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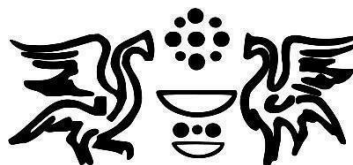
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Editorial Foreword

Editor

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Welcome to the new Issue of the Journal Of Law and Politics -JLP. The topics covered by this Issue are related to the current trends of research, original research that uncovers law and politics recent advances.

The Journal of Law and Politics (JLP) serves as an international platform for rigorous academic discourse at the intersection of legal scholarship and political analysis. The publication provides a comprehensive forum for scholars, practitioners, legal professionals, policy analysts, graduate and undergraduate researchers, postdoctoral fellows, and judicial clerks to disseminate cutting-edge research and theoretical advances in legal-political studies.

Scope and Focus Areas

JLP publishes peer-reviewed research spanning constitutional law, comparative politics, public policy analysis, electoral systems, judicial behavior, legislative processes, administrative law, international relations, human rights law, political economy, and governance studies. The journal maintains particular interest in interdisciplinary approaches that examine how legal frameworks shape political outcomes and how political processes influence legal development.

Hopefully you find this Issue valuable and we definitely look forward to receiving your high-quality studies for the next issue of the Journal.

Prof. Dr. Bekim Fetaji
Editor

Journal of Law and Politics

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CONSTITUTIONAL CHALLENGES AND THE IMPACT ON THE LEGAL SYSTEM IN NORTH MACEDONIA

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Introduction

In the Republic of North Macedonia, the Constitution serves as the highest legal framework, providing a foundation for democracy by establishing sovereignty derived from its citizens. This role underscores its importance in fostering a fair democratic process. However, a gap remains in the current research, particularly regarding the constitutional provisions for equitable representation within the state institution and the challenges to uphold these rights, especially as affected by recent decisions of the Constitutional Court. In recent decades, North Macedonia has faced internal and external pressure affecting the legal framework - especially through the need to respect ethnic diversity, human rights, and European legal standards, which the country must adopt to achieve its Euro-Atlantic integration goals. This research addresses the ongoing challenge of implementing constitutional principles, especially those enshrined in the Ohrid Framework Agreement (2001), which aimed to enhance ethnic harmony and ensure fair representation. Previous studies primarily focus on North Macedonia's Euro-Atlantic integration and human rights improvements; however, the current constitutional challenges—stemming from the Constitutional Court's recent abrogation of the law ensuring fair representation—require further examination to understand the implications for equitable governance, social stability, and the country's trajectory toward European Union standards.

Purpose of Study

The study examines the constitutional challenges that have emerged in North Macedonia since the country's independence, focusing on how the Constitution and recent court decisions impact the state's legal integrity. The analysis centers on the law of fair representation, a pivotal amendment resulting from the Ohrid Framework Agreement, which mandates equitable representation for all communities within public institutions. This research seeks to clarify how the recent judicial abrogation of this law may affect public institutional dynamics, potentially destabilizing the state's multiethnic harmony and hindering European integration processes. The study aims to contribute to a deeper understanding of constitutional safeguards, particularly for marginalized communities, and to propose solutions for strengthening legal protections that align with EU principles.

Research Methods

This study employs a qualitative research methodology encompassing comprehensive description, interpretation, and comparative analysis. Data are collected from primary constitutional texts, legal amendments, and decisions of the Constitutional Court. The core research question examines whether North Macedonia's constitutional framework—particularly amendments for equitable representation—adequately addresses the rights stipulated in the Ohrid Framework Agreement and whether additional legislative measures are required to protect these rights effectively.

Hypotheses and Research Questions:

- Hypothesis: Constitutional amendments alone may not suffice for safeguarding equitable representation and upholding the Ohrid Framework Agreement in practice.
- Research Question 1: How essential is the Constitution in guaranteeing equitable representation within public institutions across North Macedonia?
- Research Question 2: Are the current amendments and human rights reforms sufficient to meet the obligations of the Ohrid Agreement and ensure equitable representation?

1. North Macedonians challenges in state-building process/ ethno centric constitution

The Republic of North Macedonia proclaimed its independence from the Yugoslav Federation in 1991 and it is relatively a young state. The first Constitution of the independent and sovereign Republic of North Macedonia was adopted by the Assembly of the Republic of North Macedonia on 17 November, 1991. With this fundamental political or legal act of the state, the long historical process has been rounded up for the Republic of North Macedonia to become a sovereign and independent state whose sovereignty is inseparable, inalienable and infallible. With the adoption of the Constitution, the status of the Republic of North Macedonia was also ensured as an equal subject in the international community.

The Constitution belongs to the group of liberal democratic constitutions, where the main purpose was to mark the beginning of contemporary development of the State. A State that completely disrupted ties with the former socialist background and was expected to

go through full democratic reorganization. Its purpose was the transfer of society and country from a system of profound socialist character to a new democratic system.¹ However, the 1991 constitution falls within the group of solid constitutions, because it represented complexity for change, and the changes adopted throughout the history of the existence of Macedonia after independence presented a challenge for building state with legal order. The need for “Europeanization” of the constitution to achieve the ultimate goal of EU integration has not necessarily been an easy and favorable process for developing and building the state, even though it has brought constitutional and legal developments in the Republic of North Macedonia.

1.1. Ethno centric constitution

Since the formation, Macedonia has a unique history of development and has faced many problems. The country for 33 years has passed legal changes, starting from the time the Constitution was established. Since its establishment, Macedonia inherited many problems as a result of the failure to consider other communities that were composing the majority and are inseparable part of North Macedonia. All the citizens were not treated properly, and some of their fundamental rights were being ignored and violated, particularly the rights of Albanians as ethnic majority in Macedonia.

The majority of the Albanian community boycotted the Referendum for Independence, due to the belief that the new Constitution was ethno-centric and favored the Macedonian ethnic community, over other communities that lived in the state. Due to the dissatisfaction of the status of Albanians in the new Constitutions, the Albanian political parties in the Assembly at the time, did not vote on its adoption.² Policy developments in the Republic of North Macedonia at that time represented a great violation of human rights and discrimination in fundamental rights. The situation was favorable predominantly to the Macedonian ethnic community. During the 1990s, there was a perception that the use of nonviolent action such as boycott, protests, creation of parallel academic institutions in Albanian, etc., for the advancement of the cultural and political rights of Albanians, were not working.

As a consequence of dissatisfaction and unequal treatment, on November 2000, ethnic violence erupted, leading to an armed conflict which started at the beginning of 2001. International influence with direct involvement of EU and US managed to enter in negotiation the four most important political parties of Albanian and Macedonian ethnicity, which achieved peaceful resolution of the interethnic conflict and the result of the negotiation was a Political Document commonly known as the Ohrid Framework Agreement concluded on 13 August 2001.³

Unlike in the past with some ethnic problems, in which all branches of the state have violated human rights and have not treated them in the same way before the law, the implementation of this agreement into constitutional and legal amendments brought ethnic rights changes and inclusion of minorities in the state institutions. Practically, this political document brought changes to the preamble, as well as some articles of the Constitution and reinforced the ethnic composition in the conception of collective rights that are included in the fundamental provisions and fundamental rights and freedoms. These Constitutional changes guarantee direct community, ethnic, linguistic and cultural rights and protection mechanisms in voting procedures and measures for proportional and equitable representation of communities within public offices. Nevertheless, that was not enough, as much that was signed in this agreement evolved very slowly, and the demands for institutionalization of rights continued to be evident and unfulfilled. Citizens continued to be unequal before the law and these problems affected the country’s interest and the state’s development process towards European integration.

In the middle of the conflict, was signed the Stabilization Association Agreement.⁴ In general this agreement covers areas of, political dialogue; regional cooperation; free movement of goods; movement of workers, establishment, supply of services, capital; approximation of law and law enforcement; justice and home affairs; cooperation policies; financial cooperation; and institutional, general and final provisions.⁵ It covers approximation of the legislation to the *acquis*, specifying certain very precise rules in the field of intellectual property rights, competition and public procurement, and a wide spectrum of different forms of cooperation in Community policies, justice and home affairs.⁶

2. The adoption of international documents and their impact on domestic legal framework regarding

North Macedonia's path toward European Union accession has been profoundly shaped by a complex interplay of international

¹ T. Karakamisheva-Jovanovska, *Macedonian Constitutional development – Historical aspect and challenges*, Skopje, University Ss. Cyril and Methodius, 2005, 3-4.

² Q. Lita, *THEMELIMI DHE SHUARJA E AUTONOMISË SË SHQIPTARËVE NË MAQEDONI*, Skopje, TV-Shenja, 2018, accessed on 9 September 2018, <http://shenja.tv/themelimi-dhe-shuarja-e-autonomise-se-shqiptareve-ne-maqedoni/> see also *Maqedonia 26 vite e pavarur, referendumi i bojkotuar, lufta me shqiptarët dhe 'fërkimet' me Greqinë*, Java News, 2017, accessed on 9 September 2018, <http://www.javaneews.al/maqedonia-26-vite-e-pavarur-referendumi-i-bojkotuar-lufta-me-shqiptaret-dhe-ferkimet-me-greqine/>

³ *Framework Agreement*, Concluded at Ohrid Macedonia, Signed at Skopje, Macedonia on 13 August 2001, accessed on 15 March 2018, <https://www.osce.org/skopje/100622?download=true>

⁴ The Stabilization and Association Agreement between the European Union and the Republic of North Macedonia (SAA) was signed on 09 April 2001 in Luxembourg, and entered into force on 1 April 2004, after a three-year ratification process by all EU Member States, and after the consent of the European Parliament.

⁵ *Stabilization and Association Agreement between the European Communities and their Member States, of the one part, and the former Yugoslav*, *Official Journal of the European Union*, [47], 2004.

⁶ *Ibidem*, 13–81.

dynamics and influential powers. The country has navigated significant challenges, including resolving long-standing disputes, such as the name issue with Greece, which culminated in the Prespa Agreement, a landmark step that demonstrated its commitment to regional cooperation and European integration.⁷ The involvement of the EU and other global actors has been pivotal in fostering reforms related to governance, the rule of law, human rights, and economic stability. At the same time, competing geopolitical interests in the Balkans have added layers of complexity to North Macedonia's accession journey, with regional powers, international organizations, and EU member states influencing its trajectory in various ways. Despite these challenges, the country remains determined to align itself with EU standards, underscoring the importance of international engagement in shaping its progress. In order for the Republic of North Macedonia to achieve its strategic goals toward European integration, the harmonization of legal acts was inevitable. Globalization along with international organizations and EU integration promote a dynamic constitutional and legal reforms, always in the interest of and extensive protection of human rights.⁸ The most important necessity of the state is to guarantee respect and protection for the interest of the citizens, completing, amending and harmonizing various legal acts, including the Constitution as the highest juridical act of the State.

The Assembly ratifies international agreements by law as defined in Article 68 of the Constitution. The ratified international treaties enter the North Macedonian legal system according to the monistic doctrine and they are directly applicable and effective, and as Article 118 of the Constitution states that, “[i]nternational agreements ratified in accordance with the Constitution are part of the internal legal order and cannot be changed by law,” it is obvious that the ratified international treaties are binding, and as impartial components they have priority over domestic law. They are listed at the level of national laws, but have a greater validity since *lex posterior derogat legi* is excluded as a principle. This implies that national laws are below the Constitution and at the moment of the occurrence of any conflict between national law and the international agreement, the latter one prevails. The Constitution does not specify the attitude and applicability of signed, but not ratified international agreements in the domestic legal system, therefore many authors present a dilemma if the Constitution really has dualistic approach towards them by arguing the monistic approach that could be reached by the court using the appropriate line of interpretation.⁹

As the conditions within the society changes, similarly the Constitution must also be adapted to the interest of social progress and development. The very history of development and change reflects the role and importance that the Constitution has in different periods of state formation. In the case of North Macedonia, since its creation it has had various needs for constitutional interventions, with changes and amendments, precisely because of the above-mentioned state priorities. These changes came as solutions to certain domestic and international political situations, social actualities and creation of constitutional premises for the further democratization of the society.

Despite the extensive processes North Macedonia underwent to align itself with European and international standards, the fact that many key conventions were already in force prior to its independence served as a critical foundation for its integration journey. These pre-existing conventions acted as a guarantor, ensuring that the country's commitment to international norms was not starting from scratch but rather building on established legal and institutional frameworks. By ratifying and adhering to these conventions, North Macedonia committed to implementing the obligations they imposed, driving necessary reforms and the integration of guarantee norms into its domestic legislation. This alignment facilitated the harmonization of its legal system with international standards, reinforcing its credibility as a prospective member of the European Union and strengthening its capacity to uphold the rule of law, human rights, and democratic governance. The Republic of North Macedonia was admitted as a member of the United Nations (UN) by General Assembly Resolution A/RES/47/225 of 8 April 1993 and became a member of the Council of Europe (CoE) on 9 November 1995.

In regard to human rights, North Macedonia has ratified the following conventions,

- Universal Declaration of Human Rights (UDHR) 1948; International Covenant on Economic, Social and Cultural Rights (ICESCR) 1966; International Covenant on Civil and Political Rights (ICCPR) 1966; Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (UNCAT); Convention on the Rights of the Child (UNCRC); Convention on the Elimination of All Forms of Discrimination Against Woman (CEDAW); International Convention on the Elimination of All Forms of Racial Discrimination (ICERD); International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (ICMW); European Convention on Human Rights (ECHR); Framework Convention for the Protection of National Minorities (FCNM); Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities, etc.

Before, Macedonia has signed and/or adopted different documents/treaties related to human rights, so as with many other countries, the key challenge lies again in the implementation and organization of these standards, making them work in practice. It is important that the process of harmonization of legislation does not imply only the transmission of European provisions, but it is necessary to be provided institutional structure, which will enable the implementation of new legal provisions.

In this context, the need for reform of the judicial system was emphasized in order to improve its efficiency, as well as reforms for the creation of competent state and local public administration. All these international conventions, as well as others, have influenced the

⁷ Prespa Agreement <https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280544ac1>

⁸ Dinah Shelton, *Protecting Human Rights in a Globalized World*, Boston College International & Comparative Law Review, 2002 [25], 273-322, accessed on 26 March 2018, <https://lawdigitalcommons.bc.edu/cgi/viewcontent.cgi?article=1172&context=iclr>

⁹ S. Georgievski, *The effect of international agreements concluded in simplified form in the Macedonian legal order: Between the dualist and monist regime*, Skopje, University Ss. Cyril and Methodius, 2004.

creation and development of the legal system, eliminated discrimination and established the order set out in these conventions. As the State is obliged to respect the principles established by the convention, this has positively affected the treatment of its citizens and communities.

According to the Article 118 of the Constitution of Republic of North Macedonia, “the international agreements ratified in accordance with the Constitution are part of the internal legal order and cannot be changed by law.” Observance of the international conventions signed and approved by North Macedonia, in which the interest and freedom of human rights are constitutionally protected and are necessary for building a democratic state and equal society.

As it is known countries that are applicant to EU and also member states sign accession agreements, which are draft documents that the candidate countries are bound to follow for an all-embracing social, economic and legal transformation.¹⁰ In the hierarchy position of the legal norms, international agreements take precedence over domestic laws and human rights agreements have a stronger legal effect than the other international agreements. Accession agreements impose obligations to carry out complex and radical constitutional and legal reforms.¹¹

The EU Country Report on North Macedonia evaluates the protection of minorities as an area requiring further progress and sustained commitment. While acknowledging steps taken, such as the publication of the National Strategy for Inter-culturalism and Social Cohesion 2024-2026 by the Agency for the Rights of the Non-Majority Communities, the report notes significant gaps in implementation and follow-through. The recommendations issued by the Advisory Committee on the Framework Convention for the Protection of National Minorities, particularly those aimed at promoting and ensuring the sustainability of the "One Society for All and Interculturalism" strategy, remain partially implemented. A critical shortfall is the lack of parliamentary adoption of the new strategy, which hinders its formalization and operationalization. To secure the strategy's sustainability, the report emphasizes the need for high-level political backing, adequate funding, and effective media outreach to foster awareness and inclusivity. Furthermore, North Macedonia's failure to ratify the European Charter for Regional or Minority Languages, despite having signed it in 1996, reflects a longstanding gap in its commitments to minority rights. These issues highlight the need for enhanced efforts to build a cohesive, multi-ethnic society and align fully with European standards on minority protection.¹² Due to the necessity of integrating the country into the EU, EU monitoring bodies release annual reports on the country's progress in areas where it must meet EU integration criteria. However, for North Macedonia, these reports have not been positive, particularly in areas such as the rule of law and human rights. A review of these reports shows that progress in these crucial areas—fundamental pillars of democracy, human rights, and the rule of law—is either too slow or absent altogether.

