computers, printers and scanners are the most important units of the enterprises and have started to transfer the traditional accounting place to smart accounting. Days of accounting transactions as we know them, are now behind. The software, which was prepared for answering, started to use automatic answering system in communication with the customer. Today's Big Data concept is a help finding a solution instead of being scary.

Research studies were carried out with the development of a digitalization software in the field of intelligent accounting. Firstly, the developed software is scanned with the Flexi Capture SDK software and the document type is determined. Thus, digitizing and converting the data into a suitable format saves a great deal of time and effort. The performance of companies using the advantages of traditional accounting and smart accounting was measured. The results of our research proved the success and performance of the developed software in the best way.

Keywords: Industry 4.0, Big Data, Data Digitalization.

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INTRODUCTION

Modern industrial development has continued for several hundred years and three major industrial revolutions have emerged to the present day. The fourth industrial revolution, now called Industry 4.0, is now underway. Industry 4.0 takes over production with robots that communicate with each other, detect the environment with sensors, and realize needs through data analysis; aims to produce a better quality, cheaper, faster and less wasted production. In addition, Industry 4.0 allows monitoring of cyber physical systems and physical processes in modular structured smart factories, allowing objects to communicate with each other and with people, resulting in decentralized collaborative decisions. In today's competitive environment, it is inevitable for businesses to apply Industry 4.0 to their organizations in order to protect and sustain their assets. Industry 4.0 is the subset of the fourth industrial revolution that concerns industry. The fourth industrial revolution encompasses areas which are not normally classified as an industry, such as smart cities, for instance. Although the terms "industry 4.0" and "fourth industrial revolution" are often used interchangeably, "industry 4.0" factories have machines which are augmented with wireless connectivity and sensors, connected to a system that can visualize the entire production line and make decisions on its own.

Digitalizationor - digitalization, is the process of converting information into a digital format, in which the information is organized into binary digits. The result is the representation of an object, image, sound, document or signal by generating a series of numbers that describe a discrete set of points or samples. The result is called digital representation or, more specifically, a digital image, for the object, and digital form, for the signal. In modern practice, the digitized data is in the form of binary numbers, which facilitate computer processing and other operations.

Our research is based on a software solution for automatically scanning and processing data from analogue to digital. Today, when accountants are over whel medby the amount of unprocessed accounts and invoices it would help a lot. So our software solution was applied in two big, similar companies in two different countries. The result was obvious, the work of accountants was limited to only scanning document sand invoices and just manually verifying the automated task.

1. INDUSTRY 4.0 AND DIGITALIZATION

The new process, called Industry 4.0, includes a structure that will completely change the relationship between production and consumption. It defines production systems that instantly adapt to the changing needs of the consumer on the one hand, and automation systems that are in constant communication and coordination with each other and encourages close cooperation between various disciplines in product development. They define Industry 4.0 as integration of complex physical machines and devices with networked sensors and software used to better predict, control, and plan commercial and social outcomes "or bringa new level of value chain organization and management throughout the life cycle of products" .

In the industrial sense, the First Industrial Revolution (Industry 1.0), which first started with steam engines in the 18th century and aimed at increasing production, was followed by the Second Industrial Revolution (Industry 2.0), which emerged as a transition to mass production at the beginning of the 20th century and paved the way for the utilization of electrical energy. Then came the Third Industrial Revolution (Industry 3.0), where production systems ceased to be analog and digital systems took place in the industry. Thus, the first three industrial revolutions brought mechanization, electricity and information technology (IT) into human production. These three industrial revolutions aimed at increasing productivity in production. However, the manufacturing companies in the world have faced serious difficulties due to the environmental, social, economic and technological developments experienced at that time and only increasing productivity has not brought companies to the forefront in global competition. To overcome these challenges, companies needed virtual and physical structures that allowed close collaboration and rapid adaptation throughout the entire lifecycle, from innovation to production and distribution, and were constantly on a quest. After the Cold War, trade borders between the countries disappeared and exchanges between these countries began to increase. In the 1960s, the change in the demands and expectations of the customer who bought only the existing product in the 2000s caused the production processes of the companies to be more complex. Thus, firms now have the need for interdisciplinary work and the Fourth Industrial Revolution (Industry 4.0) has emerged where all objects communicate and interact over the Internet.

Since the first industrial revolution, subsequent revolutions have led to radical changes in production, from water and steam electric machines to electrical and digital automated production. Production processes have become increasingly complex, automated and sustainable. This has led to the need for simple, efficient and stable operation of the machines. On the other hand, the continuous development of information and communication technologies has continued to offer manufacturing companies great potential to meet their needs. Accordingly, during the Hannover 2011 Hannover Fair event, a new concept was introduced by the Germans, Industry 4.0, which symbolized the beginning of the 4th industrial revolution. It also became a strategic initiative of the German government in the same year and was included in the High Technology Strategy 2020 Action Plan.

This, the concept of Industry 4.0,was considered as a strategy to compete in the future. Similar strategies have been proposed in similar industrial countries. For example; At the European level, the corresponding concept is a ”Factories of the Future“, Industrial Internet ’in the US and“ Internet + ’in China. Since then, the term Industry 4.0, also known as “intelligent manufacturing internet“ industrial internet, or ”Industry” integrated industry, industry has become one of the most popular manufacturing issues among industries and academics in the world and has the potential to affect all sectors at the moment. is a default issue. 4. The Industrial Revolution has arisen in industry when machines in general have started to manage themselves and their production processes without the need for manpower. While Industry 4.0 was initially considered a technology trial, it has now become a requirement to maintain competitiveness in an ever-changing industry environment. Because of industry 4.0, it is expected that more computerization and more software decision making processes and intelligent systems will be involved in production.

Digitalization is of crucial importance to data processing, storage and transmission, because it “allows information of all kinds in all formats to be carried with the same efficiency and also intermingled”. Though analog data is typically more stable, digital data can more easily be shared and accessed and can, in theory, be propagated indefinitely, provided it is migrated to stable formats as needed. That is why it is a favored way of preserving information for many organizations around the world.

1.1.Cyber-Physical Systems

Cyber Physical Systems (CPS) are the structures that involve communication and coordination between the physical world and the cyber world. The main role of CPS is to meet the agile and dynamic requirements of production and to increase the efficiency and efficiency of the entire industry. Industry 4.0 is characterized by an unprecedented connection of the Internet and CPS, which can be regarded as systems that bring the physical and virtual world together.

1.2. Internet of Things (IoT)

The structures that enable objects to communicate with each other are called the Internet of Things (IoT). The Internet of Things is expected to open numerous economic opportunities and is considered one of the most promising technologies with great destructive potential. Internet of Things concept of a British entrepreneur created by Kevin Ashton. The idea was formulated in 1999 to describe a system in which the material world communicates with computers (data exchange) with sensors everywhere. In this approach, not only objects, but also processes, data, people and even animals or atmospheric phenomena - a system of all things has been formed as a variable.

1.3. Cloud-based manufacturing (CBM)

Cloud-based manufacturing (CBM) is another emerging paradigm that will make a significant contribution to the success of Industry 4.0. CBM uses on-demand access to a sharing set of shared diversified and distributed production resources to create temporary, reconfigurable cyber-physical production lines that increase productivity, reduce product life costs, and allow optimal resource allocation to respond to customer-generated variable demand depending on the production model.

1.4. 3D Printers

This technology was first applied in 1984, but with Reprap, which emerged in 2006, there was little interest until it was re-introduced. 3D printers take raw material directly into production, unlike cutting, cutting and then reassembling the raw material. Thus, there is no material waste and the products are produced at a much lower cost at one time. Another

advantage of 3D printers, is that it allows for a wide range of production. It is believed that this technology, which enables production in every field from information technologies to genetics, medicine, food and jewelry to city planning, will start a new era for humanity.

1.5Artificial intelligence

Algorithms with cognitive functions such as perception, learning, linking, plotting, thinking, inference, and reasoning, which are unique to human beings, are called artificial intelligence. Through self-learning, artificial intelligence applications can mimic human behavior and develop itself at a later time to reach a more advanced level of consciousness than humans. This situation can evolve to humanity in medicine, astronomy, agriculture, energy management and production, as well as technologies that can bring an end to humanity. So many scientists, such as Stephan Hawking, have warned or continue to warn of the dangers of artificial intelligence. However, the evolution of artificial intelligence, regardless of its end, will open the door to a completely different era in human history that we have never seen before.

1.6.Autonomous Systems

Thanks to the internet of objects, developing sensors and robots with increased mobility, the problems that may occur in the production line can be detected instantly and remedied by remote and mobile communication tools. Autonomous robots that communicate with each other will be able to act together to solve the problem without interrupting the current production and transfer information to the operators through the server they are connected to in case of negative situations that occur at some point of the production line. In this way, the productivity of the production will increase while the costs resulting from the production error can be reset.

1.7. Robotic and smart factories

Most of the world's leading industrialized countries have invested in national initiatives to promote advanced production, innovation and design in a globalized world. Much of this investment has been to reach a future where rational factories such as Industry 4.0 and intelligent manufacturing are the norm. Industry 4.0; It is called smart

manufacturing, where all objects can interact with the internet through advances in fields such as artificial intelligence, 3D printers and "space technology". In Industry 4.0, one of the important places where objects communicate with each other is "smart factories", which are equipped with"smart"technologies and also called dark factories because no people work.

1.8. Big Data

Data from any source connected to the Internet (social media, blog, vlog, blogs, etc.) is transformed into a meaningful and processable format called big data. However, it is quite difficult to do so; because the amount of stored data increases day by day, making it very difficult to make sense of these data stacks. However, "big data" result that is processed makes it easier to understand human nature. At this point, which entered into force and previously, in the May 2018 issue of the Machine Bulletin, we can determine the estimations on the values, expectations and behaviors of people with an accuracy of up to 90%. There is only one way to increase the accuracy of predictions; replicate the number of data you have as much as possible and make it workable with a good algorithm.

1.8.1. Data Size

Companies use huge amounts of data in their decision-making processes. The size of the data continues to increase exponentially. While some experts consider peta bytes as the starting point of big data, many companies consider data sets between one terabyte and one peta byte as big data.

1.8.2.Diversity

The large data structure accommodates a wide range of data types such as photos, click throughs, emails, sounds, videos, HTLM, PDF and ecg data. This data is structured (edited), semi-structured and unstructured data. Most of the large data consists of unstructured data that is not placed in rows and columns in classical format.

1.8.3. Speed

The rate at which data is produced, processed and analyzed is constantly increasing. Higher speed is due to the need to combine the generated data with natural real-time and flowing data with business

processes. Today, data is being produced at an ever-increasing rate. However, it is not possible to capture, store and analyze this data using traditional methods. Particularly for time-sensitive processes such as multichannel instant marketing, it is crucial to analyze data simultaneously for business value.

1.8.4. Value

After 3V (volume, velocity and variety) definitions are made to describe the big data, these analyzes need to produce a value to obtain useful results after the data is collected and processed. Therefore, it can be said that this V is the junction point of the other 3V (volume, velocity and variety).

1.8.5. Accuracy

Accuracy refers to the level of reliability associated with certain data types. High data quality for big data is an important requirement and the quest for struggle. But even with the most important data clearing methods, the inherent unpredictability of some data (such as weather, economy or a customer's purchasing decisions) cannot be removed.Today, many different definitions of big data are worshiped. The main reason why these definitions are different stems from the area in which they are used.

1.8.6.BIG DATA analytics

Each project starts to achieve a specific objective and sub-objectives are set for this purpose. In order to achieve the project objectives and objectives, organizations have to access the appropriate data as raw material from large and complex data sets that the existing information systems cannot process. Once appropriate data is reached, data analytics will be needed to relate, process, and access information at the stage of making strategic decisions in projects. With technological developments, semi-structural and non-structural data types have been used in addition to structural data. Big data analytics is the use of analytical and parallel techniques developed to handle very large and diverse records that contain different types of content. At this point, the big data analytics tools aim to obtain valuable information from the data by analyzing a large amount of structural, semi-structural and non-structural “data as a whole”, which is difficult to process using traditional database techniques.

- **Data Collection Processes and Methods**

Data is defined as any measurement, value, fact and information that can serve to solve a problem. These can be verbal and written expressions, as well as figures, pictures, articles, models, numbers and symbols. The concept of information emerges when we investigate the definition of data. Knowledge is a concept that can be obtained at the end of a process. In other words, it is the processed version of the data. Therefore, the most basic concept in accessing information is "Data"

- **Data Types**

1. Factual data: Data that cannot be interpreted by the researcher and can be evaluated by everyone in the same way. More precisely, it is the kind of facts that everyone can agree on, independent of personal judgment. (Age, gender, etc.)

2. Judicial data: Data that can be defined by subjective judgments, which acquire the quality of data by the researcher's interpretation. Lazy, harmonious, emotional and so on. personality traits such as. Evaluations of social behaviors in social research may also be an example of this data type.In order to make the data collected by the researcher meaningful and to reveal the meanings that are hidden in the data, various methods and statistical methods should be used. These ways are verbally explaining the data, grouping them in tables, showing them in graphs, specifying and describing them in statistical values by performing various calculations.

In order to make the data meaningful, the first thing to do is to classify them and formulate the tables. It is easier to see what type of data is available from these tables, their amounts, distribution shapes and properties.

- ***Quantitative Data:*** Data that give a countable, measurable characteristic of an experiment. There are two types: continuous quantitative data and discrete quantitative data.Continuous quantitative data: Quantitative data that can take decimal values. Length, weight, etc.Discrete quantitative data: These are the integer values obtained by

counting. Population, number of students, number of households etc.

- ***Qualitative Data:*** Data indicating the characteristics of a subject. Educational status, whether to host, etc.… Qualitative data are divided into two groups.Classifiable Qualitative Data: Data that can be classified by class, which can be represented by codeand number. Qualifiable Data: Data obtained by a sequence or grade that do not specify a specific quantity.

- ***Criteria in Data Acquisition Tools.***

The measurement is significantly influenced by the measuring instrument used. Gold that requires a sensitive measurement requires a sensitive balance. No matter how good the measuring instrument and the data acquisition technique are, the capabilities of the user also have a large impact on the measurement.

Validity; the undesirable things to be measured, in other words, what the instrument is intended to measure is explained by the fact that other factors and features do not affect the measurement result. This is the feature of an instrument measuring only what it is intended to be.

Reliability, the second important feature of a measuring instrument is reliability. This is the ability of the instrument to measure the same degree each time it measures. That is, if there has not been any change in the subjects, test and test area in relation to the subjects and information in the test, the measurement is expected to give the same result.

2. METHODS AND FINDINGS

Prior to the survey, an application for digitalization of accounts and invoices data was developed. While the research itself contains: documents scanning, the experimental method, observation and descriptive method.

The software solution has the following modules:

- ABBYY Form Capture form templates of more then 30 different types of invoices and various types of documents, for automatic classification and recognition, which results in XML documents with description of all important fields.
- Separate software application for fixing the common errors, but also processing the generated XML document, by mapping the predefined codes and inserting the actual records into the database of the existing accounting software.

The end-result was the same as with manual retyping of the same documents, which saves many hours, or even days of human labor.

A good quality high volume double page scanner was also required and with the right settings and adjustments, quite high accuracy rate was achieved.

After the initial period of this software approach with different types of real documents, the conclusion was that the software was fully automated and with minimal human intervention: only maintenance of the code mappings and quick verification of the output. Its usefulness was proven buy it's use of many months afterwards and on a large volume of documents.

The similar software solution was also applied in a company in neighboring country, with accounting legislative compatible to the one in EU.

The performance and the accuracy rates in the both companies were quite similar. For example, in a quite large accounting sector with more then 10 accountants, the productivity was increased by factor of 10.

Here are the approximate results of the usage period of one month:

Company	Number of different types of documents	Number of processed pages	Accuracy
Company A (MKD)	12	750	90%
Company B (SRB)	2	150	95%

Table1. The approximate results of the usage period of one month

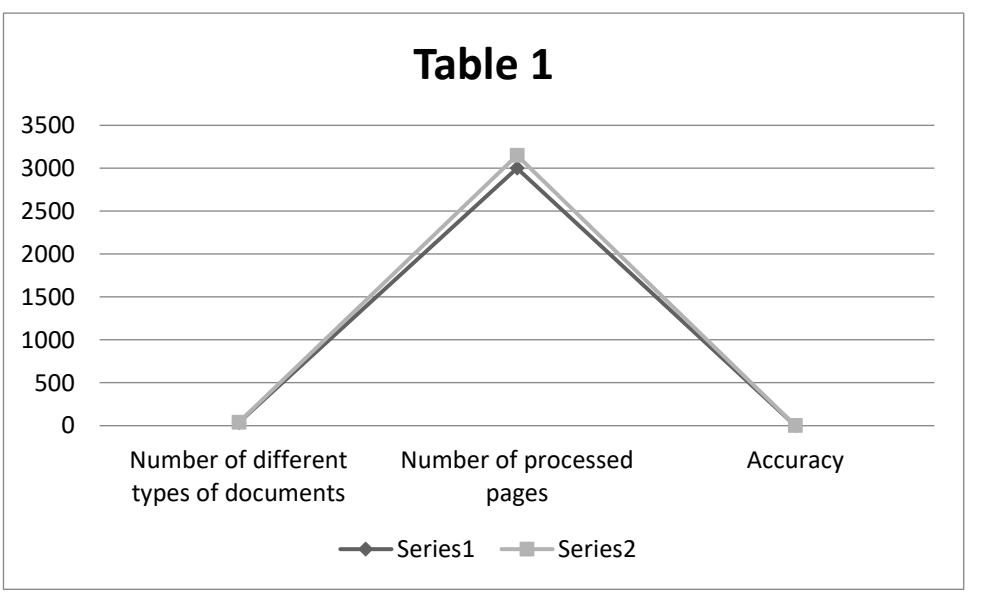

Chart.1. The approximate results of the usage period of one month

After several recognition accuracy and other improvements, as well as support more document types, we got the following approximate results:

Company	Number of different types of documents	Number of processed pages	Accuracy
Company A (MKD)	35	3000	97%
Company B (SRB)	4	150	98%

Table2. The following approximate results

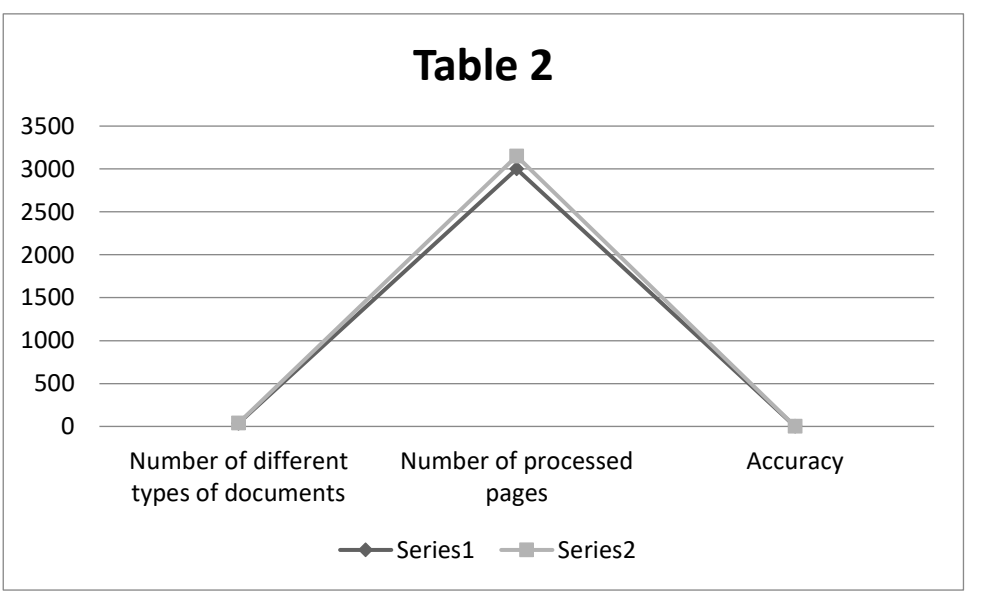

Chart2. ***The following approximate results***

All the accountants who used to work on tedious task of retyping documents and invoices into the company software, were more than satisfied with the end result, even though at the beginning they were mostly reserved and skeptical about the whole idea.

3. CONCLUSION

With applying new innovations and predefined algorithms, like customized digitalization, a significant boost can be achieved in both productivity and accuracy. Similar approach can be applied in an unlimited number of similar standardized document processing tasks in various organizations and companies, that usually generate or work with large number of documents and data. Also,with manual tedious human work, the organizations and companies are limited by the available human resources, which results with generating and keeping a lot of hard-copy documents, which were difficult to find, search or do some standardized processing of the data. We've seen that this software solution, do save a lot of time and money and would have a very attractive ROI (Return of Investment) value. This conclusion guaranties only higher use of similar software's in various companies or institutions in the future.

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THE ROLE OF THE WHISTLEBLOWERS IN THE FIGHT AGAINST CORRUPTION

Gjorgi Slamkov, Zoran Filipovski*, page 63-86

ABSTRACT

The paper deals with one of the instruments in the fight against corruption, ie "whistleblowers". It is an immediate source of information from the place where the crime was committed - illicit behavior, which has a long history but with different treatment.

In fact, the complexity and pervasiveness of corruption require finding and applying a variety of means to tackle it, and whistleblowers can contribute at different times, both before committing harmful behavior, during execution and after completion.

Especially the last decade, internationally, a lot of attention has been paid to whistleblowers. Among the numerous laws containing provisions on this anti-corruption instrument are the G20 High Level Principles for Effective Protection of Whistleblowers - The Osaka principles adopted in June 2019 and are a catalyst for improving the position of whistleblowers and their protection, in order to effectively combat corruption.

In the same direction, at the EU level in 2019, the new EU Whistleblower Protection Directive has been adopted, which has several years of implementation in all member states. Its purpose is to increase the protection of whistleblowers and to raise awareness in the society of their meaning. Experience at EU level shows a non-uniform approach to the issue, i.e., some member states have no regulation, in other member states it is symbolically expressed, and in third member states (around ten) there is quality regulation of this anti-corruption instrument. The UK experience is particularly significant, and it is briefly contained in this paper.

The situation is similar in the United States, namely, for nearly four decades there has been continuous work to improve federal and state regulation of whistleblowers.

The paper presents the latest legal instruments for the protection of whistleblowers and guidelines for the future development of this instrument.

Keywords: corruption, whistleblowers, international acts, protection mechanisms, raising public awareness,

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1. INTERNATIONAL LEGAL INSTRUMENTS FOR PROTECTION OF WHISTLEBLOWERS

Persons employed in an institution know best about the situation inside, and therefore whether there is corruption or other illegal activities. Whether they will be encouraged to report such events depends on a number of circumstances, and in particular on the proper functioning of the law enforcement authorities. Namely, by reporting illegal acts within the institutions, these persons, also known as whistleblowers, are put in danger, that is, they run the risk of suffering some damaging consequences, related to or outside the workplace, personally for for themselves or for their family members. That is why it is necessary to have a system for the effective protection of whistleblowers.

There are several international legal instruments that form the basis for the protection of whistleblowers. Thus, article 9 of the Civil Law Convention against Corruption of the Council of Europe (https://www.coe.int/en/web/conventions/full-list/-/conventions/rms/090000168007f3f6) states: „Each Party shall provide in its internal law for appropriate protection against any unjustified sanction for employees who have reasonable grounds to suspect corruption and who report in good faith their suspicion to responsible persons or authorities.“ This provision seeks to protect the employment, career and psychological integrity of the person reporting corruption.

The Council of Europe's Criminal Law Convention against Corruption (https://www.coe.int/en/web/conventions/full-list/-/conventions/rms/090000168007f3f5) defines the issue from a criminal-legal approach, creating a legal basis for finding legal solutions for protection of collaborators of justice, as well as for creating witness

protection programs and their families. Thus in article 22 entitled Protection of collaborators of justice and witnesses stated: „Each Party shall adopt such measures as may be necessary to provide effective and appropriate protection for: - those who report the criminal offences established in accordance with Articles 2 to 14 or otherwise co-operate with the investigating or prosecuting authorities; - witnesses who give testimony concerning these offences."

Declaration on strengthening good governance and combating corruption, money laundering and the financing of terrorism (https://www.osce.org/cio/97968?download=true) adopted at the OSCE Ministerial Council in Dublin 2012, inter alia, it also contains strong guidelines for protecting whistleblowers, as an important factor in the fight against corruption. Namely, it states: „ we recognize the importance of extending sufficient protection to whistleblowers in the public or private sector, as they play a key role in the prevention and detection of corruption, thus defending the public interest. We will intensify our efforts to take appropriate measures to put in place and implement legal mechanisms for the effective protection of whistleblowers and their close family members, from retaliation, intimidation or other psychological or physical harm, or the unwarranted loss of their liberty or livelihood. We recognize such measures to be necessary elements of an effective anti-corruption regime."

This issue is also covered by the Universal Document on Fighting Corruption - UNCAC or the UN Convention against Corruption (https://www.unodc.org/documents/treaties/UNCAC/Publications/Convention/08-50026_E.pdf). Namely, Article 33 of the Convention entitled Protection of reporting persons and states: "Each State Party shall consider incorporating into its domestic legal system appropriate measures to provide protection against any unjustified treatment to any person who

reports in good faith and on reasonable grounds to the competent authorities any facts concerning offenses established in accordance with the Convention." A special act has been prepared for the implementation of the mentioned article. Namely, according to the Resource Guide on Good Practices in the Protection of Reporting Persons (UNODC, 2015, https://www.unodc.org/documents/corruption/Publications/2015/15-04741_Person_Guide_eBook.pdf) protective measures need to match the needs and circumstances of the reporting person. The range of reportable information must be broad, including any matters of wrongdoing or harm to the public interest, in order to protect against corruption and increase public accountability. The role of institutions / individuals, who are authorized to receive information from whistleblowers, is extremely important throughout the process, so the competent authorities should have the appropriate mandate, capacity, resources and powers to receive reports, investigate wrongdoing and protect the persons reporting. In addition, the staff of the competent authorities should have adequate training and specialized skills in handling reports and protecting whistleblowers. On the other hand, the competent authorities should be protected from undue influence and be able to carry out their functions impartially.

The recommendations of the second round of evaluation conducted by GRECO in the period 2003-2007 (https://www.coe.int/en/web/greco/evaluations#{%2222359946%22:[3]}) are recommended a large number of member states to introduce or enhance the protection of whistleblowers, in particular to protect themselves from pressure and retaliation, to have reporting officers, to have confidentiality of the process, to have special access to classified data

(https://whistlenetwork.files.wordpress.com/2014/01/seventh-general-activity-report.pdf).

The importance of whistleblowers - concerned individuals alerting to unauthorized conduct that may result in corrupt behavior or other violations of the law, both in the public and private sectors, is also highlighted in Council of Europe Resolution 1729 of 2010 (http: // : //assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp? fileid = 17851). It encourages Council of Europe members to implement legal provisions on whistleblowers and their protection.

The Council of Europe has adopted Resolution 2060 of 2015 to improve the protection of whistleblowers (https://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=21931&lang= en). It seeks stronger protection of whistleblowers from the intelligence and security sectors, as well as the exercise of the right of asylum in any Council of Europe member state, if persecuted in their own country. In addition, it is also emphasized in Recommendation CM / Rec (2014) 7 calling on member ctates to create normative, judicial and institutional frameworks for the protection of whistleblowers (https://rm.coe.int/16807096c7).

2. THE G20 HIGH LEVEL PRINCIPLES FOR EFFECTIVE PROTECTION OF WHISTLEBLOWERS - THE OSAKA PRINCIPLES

Notable are the efforts of the G20 group (http://worldpopulationreview.com/countries/g20-countries/) to develop regulation to protect whistleblowers. Of particular importance is the G20 Osaka summit held in June 2019 (https://en.wikipedia.org/wiki/2019_G20_Osaka_summit). Namely, the

summit adopted the G20 High Level Principles for Effective Protection of Whistleblowers (https://www.g20.org/pdf/documents/en/annex_07.pdf), also welcomed by the world's most renowned anti-corruption organizations (https://www.transparency.org/news/pressrelease/new_g20_principles_on_whistleblower_protection_must_be_urgently_implemented), which apply to both the public and private sectors.

The Osaka principles specify the scope of protected disclosures should be broadly but clearly defined and protection should be available to the broadest possible range of reporting persons. In addition, the Principles require the establishment of clear and visible channels for reporting illegal activities, such as internal reporting to the organization, external reporting to law enforcement agencies, and if these two modes are not established then - public reporting. It is particularly important to ensure confidentiality of the identity of whistleblowers as well as the content of the reported information. For the purpose of greater protection of whistleblowers, the principles recommend that G20 member states also accept anonymous reporting as a relevant way of detecting corrupt activities.

The principles define retaliation against whistleblowers in a comprehensive way, and therefore their protection should be broader, in the workplace, professional protection, physical protection, psychological assistance, social inclusion, ie, not only for whistleblower but also for his family. The aim is to achieve individual and general protection, namely, if in one case of reporting, quality protection is provided to the whistleblower and his or her family, it will generally have a positive impact on other individuals reporting irregularities (knowing that they will

be protected), thereby creating a wider social action in the fight against corruption.

It is recommended to build temporary protection mechanisms, as well as a comprehensive indemnification of whistleblowers for the damage they have suffered as a result of their activity to detect corrupt behavior. It means building a robust and comprehensive protection of whistleblowers.

According to the principles, providing for effective, proportionate and dissuasive sanctions for those who retaliate against whistleblowers or jeopardizing their rights is a necessary step in fulfilling the purpose. Generally speaking, without the proper application of sanctions, no protection of any value, good or interest is possible, especially in the fight against corruption.

Whistleblowers may not be held liable and subject to disciplinary liability if they have made the reporting in accordance with established reporting channels and if they have reasonable grounds to believe that there has been a breach of the rules of conduct leading to corruption or other unlawful conduct. However, if the whistleblower knowingly lied at the time of reporting, he is liable for the damage suffered by third parties as a result of his actions.

The G20 High Level Principles for Effective Protection of Whistleblowers - the Osaka principles provide strong support for whistleblowers as an effective means of combating corruption. Given the global problem of corruption, the G20 member states offer technical assistance to other countries to implement and develop whistleblowers. It is an important, but also a medium-term process, which requires raising the awareness of the citizens about this anti-corruption instrument and getting acquainted with its benefits.

3. WHISTLEBLOWERS IN UK

Within the European Union, only ten countries (France, Hungary, Ireland, Italy, Lithuania, Malta, the Netherlands, Slovakia, Sweden and the United Kingdom) have a quality and comprehensive legal framework for the protection of whistleblowers (http://www.europarl.europa.eu/news/en/press-room/20190410IPR37529/protecting-whistle-blowers-new-eu-wide-rules-approved). The remaining EU countries, the protection granted is partial: it covers only public servants or only specific sectors (e.g. financial services) or only specific types of wrongdoings (e.g. corruption) (https://ec.europa.eu/info/sites/info/files/placeholder_11.pdf). Following is the UK regulation, as one of the states with an adequate approach to the issue.

Namely, as a result of a series of high profile financial scandals, as well as health and safety incidents, in 1998 UK legislation on whistleblower protection was adopted, known as The Public Interest Disclosure Act (PIDA) (https://www.gov.uk/government/publications/the-public-interest-disclosure-act/the-public-interest-disclosure-act). Prior to its adoption, the whistleblowers had no protection from the employer against termination of employment due to the publication of unlawful acts.

Generally, a distinction should be made between whistleblowing and grievance. Because whistleblowing is where an employee has a concern about danger or illegality that has a public interest aspect to it, while a grievance or private complaint is a dispute about the employee's own employment position and has no additional public interest dimension.

According to the law, whistleblower is a worker who reports certain types of wrongdoing to the authorities. The term is thought to have appeared around the 1970s, as a reference to when a referee blows the whistle during sports to indicate a foul.

The Act protects workers from detrimental treatment or victimisation from their employer if, in the public interest, they blow the whistle on wrongdoing. The Act protects most workers in the public, private and voluntary sectors. The Act does not apply to genuinely self-employed professionals or the intelligence services.

The Act protects employees in a variety of ways, including: if an employee is dismissed because he has made a protected disclosure that will be treated as unfair dismissal; then, in any event workers are given a new right not to be subjected to any 'detriment' by their employers on the ground that they have made a protected disclosure, and to present a complaint to an employment tribunal if they suffer detriment as a result of making a protected disclosure.