3. Ohrid Framework Agreement as a legal base for equal representation

Except international factors, constitutional changes in Macedonia have come in combination with internal factors. The Ohrid Framework Agreement was an obvious example.¹³ It has had a very important role in constitutional reform with achievements for the rights of ethnic minorities. In this respect, the Framework Agreement is dedicated to the minorities' rights, especially to the Albanian minority. The basic principles of this Agreement were, promotion of peaceful and harmonious development of civil society, preservation and further development of state power, rejection of violence as a means for the achievement of political goals, inviolability of sovereignty, territorial integrity and unitary character of the country, protection and further development of a multi-ethnic society and integration of the country into the Euro-Atlantic structures.¹⁴

¹⁰ A. Petricusic and E. Erkan, op. cit.

¹¹ Ibidem.

¹² EU Country Report on North Macedonia, Page 40 https://neighbourhood-enlargement.ec.europa.eu/document/download/5f0c9185-ce46-46fc-bf44-82318ab47e88_en?filename=North%20Macedonia%20Report%202024.pdf

¹³ *Framework Agreement*, op. cit.

¹⁴ The Constitutional Preamble was amended as such, “The citizens of the Republic of North Macedonia, the Macedonian people, as well as the citizens, living within its borders such as Albanian people, the Turk people, the Vlach people, the Serb people, the Roma people, the Bosnians people and others. . .” In the first constitutional amendments of 2001, from the 14 proposed amendments, only the amendment 4 that had to do with the preamble did not pass. The passage of the amendment that would complete the preamble of the Constitution posed a major problem since the Albanian minority insisted that the above-mentioned formulation, where the country is described as a national state of Macedonian people, was ethno-centric and did not reflect the multiethnic character of the society. Thus, the notion Macedonian nation as a main pillar of the Macedonian state disappeared in the first draft of the preamble. This draft did not specify the Macedonian people and the 5 national minorities, but offered the concept of individual rights and the concept of civil society instead. These concepts opposed the other amendments introduced with the Ohrid Agreement, which contained the concept of collective rights and the concept of the multiethnic state. Beside this, the Macedonian public was strongly opposed to the suggested amendment for excluding the Macedonian people as a main pillar of the Macedonian state. The final text of the preamble was accepted as a compromised solution. The Macedonian people were put back but as an ethnicity, and national minorities were classified as citizens of the respective people rather than nationalities. See, Blerim Reka (ed.) *Ten years from the Ohrid Framework Agreement. Is Macedonia Functioning as a multi-ethnic state?* available at, https://www.seeu.edu.mk/files/research/projects/OFA_EN_Final.pdf

The constitutional changes after the Agreement starts with the Badinter principle or double voting. This principle is described as follows,

*The “Badinter” principle represents a voting procedure for the adoption of laws or other bylaws and regulations which directly affect the issues dealing with non-majority communities in the Republic of North Macedonia. It also applies at the local government units through the provision of majority vote in which also the majority of votes of the non-majority communities should be provided. This principle is particularly important for non majority communities in the Republic of North Macedonia, or in certain units of local self-government, because it represents a basic tool against the possibility of “majorization” by the majority community. The implementation of the principle of double voting by state institutions, starting from the legislative power and up to the other administrative and judicial powers in the decision-making processes of the public institutions of the Republic of North Macedonia, will be the guarantor of the preservation of the multiethnic character of the state as prescribed by the constitution.*¹⁵

It is worth mentioning, however, that the Republic of North Macedonia as a multi-ethnic state with the largest minority being Albanian, has encountered problems and dissatisfaction, as well as constitutional and fundamental principal violations. Referral to the constitution has not always played a role in the protection and realization of constitutional rights in a fair manner. It has been frequently violated by the judicial authorities in regard to the regular judicial processes, thus violating the constitutional rights of citizens and at the same time not respecting the principle of constitutionality and legality in a regular judicial process. The level of respect for the constitution and the effective instruments for its protection reflects the level of democracy and respect for the realization of the fundamental rights of the citizen.¹⁶ Different political platforms have often de-factorized and developed discriminatory and inequitable policies among citizens, with which they have done a constitutional violation of the fundamental rights set forth in Article 8 of the Constitution. For this even the European Commission reports have consistently provided criticism as well as obligations for urgent reforms in the improvement of fundamental rights guaranteed by the constitution.¹⁷

Therefore, one of the fundamental values of the Republic of North Macedonia against these violations is the rule of law and the division of judiciary as a separate authority. The concept of power-sharing is particularly important for securing the rule of law, because compliance with this concept must be based on the independence of the work of all government bodies within the jurisdiction without interference and pressure outside the legally-regulated relationship.¹⁸ This principle also provides the basis for independent and autonomous judiciary, with what later it results in the development of judicial processes and justice in the country.

3.1. Constitutional Amendments

Following the Ohrid Framework Agreement (OFA), North Macedonia's Constitution was amended to include provisions aimed at fostering equitable and proportional representation of all ethnic communities within the country. These changes were designed to address historical inequalities and ensure that ethnic minorities, particularly the Albanian community, are adequately represented in public administration, security services, and other state institutions. A cornerstone of these constitutional amendments is the introduction of the “Badinter” principle, a double-majority voting mechanism. This principle requires that, in addition to a general majority, any laws directly affecting ethnic communities must also gain the approval of a majority of representatives from minority groups in the legislature. This safeguard ensures that minority voices are not overridden by the majority, promoting inclusivity and mutual trust. By embedding such mechanisms, North Macedonia sought to strengthen inter-ethnic harmony, align its governance with democratic standards, and lay the groundwork for a stable, multi-ethnic society.¹⁹

Following the Ohrid Framework Agreement (OFA), the Constitution of North Macedonia was amended to reflect the principles of equitable representation outlined in the agreement, resulting in the adoption of Amendment VI. This amendment introduced a commitment to the fair representation of all communities in public bodies at all levels and extended its reach to other areas of public life. By doing so, it reinforced the constitutional foundation for ensuring inclusivity and equality in state institutions. Specifically, Amendment VI supplemented paragraph 2 of Article 8 of the Constitution, embedding the principles of non-discrimination and equitable participation as fundamental values of the state. The amendment emphasizes a rotating and equal representation framework, ensuring that the composition of public institutions mirrors the country's multi-ethnic character, a key element in fostering social cohesion and addressing historical disparities among communities. This constitutional shift underscores North Macedonia's dedication to creating a more inclusive and

¹⁵ I. Zejneli, A Jashari, J Shasivari, B. Arifi, and E. Basheska, *Legal Aspects of implementation of the OFA*, in B. Reka (ed.) *Ten years from the Ohrid Framework Agreement. Is Macedonia Functioning as a multi-ethnic state?* Tetovo, South East European University, 2011, 131, accessed on 27 March 2018, https://www.seeu.edu.mk/files/research/projects/OFA_EN_Final.pdf

¹⁶ K. Salihu, op. cit., 46.

¹⁷ European Commission Neighbourhood and Enlargement Negotiations, *URGENT REFORM PRIORITIES FOR THE FORMER YUGOSLAV REPUBLIC OF NORTH MACEDONIA*, 2015, accessed on 27 March 2018, https://eeas.europa.eu/sites/eeas/files/urgent_reform_priorities_en.pdf

¹⁸ K. Salihu, op.cit.

¹⁹ I. Zejneli, A Jashari, J Shasivari, B. Arifi, and E. Basheska, *Legal Aspects of implementation of the OFA*, in B. Reka (ed.) *Ten years from the Ohrid Framework Agreement. Is Macedonia Functioning as a multi-ethnic state?* Tetovo, South East European University, 2011, 131, accessed on 27 March 2018, https://www.seeu.edu.mk/files/research/projects/OFA_EN_Final.pdf

representative society in line with the goals of the Ohrid Framework Agreement.²⁰ Although the right representation has been integrated into the Law on Administration and the Law on Labor Relations due to its constitutional nature and derivation from the Constitution, the Constitutional Court decided to abrogate it, rendering it invalid. This decision disregards the fact that there is still no legal framework in place to guarantee the protection of this principle, effectively making the Court's ruling both unconstitutional and contrary to the provisions of the Ohrid Framework Agreement (OFA). The lack of justice resulting from this abrogation could only be addressed by introducing a law that ensures fair and adequate representation, thereby serving as a protective mechanism for Article 8 of the Constitution, which defines fundamental human rights.

The government adopted the Strategy for Judicial Reform 2024-2028 and its accompanying action plan in December 2023. The Strategy focuses on five priority areas: courts and public prosecutor's offices, judicial system institutions, independent professions and public services, reform of the Constitutional Court, and reforms in specific legal areas, such as criminal and civil law. While the action plan sets realistic timelines and follows a logical sequence, it lacks allocated funding. In addition to judicial reforms, it addresses three other areas: reforming the Electoral Code, revising the Law on financing political parties, and enacting a Law on equitable and fair representation. The Council for Monitoring Implementation of the Strategy, established in March 2024, has yet to convene. Furthermore, several unfinished activities from the previous justice sector strategy (2017-2022) were carried forward, and no progress has been made on implementing the 2020 strategies for human resources management in courts and public prosecutor's offices.²¹

The legal norm established by Article 8 of the Constitution, reinforced by Amendment VI, mandates equitable representation of all communities in public bodies and other areas of public life. This principle has been further operationalized through legal acts, such as the Law on Administration, the Law on Employment, and related bylaws, which serve as protective mechanisms to uphold the constitutional commitment to fairness and "balancing." While abuses of these provisions have occurred in various forms, addressing such abuses falls under the purview of specific institutions and state bodies, not the Constitutional Court. The Court's role is limited to assessing the constitutionality of challenged legal provisions and issuing rulings accordingly. Regarding the assertion that the need for the "balancer" mechanism has been fulfilled or is no longer relevant, we firmly disagree. The "balancer" remains a vital legal tool for ensuring the implementation of the constitutional principle of adequate and equitable representation. As long as Constitutional Amendment VI is in legal force, the necessity of this mechanism endures to safeguard fairness and inclusivity in public institutions.

In this direction, the repeal of the said provisions of the two Acts, namely, the Public Sector Employees Act and the Administrative Officers Act, as well as the repeal of the other by-laws, referred to in the operative part of the Constitutional Court's Decision, effectively suspends the legal mechanism which provides the guarantee of respect and proper application, and thus the realization of the constitutional principle of adequate and equitable representation.

This obligation to enact the mentioned laws stems from the constitutional requirement that the legislator, through legislation, must ensure the constitutional principle of proper and equitable representation for all communities is upheld. In this sense, the enacted laws, and in particular the provisions that are repealed, constitute a legal control mechanism through which the constitutionally established and guaranteed right is ensured and protected, in particular by the Constitution the established and guaranteed right, in this case the right to adequate and equitable representation. With this legal mechanism being abolished, the right to equitable and adequate representation, guaranteed by the highest law of the land, remains a "list of good wishes".

The adopted Decision was adopted on a national basis, which means, by overvote, and decided against the rights of non-resident communities, in particular, it was decided contrary to the fundamental value - the right to adequate and equitable representation of citizens belonging to all communities in state authorities and other public institutions at all levels (Amendment VI to the Constitution of the Republic of North Macedonia). We appreciate and consider such a decision to be illegitimate and, as such, always produces serious legal consequences.

Such decision-making is not inherent in a political system that is determined to be democratically governed. According to the Constitution, the Republic of North Macedonia is defined as, among other things, a democracy with democratic governance.

A multitude of scholars and political thinkers, since Cicero, Lock and Montesquieu have asserted that the function of the judicial system should be completely independent, equal with the legislative and executive branch, and as such it provides protection against the abuse of power by other branches.²² This viewpoint continues to be very important even today and it is expected to be the formula for the rule of law within a country.

Judicial function constitutes the cornerstone of justice. It is one of the vital elements of country's political system. The judicial function in the Republic of North Macedonia is regulated by the Law on Courts and it is in accordance with the Constitution. This law is supplemented and amended as an urgent need for reforms within the state, with the considered recommendations from the Venice Commission. Since the Law is a fundamental form for judicial protection and constitutionality, these changes were necessary for an

²⁰ The Constitution of the Republic of North Macedonia https://www.sobranie.mk/the-constitution-of-the-republic-of-macedonia-ns_article-constitution-of-the-republic-of-north-macedonia.nspx

²¹ https://neighbourhood-enlargement.ec.europa.eu/document/download/5f0c9185-ce46-46fc-bf44-82318ab47e88_en?filename=North%20Macedonia%20Report%202024.pdf

²² K. Salihu, op.cit., 335.

independent and professionalized judiciary.

Findings and Results

The expected findings of this research suggest that while North Macedonia's constitutional framework aspires to uphold equitable representation and minority rights, significant obstacles remain in translating these principles into practice. The recent abrogation of the fair representation law by the Constitutional Court highlights the vulnerability of such legal provisions when judicial independence is compromised. This action could destabilize the balance of ethnic representation within public institutions, challenging the fundamental objectives of the Ohrid Framework Agreement and potentially weakening social cohesion. The study anticipates finding that, despite constitutional amendments intended to safeguard these rights, inconsistent implementation and judicial resistance create gaps in fulfilling the mandate of equitable representation, ultimately hindering North Macedonia's progress toward Euro-Atlantic integration.

The research also expects to uncover that the Constitutional Court's decisions reflect a broader trend of judicial susceptibility to political influences, posing risks to the impartiality required for upholding fundamental human rights and democratic standards. This judicial stance, if left unaddressed, could lead to further loss of public confidence in the judiciary and increase societal tensions among ethnic groups seeking fair representation. Consequently, the study will argue for necessary reforms, including strengthened legislative mechanisms and judicial safeguards, to ensure an impartial judiciary and effective enforcement of constitutional protections. The findings are expected to advocate for a comprehensive approach to constitutional implementation that upholds the principles of the Ohrid Agreement and aligns with EU human rights standards, supporting North Macedonia's democratic resilience and European aspirations.

Conclusions and Recommendations

This study concludes that while North Macedonia's Constitution enshrines the principles of equitable representation and fundamental rights, these values remain partially realized in practice. The Ohrid Framework Agreement catalyzed constitutional reforms to secure minority rights and foster ethnic harmony, but the implementation of these rights has been inconsistent, revealing gaps in judicial and legislative support. The Constitutional Court, although tasked with upholding independence and autonomy, has yet to fully assert its role in ensuring an impartial judiciary free from political influence. This shortfall underscores the need for a justice system that aligns with the Constitution's democratic ideals and provides robust safeguards for minority rights, essential for both national cohesion and European integration aspirations.

To address these challenges, the research suggests that meaningful judicial reforms and strengthened legislative mechanisms are essential to actualize the Constitution's foundational principles. Judicial independence and a commitment to equitable representation must be at the core of Macedonia's democratic development, ensuring that the rule of law is respected and upheld in alignment with Euro-Atlantic standards. Continued research and policy reforms are also recommended to evaluate the practical impact of the Ohrid Agreement on minority inclusion and to advance a judiciary that exemplifies democratic integrity and equity in governance.

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DNA Analysis in Forensic Medicine and Their Application in Criminal Law

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ABSTRACT

DNA analysis is a method that has brought important results to the criminal justice and judicial system and has served as a tool in combating even the most serious forms of crime.

The purpose of this paper is to provide assistance not only in understanding the great role and power of DNA analysis, not simply in criminal identification, but more broadly, in the fight against crime, but also in using the conclusions drawn as incontestable evidence to prove the guilt of persons whose traces are found at the crime scene and are related to the crime that occurred.