Only disclosures which relate to specific categories of information are covered by the legislation. The information disclosed must, in the reasonable belief of the worker, be made in the public interest and tend to show that one of following categories of wrongdoing has occurred, is occurring, or is likely to occur (https://www.gov.uk/government/publications/blowing-the-whistle-list-of-prescribed-people-and-bodies--2/whistleblowing-list-of-prescribed-people-and-bodies) :

- a criminal offense,
- breach of any legal obligation (which can include an obligation contained in a contract of employment),
- miscarriage of justice,

- danger to the health and safety of any individual,
- damage to the environment,
- the deliberate concealing of information about any of the above.

Whistleblowers must have a reasonable belief that the information disclosed points to one or more of the relevant failures, which can relate to past, present or likely future occurrences. The belief need not be correct provided that it is honestly held in the circumstances prevailing at the time of the disclosure.

Although the law does not require employers to have a whistleblowing policy in place, the existence of a whistleblowing policy shows an employer's commitment to listen to the concerns of workers. By having clear policies and procedures for dealing with whistleblowing, an organisation demonstrates that it welcomes information being brought to the attention of management. Namely, workers are often the first people to witness any type of wrongdoing within an organisation. The information that workers may uncover could prevent wrongdoing, which may damage an organisation's reputation and/or performance, and could even save people from harm or death. There are benefits for the organisation if a worker can make a disclosure internally rather than going to a third party. This way there is an opportunity to act promptly on the information and put right whatever wrongdoing is found.

There is no one-size-fits-all whistleblowing policy as policies will vary depending on the size and nature of the organisation. Some organisations may choose to have a standalone policy whereas others may look to implement their policy into a code of ethics or may have 'local' whistleblowing procedures relevant to their specific business units.A large organisation may have a policy where employees can contact their immediate manager or a specific team of individuals who are trained to

handle whistleblowing disclosures. Smaller organisations may not have sufficient resources to do this. Any whistleblowing policies or procedures should be clear, simple and easily understood.

If internal reporting is not effective, or appropriate procedures are not provided, or there are other circumstances that make it impossible, the next option is external reporting. One option for external disclosures is prescribed persons. Prescribed persons are mainly regulators and professional bodies. The relevant prescribed person depends on the subject matter of the disclosure, for example a disclosure about wrongdoing in a care home could be made to the Care Quality Commission, if it concerns the judiciary could be made to the Criminal Cases Review Commission, or if it relates to education is reported to Chief Inspector of Education, Children's Services and Skills (https://www.gov.uk/government/publications/blowing-the-whistle-list-of-prescribed-people-and-bodies--2/whistleblowing-list-of-prescribed-people-and-bodies). Prescribed persons have individual policies and procedures for handling concerns and complaints.

A worker might choose to approach the media with their concerns. If a worker goes to the media, they can expect in most cases to lose their whistleblowing law rights. That can happen only if the whistleblower does not believe in acting on their employer or a prescribed person, if he / she thinks the evidence will be destroyed or something similar. In that case, the choice to make the disclosure public, through the media, would be understandable.

If a whistleblower believes that they have been unfairly treated because they have blown the whistle they may decide to take their case to an employment tribunal. The process for this would involve attempted

resolution through the Advisory, Conciliation and Arbitration Service (Acas) early conciliation service.

Reporting irregularities can be secret, anonymous, without revealing the identity of whistleblower, but it does have consequences that make it difficult the procedure for checking published information because it is not known who the whistleblower is and thus cannot be protected by the provisions for whistleblower law. Namely, workers should be made aware that making a disclosure anonymously means it can be more difficult for them to qualify for protections as a whistleblower. This is because there would be no documentary evidence linking the worker to the disclosure for the employment tribunal to consider (https://www.irs.gov/compliance/confidentiality-and-disclosure-for-whistleblowers).

4. WHISTLEBLOWERS IN USA

In the United States numerous federal and state laws address the issue of whistleblowing, including:

- The False Claims (Amendment) Act 1986 (https://bergermontague.com/federal-false-claims-act/) is an instrument for combat frauds against the US federal government.

Namely, this Act applies to any fraud committed against a federal agency, program or contract. Under the False Claims Act, whistleblowers are permitted to bring a case on behalf of the federal government to recover damages on its behalf, ie., allowing those people not affiliated with the government to file lawsuits on the government's behalf.

The False Claims Act includes a provision to protect whistleblowers from workplace retaliation, known as the Anti-Retaliation

Provision. According to this act, the whistleblowers are protected by: dismissal; suspension of employment; demotion; harassment; other discrimination in employment.

The basis of every False Claims Act case is that the federal government was defrauded in one form or another. This fraud, or "false claim," can come in many forms, such as: Inflating the price or overcharging for a product; underpaying money owed to the federal government; failing to provide or perform a service; charging for one product and delivering another; obtaining federal funds to which one may not be entitled, then using false statements or documentation to retain the money.

The whistleblower should have knowledge of the fraud, not just suspicion, then the evidence of fraud not originating from public sources and it should be fraud with federal money.

The Federal False Claims Act incentivizes whistleblowers to report fraud by offering a percentage of any reward recovered from an ensuing lawsuit, generally in the range of 15-25%. In every action, the government has the option to either step in and litigate, or decline the case. If the government declines to proceed, the whistleblower may continue on behalf of the government. If the whistleblower succeeds, they are entitled to a larger percentage of the recovery (25-30%) (https://www.justice.gov/sites/default/files/civil/legacy/2011/04/22/C-FRAUDS_FCA_Primer.pdf).

-The Whistleblower Protection Act 1989 (https://www.congress.gov/bill/101st-congress/senate-bill/20/text/enr) is a United States federal law that protects federal whistleblowers who work for the government and report the possible existence of an activity constituting a violation of law, rules, or regulations, or mismanagement,

gross waste of funds, abuse of authority or a substantial and specific danger to public health and safety. A federal agency violates the Whistleblower Protection Act if agency authorities take (or threaten to take) retaliatory personnel action against any employee because of disclosure of information by that employee.

Whistleblowers are protected through two agencies, the Office of Special Counsel and the Merit Systems Protection Board. The Office of Special Counsel (https://osc.gov/) investigates federal whistleblower complaints. The primary mission of the Office is to safeguard the merit system by protecting federal employees from prohibited personnel practices, especially reprisal for whistleblowing. The Merit Systems Protection Board is an independent quasi-judicial agency established in 1979 to protect federal merit systems against partisan political and other prohibited personnel practices and to ensure adequate protection for federal employees against abuses by agency management (https://www.mspb.gov/).

- The Sarbanes – Oxley Act of 2002 (https://pcaobus.org/About/History/Documents/PDFs/Sarbanes_Oxley_Act_of_2002.pdf) , also known as SOX, the most recent law on whistleblowing, is a United States federal law that set new or expanded requirements for all U.S. public company boards, management and public accounting firms.

SOX provides wide-ranging protection for employees of public companies who make complaints about allegedly fraudulent conduct. Section 806 of the SOX, also known as the whistleblower-protection provision, generally applies to all US and non-US companies that have securities registered with the US Securities and Exchange Commission. This section protects certain employees who disclose conduct that they

reasonably believe to breach securities law, any rule or regulation of the Securities and Exchange Commission, or federal fraud statutes. Protected employees must make their disclosure to: a supervisor or any other person working for the employer who has "authority to investigate, discover or terminate misconduct"; a federal regulatory or law enforcement agency; a member of Congress; or a congressional committee.

According to SOX employees (and even contractors) who report fraud and/or testify about fraud committed by their employers are protected against retaliation, including dismissal and discrimination (https://searchcio.techtarget.com/definition/Sarbanes-Oxley-Act).

Remedies under Section 806 include: reinstatement with the same seniority status that the employee would have had, but for the discrimination; the amount of back pay, with interest; and compensation for any special damages sustained as a result of the discrimination, including litigation costs, expert witness fees, and reasonable attorney fees.

The SOX does not specify a particular method for submitting complaints. As a result, employers can establish a variety of complaints mechanisms (such as postal, telephone, fax, e-mail or "drop-box" procedures), provided that at least one confidential, anonymous method is available to employees for making complaints.

In the United States there are none restrictions on the subject matter of whistleblowing complaints. There arent any restrictions on who can receive whistleblowing complaints, namely, a complaints procedure must provide a method for complaints to be submitted to an auditing entity.

5. EU WHISTLEBLOWER PROTECTION DIRECTIVE

In order to improve the protection of whistleblowers on 16 April 2019 the European Parliament has approved the EU Whistleblower Protection Directive, after which the new law is to be approved by the EU ministers (http://www.europarl.europa.eu/doceo/document/A-8-2018-0398-AM-155-155_EN.pdf).

The EU Whistleblower Protection Directive aims at protecting and encouraging whistleblowers throughout the EU who report on misconduct in their workplace. All private and public legal entities with 50 or more employees will need to establish secure reporting channels.

Namely, until the second half of 2021 (or two years after adoption) the new law must be embedded into national law by the Member States. Organisations with 250 employees or more must be ready to comply with the new law. By the second half of 2023 (or two years after the law comes into force) legal entities with 50 – 249 employees must be ready to comply with the new law (https://whistleb.com/eu-whistleblower-protection-directive/).

The new law establish safe channels for reporting both within an organisation and to public authorities. It will also protect whistleblowers against dismissal, demotion and other forms of retaliation and require national authorities to inform citizens and provide training for public authorities on how to deal with whistleblowers. The EU Whistleblower Protection Directive introduce sanctions on retaliation against whistleblowers. The new law protects whistleblowers from liability related to reporting breaches of law in accordance with the Directive.

The EU Whistleblower Protection Directive includes a wide array of European Union law that whistleblowers may report on including anti-

money laundering and corporate taxation, data protection, protection of the Union's financial interests, food and product safety and environmental protection and nuclear safety. In addition, with a view to establishing broader frameworks for whistleblower protection, the European Commission encourages member states to provide whistleblower protection in other areas that they consider relevant.

The new EU Whistleblower Protection Directive requires the following types of organisation to establish secure reporting channels: private legal entities with 50 or more employees; private legal entities operating in the area of financial services, products and markets; private legal entities vulnerable to money laundering or terrorist financing and entities governed by public law, with possible exceptions for municipalities with less than 10,000 residents or 50 employees.

Regarding internal whistleblowing, the new EU Whistleblower Protection Directive states that the following elements should be included:

- Channels for receiving the reports, which are designed, set up and operated in a secure manner that ensure the confidentiality of the identity of the whistleblower and any third party mentioned in the report, and prevent access to non-authorised staff members. Such channels must allow for reporting in writing and/or orally, through telephone lines or other voice messaging systems, and upon request of the whistleblower, by means of a physical meeting within a reasonable timeframe.
- The designation of an impartial person or department for following up on the reports, and maintaining communication, asking for further information and providing feedback to the whistleblower.
- Diligent follow-up of the report by the designated person or department.

- Diligent follow-up of anonymous reporting where provided for in national law.
- A reasonable timeframe for providing feedback to the whistleblower about the report follow-up, not exceeding three months from the acknowledgment of receipt.
- Clear and easily accessible information regarding the conditions and procedures for reporting externally to competent authorities.

Regarding external whistleblowing the new EU Whistleblower Protection Directive states that public authorities must establish independent and autonomous external reporting channels for receiving and handling information provided by the whistleblower. This means that such channels need to be designed, set up and operated in a manner that ensures the completeness, integrity and confidentiality of the information and prevents access to non-authorised staff members of the competent authority. Channels must enable the storage of durable information to allow for further investigations (http://www.europarl.europa.eu/news/en/press-room/20190410IPR37529/protecting-whistle-blowers-new-eu-wide-rules-approved).

The EU Whistleblower Protection Directive requires that penalties be imposed against those who attempt to hinder reporting, retaliate against whistleblowers, attempt to bring proceedings or who reveal the identity of the whistleblower. Any threats or attempts to retaliate against whistleblowers are also prohibited.

Although the new EU Whistleblower Protection Directive states that Member States are to encourage whistleblowers to use internal reporting channels first, the Directive acknowledges the necessity to allow the whistleblower to be able to choose the most appropriate channel,

depending on the individual circumstances of the case. This means that the whistleblower may report internally or externally to competent authorities, and as a last resort, whistleblowers may make a public disclosure including to the media.

The Directive does not oblige member states to accept anonymous reporting, leaving it individually to determine the issue. However, anonymous reporting, in some complicated cases, can be much more productive and efficient than non-anonymous reporting and should therefore be accepted as a form of reporting irregularities, of course with a high degree of verification of allegations.

The Directive has a very wide scope, covering all individuals and legal entities who will find out about violations of certain rules of conduct and their reporting will be grounds for action.

The Directive provides several forms of support, including:

-access to comprehensive and independent information and advice, which shall be easily accessible to the public and free of charge, on procedures and remedies available on protection against retaliation and the rights of the concerned person;

- access to effective assistance from competent authorities before any relevant authority involved in their protection against retaliation, including, where provided for under national law, certification of the fact that they qualify for protection under the Directive;

- other forms: financial support, psychological support.

The process of implementation of the Directive should be accompanied by training and public campaigns, because according to European Commission data (https://ec.europa.eu/info/sites/info/files/placeholder_11.pdf) even 49%

of EU citizens do not know where to report corruption, while only 15% know about existing rules on whistleblower protection.

CONCLUSION

Whistleblower protection is essential to encourage the reporting of misconduct, fraud and corruption. The risk of corruption is significantly heightened in environments where the reporting of wrongdoing is not supported or protected. This applies to both public and private sector environments, especially in cases of bribery: Protecting public sector whistleblowers facilitates the reporting of passive bribery, as well as the misuse of public funds, waste, fraud and other forms of corruption. Protecting private sector whistleblowers facilitates the reporting of active bribery and other corrupt acts committed by companies.

Encouraging and facilitating whistleblowing, in particular by providing effective legal protection and clear guidance on reporting procedures, can also help authorities monitor compliance and detect violations of anti-corruption laws. Providing effective protection for whistleblowers supports an open organisational culture where employees are not only aware of how to report but also have confidence in the reporting procedures. It also helps businesses prevent and detect bribery in commercial transactions. The protection of both public and private sector whistleblowers from retaliation for reporting in good faith suspected acts of corruption and other wrongdoing is therefore integral to efforts to combat corruption, promote public sector integrity and accountability, and support a clean business environment.

International instruments aimed at combating corruption have also recognised the importance of having whistleblower protection laws in place as part of an effective anti-corruption framework. Whistleblower protection requirements have been introduced in the United Nations Convention against Corruption, Civil and Criminal Law Convention against Corruption of the Council of Europe. More recently are The G20 High Level Principles for Effective Protection of Whistleblowers - The Osaka Principles, as well as the EU Whistleblower Protection Directive, both documents adopted in 2019. The above acts require the establishment of unique standards for whistleblowers and increasing their protection.

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EU EMMISSIONS TRADING SCHEME: RECENT DEVELOPMENTS

Aleksandar Chavleski, Irina Chudoska Blazevska, Anita Gligorova, page 87-102

ABSTRACT

In 2005 the EU has developed the world's first multi-country cap-and-trade scheme for greenhouse gases. Today, 31 countries participate in the Scheme (the 28 EU Member States, Iceland, Liechtenstein and Norway), totalling population of half billion people. ETS includes more than 12 000 industrial plants and aircraft operators and entails half of European CO2 emissions. Under the Scheme, a quantitative limit on CO2 emissions was imposed and a market price has been paid for CO_2 emissions by virtually all industrial and electricity-generating installations within the European Union.

Legally binding caps have strict timetable: the cap decreases by 1.74% per year from 2010 based on the average cap for 2008-12, the second phase of the EU ETS. This annual reduction factor of 1.74% has been fixed in order to reach an annual amount of carbon allowances 21% below 2005 levels by 2020. In 2014 the European Council decided the rate to be increased 2.2% a year from 2021, in order that a 43% reduction be attained by the ETS sectors by 2030 compared to 2005. These respective shares are determined by what is estimated to be a cost-effective contribution by the sectors covered to meet a 40% economy-wide target by 2030. The EU ETS became a effective key instrument of European climate change policy and the primary vehicle for meeting the obligations under the Kyoto Protocol and now the Paris Agreement. These particular article aims to give overview of the recent developments of this key EU instrument and offer insight in the future developments.

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INTRODUCTION

Although a bit of a laggard in the field of climate change, after President Bush pulled the USA out of the Kyoto Protocol in 2001, the EU became the pivotal actor for advocating entry into force of the Protocol and take over global climate policy leadership (Birger et al, 2016). The EU ETS was the first large experiment for trading carbon dioxide (CO2), in order to reduce the harmful greenhouse gases both on EU and global level (Ellerman, D.&Buchner, 2007). In 2001 the European Commission proposed the Directive on ETS, which was formally adopted in 2003. During 2004 national allocation plans for allocation of emission permits for CO2 were executed. Since January 1, 2005 the ETS become fully operational, and was mainly focused on large industrial emitters of CO2. For the Phase II of the ETS, the Directive allowed the governments of the Member States to auction up to 10 % of the issued allowances, without any constraints attached (Hepburn, et al, 2006).

In its Communication (CEC, 2006), the Commission has indicated its intention to move away from the more qualitative guidelines in Annex 3 of the EU ETS Directive to a more rigorous quantitative process. As a consequence in 2008 verified emissions exceeded allocation for the EU total. As a result of the global financial crisis and the drop of economic activity and emissions the cap was only stringent in 2008, but in the following years there were again a surplus of allowances. 2009 saw the outline reform of the Phase III, and 2018 the reformed Phase IV of the ETS for the period 2021-2030. In the evening of world climate change in Katowice (Poland) UN Secretary General Guterres called climate change "the most systemic threat to humankind" and urged world leaders to curb their countries' greenhouse gas emissions (Sengupta, 2018). He warned that if world countries do not change direction by 2020 the humankind and natural systems will face horrific consequences (HRT, 2018).

PHASES OF EU ETS

The EU ETS so far has undergone fully Phase I (2005-2007) and Phase II (2008-2012). Phase III is currently underway (2013-2020), and the next Phase IV will begin in 2021 through 2030.

It is estimated that Phase I of ETS brought significant efficiency gains from trading in comparison with the status *ex ante* with no existing

inter-sectoral or inter-regional trade. In consequence net welfare gains emerged in most EU Member States, the Netherlands and Italy being the exception. Efficiency benefits from inter-sectoral emissions trading are greater compared to inter-regional emissions trading (Betz & Sato, 2006). But, the total number of allowances at the end of Phase I were too excessive. The result of that was the drop of the price of first-period allowances to zero.

For Phase II the European Commission peddled more influence on the NAPs. So in 2008, total allocation was reduced by 233 Mt (11%) compared to Phase I. On the other hand, emissions decreased by 2% between 2007 and Phase II (Kettner et al, 2013). On 1.1.2008 Iceland, Norway and Lichtenstein joined the ETS. Approximately, 45% of total EU greenhouse gas emissions are part of the system. Aviation industry become part of ETS on 1.1.2012 (European Commission, n.d).

What sectors are covered by EU ETS? First and foremost, CO2 emissions from: 1) power and heat generation; 2) Energy-intensive industry sectors including oil refineries, steel works and production of iron, aluminium, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids and bulk organic chemicals; 3) Civil aviation. Second, nitrous oxide (N2O) from production of nitric, adipic and glyoxylic acids and glyoxal. Third: Perfluorocarbons (PFCs) from aluminium production.

A 'cap' is an absolute quantity of greenhouse gases which can be emitted by the factories, power plants and other installations in the system, in order to ensure the emission reduction target is met. The cap corresponds to number of allowances put in circulation over a trading phase. Emission allowances are the 'currency' of the EU ETS. Each allowance allows the company to: 1) emit one tonne of CO2, or 2) the equivalent amount of two other powerful greenhouse gases, nitrous oxide (N2O) and perfluorocarbons (PFCs). Each allowance can be used only once. Companies must surrender allowances for every tonne of CO2 (or the equivalent amount of N2O or PFCs) they emitted in the previous year. If this obligation is not met, then strict fines are imposed if the surrendered allowances do not match their emissions (Ibid). In phase 3 of the EU ETS, participants who fail to comply with their obligation to surrender allowances under the EU ETS are fined €100 per tCO2, adjusted with the EU inflation rate from 2013 onwards, for which they fail to submit an allowance. This fine is imposed by the relevant Member State authority. Furthermore, the shortfall in compliance is then added to the compliance

target for the following year. In other words, any failure to comply is not written off, but must be addressed in addition to the next year's obligation. In addition to this penalty there is also "name-and-shame" sanction (Article 16(2) of the EU ETS Directive) consisting of publicly naming the operators (including air carriers) that are in breach of their obligations (usually only in the official languague(s) of the Member State imposing the sancion) (Peeters&Chen, 2016). Except for these two provisions, the ETS Directive leaves to the Member States discretion with respect to the detailed design of the rules on enforcement measures (European Commission, 2015).

Companies are allowed to be granted some allowances from governments free of charge. In order to cover the rest of their emissions, the companies can: 1) buy additional allowances or 2) draw on any surplus allowances they have saved from previous years. Also, a combination of these procedures is possible.

Within the cap, companies receive or buy emission allowances that are subject to trade between the companies. Companies can buy limited amounts of international credits concerning emission-saving projects both in and outside the European Union. The set limit on the total number of allowances that are available at any given time ensures that they have a value (European Commission, EU Emissions Trading System, n.d.).

The idea behind the scheme is to incentivize companies continuously to reduce their emissions by investing in more efficient technology or at least to use less carbon-intensive energy sources. In this way companies can choose the most cost-effective options to address their emissions (European Commission, EU Emissions Trading System Factsheet, n.d).

For the period 2005-2012 (Phases 1 and 2 of ETS) the EU-wide cap represented aggregated total quantity of allowances established by the National Allocation Plans of each Member State. For instance the 2013 cap was set at 2 084 301 856 allowances. This cap decreases each year by a linear reduction factor of 1.74%, so that the level of allowances that can be used by stationary installations in 2021 to be 21% lower in comparison with 2005.

In 2009 major reform of the EU ETS was agreed for the period 2013-2020:

- A single, EU-wide cap has been imposed on the allowances' volume;

- Open, transparent, harmonised and non-discriminatory auctioning has been put in place by ETS Auctioning Regulation;

- Harmonized procedures for the free allocation of emission allowances have established across the EU and benchmarks have been introduced by the Benchmarking Decision;

- New cogent rules on monitoring and reporting, verification of emission reports and accreditation and supervision of verifiers were set by separate Regulations;

- New stricter rules and conditions were introduced for the use of international carbon credits;

- A Central electronic Union Registry was establiehd and the previous system of national emissions allowances registries was abandoned.

Also, in this Phase the emission allowances were transformed into financial instruments and subject them to financial market supervisory system.

Subsequently, in January 2014 a proposal to establish a Market Stability Reserve was presented (the legislative process has been finalised with the adoption of the Decision (EU) 2015/1814 of the European Parliament and of the Council of 6 October 2015 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and amending Directive 2003/87/EC). On 15 July 2015 the Commission presented a legislative proposal to revise the EU Emissions Trading System in line with the 2030 framework (European Union Emissions Trading Scheme, n.d.). European Parliament agreed the reform the EU's carbon market after 2020 in February, and to raise up the prices for CO2 in order to curb the greenhouse gas emissions. European carbon prices rose up to 15% in comparison with the situation ex ante at a level of €8.90 per tonne. Some staunch critics of the previous level of prices again argue that the new level is also very low.

After 2009 a surplus of emission allowances occurred in the ETS. The European Commission reacted with short-term and long-term measures. The main reason for this was the economic crisis and the high imports of international credits. In consequence, this lowered carbon prices and there interest for lowering emissions dropped.

As a result this could distort the functioning of the ETS. Also, in perspective the ETS would be not able to achieve more ambitious emission reduction targets cost-effectively.

At the beginning of the phase 3, around 2 billion allowances were superfluous, which number increased over 2.1 billion in 2013. But two years later, this number dropped to 1.78 billion due to back-loading.

First **short-term measure** taken by the Commission was the delay of auctioning of 900 million allowances until for the period 2019-2020.

This 'back-loading' only means, that different distribution of auctions will apply: 1) 400 million allowances in 2014 2) 300 million in 2015 3) 200 million in 2016. The crucial goals of the Mechanism are: 1) Address the current oversupply of allowances; 2) Address future supply-demand imbalances that arise from macroeconomic changes and/or complementary policies; 3) Ensure inter-temporal efficiency of the system; and 4) Increase credibility *vis-à-vis* functioning of the European carbon market 5) Address the current oversupply of allowances; 6) Address future supply-demand imbalances that arise from macroeconomic changes and/or complementary policies; 7) Ensure inter-temporal efficiency of the system; and 8) Increase credibility *vis-à-vis* functioning of the European carbon market (Zetterberg, et al, 2014).

On the longer run, from 1 January 2019 a Market stability reserve will established. The purpose of this new mechanism is to: 1) tackle the problem of the existing surplus of allowances 2) strengthen the ETS **resilience** to major shocks. But the abovementioned 900 million allowances kept as reserve since 2019-2020 (there will be no auction).

Unallocated allowances will also be transferred to the reserve. This reserve will operate under **pre-defined cogent set of rules** leaving no leeway for the Commission or Member States.

At the latest by 15 May every year the total number of allowances in circulation will be published by the European Commission. According to this report, the subjects can assess whether the allowances will become part of the reserve, and if so how many, or whether allowances will be released from the reserve.

From 2018, the EU Commission will calculate the surplus which equals all allowances (auctioned and freely allocated), plus all Kyoto credits minus the total covered verified emissions from 2008. There are two quantity and price thresholds. The lower quantity threshold is a trigger for the Commission to reintroduce more allowances when the number of

allowances in circulation fall below the limit. The upper quantity threshold triggers a removal of the allowances in circulation if they go beyond the limit. On the other hand the price threshold is activated if and when there is an extremely volatile rise in prices (Jallard et al, 2016).

As things stand, the ETS reform has only one more hurdle to clear but a recent plan floated by EU Budget Commissioner Günther Oettinger on how to plug a €13 billion hole left by the UK after Brexit suggests the tinkering might not be over (Morgan, 2018).

2018 REFORM OF THE ETS

With the adoption of the new ETS Directive in 2018, the emissions trading system is reformed by introducing the following elements:

- In line with the European Council conclusions of October 2014 the reformed ETS will be the main European instrument to achieve the reduction target of at least 40 %, with an annual reduction factor of 2,2 % from 2021 onwards (linear reduction factor) (European Parliament and Council of EU: 2018). So, in 2030 the CO2 levels should drop at least 40 % in comparison with the 2005 levels. But, recently EU Commissioner for climate action and energy Cañete has been pushing for an increase to 45 percent (DPA, 2018). But the German Chancellor Angela Merkel criticized these new ambitious goals, on the grounds that many EU Member States do not comply with the already agreed reduction targets. So, all Member States should first reach these set targets, before setting new more ambitious ones (Appunn, 2018). Unlike most EU Member States, Germany has already succeeded to make renewable energy central factor of its power supply, and intensifying the efforts to boost e-mobility (electric cars) on German roads) (Ibid).
- By amending the Decision (EU) 2015/1814 until 31 December 2023, the percentages and the 100 million allowances to be placed in the market stability reserve will be doubled temporarily until the end of 2023 (feeding rate) (European Parliament and Council, 2018). Unless otherwise decided in the first review carried out in accordance with Article 3, from 2023 allowances held in the

reserve above the total number of allowances auctioned during the previous year shall no longer be valid.

- A new mechanism to **limit the validity of allowances** in the Market Stability Reserve above a certain level will become operational in 2023. Namely, in accordance with the new Art.13 "allowances issued from 1 January 2013 onwards shall be valid indefinitely. Allowances issued from 1 January 2021 onwards shall include an indication showing in which ten-year period beginning from 1 January 2021 they were issued, and be valid for emissions from the first year of that period onwards.'.

The revised ETS directive also contains a number of new provisions to protect industry against the risk of carbon leakage and the risk of application of a cross-sectoral correction factor:

1) The share of allowances to be **auctioned will continue be 57%**, but in the event that demand for free allowances triggers the need to apply a uniform cross-sectoral correction factor before 2030, the share of allowances to be auctioned over the ten year period beginning on 1 January 2021 should be reduced by up to 3 % of the total quantity of allowances (European Parliament and Council, 2018).
2) Revised free allocation rules will enable better alignment with the actual production levels of companies. Benchmark values between 2021 to 2025 will be adjusted in respect of each year between 2008 and the middle of 2021 - 2025 with either 0,2 % or 1,6 %, leading to an improvement of 3 % or 24 % respectively compared to the value applicable in the years 2013 - 2020. Between 2026 to 2030, the benchmark values will be applicable in the same way, resulting with improvement of 4 % or 32 % respectively in comparison with the value applicable for the years 2013 - 2020. In order to ensure fair terms, the benchmark values for aromatics, hydrogen and syngas should continue in line with the refineries benchmarks (European Parliament and Council, 2018).
3) The sectors at highest risk of relocating their production outside the EU will receive **full free allocation**. The free allocation rate for sectors less exposed to carbon leakage will amount to 30%. Sectors and subsectors in relation to which the product resulting from multiplying their intensity of trade with third countries,

defined as the ratio between the total value of exports to third countries plus the value of imports from third countries and the total market size for the European Economic Area (annual turnover plus total imports from third countries), by their emission intensity, measured in kgCO2, divided by their gross value added (in euros), exceeds 0,2, shall be deemed to be at risk of carbon leakage. Such sectors and subsectors shall be allocated allowances free of charge for the period until 2030 at 100 % of the quantity determined pursuant to Article 10a (European Parliament and Council, 2018). A gradual phase-out of that free allocation for the less exposed sectors will start after 2026, should decrease by equal amounts after 2026 so as to reach a level of no free allocation in 2030. Exception will be the district heating sector (European Parliament and Council, 2018).

4) By way of derogation from Article 10a(1) to (5), Member States which had in 2013 a GDP per capita at market prices (in euros) below 60 % of the Union average may give a transitional free allocation to installations for electricity generation for the modernisation, diversification and sustainable transformation of the energy sector. The investments supported shall be consistent with the transition to a safe and sustainable low-carbon economy, the objectives of the Union's 2030 climate and energy policy framework, and reaching the long-term objectives expressed in the Paris Agreement. The derogation provided for in this paragraph shall end on 31 December 2030 (European Parliament and Council, 2018).
5) The **new entrants' reserve** will initially contain unused allowances from the current 2013-2020 period and 200 million allowances from the market stability reserve. Up to 200 million allowances will be returned to the market stability reserve if not used during the period 2021-2030. Allowances from the maximum amount which were not allocated for free by the year 2020 will be preserved for the new entrants, plus the 200 million allowances put in the market stability reserve pursuant to Article 1(3) of Decision (EU) 2015/1814. Of these allowances, up to 200 million shall be returned to the market stability reserve at the end of the in 2030 if not allocated for that period (European Parliament and Council, 2018).

6) Member States can continue to provide **compensation for indirect carbon costs** in line with state aid rules. Reporting and transparency provisions are also enhanced. The measures to support certain energy-intensive industries that may be subject to carbon leakage referred to in Articles 10a and 10b shall also be kept under review in the light of climate policy measures in other major economies. In this context, the Commission shall also consider whether measures in relation to the compensation of indirect costs should be further harmonized (European Parliament and Council, 2018).

The new Directive envisages an establishment of a Modernization Fund in order to support the investments proposed by the beneficiary Member States. Such investments can include financing of small-scale investment projects, modernization of energy systems and improvement of energy efficiency, in the Member States where GDP per capita at market prices is below 60 % of the Union average in 2013. The timeframe for the Fund is from 2021 to 2030. The financing of the Fund will be provided via auctioning of allowances determined by Article 10. The projects financed by the Fund must be in line with the aims of this Directive from one side, but also with the 2030 climate and energy policy framework and the aims advocated by the Paris Agreement. The Fund shall not finance any energy generation facilities that use solid fossil fuels. By way of exception, funding may be available for efficient and sustainable district heating in those Member States where GDP per capita is below 30 % of the Union average in 2013, with an attached condition that the amount of allowances of at least an equivalent value is used for investments under Article 10c that do not involve solid fossil fuels.

A programmatic goal is at least 70 % of the total funds to be directed to support investments regarding: 1) use of electricity from renewable sources; 2) the improvement of energy efficiency, (with an exception to energy generated using solid fossil fuels); 3) energy storage and the modernisation of energy networks, including district heating pipelines, grids for electricity transmission and the increase of interconnections between Member States; 4) for support a just transition in carbon-dependent regions in the beneficiary Member States, so as to support the redeployment, re-skilling and up-skilling of workers, education, job-seeking initiatives and start-ups, in dialogue with the social

partners and 5) Projects for increasing energy efficiency in sectors like transport, buildings, agriculture and waste shall also be eligible.

The beneficiary Member States will be responsible for the operation of the Fund. On the other hand, the European Investment Bank checks whether the allowances are auctioned in accordance with the principles and modalities laid down in Article 10(4). Also, EIB should be responsible for managing the revenues (European Parliament and Council, 2018).