Using the method of content analysis of the legislation of the US, the EU and the Republic of North Macedonia, we will analyze how much and how forensic DNA analysis is applied in criminal law as evidence and proof of the commission of a criminal offense.

The legislation of the Republic of North Macedonia meets the conditions set out as European standards, taking into account the provisions of the Law on National Criminal Intelligence Database, The Law on Criminal Procedure, etc.

KEYWORDS

DNA analysis 1, blood 2, criminal law 3, databases 4, biological profiles 5.

Introduction

The clarification of a criminal event always depends on the complex of factors that make it impossible to determine the relevant facts. They can be of a personal, subjective, objective and technical nature, etc. New forensic technology can make visible traces at the scene of the crime that sometimes remain unnoticed due to the inability to detect them with the naked eye, genetic testing of biological traces can also be of decisive importance for the correct legal qualification of the criminal offense.

As the most important branch of biomedical science, which in recent decades has gained great momentum and plays an important role in the criminal justice system, genetics itself is mainly represented, which is part of molecular biology. Namely, today, with the application of DNA analysis, in most cases the identity of the person whose biological traces are found at the scene of the crime or on the body or clothes of the victim, as well as on the body and clothes of the perpetrator himself, is identified. DNA analysis undoubtedly plays an important role in achieving goals in the fight against crime.

DNA technology has occupied an irreplaceable position in the field of forensic science. In forensic science, DNA analysis has become the “new form of scientific evidence”, and more and more courts accept evidence based on DNA analysis, and its technology is almost universally accepted in most legal systems.

The creation of DNA profile databases where the genetic profiles of individuals who have committed crimes are archived and the concealment of traces of the criminal act as a segment or part of a series of tools that contribute to the efficient fight against crime has also been a subject of interest to professional opinion in the last few decades. However, from another aspect and on the other hand, a problem arises that is directed towards the infringement of citizens' rights regarding privacy and protection of personal data, and the very creation of such databases, especially the unlimited storage of their data and DNA profiles, becomes problematic.

In this paper, we will provide an overview of the notion of DNA, the types of DNA analysis, and explain the structure of DNA molecules, as well as the application of DNA analysis in the United States of America, Europe, and the Republic of North Macedonia.

The purpose of this paper is to provide assistance not only in understanding the great role and power of DNA analysis, but also the broader role of DNA in the fight against crime, namely DNA as evidence for proving the guilt of perpetrators of criminal offenses and to serve as a preventive tool in committing future criminal offenses.

The notion, types of DNA analysis and the structure of DNA molecules

DNA analysis for the needs of the criminal justice system, in the broadest sense of the word, mainly falls under the group of genetic

interventions or, more specifically, genetic analysis. Gene analysis can be done for medical purposes, or for other non-medical purposes.²³ When it comes to gene analysis for medical purposes, it mainly makes an extraordinary contribution to the field of so-called “predictive medicine”. Namely, it is an analysis of the structure of DNA or, in other words, the examination of the product or specific feature of a specific gene, which leads to the deciphering and determination of certain inherited human characteristics. The DNA analysis itself, or genetic test, begins with the identification of genes that cause inherited diseases or, however, cause susceptibility to certain diseases. As a result of all this, it can lead to the timely detection of an increasingly large number of predicted diseases, among which there are also those that can be treated or cured, and hence the great importance of such analyses in the therapeutic direction.

As a source of information, genetic tests can be very useful in other non-medical fields, where some of them are permitted, while others should nevertheless be strictly prohibited due to the violation of human dignity. Namely, the first group includes DNA analyses for the needs of criminal law in order to identify the identity of the perpetrator of a criminal offense by comparing the genetic material of the suspect or accused with the genetic material at the scene of the crime. The very basis for such action is the provisions that are most often represented in criminal procedural legislation according to which biological material can be taken from the accused or from other persons, for example, suspects, even without their consent.²⁴

Based on this, according to the Law on Criminal Procedure of the Republic of North Macedonia, according to Article 249, paragraph 3, samples for comparison of DNA analyses may be taken, when this is necessary for the identification of persons or for the comparison with other biological traces and other DNA profiles, and for this, consent from the person is not required.²⁵ The taking of biological material for DNA analysis from the suspect is also included in Article 277 of the Criminal Procedure Code in the section on police surveillance.²⁶ DNA analyses for non-medical purposes are not permitted, i.e. their use in the field of employment relations is prohibited, for the needs of insurance companies for which it is clear that they have an interest in obtaining the same in order to know the risk during employment or during health and life insurance for their clients and thereby prevent or limit the person from obtaining certain rights, etc.²⁷

The DNA molecule is built in the form of a double helix and is located in all 46 chromosomes. DNA consists of units called nucleotides. The nucleotide itself consists of three subunits, namely: a five-carbon sugar, a phosphate group and nitrogen-containing nucleotide bases, called: adenine (A), guanine (G), cytosine (C) and thymine (T). In the double strand, adenine is always paired with thymine (A-T), and cytosine with guanine (C-G), and under normal conditions, base pairing according to any other scheme is not possible. Each individual contact between these units is called a base pair (bp), and the entire human genome has about 3 billion base pairs. It is precisely the changes in the mentioned bases or the change in the number of repetitions of base pairs that have a certain sequence that constitute the basis for establishing the identity of any particular person.

Although only 0.5% of DNA is different in each person, this small part of DNA contains a large number of so-called polymorphisms (Greek poly - many; morphoma - form), i.e. differences in the DNA sequence between individuals, so we can claim with almost complete certainty that each of us has a unique genetic makeup. The analysis of the corresponding traces is based on the fact that we are all quite different genetically.

Different types of traces are submitted to forensic laboratories for examination. Traces that can be tested using some of the DNA analyses (with the exception of mitochondrial DNA) are limited to those that contain the cell nucleus.

Consequently, successful extraction²⁸ and analysis of DNA is possible from the following biological traces: blood and blood cells, sperm and seminal cells, tissues and organs, bones and teeth, hair, dandruff and nails, saliva, urine, feces and other body secretions, epithelial cells present on clothing. There are three basic conditions on which the success of DNA profile detection through the analysis of an individual trace depends, namely: sample quantity, degree of DNA degradation and sample purity.²⁹

The important property of DNA is that it is an extremely stable molecule and if stored properly, under in vitro conditions, the order of its constituent units does not change, so a sample stored in this way can be used to compare its DNA profile with another profile even after several years.

Blood stains are found in many criminal acts and are often important evidence linking the perpetrator, the criminal act and the victim. Blood stains are created in three ways: by flowing down the body, by falling to the surface by simple dripping, from a height due to gravity, which creates drops, or by spraying with active force, which creates splashes and by being transferred by touching another object, which creates cuts or abrasions. When analyzing the found blood stains it is necessary to: identify the blood - does the stain originate from blood or is it simply a trace of blood, determine the origin of the blood - is it human blood, determine genetic markers, determine non-hereditary markers, determine whether there are traces of a mixture of blood and some other tissues (for example, skin, hair, etc.).³⁰

Semen traces are most often associated with sexual violence, but they can also be important evidence in other criminal offenses. Semen is

²³ Radisic J. (2008). Medical Law. Second Revised and Amended Edition. Nomos, Belgrade. pp. 262-263

²⁴ Matovski N., Lažetic-Buzarovska G., and Kalajdziev, G. (2009). Criminal Procedural Law. pp. 234

²⁵ Law on criminal procedure (“Official Gazette of the Republic of Macedonia”. No. 150/2010, 51/2011, 100/2012, 149/2016). Article 249, paragraph 3.

²⁶ Law on criminal procedure (“Official Gazette of the Republic of Macedonia”. No. 150/2010, 51/2011, 100/2012, 149/2016). Article 277

²⁷ Resolution on the ethical and legal problems of the genetic engineering, European Parliament, Official Journal C 96/1989).

²⁸ DNA extraction methods: DNA extraction using organic solvents, DNA extraction using the “CHELEX® 100” method, DNA extraction using the “Qiagen” method, and other methods, for example, isolation, washing. Primorac V., D. and colleagues. (2008). DNA analysis in forensic medicine and justice. Zagreb. pp. 20-23.

²⁹ When collecting footprints at the scene it is necessary to take the following actions: photograph the marked footprints, make a video of the footprints and their position at the scene, write down the location and condition of the sample, make a sketch and draw the location of the sample and its relationship with other samples and surrounding objects. Primorac V., D. and colleagues. (2008). DNA analysis in forensic medicine and justice. Zagreb. pp. 78.

³⁰ Primorac V., D. and colleagues. (2008). DNA analysis in forensic medicine and justice. Zagreb. pp. 79

a bodily fluid, and contains cellular components - sperm cells that are created in the gonads (testicles) and liquid components that are created by accessory glands, such as the prostate and seminal vesicles. Semen can be searched for in the genitals of a living or deceased woman, on the body of the victim, on clothing and at the scene of the crime, as well as on the body of the perpetrator. Semen can be detected in the vulva of a living woman for about 34 hours after sexual intercourse and with a high degree of cleanliness of the vulva (vulva with physiological flora, no inflammation, etc.) for up to 42 hours, while in the vulva of a deceased woman, 2-3 days after death, and extremely longer. Semen analysis includes identification tests, the purpose of which is to confirm the presence of sperm or seminal fluid, and individualization tests that involve genetic typing, both by determining conventional markers and DNA profiles. Identification is used to verify the victim's testimony about the sexual violence committed. Genetic testing, as a rule, is performed to identify the perpetrator.³¹

Bodily secretions such as saliva, urine, vaginal secretions, sweat, snot (runny nose), milk, gastric juice or regurgitated contents and feces are also found at the crime scene, on clothing, the victim and/or the perpetrator of the crime. These fluids can be identified in the laboratory, the blood type, isoenzymes and DNA profile can be determined and the results obtained are used to include or exclude a person as a possible tracer. Saliva stains are most often tested on cigarette butts. The requirements for sweat expertise are exceptional, and for the other listed secretions even rarer.³²

Bone analysis can determine a person's gender and age, approximate time of death, injuries or even cause of death, and an unknown corpse can be identified.³³

Hair and locks are also one of the most common material traces, both on the victim and on objects, the scene and the perpetrator of the crime.

Other types of biological traces such as sweat, tears, and serum cannot be tested with standard DNA analysis due to the lack of a cell nucleus.

A special feature of DNA analysis is the possibility of determining the DNA profile of mixed traces, i.e. those in which two or more individuals appear as possible donors, i.e. the biological sources of that trace. Mixed traces are not a rare occurrence in forensic medicine, especially in rape cases when a large number of traces (vaginal swabs, traces of semen on underwear, traces of semen from the victim's body, etc.) are mixed with the perpetrator as one donor and the victim as another donor (contributor). In such cases, additional statistical analysis is mainly used to clearly determine each individual trace participating in the mixture. There are two basic principles when interpreting the results that can be clearly distinguished. The first of them aims at the general conclusion that the examinee can be excluded as a possible contributor. This is most often the case when the fractions are equally represented and when it is not possible to clearly determine each individual contributor. Then, based on the comparison of the DNA profile of the examinee and the DNA profile of the mixture, one can usually only speak of the (impossibility of) excluding the examinee. The second is more accurate and gives statistically stronger results and is applied in cases where the fractions in the mixture can be clearly quantitatively distinguished, i.e. when it can be established with a high degree of certainty which specific allelic variants belong to which contributor.

Analysis of DNA extracted from plants plays a primary role in linking individuals to crime scenes or linking evidence to specific geographic locations. Recently, it has become possible to trace the movement of certain types of drugs from the place of cultivation to the place of use.

Also, due to the existence of a very unique genetic structure of marijuana seeds, today it is possible to monitor the distribution of seeds and at the same time connect drug distribution routes, as well as drug "dealers".

Examination of the types and appearance of plants can help determine the place and time of the crime, the time of death of the victim, the identification of traces on the clothes and shoes of the perpetrator, etc. For this reason, during the autopsy, it is necessary to examine the clothes and body of the victim to find traces of leaves, twigs, roots, etc., and send them to the laboratory for biological analysis. Of particular importance is the analysis of fiber traces, which are usually found as microtraces and contact traces. They are derived from substances found in nature and include plant fibers (cotton, wool, silk) and mineral fibers (for example, asbestos).³⁴ In addition, there are synthetic (artificial) fibers and processed natural fibers.

The first case of DNA analysis from plants in forensic medicine took place in 1992. Then, the dead body of a woman was found in Arizona, and next to her was a pager, which was supposedly known to whom it belonged. During the investigation, several plant seeds were found in the suspect's truck, for this reason the police officially requested that the DNA of the seeds found at the crime scene be compared with the DNA extracted from the plants found in the truck. Laboratory DNA analysis confirmed that the DNA is identical and has a high specificity compared to other plants found in the environment. This fact was important for declaring the suspect guilty.

Traces of animal origin may be the subject of examination due to suspicion that the disputed material originates from humans or it is necessary to determine the type of animal from which the traces originate. Blood, tissue, hair and feathers can be analyzed. It has been proven that animal DNA has a unique genetic code, so it is possible to distinguish individual animals even within the same population. It

³¹ Primorac V., D. and colleagues. (2008). DNA analysis in forensic medicine and justice. Zagreb. pp. 81-83

³² Primorac V., D. and colleagues. (2008). DNA analysis in forensic medicine and justice. Zagreb. pp. 83

³³ An example from practice: in the northern part of the city of Split, outside Diocletian's palace, a human skeleton was found during archaeological excavations. During the excavation, the skeleton was damaged, but it was established that it was a male person, aged 30 to 40 years old, about 167 cm tall, and the time elapsed from death to the discovery of the skeleton was about 1760 years. Despite the age, DNA was successfully isolated, which determined the genetic profile of the person whose remains were found). Andelinović V., Sutlović Sh., Drmić D., Primorac I., and Bone D. (2001). DNA old as Diocletian's palace? Pro- ceedings of the 10th International Meeting on Forensic Medicine Alpe-Adria-Pannonia; Opatija. Department of Forensic Medicine and Criminology, School of Medicine, University of Zagreb. pp. 23-26

³⁴ The procedures for the collection, preservation and examination of fiber traces are almost identical to those applied to hair and hair traces. Forensic botany is rapidly developing as a separate discipline that helps to illuminate relevant factors in the discovery of perpetrators criminal. Primorac V., D. and colleagues. (2008). DNA analysis in forensic medicine and justice. Zagreb. pp. 86.

is often necessary to determine the origin of animal hair found at the scene of a crime or on the clothing of the victim or suspect. Most often, it is the hair of a dog, cat or some other domestic animal.

Recently, insect analysis has taken on a special meaning. Since insects are found almost everywhere and all year round, they are therefore of particular forensic interest in numerous situations: determining the time of death, the place of death, the possible movement of the body to other places.

The most famous forensic case in which DNA analysis of biological traces of animal origin yielded important results for the investigation is the case known as the "Snowball Case". Namely, on Prince Edward Island in Canada, the body of a murdered woman was found. The main suspect all along was her husband, but there was no material evidence that would link him to the specific crime. The necessary material evidence was collected in the form of a sample of white hair on a jacket found near the scene of the crime, which was found to belong to the wife of the murdered woman. Through DNA analysis, it was found that the hair belonged to a cat that was a pet of the perpetrator's parents. The whole case was closed with the statement "Cats and DNA don't lie".³⁵

Given that a large number of people have dogs as pets with whom they share their living space, it is possible, in this particular case, from the DNA analysis of the hair of a dog that is linked in a certain way to a certain criminal offense (whether it was found at the scene of the crime, on the body of the victim and/or the perpetrator, clothes, shoes, etc.), to reach the perpetrator of that criminal offense.³⁶

The use of DNA analysis in the USA, Europe and the Republic of North Macedonia

With the scientific development and technical-technological achievements in the field of genetics and molecular biology, the interests of the states were immediately "awakened" in the application of such methods in forensics and in general for the needs of the criminal justice system.