In order to achieve the goals of Phase 4 of EU ETS (2021-2030), also a new Innovation Fund will be in operation in order to use innovative technologies and breakthrough innovation in the industry. The amount of funding will be at least commensurate to a market value of 450 million allowances. This Fund will complement the NER 300 programme, and will fund projects aimed at decarbonising industrial production (ETS Innovation Fund, n.d.). It is estimated that approximately €10.7 billion for clean technology projects will be awarded by the end of 2030 (Garside, 2015).

Interestingly, in May 2018 the first climate change court case was filed against the European Union. Namely, the plaintiffs are targeting all current 28 EU Member-States. 'The People's Climate Case' – is the latest of strategic court cases designed to put pressure on the governments in order to take more ambitious steps to tackle climate change.

The plaintiffs are 10 families from Portugal, Germany, France, Italy, Romania, Kenya, Fiji, and the Saami Youth Association Sáminuorra. They argue that EU has failed, and continues to fail, to meet its urgent responsibilities to limit the emission of greenhouse gases (GHGs). Moreover, the current domestic GHG reduction target, the levels of greenhouse gases to be reduced by 40% by 2030 in comparison with 1990 do not correspond to the requirements of higher ranking EU and international laws.

Such EU failure represents an infringement of the *principle of equality* (Articles 20 and 21, EU Charter); the *principle of sustainable development* (Article 3 TEU, Article 11 TFEU, Article 37 EU Charter, Article 3UNFCCC; the *no harm principle* in international law; and *EU's environmental policy* (Article 191 TFEU) (Setzer, 2018).

CONCLUSION

The 13 - year long operation of EU ETS showed that the system has many benefits, but also series of shortcomings. Critics of EU ETS often stress that the EU's cap-and-trade system is overloaded by a plethora of procedures and permits, thus suffering from inefficiency. However, many surveys show that for the period 2005-2012, EU ETS contributed emission savings in the range 40 – 80 MtCO2/yr. This totals 2-4% of the overall capped emissions. It can be concluded that the benefits of EU ETS is greater than other existing individual energy-environmental instruments (Laing, 2013). Also, on the investment scale it is estimated that ETS contributed to incentivize companies to make only small (rather than large) investment decisions in energy efficient projects. But on the other hand, probably it deterred the financing of many carbon-intensive projects (Ibid).

The new goal is to strike a (careful) balance between setting too ambitious reducing targets from one hand, and on the other to avoid the danger that such steps do not trigger energy-intensive industries setting up shops outside EU countries where the regulation is not so strict (the phenomenon of so called "carbon leakage). Recently, even the German Chancellor Angela Merkel pointed out that there should be no setting more ambitious goals for CO2 reduction when most of EU countries lag behind the already agreed reduction targets.

Key measure to enable rising of prices per tone will be doubling the rate at which the Market Stability Reserve (MSR) soaks up excess allowances. In 2023, a new mechanism to limit the validity of allowances in the MSR will be put in place. The overall cap on the total volume of emissions, known as the linear reduction factor (LRF), will be reduced annually by 2.2%.

The new Directive contains tools that are tailored to enable the Union to successfully pursue and achieve the set emission targets as well as the long-term objectives set by the Paris Agreement. For example, the new Modernization Fund should ensure sufficient financing for projects like electrification of transport, the new Innovation Fund will support projects aimed at decarbonising industrial production, the Market Stability Reserve (2019) should stabilize the ETS and make it more resilient to shocks, the transitional measures to support certain energy intensive industries should prevent carbon leakage etc.

However, while trying to keep the balance between the danger of "carbon leakage", keep the jobs in EU from one hand, and the setting a relatively ambitious goals on curbing CO2 emissions by 2030, from another, the new case lodged with the EU General Court (dubbed People's Climate Case) shows that the citizens, scientists and broad range of NGOs, are of the opinion that EU is not doing enough to tackle climate change. Namely, plaintiffs seek the annulment of emission targets set by GHG Emission Acts and injunction against the Union to set deeper emission targets at a level required by law. Applicants argue that EU has set the 40 % reduction target for the year 2030 without seeking or inquiring whether a higher target is feasible, i.e. without taking into account the overwhelming scientific, engineering and economic evidence that the target could be set somewhere between 50 to 60 % of the 1990 levels (General Court of EU, 2018). Since the case is in a early phase, and one can not foresee the judgment of the General Court and its legal ramifications for the ETS, it is early to comment whether there will be changes in this regard. However, that possibility can not be excluded, particularly having in mind the recent statements by EU Commissioner Cañete for "gearing up" the reduction targets.

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BREXIT'S IMPACT ON INTELLECTUAL PROPERTY RIGHTS

Jordan Delev, page 103-120

ABSTRACT

The functioning of the European Union (EU) and its most important component, the Single Market, have been and are being challenged by the United Kingdom (UK)'s decision to leave the EU, popularly known as Brexit. The UK decision to leave the EU, accordingly, reflects not only on the political-trade constellations between the two entities but also has an impact on the rights acquired by private entities (natural and legal persons). Accordingly Brexit has its implications for intellectual property rights that are harmonized within the EU at a high level, and it also has an impact on the unitary intellectual property rights that exist and operate successfully at EU level. The purpose of this paper is to summarize the effects that Brexit has on intellectual property rights, what will be the treatment of already recognized intellectual property rights in the UK, and how future trade relations between the EU and the UK will affect the regulation of these rights. Therefore, the paper compares the existing acts regulating intellectual property rights and the future steps to be taken by the UK with regard to the regulation and transposition of unitary intellectual property rights, as well as an analysis of changes to the UK intellectual property law as a result of Brexit. The paper partially analyzes intellectual property rights including patents, supplementary protection certificates, trademarks, designs, plant variety rights, protected geographical indications, and copyrights.

Keywords: Intellectual property rights, Brexit, European Union, United Kingdom

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INTRODUCTION

Many UK intellectual property laws derive from, or are closely integrated with, EU laws. Although the UK has an independent system of administering national intellectual property rights registrations through the UK Intellectual Property Office (UKIPO), EU-wide intellectual property rights such as the EU Trade Marks (EUTM) and Registered Community Designs (RCD) are found in the intellectual property portfolios of many UK organisations. For such UK organisations, it is important to be aware of what Brexit may mean in respect of their registered intellectual property portfolios.

Nonetheless, there are some forms of intellectual property rights that will no longer be available in the UK without specific post-Brexit provision, in particular EU registered trade marks and designs, as well as Protected Designations of Origins (PDOs) and related rights.

IPRs are, of course, particularly important for technology-reliant sectors, including life sciences/pharmaceuticals, information technology (IT), oil and gas and renewables. These sectors are especially interested in patent protection. Brexit may rule out, or at least time limit, the ability of businesses in tech-reliant sectors to rely on the new EU patent enforcement system to enforce EU patent rights in the UK.

EU legislation has driven much of the UK's intellectual property law in recent years. Traditionally intellectual property rights arise on a country by country basis and give rise to national rights. Thus the UK has its own UKIPO, which deals with UK trade mark, design and patent registrations. There is also stand-alone national UK legislation on unregistered designs, as well as highly developed common law principles in relation to passing off, which protect unregistered trade marks and goodwill, trade secrets and confidential information.

EU intellectual property rights are administered by the EU Intellectual Property Office (EUIPO), and deals with EUTMs and RCDs. There is also an EU system relating to unregistered designs. The existing European patent system is a product of the European Patent Convention (EPC) rather than the EU so will be unaffected by Brexit. The EPC system is not truly pan-European, however, as it effectively grants a bundle of national

patent rights in the participating European states, which then require to be enforced on a country-by-country basis.

As a result of Brexit the UK government has made technical changes through legislation in Parliament using powers under the European Union (Withdrawal) Act 2018. The following 6 Statutory Instruments were laid in Parliament between 23 July 2018 and 31 January 2019:

- The Design Right (Semiconductor Topographies) (Amendment) (EU Exit) Regulations
- The Intellectual Property (Exhaustion of Rights) (EU Exit) Regulations
- The Trade Marks (Amendments etc.) (EU Exit) Regulations
- The Patents (Amendment) (EU Exit) Regulations
- The Intellectual Property (Copyright and Related Rights) (Amendment) (EU Exit) Regulations
- The Designs and International Trade Marks (Amendment etc.) (EU Exit) Regulations
- Supplementary protection certificate law

1. BREXIT – IN GENERAL

On 31 January 2020, the UK left the EU. Brexit is a term coined to signify the UK's departure from the EU. Until the Brexit formalization, the EU was an economic and political union involving 28 European countries. The EU allows free trade and freedom of movement for people to live and work in any country of their choice. The UK joined the EU in 1973, at a time when the union functioned as the European Economic Community (EEC). With the implementation of the Brexit deal, UK is the first member state to have left the Union. The UK leaves the Union as a result of a referendum held on 23 June 2016, deciding whether the UK should stay within the EU or whether it should leave the Union. The result of that referendum was a 52%-48% view that the UK should end its membership of the EU. Brexit was originally due to be completed on 29 March 2019. It comes two years after Prime Minister Theresa May submitted on 29 March 2017 the notification of UK intention to withdraw from the EU called on Article 50 of the Treaty on European Union to launch a formal

process of leaving the union and at the same time began negotiations on leaving.

Article 50(1) of the Treaty on European Union provides that any member state may decide to withdraw from the EU. On 23 June 2016, the UK held a referendum on whether to remain a part of the EU. Article 50 provides for a period of up to two years for the UK and EU to negotiate and conclude a withdrawal agreement that also takes into account the future relationship between the UK and the EU. Absent agreement or extension, requiring unanimity, the UK's membership of the EU would therefore cease March 2019. (Brodies, 2017)

Under the leadership of Teresa May, the deadline for leaving the Union was twice postponed as a result of parliament's rejection of a draft agreement on leaving the EU. After Boris Johnson's replacement for Terrace May as prime minister, a third extension was requested as members of parliament disagreed that the Brexit agreement would come into force. The new exit deadline was set for 31 January 2020, three and a half years after the referendum was held. Given that the European Parliament has given the green light, the UK is leaving the EU by agreement. However, this only marks the beginning of the next steps to be taken in the Brexit process. After 31 January 2020, in order to effectively implement the UK Withdrawal Agreement, the UK enters a transition process until 31 December 2020. During this period, trade relations between the EU and the UK will remain the same as long as the two sides negotiate a free trade agreement. At the same time, other aspects of future relations between the EU and the UK, such as law enforcement, data sharing and security, need to be agreed upon during the transition period. If the trade agreement is prepared in time, new relations between the EU and the UK can begin immediately after the end of the transition period. If the trade agreement is not agreed, the UK may face the establishment of a trade relationship without an agreement. That would mean introducing checks and tariffs on British products that would be placed on the EU market.

Brexit has had its implications for trade relations between the EU and the UK to both intellectual property rights and their regulation. Bearing in mind the fact that the UK leaves the EU by agreement in the foreseen transition period, the UK will continue to follow EU rules but will not be

involved in the decision-making process. In this situation, the day of the UK's exit from the EU is considered the last day of the transition period, which would probably be 31 December 2020. This means that, all EU primary and secondary law will cease to apply to the UK from 31 December 2020. The UK will then become a 'third country'. The effects of the UK's withdrawal from the EU will be different for different intellectual property rights. It will be consider the practical effects on: patents, supplementary protection certificates, trademarks, designs, plant variety rights, protected geographical indications, and copyright.

2. BREXIT AND INTELLECTUAL PROPERTY RIGHTS

2.1. PATENTS

Patents can be obtained in the UK through the national route or the European route via the European Patent Office (EPO). Both are unaffected by the UK leaving the EU. An inventor can continue to apply for, and be granted, a patent by the UKIPO. The requirements and processes for grant will not change, nor will the rights you obtain when a patent is granted. Any existing rights and licences in force in the UK will remain in force after the UK leaves the EU. If legal proceedings involving these rights or licences are underway, they will continue unaffected. Also, an inventor can continue to apply to the EPO for patent protection which will cover the UK. Existing patents from the EPO are also unaffected. UK-based European Patent Attorneys can continue to represent applicants at the EPO. The UK will continue to be a participating state in the EPC. Moreover, there is no effect on the Patent Cooperation Treaty (PCT) system. International patent applications under the PCT will still be able to designate the UK via the national and EPO routes. The UK will remain a member state of the European Patent Organisation and the EPC will continue to apply to the UK after Brexit. The EPO is not an EU institution and currently has ten member states that are not part of the EU. European patents granted by the EPO will still be able to take effect in the UK, and be enforced through UK courts, as now. The conditions for patenting biotechnological inventions will remain in place. UK, EU and third country businesses as patent holders, third parties and applicants can continue to make decisions on the basis of the current legislation.

(European Parliament's Committee on Legal Affairs, 2019, November, p. 17-18).

Only a few specific areas of the patents process have been adjusted by the Patents Regulations. The Patents Rules contain provisions on when a party to proceedings before the UKIPO can be required to provide security for costs or expenses incurred by the other side. The EU's arrangements for civil judicial cooperation mean that an European Economic Area (EEA) resident cannot be the subject of an order to provide such security. After exit day, the UK will fall outside of those arrangements and the exception will no longer apply. The Patents Regulations remove the exemption for EEA residents, so that any person resident outside the UK may be subject to an order for security.

The European patent with unitary effect, commonly known as the Unitary Patent, and the related Unified Patent Court (UPC) are not yet in operation. The UK is one of the three mandatory ratification states – France and Germany being the others – of the UPC agreement. However, it is unclear whether the UK will remain within the UPC system post-Brexit. Whether the UK continues to participate in the Unitary Patent and the UPC after its withdrawal from the EU will be a political decision for the EU, its remaining Member States and the UK. (Shorthose, S., 2016)

The existing European patent system will be essentially unaffected by the UK leaving the EU.

2.2.SUPPLEMENTARY PROTECTION CERTIFICATES (SPCs)

A supplementary protection certificates has the effect of extending the term of a patent relating to protection of a particular medicinal or plant protection product usually by a period of not more than five years. After exit day, the applicant will apply for an SPC in the same way, by submitting an application to the UKIPO. The same timescales for when the application must be filed will apply. The applicant will need to provide the same documentation and evidence as currently required. This includes information on both the UK marketing authorisation and the earliest marketing authorisation for this product in the EEA, if it predates the UK authorisation.

Although supplementary protection certificates are granted nationally, the legal basis for supplementary protection certificates comes from EU regulation. Following Brexit, authorisations from the European Medicines Agency will be converted into equivalent UK authorisations on Brexit. The UK's Medicines and Healthcare Products Regulatory Agency independently of the European Medicines Agency would become a requirement institution for the granting of a SPCs. If SPC holder rely on an authorisation from the European Medicines Agency as the basis for the SPC, may be asked to provide information on the converted UK authorisation, so that this can be recorded on the register. This will not affect the validity of the SPC. (Brodies, 2017).

After exit day, it will no longer be possible for UK courts to make references to the Court of Justice of the European Union (CJEU) for interpretation of the SPC legislation and other retained EU law. Judgments of the CJEU that were issued before exit day will continue to apply to the retained EU law. The amendments made by the Patents Regulations are written to have the same meaning as the original EU legislation, so that existing case law on its interpretation still applies. After exit day, UK courts will continue to apply pre-Brexit CJEU case law in any SPC actions. SPC examiners will also take into account of the relevant CJEU case law applicable before exit day. They will examine SPC applications on that basis. UK courts will not be required to follow judgments of the CJEU issued after exit day, as these will not be binding. They may be taken into account, but it will be for the court to determine the extent to which the post-exit case law applies. (The Chartered Institute of Patent Attorneys [CIPA], 2017, p. 2)

2.3.TRADEMARKS

The primary legislation in UK on trade marks is the Trade Marks Act 1994. There is secondary legislation in the form of the Trade Marks Rules 2008, and amending and standalone regulations. Some of these implement the requirements of the EU Directive on trade marks. The Directive goes beyond international treaties to further harmonise trade mark law within the EU. The UK's implementation of the EU Directive has resulted in several references in UK legislation to the EU and EEA. After Brexit, all existing EUTMs will cease to provide protection in the UK. As a result,

UKIPO amend existing trade mark legislation to ensure that UK protection conferred by EUTM is preserved, and to enable our law to continue working effectively. For these reasons, UKIPO has introduced The Trade Marks Regulations 2019 under the powers of the EU (Withdrawal) Act.