As early as 1980, the process of adopting acts requiring DNA samples to be taken from perpetrators of sexual crimes and rapes began in the USA. Thus, from 1980 to 1994, at the initiative of the Federal Bureau of Investigation, a group was formed and worked to create guidelines for the use of forensic DNA analysis in laboratories, which later became the basis for similar solutions in the laws of almost all American states.³⁷ The relevant legislation for the creation of the national DNA database itself was approved by Congress in 1994. The database consists of DNA profiles made from samples taken from persons covered by the legislation and from samples collected from crime scenes that are compared with the data of the existing database. Thus, based on the Justice for All Act adopted in 2004, the state had to preserve biological evidence unless, after a final judgment, the person requests the destruction of such evidence, if the court refuses to conduct an analysis of such samples, and the like. It is considered that with regard to the issue of the duration of the storage of such samples and profiles, the USA as an independent state has started from a special approach, namely the general rule was that they are preserved, unless the person, based on the legal possibility, does not request their destruction.³⁸

Namely, strict, precise and high standards are stipulated by American legislation and for laboratories that are accredited to perform such analyses, which is primarily of paramount importance, first and foremost, due to the provision of accurate results, verified based on standardized procedures.

The Council of Europe and the European Union have also expressed their positions on the use of DNA analysis through their acts for two decades. The Council of Europe first referred to this issue through Recommendation No. R (92)1 on the use of DNA analysis in criminal law, which was adopted in 1992 at the 470th meeting of the Ministers' Deputies.³⁹

This Recommendation directly refers to the Convention for the Protection of Human Rights and Fundamental Freedoms of 1950 and the Convention for the Protection of Individuals with regard to Automatic Processing of Data of 1981, as well as to the fact that DNA analysis plays a major role in the efficiency of the criminal justice system, especially in determining whether a person is innocent or guilty of a criminal offense.

However, the document itself also highlights concerns about possible violations of human dignity and disrespect for the physical integrity of the person, as well as the right to protection and the principle of proportionality in the application of criminal law. This Recommendation initially provides a large number of definitions of the basic notions with which it operates, stating: "DNA analysis" refers to any procedure that can be applied to the analysis of deoxyribonucleic acid - the basic genetic material of humans and all other living beings. "Sample" means any matter of living origin which can be used for the purposes of DNA analysis. "DNA file" means any structured collection of DNA analysis test results, whether in physical form, such as hand files or in a computer database.

Recommendation No. R (92) 1 referred only to the collection and use of DNA analysis for the purposes of identifying a suspect or other individual in the context of the investigation and prosecution of a criminal offence. In other words, the recommendation itself increasingly emphasizes that it refers to samples collected for DNA analysis for criminal law purposes. And so, from then on they could only be used for this purpose, while samples collected from living persons for DNA analysis for health purposes, as well as the results obtained from them, may not be used for the purposes of the investigation and prosecution of perpetrators of criminal offences, unless there are explicit

³⁵ Marjanović V., Primorac D. (2009). Molecular forensic genetics. Sarajevo. pp. 227

³⁶ Dayton M., Koskinen M., Tom T., Matilla B. K., Johnston A. M., Halverson E., Fantin J., DeNise D., Budowle S., Smith B. D. G., and Kanthaswamy S. (2009). Developmental Validation of Short Tandem Repeat Reagent Kit for Forensic DNA Profiling of Canine Biological Material, Croat Med J. pp. 268-283

³⁷ Resolution on the ethical and legal problems of the genetic engineering, European Parliament, Official Journal C 96/1989. Accessible at: <http://www.codex.vr.se/texts/EP-genetic.html>

³⁸ Nathan J. (2012). DNA Testing in Criminal Justice: Background, Current Law, Grants and Issues. CSR, Introduction.

³⁹ CoE, Committee of Ministers, Recommendation R (92)1 on the use of analysis of DNA within the framework of the Criminal Justice System. Accessible at: <https://wcd.coe.int>

circumstances provided for by national legislation. Samples taken for DNA analysis and the results obtained may be used for research and statistical purposes, but the identity of the person from whom it originates must not be revealed, in other words, the identifying references themselves must be removed from such data in time.

Thus, in relation to the taking of biological samples for DNA analysis, it is emphasized that the conditions for it must be determined by national legislation and that they must be met during practical implementation. It is then emphasized that in some countries, approval by the judicial body is also necessary if the national legislation allows taking samples for DNA analysis and without the consent of the suspect, it is recommended to apply it only if it is reasonable in terms of the circumstances of the case itself. Namely, DNA analysis, according to this act, is not related to the degree of gravity of the criminal offense, but it should be allowed for all legal-criminal cases where it can contribute to a greater extent and be useful.

The Council of Europe has recommended that the high standards and conditions that must be met by the laboratory where the DNA analysis is carried out be met, taking into account that it is a sophisticated procedure that requires adequate equipment and staff. From here, each member state of the Council of Europe must have a strict list of accredited laboratories or institutions that must ensure high professional staff, quality control procedures, scientific integrity, adequate security of the installations and substances that are researched, guarantees of reliability and confidentiality regarding the identification of the person on whom the DNA analysis was carried out, as well as guarantees that the recommendations from the analyzed document have been respected. Each state has had an obligation in national legislation to regulate the issue of the creation and use of DNA files for the purposes of investigation and criminal prosecution. As a basic principle of Recommendation No. R (92)1 was the principle of equality of arms, which means that DNA analysis should be equally available as evidence for the defense, and not only for the prosecution, whether by court order or through the use of an independent expert. Furthermore, the standardization of methods for DNA analysis at national and international level has also been established as a fundamental rule, which has inevitably assumed inter-laboratory cooperation for the unification of analytical and control procedures. Even though intellectual property rights have been defined as rights that are primarily related to specific methods of DNA analysis, in this area it has been strictly required that this not be a coincidence. DNA analysis can also be carried out in a laboratory or institution of another state and it will then be valid in the state where the case was developed if it was worked for an institution that has met all the criteria set out in the Recommendation itself.

Within the European Union, concrete steps have been taken to regulate this matter on a legal basis, through resolutions, conventions, decisions, etc.⁴⁰ Since 1997, the Council of Europe has adopted a Resolution on the exchange of DNA analysis results,⁴¹ which emphasizes the importance of the exchange of DNA analysis results for the successful investigation of criminal cases. DNA investigation has had technical, legal, political and ethical aspects, which should have been given due attention in further cooperation activities.

When it comes to the Republic of North Macedonia, it is now necessary to emphasize that in our country there is no legislation that defines in detail the creation and functioning of the DNA profile database, but this matter is regulated by the Law on National Criminal Intelligence Database. The law was adopted in 2009, and began to be implemented in January 2012.⁴²

Provisions for obtaining biological materials for DNA analysis are also contained in the Criminal Procedure Law.⁴³ According to the Law on the National Criminal Intelligence Database, the database is established in the Ministry of Interior as an integrated information system containing data:

- For persons for whom there are grounds for suspicion that they have committed a criminal offense, for convicted persons, as well as for persons who are victims of criminal offenses that are prosecuted ex officio.
- Regarding the existence of grounds for suspicion that a criminal offense is being prepared, is being committed or has been committed, due to the provision of data and facts necessary for the successful conduct of criminal proceedings.
- For certain persons, criminal-legal events or criminal occurrences organized in criminal files.

Data on persons for whom there is a basis for suspicion that they have committed a criminal offense, on convicted persons as well as on persons - victims of criminal offenses for which they are prosecuted ex officio include only the following personal data: personal name and maiden name; given names (pseudonyms and nicknames) or assumed names; previous personal names; date and place of birth; place of residence or residence; citizenship; gender; transaction account numbers, as well as data on driver's licenses, identity cards and travel documents and other characteristics that may assist in identification, including specific objective physical characteristics, which are not the subject of dactyloscopic data and DNA profile (determined from the uncoded part of DNA).⁴⁴

In order to comply with international and European rules and standards, the Law on the National Criminal Intelligence Database provides for limited data storage. The data in the Database are stored for the period necessary to achieve the purposes for which the data were collected, at most three years from the date of their entry into the database. In order to assess the need for further data storage, three months before the date of expiry of the data storage period, the database automatically notifies the competent state body that entered the data. The assessment is made by the Commission, upon a reasoned request from the competent state body that entered the data in the database, which presents evidence of the legal basis for the request for an extension of the data storage period, in accordance with the law. After the expiry of the storage period, if the Commission does not make a decision to extend the data storage period, the data are automatically deleted

⁴⁰ McCartney C.I., Wilson T.J., and Williams R. (2011). Transnational Exchange of Forensic DNA: Viability, Legitimacy and Acceptability. Published in: European Journal of Criminal Policy and Research, Volume 17. No. 4. Kluwer.

⁴¹ Nys H., and Trouet C. (2000). International Medical Law and Ethics. Hague-London-Boston.

⁴² Law on National Criminal Intelligence Database ("Official Gazette of the Republic of Macedonia". No. 120/2009). Article 5, paragraph 1

⁴³ Law on Criminal Procedure ("Official Gazette of the Republic of Macedonia, no. 150/2010, 51/2011, 100/2012, 149/2016).

⁴⁴ Law on National Criminal Intelligence Database ("Official Gazette of the Republic of Macedonia". No. 120/2009). Article 5, paragraph 2.

from the database. Criminal files are stored in the database until the purpose for which they were created is achieved, but at most three years from the date of their creation. Before the expiry of the three-year period, the Commission shall review the need to extend the period of retention of the file. When it is necessary for the achievement of the purposes of the file, the Commission may decide that the file shall be retained for an additional period of three years. When it is proven that the purpose for which the data were entered into the database has been fulfilled, or when it is proven that the reasons for which the data were entered into the database have been fulfilled by the competent state body. The manner of processing and retention of data in the database shall be regulated by the Government of the Republic of North Macedonia, upon the proposal of the Commission.⁴⁵

Conclusion

DNA analysis (deoxyribonucleic acid) is “a new form of scientific evidence”, the results of which are accepted by courts around the world and its technology is almost universally accepted in most legal systems. DNA analysis in forensic medicine is particularly important in the investigation of criminal offenses, determining the identity of persons and establishing family relationships. It is a method that is certainly one of the most sophisticated scientific achievements.

In the criminal justice system, it was DNA analysis that improved the technology in terms of expert testimony, which was very necessary for the detection of perpetrators of criminal offenses, i.e. to establish fairly and completely the relevant factual situation in a specific criminal proceeding. It is precisely this development of science that leads to the preservation of the most important values of any legal state, i.e. it ensures that no innocent person is punished and the perpetrator of a criminal offense is punished in accordance with the law.

In the early 21st century, using DNA analysis, police officers around the world have identified hundreds of perpetrators of various criminal offenses, thereby preventing them from escaping justice and being held accountable for their actions. This has increased public safety while reducing the security and self-confidence of perpetrators, particularly their intent to commit new crimes.

DNA analysis is a revolutionary scientific advance in the detection of perpetrators of criminal offenses and is a response to the increasingly professional approach of perpetrators in planning the commission of crimes and concealing traces of the crime.

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The use of DNA analysis also presupposes the existence of DNA data and profiles with which the results in a specific case can be compared, and this means the existence of DNA databases. Accordingly, in the 1980s in the USA, regulations were adopted that regulated the use of DNA analysis and the creation of such databases, while in Europe such activities were more noticeable decades later within the framework of the Council of Europe and the European Union.

Namely, the analysis itself shows that European standards are stricter than American ones in terms of ensuring confidentiality, privacy and protection of personal data, although this is perhaps only theoretically defined, due to greater regulation, given the different legal systems to which these regions belong.

International documents, as well as the important, if one may say poor, case law of the European Court of Human Rights, define clear determinants for the permissibility of the use of DNA analyses that are proposed to be implemented in our country, and these are as follows:

- DNA analyses should be allowed for all types of criminal offenses in which they can contribute to the verification of legally relevant facts.
- They must be performed in accredited laboratories and in a standardized procedure using markers that do not provide information about hereditary characteristics.
- DNA profile databases must be established by law with clearly defined conditions and procedures for their processing, use and disclosure.
- This only applies to persons who are suspected, accused or convicted of a criminal offense and are detained until the conclusion of the procedure or a certain period of time thereafter.
- The exchange of information, more precisely the results of DNA analyses, is permitted and recommended due to its efficiency in the fight against complex forms of crime, but this concerns not only the coded part of the DNA molecule, etc.

Using the method of content analysis of the legislation of the US, EU and the Republic of North Macedonia, we prove that forensic DNA analysis is applied in criminal law as evidence and proof of the commission of a criminal offense.

The legislation of the Republic of North Macedonia essentially meets the requirements set out as European standards, although explicit regulation in terms of DNA databases and DNA analysis is quite poor. However, the rules provided for in the Law on the National Criminalistics-Detection Database, as well as the provisions of the Law on Criminal Procedure relating to data collections, ensure the necessary minimum protection.

Thus, it is concluded that justice must keep pace with progress and new knowledge in the field of natural sciences in order to ensure timely and efficient adequate legal protection of human and citizen rights.

⁴⁵ Law on National Criminal Intelligence Database (“Official Gazette of the Republic of Macedonia”. No. 120/2009). Article 15.

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The right for a trial in reasonable time in administrative cases – European and North Macedonian practices

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Abstract

The increase in the capacity to do more in less time needs to be backed up by an increase in efficiency of public administration and administrative courts. Here we scrutinize the European and the North Macedonian legislation on the right for a trial in reasonable time. Referring to the practice of the European Court of Human Rights and the Administrative Court of North Macedonia we analyze the observation of the right for a trial in reasonable time and are finishing up with conclusions and recommendations based on our findings.

Keywords

Right for a trial in reasonable time, administrative procedure

1. Introduction

More than a year ago, one of the authors of this paper submitted a motion to the Constitutional Court of North Macedonia for assessment of the legality of some provisions from the Statute of one of North Macedonia’s trade unions. As we are writing these lines, we are still waiting for a “signal” from the Constitutional Court on whether the motion in question is accepted or rejected. Looking at the provisions in section three of the Statute of the Constitutional Court of Republic of North Macedonia (2024) we are finding very difficult to ascertain the exact time frame within which the Court is supposed to reach a verdict with regards to accepted initiatives. Prolonged waiting periods and the negative legal effects brought by the absence of any outcome, made us think about the effectiveness of the decisions especially in cases when decisions are taken outside of legally prescribed time frames. The equal importance of the substance and the procedure are thoroughly elaborated in many scientific works dealing with legality (Walrdon, 2011). Narrowing our field of interest to the sphere of administrative law, we can also refer to authors who are including the importance of respecting time limits as one of the cornerstones of good governance and safeguard human rights (Demková & Hofmann, 2022). The goal of this research is to look for the time limits associated with the reasonable time for finalization of administrative cases and to see whether these limits are observed. The research will investigate Europe and North Macedonia including analysis of 40 randomly selected cases from the Administrative Court in North Macedonia, as well as 74 rulings of the Administrative Court challenged before the Supreme Court on the grounds of excessive length of the proceedings. The methodology used for carrying out this research is comprised of review and analysis of laws, court rulings, and other legal regulations. Simple random sampling was the technique used for choosing the cases of the Administrative Court (Taherdoost, 2016), and Framework analysis (Lacey & Luff, 2001) was used for analyzing gathered data.

2. The European Union’s (EU) perspective on the right of the citizens to have their administrative affairs handled within a reasonable timeframe

The basis for observation of the right administrative issues to be handled within a reasonable timeframe could be found in article 6 of the European Charter of Human Rights (2017), reading that everyone is entitled to a fair and public hearing within a reasonable time. And article 41 of the Charter of Fundamental Rights of the European Union (European Union, 2010, art. 41) reading that every person has the right to have his or her affairs handled impartially, fairly and within a reasonable time by the institutions, bodies, offices and agencies of the Union. Including the obligation of the administration to give reasons for its decisions and the right to have the Union make good any damage caused by its institutions or by its servants in the performance of their duties. Based on the aforementioned documents the European Parliament voted for the European Code of Good Administrative Behavior. Though the Code is not legally binding, it serves as a guideline for the administrative conduct of EU institutions. It outlines principles such as lawfulness, non-discrimination, proportionality, and consistency, aiming to ensure high standards of administration and transparency. EU institutions are encouraged to adhere to these principles to promote good administration and accountability. If one feels that an EU institution has not followed the Code, a complaint with the European Ombudsman could be filed (Mendes, 2009). Several acts in this regard were also adopted by the Council of Europe, above all various recommendations on improvement of domestic remedies, good administration, judicial review of

administrative acts, efficient remedies for excessive length of proceedings, etc. (Sever & Kovac, 2016, p.4).