Once the UK has left the EU, it is expected that new EU trademarks will not apply to the UK. As a result, EU trademarks registered in accordance with Union law before the exit date will continue to be valid in the EU27 Member States but will have no longer effect in the United Kingdom as from the exit date. Any application for an EU trade mark pending before the exit date will no longer cover the UK as from that date. Any right granted by the EUIPO on or after the exit date will only cover the EU27 Member States. (Drew, I. and Watal, A., 2016)

Given their considerable commercial importance, the UK enact transitional provisions for the recognition of the UK portion of existing EU trademarks or for their conversion to UK registrations. On exit day, UKIPO will create a comparable UK trade mark for every registered EUTM. Each of these UK rights will be recorded on the UK trade mark register, will have the same legal status as if you had applied for and registered it under UK law, will keep the original EUTM filing date, will keep the original priority or UK seniority dates, will be a fully independent UK trade mark that can be challenged, assigned, licensed or renewed separately from the original EUTM. The EUTM holder will not need to pay for your equivalent or comparable UK trade mark – and there will be as little administration involved as possible and will receive a UK registration certificate. UKIPO will provide a means for identifying comparable UK rights and distinguishing them from existing UK trade marks. (European Commission, European Union Intellectual Property Office [EUIPO], 2018)

UKIPO will only create a comparable UK trade mark for EUTMs registered before exit day. If the EUTM applicant has an EUTM application that's still pending at exit day, the applicant will be able to apply to register a comparable UK trade mark in the 9 months after exit day, to retain the earlier filing date of the pending EUTM and to claim any valid international priority you had on the pending EU application, along with any UK seniority claims recorded against it. If the applicant apply to

register for a comparable UK trade mark, the application must relate to the same trade mark that was the subject of the EUTM application, must seek protection in respect of goods and services that are identical to, or contained within, the corresponding EU application and if the details of the application do not match those of the corresponding EUTM application, the applicant will not be able to claim the earlier EU filing or priority dates. The applicant must submit his/her application within 9 months of exit day.

If the EUTM holder does not wish to hold the new right, it may opt out of holding it. If the holder opt out, the comparable right will be treated as if it had never been applied for or registered under UK law. Opt-out requests can only be submitted after exit day. Any requests made before then will not be valid.

Once a comparable UK trade mark is created, a separate renewal fee will apply for each comparable UK trade mark and the existing EUTM. The fees will need to be paid separately to UKIPO and the EUIPO. For the purposes of future renewal, the comparable UK right will retain the existing renewal date of the corresponding EUTM.

A priority date claimed under the Paris Convention that has been recorded against the corresponding EUTM will be inherited by the comparable UK trade mark. Accordingly, where proceedings involve a comparable UK trade mark with a priority claim inherited from the corresponding EUTM, the date of that priority claim will have effect. Seniority is a concept which derives from EU legislation and has applied only to EUTMs and UK trade marks that have been converted from EUTMs. From exit day, it will also apply to the UK comparable trade marks. Seniority allows a business to consolidate its multiple national registered trade marks into one single EUTM by retaining the 'senior' dates of those national rights and recording them against the EUTM. Seniority can determine the effective date of an existing EUTM. Seniority claims based on earlier UK or International (UK) trade marks will be recognised.

The retention of existing priority and seniority dates in comparable UK trade marks will be automatic. As the holder of an EU right will not have to inform UKIPO of any earlier effective dates. This is because filing, priority and seniority information will be automatically transferred onto the new UK right. The UK application process will provide the holder

with a way of recording priority and seniority dates for applications corresponding to pending EUTM applications filed within 9 months after exit day.

In addition, the holders of international registrations of trademarks having designated the EU before the withdrawal date pursuant to the Madrid system for the international registration of marks, should consider that, as from that date, those international registrations will continue to be valid in the EU27 Member States only and thus will no longer have effect in the UK.

Post-Brexit, new decisions of the CJEU, including new referrals from courts of EU member states on questions of law, would almost certainly cease to apply to the UK. Therefore, although UK and EU trade mark law is currently harmonised, one could envisage a gradual divergence over time. UK courts would no longer be bound to interpret UK trade mark law in accordance with future rulings of the CJEU. (The Chartered Institute of Patent Attorneys [CIPA], 2017, p. 2)

2.4.DESIGNS

The registered Community designs is an EU unitary right. Therefore, EU rules on Community designs will no longer apply to the UK. RCD registered in accordance with Union law as well as Unregistered Community Designs (UCD) made available to the public in the manner provided for in Union law before the exit date will continue to be valid in the EU27 Member States but will have no longer effect in the UK as from the exit date. Any application for a registered Community design pending before the withdrawal date will no longer cover the UK as from that date. (Traub, F. and Clay, A., 2016)

Given their commercial importance, the UK enact transitional provisions to recognise the UK portion of RCD. All registered and published RCDs will have comparable UK designs, which will be recorded on the UK register. These will be treated as if they had been applied for and registered under UK law. The legislative changes introduced in the UK will ensure that the holder of an RCD is provided with an equivalent UK right. They will retain the registration and application dates recorded against the corresponding RCDs and will inherit any priority dates. As fully

independent UK rights, they may be challenged, assigned, licensed or renewed separately from the original RCD. Re-registered designs will be created at no cost to the RCD holder, and with minimal administrative burden will be placed upon the right holder. (European Commission, European Union Intellectual Property Office [EUIPO], 2018).

If RCD applicant holds a pending RCD application on exit day, the applicant will be able to apply to register a UK design in the 9 months after exit day and retain the earlier filing date of the pending RCD. To do so, the UK application must relate to the same design as that filed in the pending RCD application. If the details of the UK application do not match those of the corresponding RCD application, then the earlier EU date(s) will not be recognised. These applications will be treated as a UK registered design application. They will be examined under UK law. In these circumstances, the standard UK fee structure will apply.

Holders of the new right will be allowed to 'opt out' of holding it. Opting out will mean that the re-registered design will be treated as if it had never been applied for or registered under UK law. To request an opt out, right holder must submit a short notice providing UKIPO with the RCD number, along with details of any persons with an interest in the right.

A priority date claimed under the Paris Convention that has been recorded against the corresponding RCD will be inherited by the re-registered design. The date of that priority claim will have effect where proceedings involve a re-registered design with a priority claim inherited from the corresponding RCD.

After Brexit, UCDs will no longer be valid in the UK. On exit day, these rights will be immediately and automatically replaced by UK rights. If UCD holder owns an existing right, he/she do not need to do anything at this stage. Designs that are protected in the UK as an UCD before exit day will be protected as a UK continuing unregistered design and will be automatically established on exit day. It will continue to be protected in the UK for the remainder of the 3 year term attached to it. The fact that a corresponding UCD was established before exit day through first disclosure in the EU but outside of the UK will not affect the validity of the continuing unregistered design.

The designers should carefully consider how, when and where they first disclose its designs in order to establish unregistered protection in the UK

and the EU. Under the new law, UKIPO are creating a UK unregistered design right called Supplementary unregistered design (SUD). This right will ensure that the full range of design protection provided in the UK before exit day will remain available after UK leaves the EU. The terms of supplementary unregistered design protection will be similar to that already conferred by UCD. However, the protection it provides will not extend to the EU. Supplementary unregistered design will mirror the UCD by providing post-exit UK protection for both 3-and 2-dimensional designs. SUD will be established by first disclosure in the UK or another qualifying country. It will be subject to interpretation by the UK Courts. First disclosure in the EU will not establish SUD. However, it may destroy the novelty in that design, should you later seek to claim UK unregistered rights.

The holders of international registrations of designs having designated the EU before the exit date pursuant to the Hague system for the international deposit of industrial designs, should consider that, as from that date, those international registrations will continue to be valid in the EU27 Member States only and thus will no longer have effect in the UK.

Post-Brexit, RCD enforcement action brought in an EU court, and any resulting injunction, would not be effective in the UK. Where infringement is occurring in the EU and the UK, separate enforcement actions would be required. Moreover, UK-based companies accused of infringement in the EU would not be sued in their home jurisdiction, but in the court of an EU state. The future influence of CJEU case law on UK design law would be reduced, potentially leading to gradual divergence. (The Chartered Institute of Patent Attorneys [CIPA], 2017, p. 2)

2.5.PLANT VARIETY RIGHTS

New plant varieties that are distinct, uniform and stable may be protected at the at the EU level by the Community plant variety right, a unitary right covering all member states of the EU, or at the national level in the UK by plant breeders' rights. Once the UK leaves the EU, however, the Community plant variety right will no longer cover the UK.

At present, UK law allows holders of overlapping patents and plant variety rights to apply for compulsory licences to prevent one right from interfering with the use of the other. After exit day, Community plant

variety rights will no longer have effect in the UK. Community plant variety rights holders will not be able to use them to get a compulsory licence on a patent in the UK. The holder will still be able to do so based on UK plant breeders' rights. This will include Community plant variety rights that are converted to UK rights on exit day. (Naylor, M., 2018)

Applicants for Community plant variety rights who do not have a residence or place of business in the EU must appoint a procedural representative who must be based in the EU. After the UK leaves the EU, plant breeders based outside the EU will need to appoint an EU-based representative.

2.6.PROTECTED GEOGRAPHICAL INDICATIONS

Specific legal protection is available under EU regulation for agricultural products and foodstuffs from particular regions or having a specific character in the form of PDOs, protected geographical indications (PGIs), and traditional specialities guaranteed (TSG). These are unitary EU rights established under EU regulation. As with other EU unitary rights, it is likely that transitional provisions would be enacted to recognise existing PDO, PGI, and TSG guaranteed in the UK or for their conversion into national rights. (Shorthose, S., 2016)

2.7.CORYRIGHT

Copyright in the UK is primarily based on the Copyright, Designs and Patents Act 1988. There is no EU-unitary copyright. But there are various EU directives and regulations on whose aim is to harmonise copyright law throughout the EU. Some of these EU laws are implemented in the UK through the Copyright, Designs and Patents Act, others by separate statutory instruments.

Copyright harmonisation in the EU is far from complete. As such, post-Brexit UK will keep EU directives already implemented in the UK, or implement transitional provisions, which are consistent with the EU copyright framework. Outside the EU and its Single Market, the UK will probably still remain fairly closely harmonised to the EU copyright framework as a result of its international treaty obligations, though some

inevitable judicial divergence is likely to arise over time. (Naylor, M., 2018)

There is a great deal of interest in copyright regulation with regard to the copyright clearance for satellite broadcasting after Brexit. Satellite broadcasters transmitting copyright works to EEA states should re-check their permissions. When a satellite broadcaster transmits a copyright work, for example, a film, from one EEA member state to another, they are only required to obtain the copyright holder's permission for the state in which the broadcast originates. This 'country-of-origin' principle was introduced by the Satellite and Cable Directive and avoids satellite broadcasters having to secure individual licences for every EEA state in which their broadcasts are received.

UK law applies the country-of-origin principle to broadcasts originating in any country in the world, except for a limited safeguard in the case of broadcasts originating outside the EEA but commissioned or uplinked to satellite from within the EEA. UK broadcasters may no longer benefit from the country-of-origin principle for broadcasts into the EEA after Brexit and might need to obtain additional right holder permissions covering the EEA states to which they broadcast. This will depend on how the domestic legislation of each EEA member state treats broadcasts originating in non-EEA countries - for example, whether they apply the country-of-origin principle to non-EEA broadcasts, as UK law does .

Database rights in UK arise specifically from the EU Database Directive. In fact, the "sui generis" database right is a uniquely EU intellectual property right only available within the EEA and (theoretically) those countries providing reciprocal protection. UK citizens, residents, and businesses will no longer be eligible to receive or hold sui generis database rights in the EEA after Brexit. UK database owners may find that their rights are unenforceable in the EEA. UK legislation will be amended so that only UK citizens, residents, and businesses are eligible for new database rights in the UK after Brexit. Database rights that exist in the UK prior to exit (whether held by UK or EEA persons or businesses) will continue to exist in the UK for the remainder of their duration. Those in the UK who wish to use databases protected by these rights will continue to need the permission of the right holder(s).

After Brexit, EEA collective management organisations may not automatically represent UK right holders and collective management organisations. Collective management organisations (CMOs) are not-for-profit or member-governed bodies that license rights on behalf of copyright owners. CMOs in the EEA are governed by the Collective Rights Management Directive (the CRM Directive). This includes obligations to represent on request right holders from any EEA member state unless there are objectively justified reasons not to do so. The UK has implemented the CRM Directive via the Collective Management of Copyright (EU Directive) Regulations 2016. The government has published guidance on those regulations. After Brexit, EEA CMOs will not be required by the CRM Directive to represent UK right holders or to represent the catalogues of UK CMOs for online licensing of musical rights. UK right holders and CMOs will still be able to request representation, but EEA CMOs may be free to refuse those requests depending on the law in individual member states.

CONCLUSION

More than clear is the fact that the UK withdrawal is not just a matter for EU and national authorities but also for private parties. Brexit as a new emergence in the EU adequately reflects its implications on all the rights the EU recognizes to its citizens. The process of creating harmonized and unified legislation established national rights based on a horizontal basis and also introduced unitary rights, independent of existing national rights. EU Intellectual property law represent a combination of the existence of unitary rights at EU level and the existence of harmonized national legal frameworks. Brexit also extended its influence on intellectual property rights accordingly.

Post-Brexit, EUTMs will not provide protection in the UK. However, registered EUTMs will be automatically cloned on to the UK Register (at no cost to the right holders) and given the same rights as existing UK trade mark registrations. EU designations of International Registrations will also be cloned on to the UK Register but they will be independent national UK registrations, not UK designations of the International Registration. Pending EUTM applications will not be cloned and re-filing will be necessary if protection in the UK is required. There is a nine month period

from the exit day where re-filed UK applications can claim back the original filing date of the corresponding EUTM application.

After exit day, RCDs will not provide design protection in the UK. However, as with trademarks, RCDs will be automatically cloned on to the UK Register and given the same rights as existing UK design registrations. Pending RCDs (including those subject to deferred publication) will not be cloned on to the UK Register but there will be an option to re-file these rights in the UK whilst keeping the same filing date.

Brexit will have no impact on European patents because the EPC is not an EU treaty. Furthermore, members of the EPC do not need to be an EU state and there are already a number of non-EU members. It is expected that the UK will remain a member of the EPC post-Brexit.

Once the UK has left the EU, separate trademarks and designs will need to be filed in order to ensure protection across both territories. Although it is not strictly necessary to file applications in both the EU and UK due to the cloning of rights, as this only applies to EUTM/RCD registrations and not pending rights, the general recommendation is that right holders should consider filing both UK and EU applications for core trade marks and designs.

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LIFELONG LEARNING AS AN INCENTIVE OF LEADERSHIP: KEY ELEMENT IN LEADERSHIP DEVELOPMENT

Kalina Sotiroska Ivanoska, Zoran Filipovski, Muedin Kahveci, page 121-126

ABSTRACT

Lifelong learning is an important factor in leadership development. This article addresses the relationship between lifelong learning and leadership. There were asked 60 participants about lifelong learning. The obtained findings of the study contribute to theory of leadership, lifelong learning and could help in the process of improving the society. A leadership development program can incorporate the findings of theories of learning and improve implementation of the knowledge in everyday life.

Key words: lifelong learning, leadership, leadership development, society

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INTRODUCTION

People have been learning all their lives means to confirm the facts. Individuals learn every day, more or less intensively. Sometimes they do it on purpose while sometimes the learning processes are unplanned; very often inevitable. Life without continuous learning is unthinkable. Even organizing daily activities involves continuous learning. In fact, learning process is more and more often than people know. The less obvious assumption is that lifelong learning can be promoted or organized in some way, a thesis that is often implicitly in favour of lifelong learning as a promising idea in educational policy and educational approaches.

Lifelong learning covers many fields, from general education to vocational training, from the needs of the young to the needs of the elderly as well as the needs of the employed and the unemployed. Lifelong learning involves different levels of learning, formal, non-formal, informal, and covers many fields: coaching, basic skills, integration of information and communication technologies, investment efficiency, foreign language learning, lifelong guidance, system flexibility to make learning accessible to all, mobility, civic education, etc. One of the reasons that lifelong learning has become very important is the accelerated scientific and technological development. Despite the length of primary, secondary and university education , which ranges between 14 and 18 years depending on the country, the knowledge and skills acquired on this occasion are not sufficient for a professional career spanning three or four decades. In October 2006, the European Union adopted a document entitled "It's never too late to learn." This document recommends lifelong learning as the essence of the ambitious Lisbon 2010 project, on the basis of which the entire European Union should become a learning area.