Parties in administrative relations are pursuing rights of positive status, meaning they cannot receive certain substantive rights (for example public scholarship) unless they apply to the respective administrative authorities. Since the administrative decision-making is affecting every EU citizen's life almost on daily basis or at least a few times per year (for example each year every citizen is subject to assessment of taxes, issuing of vehicle registration certificate, obligatory public health insurance scheme etc.), it is very important these decisions are issued in reasonable time and lawful, which is ensured also thorough effective supervision. (Sever et al., 2014). In administrative matters the supervision is usually performed in two phases, administrative, and (consequently) judicial. The executive branch of power is competent for carrying out the supervision under the first phase, in accordance with the provisions of the Administrative Procedure Act. The supervision under the first phase consists of supervision from the hierarchically superior authority, usually carried out by the competent ministry. Moreover, to ensure legal and correct decision-making, external, judicial review of the administrative decisions is required. Thus, the administrative matter of first instance becomes a judicial matter of second instance, also referred to as an administrative dispute (Ibid.).

Bearing in mind what was said in the previous paragraph, especially referring to the fact that a lot of practical issues in everyday lives of EU's citizens are being materialized through the use of the administrative procedure, the authors were keen to investigate if there are some concrete provisions setting concrete time limitations for completion of the various phases of the administrative procedure in both instances (other than the general principles mentioned under the first paragraph of this section). And the overall impression is that there aren't any specific time limits on the level of EU legislation, at least not in a way set forward in the national Administrative Procedure or Administrative Disputes acts (Craig, 2019; Sever & Kovac, 2016).

To be correct, we need to point out that the European Parliament has recognized the need for codification of administrative procedure related regulations and therefore adopted a Resolution with recommendations to the Commission on a Law of Administrative Procedure of the European Union (European Parliament resolution, 2015). The Law of Administrative Procedure of the European Union still has not seen the light of day, but there was a project (under the name ReNEUAL Model Rules on EU Administrative Procedure) commissioned by the EU, involving academics from the field of administrative law who were tasked with writing draft rules on administrative procedure, paving the way for the enactment of the long expected Law of Administrative Procedure of the European Union (Craig et al., 2017). Under the ReNEUAL Model Rules on EU Administrative Procedure a default time-limit of three months for completion in first instance is established, beginning on the date of the receipt of a complete application in application procedures, or on the date of initiation ex officio (Craig et al., 2017, p.105).

Without intention to investigate the administrative procedure time-limits for each and every EU member state we would like to point out to the case of Slovenia as a positive example of limiting the timeframe for completion of the administrative procedure and issuing of final administrative act within a period of 3 years, including the time for use of legal remedies (Sever et al., 2014, p. 6).

Having ascertained that there aren't any unified provisions on the right of the citizens to have their administrative affairs handled within a reasonable timeframe on the level of the European Union, with exception of certain European countries, such as the case of Slovenia (Ibid, p. 6), next is to look into court practices of handling cases where citizens' complain against excessively long periods of proceedings with the national administrations.

The European Court of Human Rights (ECtHR) is making an assessment on the eventual breach of article 6 of the European Charter of Human Rights on a case-by-case bases. Instead of talking about a definite timeframe for completion of a certain administrative procedure, the Court is defining a list of five basic criteria used for assessment on the eventual breach of article 6 with regards to the excessive length of procedure. The five basic criteria are: the complexity of the case; the applicant's conduct; the conduct of the competent authorities; what is at stake for the applicant; and the overall assessment of the circumstances of the case (Calvez & Regis, 2018, pp. 16-28). Though it was pointed out that the Court decides on a case-by-case basis, Calvez & Regis (2018, p. 74), based on their in-depth analysis of the case law of the European Court of Human Rights, point out that for any proceedings lasting longer than 2 years, the Court examines the case in detail to check the diligence of both national authorities and the parties in the light of the case's complexity. For proceedings short of the two-year mark, the Court does not carry out this detailed examination.

Table 1 Judgements related to Article 6§1 by year

Number of judgements and judgements confined to violations of Article 6§1			
Year	Total Judgments Delivered	Violations of Article 6 §1 (Length of Proceedings)	% of Violations of Article 6 §1 out of total number of Judgements per year
2018	1014	216	21.30%
2019	884	162	18.33%
2020	1039	157	15.11%

2021	1105	125	11.31%
2022	1163	116	9.97%
2023	1014	94	9.27%

Table 1 reads a trend of decrease of the number of violations related to Article 6§1 of the Charter. The same trend is presented with the use of line for better visualization in Table 2.

Regarding some distinguished cases that have profound influence upon setting the jurisprudential standards with regards to various aspects of Court's interpretations on the excessive length of procedure we may refer to the case *Kurzac v. Poland* where the Court reiterated that: "The reasonableness of the length of proceedings must be assessed in the light of the particular circumstances of the case and having regard to the criteria laid down in the Court's case-law, in particular, the complexity of the case, the conduct of the applicant and the relevant authorities, and the importance of what was at stake for the applicant in the litigation" (*Kurzac v. Poland*, 2001). In the case *Zimmermann and Steiner v Switzerland* the Court considers the excessive length of the proceedings as representative of poor functioning of the judiciary: "the Convention places a duty on the Contracting States to organize their legal systems so as to allow the courts to comply with the requirements of Article 6 § 1 including that of trial within a reasonable time" (*Zimmermann and Steiner v. Switzerland*, 1983). In *Kudla v. Poland* the Court established the existence of a systemic connection between the right to a fair trial within a reasonable time in Article 6 § 1 of the ECHR, and the right to an effective remedy in Article 13 (*Kudla v. Poland*, 2000). Though we already concluded that there isn't any concrete regulation set forward by the Court, on the maximal timeframe allowed for processing a particular case, the author Maria Filatova performed an analysis of a considerable number of cases and subsequent judgements of the Court and came to some interesting conclusions. When proceedings are short (up to three years in length), the percentage of recorded cases of a reasonable time not being observed is quite low, except for cases of special urgency. In cases when the total length of proceedings lasts three to five years, a conclusion on non-observance depends on the circumstance specific case, and in cases formally long total length of proceedings (five years and the most likely outcome is the observance of a reasonable (Filatova, 2021, p. 51).

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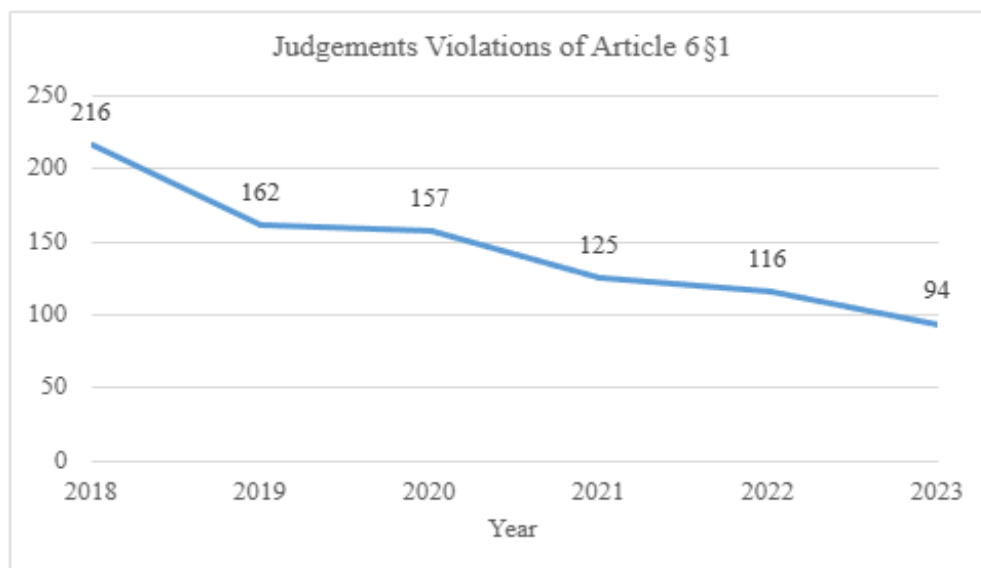


Table 2 Trend of decrease of judgements related to Article 6§1

In North General (LGAP)

length of proceedings lasts three to five years, a conclusion on non-observance depends on the circumstance specific case, and in cases formally long total length of proceedings (five years and the most likely outcome is the observance of a reasonable (Filatova, 2021, p. 51).

3. The right of the citizens of North Macedonia to have their administrative affairs handled within a reasonable timeframe
Macedonia the Law on Administrative Procedure stipulates that the administrative procedure in

the first instance, initiated upon request, except when otherwise provided by law, is completed in the shortest possible time, and at the latest within 30 days from the day of its initiation (2015, Article 93). In the following article of the same law the administrative authority is allowed to extend the deadline for completion of the administrative procedure for an additional 30 days if the complexity of the matter justifies the extension (Law on General Administrative Procedure, 2015, Article 94). The Law on General Administrative Procedure is widely implemented in the work of the public administration and other public entities and should be looked upon as an umbrella law regarding the actions of the parties to the administrative procedure, but still there are some sectoral laws which have priority in implementation (*lex specialis*) over the LGAP with regards to specific areas related to such laws. For example, with the Law on Acting Upon Complaints and Proposals the timeframe for responding to a submitted complaint or a proposal is set to 15 days following the day of the submission, and a maximum duration of 30 days from the day of the submission, for complex cases (Law on Acting Upon Complaints and Proposals, 2008, Article 9). Another similar example is the provisions of the Law on Freedom of Information, where the timeframe for a response to a request for access to information is set to a maximum of 20 days (Law on Freedom of Information, 2019, Article 21) or 30 days for complex cases (Ibid, Article 22).

In situations where the initiated administrative procedure will not be completed within the designated timeframe, or the party is not satisfied with the outcome, the dissatisfied party can submit a complaint (Davitkovski & Daneva, 2020, p. 61). A complaint can also be launched on the grounds of administrative silence. And there is an additional instrument for challenging the eventual noncompliance of the administration with regards to observation of their responsiveness, especially referring to the execution of real acts. For instance, a citizen wants to apply for using a subsidy for purchasing an inverter air conditioner, but the clerk at the municipality refuses to accept the application because there were already more applications submitted than the number of subsidies available. In this situation the submitter cannot launch a complaint because there is not any administrative act that he may challenge. Therefore, in cases like this one, the omission of the clerk to perform his/her legal duty of accepting, registering, and issuing receipt for admission could be challenged with filing an objection in writing, to the same administrative entity, whereas the entity in question should decide in writing within 15 days (Ibid, p. 63).

Instruments for challenging the work of the administration of first instance	
Name of the instrument	Grounds
Complaint	Expiration of date for getting response
	Silence of Administration
	Dissatisfaction with the decision
Objection	Refuse or omit to act

Table 3 Instruments for challenging the work of the administration of first instance

Should the administration fail to respond within the designated timeframe or ignore the request, the submitter is entitled to launch a complaint or an objection (in cases where his request was being ignored). The timeframe for launching a complaint is 15 days from the date of delivery of the act (Law on General Administrative Procedure, 2015, Article 106). As pointed out by theoreticians, in some sector related administrative procedures there might be a certain deviation from the generally accepted timeframe for launching a complaint, but this is mostly due to the fact that some sector specific laws have been enacted prior to the Law on General Administrative Procedure and their provisions are still not aligned to the provisions of the Law on General Administrative Procedure (Davitkovski & Daneva, 2020, p. 57).

The complaint against any administrative act enacted in first instance is submitted to the State Commission for Decision-Making in Administrative Procedures and Employment Procedures in Second Instance (Law on the Establishment of a State Commission for Decision-Making in Administrative Procedures and Employment Procedures in Second Instance, 2011, Article 1). The Second Instance Commission is resending the complaint to the administrative entity of first instance which has enacted the decision in question. The administrative entity of first instance has a timeframe of 7 days to review the decision and to amend it or enact a new decision should it find out that the complaint is well-founded. Otherwise, the administrative entity, in first instance, should write a response to the submitted complaint and together with the complaint return it to the administrative authority of second instance i.e. the Commission of Second Instance (Davitkovski & Daneva, 2020, pp. 57-63).

The Commission of Second Instance has a time-limit of a maximum of 60 days to make a final decision regarding the complaint, counting from the second day after the administrative authority of first instance had reviewed the complaint and had it sent to the Commission of Second Instance (Law on General Administrative Procedure, 2015, Article 112). Naturally, the Commission of Second Instance has multiple options to use regarding the handling of the complaint such as: returning it to the authority of first instance with instructions on what should be taken into consideration when deciding for the second time; or rejecting the complaint; or partially accepting the complaint; or making a new decision. In cases where the Commission of Second Instance will decide to return the case to the authority of first instance for reconsideration, the Commission is not allowed to send it back a second time for reconsideration should

the party that has submitted the complaint for the first time decide to launch a complaint for the second time. In such a case the Commission of Second Instance is obliged to make the final decision upon the complaint on its own.

The lawmaker was strict when insisting that the procedure pertaining to reviewing and reaching the final decision with regards to proceedings in second instance upon complaint submission should be completed within a timeframe of 60 days. Hence the provision in the Law on General Administrative Procedure (Ibid.) reads that when the second instance authority fails to resolve the case within the time limit of 60 days, the party has the right to initiate an administrative dispute.

With Article 50 of the Constitution of the Republic of North Macedonia (1992) a judicial protection of the legality of individual acts of the state administration and other institutions exercising public authority is guaranteed. This provision leads us to the establishment of the administrative dispute as a concrete instrument for judicial protection against final individual acts of the state administration and other institutions exercising public authority. The Administrative Court has the jurisdiction to decide over the administrative disputes (Veljanovska, 2019, p. 131). The lawsuit for initiating the administrative dispute should be submitted to the Administrative Court within 30 days from the date of delivery of the administrative act to the party submitting it. When an administrative dispute is initiated due to silence of the administration, the lawsuit is filed within 30 days after the expiration of the legally established deadline for adopting the act. When the act was not served to the party in accordance with the prescribed rules for service, the lawsuit may be filed within 30 days from the moment the party learned of the decision, but no longer than one year from the date of the act's adoption (Davitkovski & Daneva, 2020, p. 94). According to the Law on Administrative Disputes (2019, Article 11) "In accordance with the principle of efficient operation, the court will conduct the procedure quickly, without resorting to unnecessary actions and costs, and will issue its decision within a reasonable time, i.e. no later than nine months from the date of submission of the documents or creation of conditions for deciding on the lawsuit".

Though in most cases administrative disputes end with the ruling of the Administrative Court, in certain rather limited situations, appeal against the ruling of the Administrative Court may be filed with the Higher Administrative Court (Davitkovski & Daneva, 2020, pp. 105 - 108).

Bearing in mind that this paper has to do with the reasonable timeframe for addressing citizens' requests in the administrative procedure we have to point out that in accordance with the Article 35 § 5 of the Law on Courts (2006), the Supreme Court of the Republic of Macedonia is competent to decide upon the request of the parties and other participants in the procedure for violation of the right to a trial within a reasonable time, in a procedure established by law before the courts of the Republic of Macedonia in accordance with the rules and principles established by the European Convention on Human Rights and Fundamental Freedoms and based on the case law of the European Court of Human Rights. The Article 35 § 5 of the Law on Courts should be considered in correlation with the Article 11 of the Law on Administrative Disputes (2019), stating that In accordance with the principle of efficient operation, the court will conduct the procedure quickly, without resorting to unnecessary actions and costs, and will issue its decision within a reasonable time, i.e. no later than nine months from the date of submission of the documents or creation of conditions for deciding on the lawsuit. The Supreme Court is obliged to decide within 6 months from the date of submission of the motion for protection against the violation of the right to a trial within a reasonable time (Law on Courts, 2006, Article 35 § 4).

4. Findings

With intention of checking the consistency in the work of the administrative court and the implementation of the binding legal provisions pertaining to the maximum assigned timeframe for completion of an administrative dispute, we performed an analysis of 40 randomly selected administrative disputes processed by the Administrative Court in the period between 2021 to 2024 (ten cases per year). We have placed our focus observing the total length of each proceeding, but we have also classified the cases in accordance with their subject.

Duration of proceedings in months for 40 cases				
Years	1-5 mo.	6-9 mo.	10-15 mo.	> 15 mo.
2024	8	1	0	1
2023	2	4	1	3
2022	2	1	3	4
2021	1	1	4	4

Table 4 Duration 40 administrative disputes

In Table 4 we have displayed the duration of the proceedings, and in Table 5 the average duration of the proceedings per year for the period between 2021 to 2024.

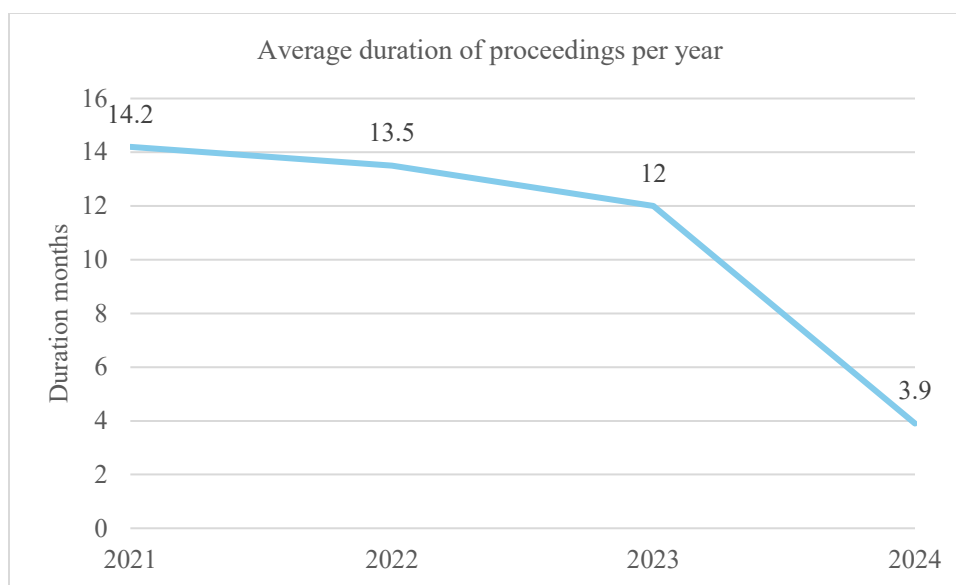


Table 5 Average duration of the proceedings per year

Along with the process of analyzing the length and the frequency of the proceedings, we have categorized the cases according to their characteristics and got a list of over 20 various categories. In addition, we have measured the average length of proceedings for each category identified and based on that have created an indicative table displaying the names of the various categories and the average duration of the court proceedings for each category. The reader must bear in mind that the average duration is not based on the same number of cases being reviewed per category. Thus, for some of the categories identified the average duration of the proceedings is based on the duration of a single case, and for others the average duration of several cases falling under the category in question.

	Categories	Av. Duration months
1	Corruption	25
2	Industrial property	24
3	Retrial request	22
4	Offenses in the field of customs	16,5
5	Taxation offense	14.5
6	Pension amount	14
7	Denationalization	13.4
8	Traffic violation	13.3
9	Privatization of construction land	13
10	An offense against public order and peace	13
11	Real estate dispute	12
12	Social assistance	11.5
13	Construction approval	10
14	Offense in the field of veterinary medicine	8
15	Cadaster registration	8
16	Apartment lease	7
17	Weapon possession permit	5
18	Offenses of public order and peace	4
19	Legalization	4
20	Expropriation	3.3
21	Asylum seeker	3
22	Permit energy regulator	2

23	Annulment of a Government decision	1
Grand Total		10.9

Table 6 Categories of cases and average duration per month per category

In 29 of the analyzed 40 cases the ruling was made by a council of three judges and in 11 cases by a single judge.

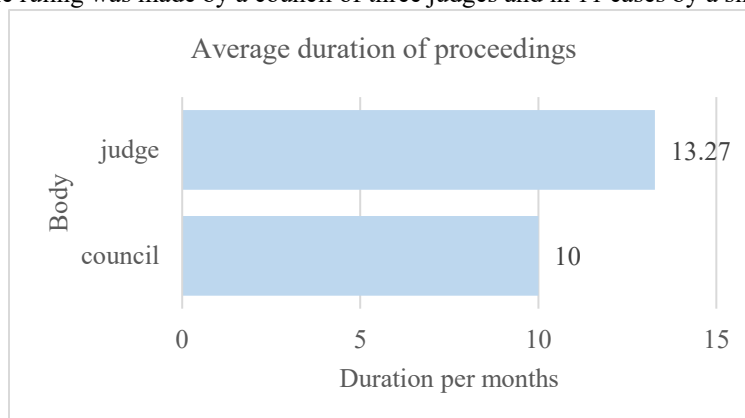


Table 7 Average duration of proceedings

The average length of proceedings amounted to 13,27 months in cases where single judge presided, and 10 months in cases where the trial was led by a council of three judges.

Regarding the outcomes upon requests of the parties in the procedure for judicial protection against the violation of the right to a trial within a reasonable time. We did a review on the outcomes of 74 rulings of the Administrative Court, challenged before the Supreme Court for the period between 2021 and 2024.

Year	Total Cases	Refused Cases	Granted Cases
2024	5	4	1
2023	15	6	9
2022	37	23	14
2021	17	14	3

Table 8 Preview of the outcomes upon complaints with respect to the violation of the right to a trial within a reasonable time in administrative disputes

When analyzing the outcomes we didn't enter any deeper analysis but the number and the ratio of granted and refused requests for protection against the violation of the right to a trial within a reasonable time in administrative disputes.

5. Discussion

The advancement of modern technology is increasing overall efficiency and decreasing the required time for completion of many contemporary business and administrative processes. This trend of increased productivity in business needs to be followed by an adequate increase in efficiency and a decrease of the time required for decision making on behalf of the public administration and administrative courts. The time factor seems to be gradually becoming a key element with regards to whether any physical or legal person will decide on challenging any decision made by the administrative authorities. We have ascertained that administrative authorities throughout EU as well as in North Macedonia take many decisions on a daily basis that have profound impact on the lives of their citizens, be it in the sphere of taxation, communal issues, misdemeanor, subsidies, and alike. In many cases citizens decide to contest the decisions of the administrative authorities. Based on our findings throughout the countries of the EU there isn't a fixed timeframe for completion of a contested administrative act, but rather a set of declarative recommendations on the length and a set of criteria crafted through the judicial practice of the European Court of Human Rights applicable on a case-by-case basis. The analysis of the case law of the Court revealed that for any proceedings lasting longer than 2 years, the Court examines the case in detail to check the diligence of both national authorities and the parties in the light of the case's complexity. A positive exception from this rather fluent stance on the maximum allowed time for challenging administrative acts is the case of Slovenia, where a final administrative act should be reached within a period of 3 years, including the time for use of legal remedies. The trend of decrease in the overall number of cases brought to the ECtHR on basis of length of proceedings is in constant increase, from 216 violations in 2018 down to 94 in 2023, but should the EU member countries and the administration of the EU confine the timeframe for finalization of the administrative procedure including legal remedies, it is certain that the ascertained trend will result in further decrease in the overall number of cases.

In North Macedonia the time for decision making in first instance is set to a maximum of 60 days upon submission, with maximum of additional 60 days for getting answer on eventual complaint. For the completion of an eventual administrative dispute there is an instructive timeframe of 9 months. Should a party to the administrative dispute consider that his/her right to a trial within a reasonable time was violated, it may submit a motion to the Supreme Court which is obliged to reach a decision within 6 months. The results from the performed review of 40 randomly selected administrative disputes pertaining to the average time for completion amount to 10.9 months, a number very close to the instructive timeframe of 9 months. There is a clear trend of decreasing the average time for completion of the administrative disputes. The average duration of 14.2 months in 2021 went down to only 3.9 months in 2024. Still the analysis of the length of proceedings according to subject revealed that in some cases it took way much above the instructive limit of 9 months. In cases related to corruption it took 25 months on average to complete, customs related offences 16.5 on average, denationalization 13.4 etc. With regards to the rulings of the Administrative Court challenged before the Supreme Court on the grounds of violation of the right to a trial within a reasonable time in administrative disputes, the results of the analysis shown that in 63.5% of the cases the Supreme Court ruled that there was no violation, while in 36.4% found that Administrative Court had violated the right to a trial within a reasonable time. As a conclusion we might say that there is no much difference between the practice with respect to exercising the right for a trial in reasonable time in administrative cases in North Macedonia and in EU member states, with exception of Slovenia. Our opinion is that the practice of putting a maximum allowed timeframe for completion of administrative cases in all instances like in the case of Slovenia, should be followed. Thus, the parties to any administrative contest would be exactly aware of the timeframe within which they could expect the final decision, and in addition this will surely result in a decrease of cases brought to the ECtHR.

6. Recommendations

The variations of the required timeframe for completion of administrative cases, especially those challenged in Administrative Court call for putting some effort in direction of defining or rather confining the maximum time for finalizing administrative cases.

The first steps in this direction should comprise of talking to lawyers who have practice with representing clients in administrative cases and talking to businesses and business associations with regards to getting their stances on the viability of the current timeframe for completion of administrative cases. The second step should involve judges of the Administrative Court in getting their arguments and eventual obstacles withholding them from adhering to the instructive timeframe for finalization of cases. We have already pointed out that we like the Slovenian approach of limiting the maximum allowed time for finalization of the administrative procedure, but argumentation wise it would be nice to investigate some scientific data on the effects of this legal provision with intention of using the results in North Macedonian context.

This paper and the research presented could be considered as an opening act in the efforts toward rationalizing and decreasing the time necessary for completion of administrative cases especially with regards to North Macedonia. The set of recommended steps gives a solid ground for collecting more data and arguments necessary for building and carrying on the mission to the next level. The team that has produced this paper will continue its work following the recommendations and progress in the direction of rationalizing the timeframe for finalization of administrative procedure.

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Decriminalization of recreational marijuana in the Republic of North Macedonia

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Abstract

The question of whether the Republic of North Macedonia is ready for the legalization of recreational marijuana presents a complex intersection of public policy, social norms, economic considerations, and legal frameworks. This research paper examines the current landscape in North Macedonia regarding the social, legal, and political preparedness for such a move. It explores public opinion, the existing legal framework surrounding drug use, and the potential economic benefits of legalization, including job creation, taxation, and reduced law enforcement costs. The paper also addresses public health concerns, drawing comparisons with other countries that have already legalized recreational marijuana. Through a combination of qualitative and quantitative data, the study aims to provide a comprehensive analysis of the potential risks and rewards of legalization in North Macedonia, ultimately determining whether the country is prepared for this significant policy shift. The research concludes with recommendations for policymakers and stakeholders, suggesting a gradual approach to ensure societal readiness and sustainable regulation.

Key words: Decriminalization, Marijuana, Criminal code,

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Introduction

According to a report by the United Nations Office on Drugs and Crime, the use of psychotropic substances is on the rise globally. About 269 million people used drugs in 2018, which is 30% more than in 2009 (Office on Drugs and crime UN, 2020). The Single Convention on Narcotic Drugs classified cannabis and its extracts in the first category as a dangerous drug along with other dangerous narcotic drugs (cocaine, heroin, etc.) The Single Convention on Narcotic Drugs classified cannabis and its extracts in the first category as a dangerous drug along with other dangerous narcotic drugs (cocaine, heroin, etc.) Following a series of recommendations from the World Health Organization, the commission on narcotic drugs at the United Nations made a decision to remove cannabis from the category of dangerous narcotics to the category of less dangerous drugs, as it is still considered a harmful substance. (UN, 2020)

Cannabis, or more popularly called marijuana, is a plant that contains a psychoactive ingredient (THC) that has a calming effect on those who use it. Recently, the use of this herb has been increasing due to its medicinal properties. The legalization of marijuana for medical and recreational purposes has recently become an increasingly present topic in the media around the world. The latest decision by the UN Commission on Narcotic Drugs has opened the door for countries to decriminalize cannabis. The legalization of marijuana for medical and recreational purposes has recently become an increasingly present topic in the media around the world. The latest decision by the UN Commission on Narcotic Drugs has opened the door for countries to decriminalize cannabis. As a result of these movements, 11 states in the United States have taken measures to decriminalize the use of marijuana by reducing the penalty for possession of a small amount of marijuana. (Bin Yu, 2020). Thus, the USA is the leader in this area. Cannabis for recreational use is legalized in 15 states, for medical use in almost all states. Conservative in this direction, only six states (Idaho, Tennessee, Alabama, South Carolina, Wyoming and Kansas) remained, which did not legalize marijuana either for medical use or for recreational use. In Europe, the trend to legalize marijuana, especially for medical use, continues. There is also a large number of countries that have completely legalized marijuana, such as Germany.

The impact of decriminalization of marijuana on society

Although the trend for the legalization of marijuana is increasing in the pro and contra debate, there are still ambiguities and dilemmas regarding legalization and what impact cannabis has on human health. Legalization has raised several dilemmas regarding the impact of cannabis on people's health, the impact on the crime rate, the impact on the state's economy and in other social segments. The debate over the legalization of medical marijuana is less controversial. Many studies show that medical cannabis (Cannabidiol) helps in the treatment and reduction of chronic pain, and has also been shown to be effective in post-operative pain management, general pain relief and relaxation. (Grinspoon, 2018)

As for marijuana for recreational use, there are also divisions between those who are FOR and AGAINST. Apart from the possible benefits, the use of marijuana is associated with a number of negative consequences, especially among adolescents. Typical negative consequences include: Impaired memory, impairment of brain functioning, reduced satisfaction with life and increased risk of transitioning to other dangerous drugs. (Bin Yu, 2020).

Following world trends, the Republic of North Macedonia also decided to legalize cannabis for medical purposes. In 2016, with the adoption of the law on amending and supplementing the law on the control of narcotic drugs and psychotropic substances, it was possible for legal entities to realize the production and cultivation of cannabis for medical purposes. Although the law was adopted with great expectations of an economic nature, it has not yet justified the expectations of both the producers and the state government. The problems are located in the legal solutions that do not allow the export of dried flower, which means that the stores of the producers are piled up with marijuana that cannot be sold outside the country. It is estimated that there are currently 22 tons of cannabis with a value of 60 million euros in the producers' warehouses. (Фокис, 2021)

Five years after the legalization of marijuana for medical purposes, government officials announce the legalization of recreational use of marijuana. Naturally, regarding this idea, the public is divided into two sides. One side is for legalization while the other side is against legalization for recreational use. Both sides defend their positions with arguments. One of the arguments of those who defend the thesis that marijuana should be legalized is that the sentences imposed by the courts in RSM for possession of marijuana for personal use

are too high. The application of Article 215 of the Criminal Code of the North Macedonia, "*Unauthorized production and placing on the market of narcotic drugs, psychotropic substances and precursors*", although it provides for an extenuating circumstance in paragraph 2 (smaller quantity), in practice it often happens that the suspects are imposed a sanction that is not proportionate to the crime committed. Thus, for small amounts of marijuana, they are charged with the crime of Article 215, which is punishable by a prison sentence of 1 to 10 years.