How do individuals keep up with the rapidly changing world, a world where information flow is increasingly difficult to follow, where it is difficult to follow the acceleration that generates new knowledge? Searching for the answer to this question is most important in raising awareness of the process and importance of learning for both personal growth and the advancement of learning communities. Learning has always been an integral part of human existence, and today it is a continuous process of progression. Simple, learning means changing.

Nowadays, individuals live in a world where everything is changing and learning: organizations, cities, communities, smart apps, etc.

The peculiarity of creativity in lifelong learning practices is manifested in two tenets: problem solving strategies (external development) and self-realization in the learner (internal development) (Goff, 1992; Maslow, 1968; Marsiske & Willis, 1998). Creativity and lifelong learning are important factors in achieving a sustainable development of a society.

Leaders are required not only to be more educated about their own expertise, but also to handle specific tasks and challenges, while intensity of work and time limits are escalating.

The concept of lifelong learning is an appreciation of adults' lifelong development needs. By facilitating a continuous learning process, individuals contribute to economic growth, greater competitiveness and lasting employability. Also, this concept is based on developing active citizenship and individual potential of individuals. The difference between lifelong education and lifelong learning still needs to be borne in mind. Namely, education is a process that covers only organized learning, while learning is a broader term that includes every opportunity to acquire knowledge throughout life.

Merriam & Caffarella (1999; according to Allen, 2007) highlight a number of adult learning theories. Allen (2007) in his article focused on four: behaviorism, cognitivism, social learning and constructivism. Behaviorism's primary purpose is to elicit behavioral change in a new and desired direction. While behaviorists are concerned with behavioral change, cognitivists focus on developing "capacity and skills to learn better". Proponents of social learning examine the intersection of the social context and the learner. Lastly, constructivists are concerned with the learners' construction of reality and how individuals make meaning from experiences. Allen (2007) provided a brief description of each theory and links its application to leadership development. Also he discussed "transfer of learning" – an important element in any leadership development initiative.

LEADERSHIP

The common definition of leadership emphasizes the fact that leadership is the process by which one person influences other members of a group to achieve the defined goals of the group or organization (Grinberg & Baron, 1998). By this definition, leadership is a process that involves influencing, changing the actions or attitudes of group members. There are multiple techniques for influencing, and leadership relies on influencing techniques without the use of coercion, above all on the positive relationship and feelings between leaders and followers. A leader who manages to be followed by the others is successful. Further there is great number of definitions for leadership; Northouse (2008) extracts four key components, the leadership is a process, influences, happens in a group context and presupposes certain goal. Based on these components, could determinate a definition: the leadership is a process which influences the group to achieve certain goal. Pettigrew (1988; according to Winston, & Patterson, 2006) includes the understanding of employees' skills and the accurate deployment of employees based on these skills as a strategic tool of the leader. Skills are the function-related knowledge and physical skills that contribute to the success and efficiency in completing tasks. Winston, & Patterson (2006), assumed that many researchers (Giblin (1986), Waitley (1995), and Deming (1986); according to Winston, & Patterson, 2006) support the notion of both the leader and the follower need to achieve higher levels of knowledge.

It is obvious the importance of the role of leaders and managers in civil society organizations, and this study is significant for developing knowledge to improve better understanding of the relationship between these concepts, leadership, lifelong learning and creativity.

METHOD

Participants

60 participants were included in the study all of them are at the top positions as politicians, rectors, deans, members of parliament in The North Republic of Macedonia. Average age is 42.7 (SD=8.93), 50 were male and 10 female.

Instruments

Participants were asked questions about reading, knowledge of foreign languages and use of IT technologies.

Results

The results of this study showed that 87% of participants said they read constantly, and 13 % said that they don`t prefer to read. One of the characteristics of a great leader is making a obligation to being a lifelong learner.

DISCUSSION AND CONCLUSIONS

According to results it is obvious that leaders constantly read. They make decisions that want to grow and learn, therefore can find different ways of resolving problems and set immediate decisions. Learning is a personal process, whereas social context and adult life style shape what adult learns and wants to know. Conger (1992, according to Allen, 2007) outlines four types of leadership training. Based on his qualitative research, leadership development programs or aspects of programs, fall into four categories, as personal growth, conceptual understanding, feedback and skill building. Personal growth programs are "based, generally, on the assumption that leaders are individuals who are deeply in touch with their personal dreams and talents and who will act to fulfill them". Conceptual learning is based on theoretical material, which is occurred basically in universities. Feedback instruments are are used in an effort to help individuals locate areas for improvement.The fourth category skill building is the most common method utilized in leadership development training and has grown increasingly difficult to teach as their thinking about leadership has progressed.

THEORETICAL AND PRACTICAL IMPLICATIONS

This study is relevant because set the relationship of leadership and lifelong learning. It has limitations because there are not used instruments to research lifelong learning, only simple questions. Nevertheless, it clarifies the importance of learning, and set the key characteristic of leader the willingness to learn and grow in their professional development. In today's dynamic information age, leaders need to continue learning

throughout their lifetime in order to retain and enhance their competence. Consequently, leadership development nowadays is in the state of confusion. Nanus (1989) defines leadership skills as embodying a vision, not just as applying a particular style of behaviour. According to the idea is that leaders are made, not born, leaders should inspire others, to achieve clearly articulated, shared goals.

Continues learning and reading are essential for producing the inventions and problem solving that is expected by leaders, needed to address the many challenging problems that our society faces. To find their way in societal shifts, leaders cannot rely on static maps, nor can they hope to manage complexity through fixating on the details (Mikkelsen & Jarche, 2015). By seeking, sensing, and sharing, everyone in a society can become part of a learning entity, listening at different frequencies, scanning the perspective, recognizing arrangements, making better decisions on an informed basis and solve problems.

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THE REGIONAL MODES OF INTEGRATION OF INTERNALLY DISPLACED PERSONS (TO THE CONCEPT OF CONCEPTUALIZATION)

Elvira Zeitullaieva, page 127-144

ABSTRACT

In the article for the first time in Ukrainian science an attempt was made to conceptualize the notion of "the regime of integration of internal migrants". The concept of the regional mode of integration of internally displaced persons is defined. The criteria for classification of the regional mode of integration of internally displaced persons are investigated. The experience of implementation of the programs of integration of internally displaced persons in some regions of Ukraine is studied.

Key words: internally displaced persons, integration and adaptation of internally displaced persons, state policy on integration of internally displaced persons, regime of integration of internally displaced persons.

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Relevance of the topic. The situation with the internally displaced persons (IDP), which arose after the armed conflict in the Donbas and the annexation of the Autonomous Republic of Crimea by the Russian Federation, is one of the most significant problems in Ukraine. It includes social, economic, political, demographic, medical, psychological, and other the components. According to the Ministry of Social Policy of Ukraine, by 01.01.2018, the structural units on social protection of local state administrations have registered more than 1 million 492 thousand refugees from the Donbas and the Crimea. As a result, a special direction of state policy was created, related to the adaptation of the IDP, implemented and coordinated by the Ministry for Temporary Occupied Territories and Internally Displaced Persons of Ukraine, which was established in 2017. The strategy for the integration of internally displaced persons and the implementation of long-term decisions on internal displacement for the period up to 2020 [1] involves a number of measures aimed to support regions and communities hosting IDP.

At the same time, the dynamics of migration from the occupied territories of Ukraine testifies the uneven placement of IDPs in the regions. This leads to imbalances in the burden on a limited local infrastructure, as well as to the rise in prices for housing rent and food products, together with low wages and the complexity of employment among IDPs.

An analysis of recent researches. Problem of IDPs and their adaptation gradually becomes the target for scientific analysis, which is supported by relevant studies of representatives of various branches of social science. They study the legal status of IDPs [see, for example, 2; 3], the mechanisms for ensuring their social rights [see, for example, 4; 5; 6], the principles of state policy on the integration of IDPs [see, for example: 7]. In the context of this research, some aspects of the problem were investigated by O. Balueva [8], V. Sereda [9], O. Rindzak [10], U. Sadov [11], V. Skobelsky [12], M. Filak [13], O. Fushtey [14], who initiated the study of regional factors in the adaptation of the IDPs. We will use some of their findings.

Unsolved parts of the problem. One of the problems of IDPs is the peculiarities of their adaptation in various regions of Ukraine. This allows putting as a hypothesis the thesis about the existence of various

regional regimes for the integration of IDPs. The study of these regimes, on the one hand, will help to solve theoretical problems (to determine the content of the regional regime of integration of the IDPs, its structure, etc.), and, on the other hand, it helps to solve the problems in various spheres connected with the development of the legal status of IDPs and their adaptation in host regions and communities.

The objective of the article. The purpose of the paper is to define the content of the concept of "regional integration of IDPs". To achieve this goal the following main tasks were set up: to study the meaningful characteristics of the regional regime of integration of IDPs; to disclose the elements of the system and structure of the regional regime of integration of the IDPs in Ukraine; to highlight the criteria for classification of regional regimes of integration of IDPs; to reveal the mutual influence and interdependence of the regional regime of integration of IDPs and the effectiveness of their adaptation; to define and characterize the system of subjects of the regional mode of integration of IDPs.

Main body of the text. In accordance with the UN Guiding Principles on Internally Displaced Persons, "internally displaced persons are individuals, groups of people who have been forced to leave their homes or places of permanent residence, in particular, as a result of or in order to avoid the consequences of an armed conflict, manifestations of violence, human rights violations, natural or man-made disasters, and who have not crossed internationally recognized state borders" [15]. The situation with IDPs in Ukraine in the regional dimension is characterized by the following indicators (Table 1).

Table 1.

Distribution of IDPs by regions of Ukraine

(data as of 01.01.2018)

Regions of Ukraine	Number of population	Number of IDPs	Percentage to the total number of IDPs	Percentage of IDPs on the total population	The number of IDPs per 10 thousand population
Vinnytsa	1 590 357	12 614	0,8	0,81	81
Volyn	1 040 954	4 165	0,3	0,42	42
Dnipropetrovsk	3 230 411	67 551	4,4	2,13	213
Donetsk	4 244 057	561 076	36,5	13,44	134
Zhytomyr	1 240 482	10 651	0,7	0,85	85
Transcarpathian	1 258 777	3 147	0,2	0,25	25
Zaporizhzhya	1 739 488	97 016	6,3	5,57	557
Ivano-Frankivsk	1 379 915	4 080	0,3	0,29	29
Kyiv	1 734 471	49 306	3,2	2,82	282
Kirovograd	965 756	13 087	0,9	1,34	134
Lugansk	2 195 290	261 819	17,0	11,86	118
Lviv	2 534 027	10 742	0,7	0,42	42
Mykolayiv	1 150 126	7 452	0,5	0,65	65
Odessa	2 386 516	36 415	2,4	1,1	110
Poltava	1 426 828	26 427	1,7	1,82	182
Rivne	1 162 763	2 808	0,2	0,24	24
Sumy	1 104 529	13 397	0,9	1,21	121
Ternopil	1 059 192	2 228	0,1	0,28	28
Kharkiv	2 701 188	172 989	11,3	6,37	637
Kherson	1 055 649	14 552	0,9	1,45	145
Khmelnitsky	1 285 267	6 115	0,4	0,47	47
Cherkassy	1 231 207	12 813	0,8	1,04	104
Chernivtsi	908 120	3 015	0,2	0,33	33
Chernihiv	1 033 412	8 554	0,6	0,82	82
Kyiv	2 925 760	135 548	8,7	4,51	451
Ukraine	**42 584 542**	**1 492 100**	**100**	**3,53**	**353**

The largest number of internally displaced persons is registered in Donetsk, Luhansk, Kharkiv, Zaporizhzhya, Dnipropetrovsk, Kyiv oblasts and in Kyiv. The smallest number of IDPs has been settled in Ternopil, Chernivtsi, Rivne, Transcarpathian, Ivano-Frankivsk and Volyn regions (figure 1).

This testifies the uneven regional distribution of IDPs in Ukraine. It is also clear that a significant amount of IDPs is recorded in the adjacent areas of the battlefields and of the occupied territory just to receive social benefits. After that they return home. According to the Ministry of Social Policy of Ukraine about 60% of the IDPs are pensioners, 23.1% are able-bodied, 12.8% are children and 4.1% are disabled persons.

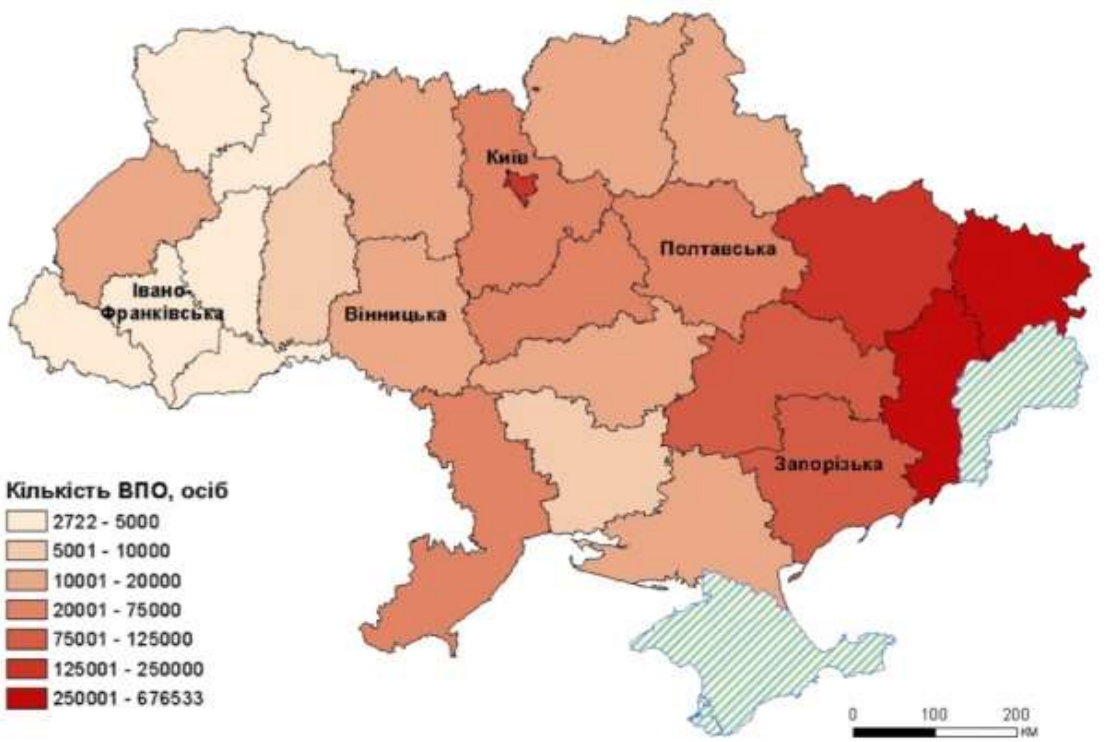

Figure 1. Placement of IDPs by the regions of Ukraine [16]

On the other hand, some part of the IDPs is focused on permanent residence in other regions of Ukraine. Moreover, according to the surveys of IDPs, the share of these individuals in some regions is approaching almost 40-45% [17]. Under such conditions, it is important to evaluate the factors of attractiveness of the regions of Ukraine regarding the integration

of IDPs into the regional communities and raise the question of the existence of certain regional regimes for the integration of IDPs, which affect the nature and content of the adaptation process of forced migrants.

In legal literature, the legal regime is characterized as a special order of legal regulation, established by the state in the form of legal norms and provided by state coercion. Within the legal science the term "migration regime" as a means of realization of the migration policy in Ukraine was defined. According to M. Balamush, "the migration regime is an integral complex of separated, interconnected and interacting elements, which forms a special unity with the environment and is at the same time an element of the system of higher order.

Therefore, the migration regime can simultaneously be regarded as an element of the system of higher order - the system of administrative-legal regimes, as well as within the migration regime to allocate the following elements: the regime of acquisition and loss of citizenship; the mode of departure outside of Ukraine and entry of Ukrainian citizens into Ukraine; the mode of entry and stay of foreigners and stateless persons on the territory of Ukraine; the mode of freedom of movement and free choice of place of residence (stay) in Ukraine, the realization of the right to asylum in Ukraine; the regime in the field of external labor migration; the regime of counteraction to illegal migration in Ukraine; the regime of legal liability of persons who violated the requirements of migration law [18, p. 53-54]. Snigur V. believes that the migration regime in Ukraine consists of three elements: 1) the system of legal acts, which is the basis of the functioning of this mechanism; 2) organizational-structural formations; 3) organizational and legal methods and means that ensure the functioning of this mechanism [19, p. 125]. Thus, within the law, the term of "regime" (in particular, the migration regime) is tied to the law-making and law-enforcement activity of state authorities and local self-government in the field of migration relations.

In political science, it is mostly argued that the political regime is an environment and condition of the political life of society, in other words, the corresponding political climate existing in a society at a certain stage of historical development [20, p. 3]. Local political regimes are entirely determined by the existing political regime in the state as a whole. They "are its local (special) manifestations and differ mainly in the ways of functioning of the institutions of power, which are imprinted by local factors (level of political culture and historical and cultural traditions of

the region, its socio-economic development, the presence of charismatic regional political leaders, the configuration of the local party system, the level of internal autonomy within the mode "center -region»)» [21]

The science of public administration enriched the definition of the concept of "regime" with resource and organizational component. Gaevskaya B. presents organizational regime as some kind of design consisting of rules, norms, beliefs and values, which is formed depending on the existing organizational culture [22]. "The regime, as it has been brought to detailed procedures and fixed in the regulations, the rules of action of the subjects of regional administration regarding the rational use and redistribution of resources to achieve the objectives, as T. Bezverkniuk says, is a form of functioning of institutional mechanism of resource provision of regional governance" [23].

Analyzing the fact that all types of regimes are related to human behavior, within the sociological school, the general term "social regime" is used to refer to all rules and regulations that people more or less respect in communicating with each other. Each mode within this approach is based on the system of social ties and that is why the regimes can not be changed only through the change of legal acts, since the social basis on which they are being built must be changed.

In the sense of sociologists, social integration has two meanings. First, it is a process and a state of combination of different (in quality) social elements in a holistic formation. Secondly, the process of joining a certain system (of integrity), which has already been formed, of one or another social particle (group, individual), merging with the system and acquiring signs of its structural, constituent element. On the other hand, adaptation is adapting to the rules of the new society. Accordingly, the measures taken to create the necessary living conditions for IDPs in a new place consist of two connected and complementary processes, when the person is first embedded in the new conditions (integrate), and then help them to exist (adapt).

Based on the latter, in our opinion, the context in which the actors of the institution of management and organization of IDPs are interacting and can be conceptualized as "the regime of integration of internally displaced persons". The IDP's integration mode represents the structural elements of society that arise and are reproduced in it as a response to internally displaced persons.

The elements of the IDP's integration regime (regulatory acts, institutional structures, discourses) are both products and regulators of the actions and interactions of the actors of the Institute for the management of the IDPs. The social practices among the actors are drawn up, restored and changed taking into account information about the mode of integration of the IDPs. Social practices are subject to change because of the variability in the context of their implementation and the unpredictable effects of agents. A change of social practices leads to a change in the IDP's integration regime.

In general, it is possible to distinguish between three mutually conditioned types of IDP's integration regimes: international, national, and regional.

Figure 2 shows the international dimension of the integration of IDPs, which characterizes the number of Ukrainian citizens seeking asylum or other forms of legal residence in neighbouring (with Ukraine) states.

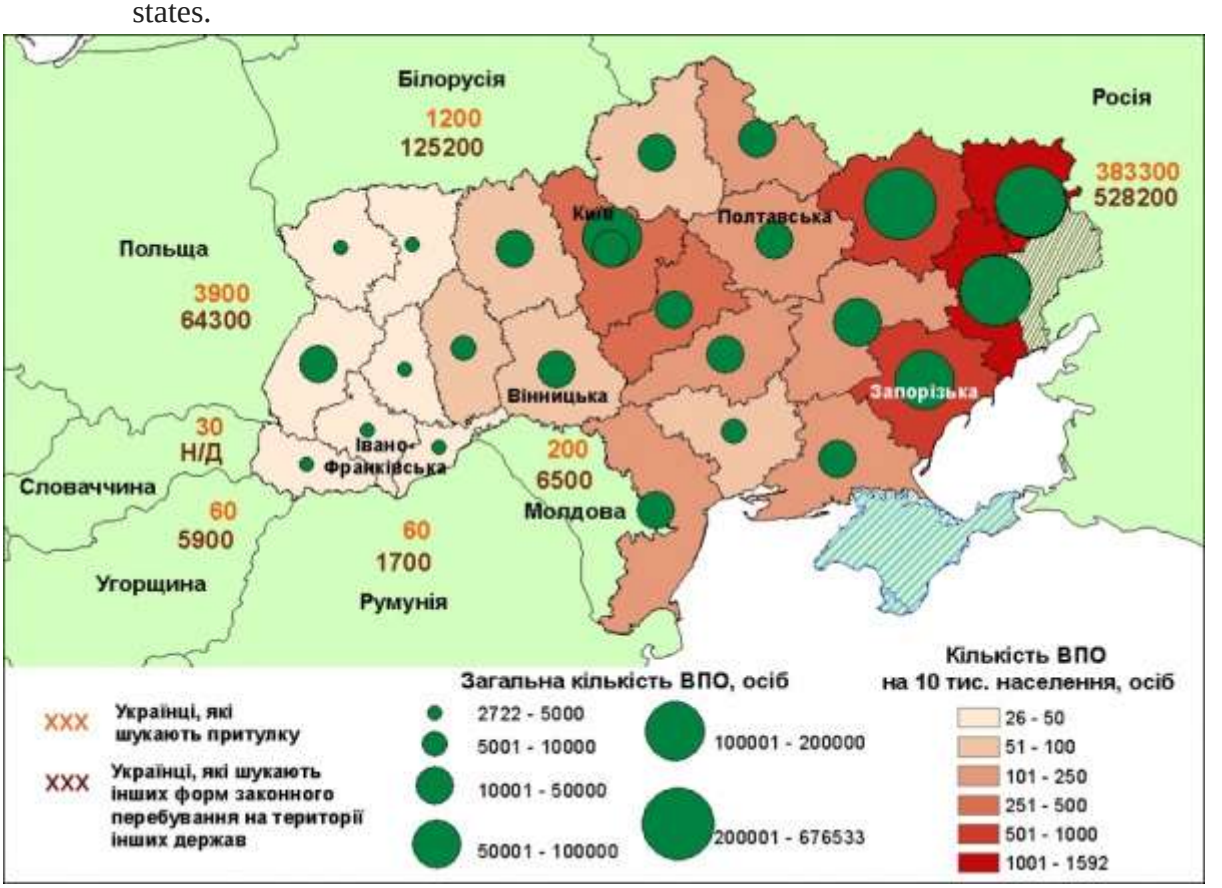

Figure 2. Number of IDPs by regions of Ukraine and the number of Ukrainians seeking asylum or other forms of legal residence in neighbouring states [24].

The national integration regime is a consequence of the direct and indirect influence of the state policy of integration of IDPs, which can be defined as a strategy developed and implemented by the state on the regulation of spatial displacement and adaptation of IDPs. A number of regulatory acts of the legislative [25] and sub-legislative level [26; 27; 28; 29] testify this.

The regional mode of integration of IDPs is the interaction of IDPs and other actors in the process of integration at the regional level - of regional authorities, local authorities, formal and non-formal public associations and the regional community as a whole. The state of the regional regime for the integration of the IDPs is witnessed by interviews with the IDPs and other actors in this process (representatives of public authorities, non-governmental organizations, the media).

For the analysis of the regional regime of integration of IDPs, it is also important to study regulatory documents of the regional level on integration issues, surveys of population, research of integration practices. As a result, two types of IDP's integration regimes can be proposed. They are "favorable" and "unfavorable" ones (Table 2).

Types of regional regimes for the integration of IDPs

Signs	Integration regime of IDPs	
	Unfavorable	Favorable
Regional integration programs of IDPs	Lack of IDP's integration programs	Availability of IDP's integration programs
Socio-economic priorities of the region	Concern over the growth of competition in the labor market. Restrictions on the resources of the IDPs .	IDPs are considered as an additional resource for the development of the territory, which has a positive impact on the state of demography in the region.

Political-administrative practices at the regional level	Use of institutional and discursive "barriers" for the integration of IDPs. The presence of socio-political speculations on IDPs.	Creating a positive "portrait" of IDPs. Lack of socio-political speculation about IDPs.
Public activity of IDPs	Low activity, low effectiveness of NGOs and IDPs cooperation with public authorities at the regional level and local self-government bodies.	High activity, establishing effective liaison between NGOs and public authorities.
Activities of international organizations	Low level of activity of international organizations in the field of integration of IDPs and refugees	High level of activity of international organizations in the field of integration of IDPs and refugees
Demographics	Percentage of IDPs from the total population and percentage of IDPs in the region from their total number below the average in Ukraine	The percentage of IDPs from the total population and the percentage of IDPs in the region from their total number above the average in Ukraine
Ensuring the right to housing	Limited location of IDPs	Availability of IDP's locations
Labor market	Tension in the regional labor market	Availability of IDP's places of employment
Realization of the right to education	Restrictions on the realization of IDPs' rights for education	Ensuring the realization of IDPs' rights for education
Health care	Complicated access to health care services	Provision of health care services

The image of the region in the perception of the IDPs	Negative image of the region in the perception of IDPs	Positive image of the region in the perception of IDPs

Based on certain criteria, we consider the regimes of the integration of IDPs in some regions of Ukraine.

A program of social support for internally displaced persons from the temporarily occupied territory, areas of the anti-terrorist operation for 2017 has been adopted in Zhytomyr oblast. The program is designed to provide IDPs from the temporarily occupied territories and areas of ATO with financial assistance as they were in difficult life situation; provision of IDPs from the temporarily occupied territories and areas of ATO holding temporary accommodation in institutions, enterprises, organizations of the region and nutrition if necessary.

It is also worth noting the activity of rayon councils of Zhytomyr region for the integration of IDPs. In particular, the decision of the Radomyshlsky rayon Council dated March 10, 2017 № 154 approved the Program of social support for internally displaced persons from the temporarily occupied territories, areas for conducting an antiterrorist operation in the Radomyshl rayon. The program envisages: the provision of IDPs with financial aid as being in difficult life situation; assistance in the renewal of passport documents; provision of free legal aid; assistance in continuing education and obtaining education; provision of necessary medical care; assistance in placement and creation of proper conditions for their temporary residence; restoration of all social payments; assisting in job placement. Korosten city council approved the city comprehensive program "Care", which provides the provision of material assistance to the NGO "Union of Forced Residents of Donbass" Dobrotvor".

In the Mykolaiv oblast there is an order of the Mykolaiv oblast State Administration "On Approval of the Plan of Measures for Implementation of the Integrated State Program for Support, Social Adaptation and Reintegration of Ukrainian Citizens who moved from temporarily occupied territory of Ukraine and areas of anti-terrorist operation to other regions of Ukraine for the period up to 2017 year in Mykolaiv region» dated March 30, 2016, № 99-p. The purpose of the decision: solving urgent problems of IDPs, promoting integration and

social adaptation of such persons in the new place of residence, reducing the level of social tension among them and in society, assisting in ensuring the creation of proper conditions for life, rights and realization of potential, provision of social, medical, psychological and material support, creation of favorable conditions for voluntary return to places of previous residence.

Also, in the Mykolaiv region, the decision was taken by the Mykolaiv oblast l Council "On approval of the Integrated program of social protection of the population "Care" for the period till 2020" from 22.12.2016, №5. The purpose of the program is to solve urgent issues of organizational, logistical, medical and social services of citizens who are in difficult living conditions, coordination of actions of executive authorities, public organizations, charitable foundations, whose activities are socially oriented.

Paragraph 1 of the Measures for the implementation of the program provides: "To carry out a systematic survey of the living conditions of the elderly, the disabled, the large families and low-income families, the victims and liquidators of the consequences of the Chernobyl accident, the families of forced migrants from the east of Ukraine and the families of the participants of the antiterrorist operation, who need various types of assistance, and timely response in case of problems".

In Kharkiv region, there are no regional programs aimed at implementing the Integrated State Program for Support, Social Adaptation and Reintegration of Ukrainian Citizens who moved from temporarily occupied territories of Ukraine and areas of anti-terrorist operation to other regions. On the other hand, more than 20 targeted programs are being implemented in Kharkiv region, which include support for IDPs. Thus, the Integrated Program of Social Protection of the Population of Kharkiv Oblast for 2016-2020 is carried out at the expense of the funds provided by the regional budget in the area of "Social Protection and Social Security", within the possibilities of the regional budget, funds of the Social Insurance Fund of Ukraine on accidents at work and professional diseases, as well as other sources of financing proclaimed by the current legislation of Ukraine. Among the expected results of the program implementation is the creation of a system of social protection of the population in residential homes for comfortable living conditions for single persons who require constant external care, including those who have been resettled from social institutions located in the ATO area. The

Economic and Social Development Program of Kharkiv Oblast for 2017 approved by the decision of the Kharkiv oblast Council on December 08, 2016, № 329-VII envisages such activities as coordination of international technical assistance and cooperation with international organizations and support for internally displaced persons, including 13 projects within the support of the European Union, the UN system, the government of Germany.

Some international projects are implemented on the territory of the region, which include the component of integration of the IDPs. In particular, a joint EU-UN project "Community-Based Approach to Local Development". The project components include working with rural and urban communities in Kharkiv region, as well as provision of housing for disabled people. The funds raised by UNDP amount to about UAH 15 million. The project of the Ukrainian Fund for Social Investments "Promoting the Development of Social Infrastructure" envisages the restoration of residential buildings for IDPs and social infrastructure objects. It is also worth mentioning the project "Promoting the development of social infrastructure, aimed at the development of the East of Ukraine", which is being implemented in three oblasts: Dnipropetrovsk, Kharkiv and Zaporizhzhya. Implementation of the first phase of the project began in 2015 and continued until 2018. The amount of the grant from the German Government is EUR 9 million. The main task of the project is to restore social facilities to provide housing for internally displaced persons. Among the priorities is the restoration of social infrastructure (schools and kindergartens) in those communities that host migrants.

The Strategy for the development of Kharkiv region for the period up to 2020 approved by the decision of the Kharkiv oblast Council № 1151-VI dated March 5, 2015, contains the strategic goal № 3 "Effective management of local development", item № 8 "Development and implementation of temporarily forced reintegration projects and programs for migrants from the ATO zone in cooperation with central authorities, the public sector and international organizations".

At the same time, in Transcarpathian, Rivne, Khmelnitsky and some other regions of Ukraine, there are no regional programs approved for the implementation of the Integrated State Program for the Support, Social Adaptation and Reintegration of Ukrainian Citizens who have

moved from the temporarily occupied territories of Ukraine and areas of anti-terrorist operations to other regions. The programs of economic and social development of the regions in 2015-2017 did not contain any reference to IDPs.

According to expert data [1] (based on the criteria for determining the types of regional integration regimes), the regions of Ukraine were distributed as following ones (Table 3):

Table 3

Distribution of regions of Ukraine according to the types of integration

Favorable IDP's integration regime	Unfavorable integration of IDPs
Vinnitsa	Volyn
Dnipropetrovsk	Transcarpathian
Donetsk	Ivano-Frankivsk
Zhytomyr	Kirovograd
Zaporizhzhya	Rivne
Kyiv	Sumy
Lugansk	Ternopil
Lviv	Kherson
Mykolayiv	Khmelnitsky
Odessa	Chernivtsi
Poltava	
Kharkiv	
Cherkassy	
Chernihiv	
city of Kiyv	

[1] Опитування проводилося в листопаді-грудні 2017 р. В опитуванні взяли участь представники 18 громадських об'єднань ВПО.

CONCLUSIONS.

The regional integration regime of IDPs is a combination of the existing forms, means, practices of integration of the IDPs into the regional community, as well as the corresponding interactions. The means of identifying the regional regime for the integration of the IDPs is to analyze the existing documents, to interview IDPs and relevant non-governmental organizations, experts, to research various integration practices. Regional integration regimes of IDPs can be classified as favorable and unfavorable. Regional regimes for the integration of IDPs in Ukraine in general are characterized by a favorable character, which does not exclude the presence of certain unfavorable processes for the integration of IDPs.

The prospects for further exploration to solve the problems of IDPs are the accumulation of experience in solving IDP's problems at the regional level, related to their placement, employment, social and economic integration; definition of expedient measures that would be able to increase the effectiveness of socio-economic integration of various groups of forced migrants and to use significant potential of forced internal migration; studying the successful experience of strengthening the social cohesion of host communities and IDPs.

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