Taking into account the various researches on the impact of marijuana that do not give a clear picture of the positive effects on human health and the different interpretations of the effects of the use of marijuana, the question arises, do we have to use marijuana to get the medicinal benefits of this herb? Most of the countries that have legalized marijuana for recreational purposes are developed countries, with well-organized and functional institutions, which is not the case with our country. The purpose of the research is to explain the negative impact that the legalization of marijuana for recreational use would have and the risks that our society may face. In the following, the reasons why I consider the legalization of marijuana to be harmful will be listed:

1. Consequences on health. Marijuana use can be harmful in several ways. Some consequences occur immediately after smoking the joint (a hand-rolled cigarette with marijuana) and some damage the joint over time. Although a lot of research has been done on the impact of marijuana on human health, there is still not enough precise evidence for marijuana in the treatment of serious diseases. There is no doubt that medical marijuana has primarily sedative effects that can help patients avoid harmful painkillers and tranquilizers. But the use of marijuana for recreational purposes can have a negative effect on people, especially among the young population. As characteristic consequences that appear with every use of marijuana: Loss of coordination, false sense of time, anxiety and panic reactions, and if used in larger doses can cause paranoia. Longer regular consumption of marijuana has greater consequences on people's health. The probability of becoming addicted to marijuana is high. A study done in the USA shows that 9% of people who consume marijuana for a long period of time become addicted. The number increases among people who start using marijuana as teenagers, and thus 1 out of 6 people become addicted and 25 to 50% are among those who use daily. (Nora D. Volkow, 2016)

Regular use of marijuana is associated with depression, anxiety, and other mental disorders, including schizophrenia, especially in individuals predisposed to such disorders. In that direction, the authorities in Canada, where cannabis is used for recreational use is legalized, but the authorities warn that people who have predispositions or a family history of mental illness or problematic substance use should not use cannabis. (Kalinski V, 2019)

Current practices do not confirm the thesis that the legalization of marijuana will contribute to a decrease in the consumption of this plant, but the opposite. The availability of this substance will increase the consumption. Independent research conducted in Portugal and the Netherlands reveals that the commercialization and sale of marijuana in "Cafes" has increased the use of marijuana by 300% among the young population. (MacCoun, 2010). Similar research reveals that the situation is mirrored in Colorado, where recreational marijuana has been legalized. Research shows that marijuana use among teenagers is 50% above the national average. (NSDUH, 2012)

2. Economy. The arguments of the supporters of the idea of legalizing cannabis for recreational use are primarily economic arguments such as creating new jobs, increasing the country's gross domestic production, etc. The question arises, how much can the legalization of marijuana for recreational use affect the state's economy if it is legalized only in Ohrid and Skopje, taking into account the government's announcement that marijuana will be legalized only in these cities? (Zaev, 2020). As data in an article, it is stated that after the legalization of marijuana in the USA, there is no increase in employment, and where there is, it is in low parameters. The same applies to the GDP of these countries. Some countries saw an increase after legalization, but insignificant. (Robison, 2019)

Buying or using marijuana in cafes or legalized places would also mean a more expensive product that would be unaffordable for most citizens, taking into account the low standard of living. This is confirmed by the data of a research conducted on the impact of decriminalization on the price of narcotic drugs. According to research results, decriminalization or a softer approach to psychotropic substances does not lead to lower prices for these substances. (Felix & Portugal, 2015) Hence legalization could significantly increase the consumption of lower priced illegal cannabis.

3. Crime. In addition to the negative impact of marijuana on human health, legalization can also affect the crime rate and more delinquent behaviors. Supporters of marijuana legalization argue that legalization reduces crime by diverting law enforcement attention to more serious types of crime. But this claim applies more to those states where marijuana is completely decriminalized. The model that is

being announced in our country is for marijuana to be used legally only in places where they have a permit for its use. Outside these places, the law enforcement authorities will have the task of prosecuting the illegal production and trade of this substance.

Another possible consequence of the legalization of marijuana is on traffic safety. One of the most common effects of marijuana is loss of coordination and decreased reflexes. This increases the risk of traffic accidents caused by people under the influence of marijuana. A study shows that after legalization, the number of drivers who test positive for THC (the main component of marijuana) has increased. (Morris, 2018) Consequently, the risk of negative traffic consequences can be expected to increase. A study done in Colorado, USA, on the consequences of the legalization of marijuana for recreational purposes shows that in the period from 2007 to 2011, where a decrease in the number of traffic accidents was observed, the number of traffic accidents with fatal consequences caused by persons who tested positive for marijuana has skyrocketed. (Mountain, 2013)

The state's capacity to deal with the legalization of marijuana for recreational purposes is also worrying. On several occasions, large amounts of marijuana have been stolen from legal entities that grow marijuana for medical purposes and it has not been found, or small amounts of the stolen goods have been found. (Aleksandra, 2021). Hence, questions are legitimately raised about the state's ability to manage this activity.

Conclusion

Although many studies have been done on the use of marijuana for recreational purposes, the results of these studies cannot clearly state the positive impact of marijuana on human health. Most of the statistics show that on the economic level, the legalization of marijuana for recreational purposes does not give significant positive results. As far as health is concerned, most of the statistics show negative consequences for those who consume it. I believe that the legalization of marijuana for medical purposes is an excellent solution both for those who need its medicinal properties and for the economic development of the country. The risk of becoming addicted to this drug is high. It is not uncommon for drug addicts to switch to heroin or other dangerous drugs. The legalization of marijuana will increase its attractiveness especially among the young population. The experience of other countries that have implemented similar reforms offers valuable insights, suggesting that effective regulation and education are key to ensuring the success of such a policy shift. For North Macedonia, moving forward with decriminalization would require comprehensive legal frameworks, public awareness campaigns, and a strong commitment to addressing potential risk.

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The legal treatment of nasciturus

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Abstract

The subject of research of this paper is the legal treatment of the nasciturus (conceived but not yet born child) in civil law. In this research, an answer is given to the question of whether the nasciturus, which is not yet part of the objective world, is a legal entity. More specifically, the paper attempts to treat the nasciturus regarding the acquisition of his general legal capacity, which according to science is notorious as an abstract possibility for subjects to acquire rights and obligations.

The research will show that most civilians believe that natural persons acquire general legal capacity at the moment of their birth, and an insignificant part at the moment of separation of the umbilical cord of the newborn from the mother.

It will be seen from the research that modern legal systems make an exception regarding the moment of acquisition of legal capacity when it comes to nasciturus. From the research, it will be seen that the provisions of the modern legal systems show that the nasciturus, different from natural persons as subjects of the law, acquires legal capacity at the moment of its conception, but only in situations when its property interests need to be protected, i.e. its inheritance rights.

The paper aims to present and analyze the legal treatment of nasciturus first in Macedonian law and then in comparative law.

Keywords: nasciturus, legal treatment, legal capacity, legal protection, inheritance rights.

1. Introduction

In legal science, there are dilemmas regarding the legal status (legal treatment) of a conceived but not yet born child, the so-called nasciturus. This issue attracted the attention of many civilians as far back as Roman law until today.

In the old *jus civile*, it was completely incomprehensible to consider the unborn child a separate legal entity in civil law because the Romans considered human life to begin with birth. According to them, before the unborn child was born, it was considered part of the "mother's womb". But if the mother died in childbirth, the *jus civile* did not allow her to be buried unless the child was removed from her. This indicates that the ancient Romans probably, for religious reasons, considered that the unborn dead child, because it was not alive, should not be an object of burial. Although they did not recognize him as a being, the very fact that physical punishment could not be inflicted on a mother carrying an unborn child indicates that the unborn child still had some legal protection in ancient Rome⁴⁷.

Classical Roman law, different from *jus civile*, showed more interest in the unborn child. Romanists argue that classical Roman jurists did not create the term nasciturus, but instead used the wording "qui in utero est" - which is in the womb. Romanists claim that in the classical period, a child conceived after the death of his father called (posthumus) was considered a forced successor of his father. At the same time, the deceased father's property (inheritance) was preserved until the posthumus was born alive (the so-called state of birth). The legal fiction that a child was born at the time of his father's death was intended to prevent the extinction of a house and lineage when there was no successor⁴⁸.

2. The legal treatment of nasciturus in modern law

The position of classical Rome regarding the rights of the nasciturus comes into consideration in almost all later laws and codes that contain provisions of a property legal nature. In this sense, the Prussian General Land Law (Preußische allgemeine Landrecht-PrALR) of 1794⁴⁹ in I 1 § 12PrALR connects with the theorem "nasciturus pro jam nato habetur..." of classical Roman law according to which an unborn child had no legal capacity until born alive. Since then, all future laws have been based on the position that the nasciturus should be born alive.

A draft resolution on the US Supreme Court's decision to overturn abortion rights in the United States and the need to protect abortion rights and women's health in the EU⁵⁰ shows that the "nasciturus" (the unborn child) is beginning to gain specific legal protection. This document refers to all situations that are favorable (beneficial) for the nasciturus so that through this specific legal protection it is concluded that the status of the unborn child is equalized with the status of every born child.

According to the provisions of Article 725 of the French Civil Code (Code Civil), to inherit, the child must exist at the time of the opening of the inheritance, and if conceived, it is necessary to be born in human form⁵¹.

The legal protection of nasciturus in the Republic of Austria is at a particularly high level. In this sense, the Austrian Civil Code decisively stipulates in Article 22 that even unborn children have the right to legal protection from the moment of their conception. This means that

⁴⁷ Per-Malte Lippmann, The unborn child in Private Law in the 18th century and its reflections on the 18th century society, available at: <https://www.academia.edu>, (05.12.2024).

⁴⁸ Ibid.

⁴⁹ Unified Law Code of Prussia. Попов, Д., *Граѓанско право (општи део), пето изменено и допуњено издање*, Нови Сад, 2007, p. 75.

⁵⁰ Art.12, Motion for a resolution - B9-0367/2022, [European Parliament](https://www.europarl.europa.eu/doceo/document/B-9-2022-0367_EN.html), available at: https://www.europarl.europa.eu/doceo/document/B-9-2022-0367_EN.html.

⁵¹ Art. 725, Code Civil, available at: <https://www.fd.ulisboa.pt/wp-content/uploads/2014/12/Codigo-Civil-Frances-French-Civil-Code-english-version.pdf>.

the rights of the unborn child are equal to the rights of the born children. As for the stillborn child, it is noticeable that the Austrian Civil Code treats him as if he had never been conceived, and therefore he was not entitled to the rights reserved to him by the code in case he was alive⁵². The scope of Article 22 of the Austrian Civil Code shows that the nasciturus has property rights only if he is born alive, or rather the legal capacity of the nasciturus is limited in civil cases of a property nature and is conditioned by the legal fact of birth⁵³. The provisions of paragraph 2 of article 1 of the Italian Civil Code state that, just as in the Austrian Civil Code, the rights of the nasciturus are conditioned by the legal fact of birth.

The Swiss Civil Code decisively speaks about the rights of the conceived child in inheritance relations: *a child can inherit from the moment of conception onwards, provided it is subsequently born alive. If the child is stillborn, it is disregarded for inheritance purposes*⁵⁴. This provision indicates that the nasciturus according to Swiss law has the abstract possibility of being the bearer of hereditary rights, but only if he was already conceived in the deletion of the testator and if he was later born alive.

The Civil Code of the Netherlands in relation to the legal capacity of the nasciturus speaks not only about the inheritance rights of the nasciturus but in general about all his property interests which, according to the code, should be considered during his existence. This finding stems from Article 1 of the Code, which decisively states that *the child of a pregnant woman is considered to have been born when her interests require it. If it is born lifeless, it is considered to have never existed*⁵⁵.

The law of the Republic of Slovenia, i.e. the Inheritance Law⁵⁶ as well as the Austrian and Italian law, which were influenced by the Austrian Civil Code, stipulates that the person who was conceived at the time of opening the inheritance is considered to have been born if born alive. Interesting in this regard is the Slovenian doctrine, which thinks that *the nasciturus does not have legal capacity and therefore is not even a subject in law*⁵⁷. According to Slovenian civilians, the nasciturus does not have the rights that the born children have according to Article 56 of the Constitution of the Republic of Slovenia and therefore does not enjoy the protection that the Constitution of the Republic of Slovenia proclaims to the children born⁵⁸.

Like the legal orders of the continental legal system, the Croatian Law on Obligations, in terms of determining the rights of the nasciturus, provides for the assumption that he will be born alive in the future to be able to realize his interests. Namely, according to Article 17 of the Law, it is assumed that: *the conceived child is born, whenever his interests are concerned, if he is born alive*⁵⁹. From this provision, it is concluded that Croatian law does not only cover the inheritance rights of the nasciturus, but also all his property interests, provided he is born alive.

Just like the Croatian Law on Obligatory Relations, the Croatian civilista B. Wiesner starts from the general rule that a natural person begins to become a subject in law "with the completion of the birth of a child". From this rule, he also accepts the exception that the nasciturus should be regarded as born in a case where his interest is at risk. This means that professor B. Wisner, just like classical Roman law, believes that the nasciturus is born at the moment of conception, to protect the interests of the child, especially about the acquisition of inheritance⁶⁰. This means the professor starts from the roots of the institute nasciturus which, as indicated earlier, comes from classical Roman law "infans conceptus (nasciturus) pro nato habetur quotiens de comodis eius agitur".

The legal system of the Republic of Serbia, that is, the Law on Inheritance of the Republic of Serbia, explicitly speaks about the inheritance rights of the nasciturus: *a child already conceived at the time of the testator's death can inherit, if it is born alive*⁶¹.

In Serbian civil doctrine, for example, professor S. Vukadinovic thinks that the conceived and unborn child (the nasciturus) should be seen as an independent value that should not be treated only as a part of the mother's womb, but also as a "value in itself". He even goes further, considering that the nasciturus has the so-called "personal legal capacity" which he interprets in a way that *the nasciturus has the right to life, bodily integrity, etc*⁶².

Different from professor S. Vukadinović, who only talks about legal capacity, professor V. V. Vodinelic, when he talks about the nasciturus, makes a distinction between his property legal capacity and personal legal capacity. When it comes to the personal rights of

⁵² § 22, Allgemeines bürgerliches Gesetzbuch (ABGB), available at:

<https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10001622>.

⁵³ See: Bydlinski P., *E drejta civile (Vëllimi i Pjesa e përgjithshme)*, Botimi i 6-të, Austri, 2013, p. 45.

⁵⁴ Art. 544, Schweizerisches Zivilgesetzbuch (ZGB), available at: https://www.fedlex.admin.ch/eli/cc/24/233_245_233/en.

⁵⁵ Art. 1:2, Dutch Civil Code, available at: <http://www.dutchcivillaw.com/civilcodegeneral.htm>.

⁵⁶ Art. 125(2), Zakon o dedovanju, Uradni list SRS, št. 15/76, 23/78, Uradni list RS, št. 13/94 – ZN, 40/94 – odl. US, 117/00 – odl. US, 67/01, 83/01 – OZ, 73/04 – ZN-C, 31/13 – odl. US, 63/16 in 102/24, available at: <https://pisrs.si/pregledPredpisa?id=ZAKO317>.

⁵⁷ Juhart M., Možina D., Novak B., Poljanar-Pavčnik A., Žnidaršič Skubic V., *Uvod v civilno parvo*, Ur. List R Slovenije, Ljubljana, 2023, p. 71.

⁵⁸ Ibid.

⁵⁹ Art. 17(2), Zakon o obveznim odnosima, N. novine, 35/05, 41/08, 125/11, 78/15, 29/18, 126/21, 114/22, 156/22, 155/23. available at: <https://www.zakon.hr/z/75/Zakon-o-obveznim-odnosima>.

⁶⁰ Vizner B., *Gradansko pravo, drugo, prerađeno I dopunjeno izdanje*, Osijek: Štampa. 1966, p. 68-69.

Same as: Станковић О., Водинелић В., *Увод у грађанско право*, Београд: Номос, 2007; О. Станковић, p. 53.

⁶¹ Art. 3(2) Zakon o nasleđivanju, Sl. glasnik R Srbije, br. 46/95, 101/2003 - odluka USRS i 6/2015, available at: https://www.paragraf.rs/propisi/zakon_o_nasledjivanju.html.

⁶² Vukadinović S., *Gradansko parvo – opšti deo*, Pravni fakultet Univerzitet Union, Beograd, 2021, p. 10.

the nasciturus, since conception there is a need for the conceived and unborn child to have personal rights to his personal property that have existed since then. Therefore, according to him, the personal legal capacity of the nasciturus can only be current and unconditional. In terms of personal legal capacity, nothing changes from conception to birth, without interruption, because it is about the interest of protecting the existing life, health, and other personal assets of the unborn child from conception to birth. With the birth according to professor V. V. Vodinelic, nothing changes, the child is still unconditionally able to have the personal rights he has already acquired and to acquire new ones⁶³. As for the property-legal capacity of the nasciturus, professor V. V. Vodinelic consists in the fact that certain property should be kept for the nasciturus until his birth because, in the period between conception and birth, a legal basis for acquiring "property inheritance rights" for the nasciturus arose. professor V. V. Vodinelic, as well as professor S. Georgievski, consider the assumption that the nasciturus was born at the time of the occurrence of the legal basis (for example, the death of the father) during the pregnancy of the mother, is fake because it was not born, but is false (fictitious) and depends on the possibility the child to be born alive⁶⁴. From the stated views of V. V. Vodinelic concludes that he sees the rights of the nasciturus in a broader dimension, not only from a property-law aspect, but also from the aspect of the existence of the personal goods of the nasciturus (health, right to life, and others).

The Macedonian legal system dedicates three provisions to the nasciturus, one general one that refers to the protection of the rights of the nasciturus in general, the second, which refers to the hereditary rights of the nasciturus and the third, which refers to the representation of the nasciturus. The possibility of protecting the rights of the nasciturus is given in paragraph 3 of Article 45-a of the Law on Obligatory Relationships⁶⁵ of the Republic of North Macedonia: *the conceived child is considered to have been born when it is necessary to protect his rights, if he is born alive*. The special provision that governs the possibility of inheriting the nasciturus is prescribed in paragraph 2 of Article 122 of the Law on Inheritance⁶⁶: *a child already conceived at the time of opening of inheritance is considered as born if born alive*. The provision for the representation of the unborn child (the nasciturus) is contained in article 164 of the Law on non-litigation procedure⁶⁷: *if the birth of a child who would be called to inheritance is expected, the probate court will notify the Center for Social Work to assess whether his interests should be represented by the parent or will appoint an attendant. If the Center for Social Work does not decide otherwise within 30 days after receiving the notification, one of its parents will take care of the rights of the unborn child*. From the presented provisions, it can be concluded that the Macedonian Law, or rather the Law on Obligatory Relationships, provides the broadest treatment of the rights of the nasciturus because this law protects all the rights of the nasciturus and not only the inheritance rights.

Regarding the legal regime of the nasciturus in Macedonian law, professors R. Živkovska and T. Pržeska, starting from the fact that the Inheritance Law speaks only about the inheritance rights of the nasciturus, and the Law on Obligatory Relationships refers to property legal protection (compensation for damage), they believe that legal capacity cannot be considered fully acquired until the child is born, i.e. is nasciturus, so according to them *it is only about the possibility of inheriting a child whose parent died before his birth*⁶⁸. If the child is born alive, the consequences of this possibility of inheritance, according to professors R. Živkovska and T. Pržeska will be valid from the very conception of the nasciturus, which means that they will have an effect *ex tunc*. Otherwise, if the child is not born alive, then they indicate that the *nasciturus will be considered as if he never existed as a successor*⁶⁹.

The teaching of Professor S Georgievski is very profound, starting from the false assumption that is, the fiction that the nasciturus is alive at the time of the testator's death, rightly calls the legal capacity of the nasciturus a "fake" legal capacity which, according to him, appears as "conditional" and "limited"⁷⁰.

Obligation law professors G. Galev and J. Dabović Anastasovska, refer to the nasciturus from the aspect of its protection in case of causing damage. They say that the nasciturus can suffer damage to his body, *which should be subject to protection in the sphere of obligation law*. The professors even say that there should be compensation protection for the future successor to whom damage is caused, which manifests itself even before conception, i.e. when it comes to a future embryo in whom the damage occurred due to physical damage or genetic damage to the predecessors in case there was some radioactive radiation from some source of atomic energy⁷¹. In fact, due to the resulting genetic damage, there was a mutation of the hereditary genes of the irradiated mother, which were transferred to the future-conceived fetus

⁶³ More about the legal capacity of the nasciturus can be seen in: Vodinelic V. V., *Građansko parvo, Uvod u građansko parvo i Opšti deo građanskog prava, četvrto izdanje*, Sl. glasnik, Beograd, 2020, p. 350-354.

⁶⁴ Ibid.

⁶⁵ Law on Obligatory Relationships (Закон за облигационите односи, Сл. весник на РМ, бр. 18/01, 78/2001, 4/2002, 59/2002, 5/2003, 84/2008, 81/2009, 161/2009, 23/2013, 123/2013, и Сл. весник на РС Македонија, бр. 215/2021, 154/2023, и 220/2023), available at: <https://www.pravda.gov.mk/>.

⁶⁶ Law on Inheritance (Закон за наследувањето, Сл. весник на Р. Македонија, бр. 47/96 и 18/2001), available at: <https://www.pravda.gov.mk/>.

⁶⁷ Law on non-litigation procedure (Закон за вонпарнична постапка, Сл. весник на Р Македонија, бр.9/2008 и 77/2018), available at: <https://dejure.mk/>.

⁶⁸ Живковска Р., Пржеска., *Граѓанско право – Општ дел*, Скопје: Европа 92, 2021, p. 73.

⁶⁹ Ibid.

⁷⁰ Георгиевски С., *Правна и деловна способност на физичките лица (предавања одржани во учебната 1969/1970 година)*, Универзитет "Кирил и Методиј" во Скопје – Правен факултет, Скопје, 1970, p. 8.

⁷¹ Г. Галев, Ј. Дабовиќ Анастасовска, *Облигационо право, додипломски студии*, Универзитет „Св. Кирил и Методиј“ во Скопје, Скопје, 2021, p. 491-492.

(the nasciturus). Professors G. Galev and J. Dabović Anastasovska believe that both when it comes to damage to the fetus and when it comes to damage to the future successor, a civil legal relationship arises. In doing so, they believe that two conditions must be met, the first of which is to be born alive, and the second is that the successor be human-like. If these conditions are not met, the professors rightly consider that then only the mother who carried the damaged embryo in her womb is damaged⁷².

3. Conclusion

The paper showed that the institute nasciturus has existed since ancient Roman law until today.

The presentation of comparative rights and doctrinal positions regarding the treatment of the nasciturus shows that legal systems and science today normalize the rights of the nasciturus based on various factors. Such are the socio-economic relations in which the presented legal orders were located, and the influence of Roman law as well as the laws and codes that have long been applied in their territories (Austrian Civil Code, Swiss Civil Code, and others) play a particular role in that norming.

The paper showed that modern legal systems normalize the legal capacity of the nasciturus in two ways. According to the first - only the inheritance rights of the unborn child are protected, and according to the second - all the interests (rights) of the nasciturus are protected. Common to both ways of normalization is the requirement that the nasciturus be born alive.

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⁷² Ibid.

Future Shifts in Migration Policy: The Impact of AI-Driven Robotics on Labor Migration Needs

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ABSTRACT

This research investigates the potential impact of AI-driven robotics, on labor migration policies in developed nations. As these countries face aging populations and workforce shortages, they have traditionally relied on migrant labor for roles in agriculture, caregiving, and manual labor. However, with robotics advancements, countries might address labor shortages by substituting robots for human workers, particularly in physically demanding or repetitive jobs. This shift could lead policymakers to reconsider entry pathways for low- and medium-skilled migrants, with implications for migration demand and demographic strategies.

Using comparative policy analysis across countries with rapidly aging populations, economic modeling of workforce projections, and case studies in key sectors, this study examines how automation might shape labor needs in traditionally migrant-reliant sectors. Initial findings indicate that AI-driven robotics could reduce demand for certain types of migrant labor, while the need for human workers remains in empathy-intensive fields like caregiving. However, if robots achieve capabilities sufficient to replace some migrant roles, policies may increasingly favor high-skilled migration and rotational work permits, which could change migration flows from developing countries.

This trend also raises ethical concerns regarding migration equity, economic dependence on remittances, and adherence to international human rights and migration laws. The research aims to advance migration policy studies by highlighting the balance required between technological progress and equitable migration governance, particularly as AI-driven automation potentially reshapes the global labor landscape.

KEYWORDS

Artificial Intelligence, Robotics, Migration Policy, Labor Migration, Human Rights, Economic Modeling

1. Introduction

1.1 Background and Context

The phenomena of Migration served as a cornerstone of economic developments for a long time in history, that enabled nations to address labor shortages driven by demographic shifts, political instability, and environmental challenges [1]. Some developed countries are struggling with aging populations and the decline of birth rates among their local population. They have historically relied on migrant labor to sustain critical sectors such as agriculture, construction, and healthcare. However, the advancements of AI-driven robotics from autonomous agricultural machinery to humanoid caregiving robots are reshaping the current labor markets and also challenging traditional assumptions about migration's role in workforce replacement. For instance, Japan has significantly investment in robotics especially for elderly care and also Germany has invested in automation of manufacturing roles demonstrating a global trend where automation and AI increasingly replace human labor in repetitive, hazardous, or physically demanding tasks and occupations [2]. This shift will introduce some risks which will destabilize the migration patterns especially for low-skilled workers from developing nations, while demanding increase for e.g., high-skilled professionals in robotics engineering and AI ethics [3].

1.2 Research Objectives

This research tries to address two main central questions: (I) How will AI-driven robotics change the demand for labor migration in key sectors? and (II) What sort of policy frameworks can be introduced to balance the technological efficiencies with more equitable labor opportunities? Through integrating the insights from several migration studies, labor economics, and AI ethics, this research aims to proposes more adaptive governance strategies to navigate the potential challenges of automation in the future.

2. Theoretical Framework

2.1 Migration Theories and Technological Disruption

The current migration theories seems to provide a perspective to better understand e.g., how the automation may reshape the labor needs and mobility. The neoclassical economic theory suggests that the wage differentials and the labor market demands would be the main factors driving migration, and the automation may reduce the wage gaps in the low-skilled sectors, resulting in diminishing of migration incentives [4]. The world systems theory also emphasize that the global economic hierarchies will influence the migration flows, potentially leading to the exacerbation of inequalities as developed nations increasingly prioritize the high-skilled migrants from technologically advanced regions [5]. The network theory will further underscores that the social and kinship networks can sustain the migration pathways. However, the automation-induced displacement may disrupt them, particularly in rural economies that are relying more on seasonal labor [6]. All these theories together will offer a framework to better analyze how the emerging technologies may alter traditional push-pull dynamics in migration patterns and policies.

2.2 Automation and Labor Market Polarization

The technological advancements, historically have disrupted the labor markets by e.g. replacing the manual roles while creating opportunities in some emerging sectors. The AI-driven robotics these days can introduce unprecedented polarization in migration issues. For instance, the high-skilled roles such as engineers, data scientists, and AI ethicists are more likely to rise while many other middle-skilled positions will be put at risk of displacement; even the low-skilled roles which have been traditionally valued for human empathy (e.g., caregiving and hospitality), may be also at risk and affected as AI advancements evolve [7]. As an example, the robotic fruit pickers in California have reduced the reliance on the seasonal migrant labors, while autonomous delivery systems in Amazon warehouses are more and more displacing the warehouse staff [8].

3. Ai-Driven Robotics and Labor Market Dynamics

3.1 Sector-Specific Impacts

Looking at different categories and sectors relying on migrant labors, e.g., in agriculture, the robotic harvesters are increasingly equipped with the advanced computer vision and the machine learning algorithms are more and more transforming the production methods. In Japan e.g., the "Robot Farmer" project has been automated over 80% of the strawberry harvesting, resulting in the reduction of reliance on the seasonal migrant labors [9]. However, the high system costs (that ranges from \$50,000 to \$100,000 per unit) limit the adoption among more small-scaled farms in developing nations, which preserve reliance on the manual labor [10]. In the caregiving sector, robots such as the Pepper and Toyota's Human Support Robot from SoftBank are assisting with several tasks including in medication reminders and in mobility support for the eldercare facilities. Yet, such technologies cannot fully replicate the empathy and cultural sensitivities that are required for an effective patient interaction in these sectors which to some extent can ensure still human caregivers remain essential [11], however, again with increasing advancements in AI, this cannot be expected to continue for long. In manufacturing, Germany introduced the "Industry 4.0" initiative which has automated over 45% of the automotive assembly-line tasks, potentially affecting the low-skilled migrant workers while at the same time creating new roles in the robotics maintenance and programming [12].

3.2 Polarization of Labor Demands

The challenges and opportunities of automation further deepens the global labor market inequalities by increasing demand for the high-skilled workers in the developed nations while also displacing the low-skilled workers in some developing countries. In Germany e.g., the Skilled Workers Immigration Act (2020) has fast-tracked the visa issuance processes for engineers and IT specialists, which resulted in a 30% increase in tech-sector migration since 2018 [13]. Meanwhile, in the Philippines, the declining overseas demand for the caregivers, particularly in Japan and also in the Persian Gulf States⁷³ are threatening the remittance flows, which could amount to approximately 9.3% of GDP [14]. This polarization will introduce further challenges for the policymakers to balance the technological progress with more equitable labor opportunities.

4. Migration Policy Implications

4.1 Case Studies

Recent case studies reveal how some states are navigating this intersection of automation and migration policies. Japan e.g., faces an estimated 40% decline in its working-age population by 2050, encouraging their policymakers to favor the technological solutions over the mass migration. The Technical Intern Training Program (TITP) of Japan admits around 300,000 of low-skilled workers

⁷³ The Persian Gulf States refer to countries in the Persian Gulf region, including Saudi Arabia, the United Arab Emirates, Qatar, Bahrain, Kuwait, and Oman.

annually, yet the country still is investing over \$1.2 billion in the eldercare and the service robots [10, 12, 15, 16]. While this strategy seemingly aims to mitigate the demographic decline through automation, the critics are raising ethical concerns regarding this potentially exploitation of migrant trainees as well as the lack of some long-term integration pathways. This case highlights the debates on whether the automation could potentially replace human labor in sectors that require social interaction all together, such as in eldercare, and also it underscores the risk of deskilling migrant workers who are facing limited opportunities for a transition to the higher-skilled roles [16].

In Germany's approach a dual strategy is observed, combining the skilled migration and automation to address their labor shortages. For instance, a scheme known as the Triple Win Program recruits nurses from Vietnam and the Philippines to mitigate the country's healthcare shortages, while initiatives such as the "Industry 4.0" aims at automating tasks in manufacturing and hospital logistics [13, 17, 22]. This approach by Germany aims at balancing ethical recruitment with technological efficiency, yet at the same time it also reveals a broader trend of high-skilled migrants receiving a targeted recruitment support, whereas in low-skilled roles it seems they are increasingly being automated. This could raise the concerns about workforce diversity and also the challenges it may create in the future of low-wage employment.

In the United States however the migration policy and automation impacts are seemingly introducing different challenges and responses in different regions. The tech-driven states such as California are more inclined to prioritizing H-1B visas to attract AI specialists,⁷⁴ while agricultural states like Florida rely heavily on H-2A visas⁷⁵ for seasonal workers in agricultural jobs [7, 14, 18]. This regional practice and disparity illustrate how the local economy and related structures and industries' demands can shape the federal general migration policies. Although the automation processes are more and more transforming the industries such as warehouse logistics and the customer services, significant parts of low-skilled labor still remain essential in certain sectors like agriculture and caregiving. As a result, the federal policies have no choice but to adapt to support both the high-tech industries and the traditional labor markets, while preventing the automation from the exacerbating income inequalities among their migrant workers.

4.2 Policy Recommendations

In this section some more concrete policy measures that are designed to potentially address the challenges posed by automation in labor markets will be explored which are aimed mainly to ensure that migration policies will remain equitable and adaptive. As well some general recommendations are offered as a framework for balancing technological progress with the protection and advancement of the migrant labor rights.

In this light the policymakers especially in the developed countries should focus more on retaining as much as possible and within their domestic goals, the low-skilled visas in automation-resistant sectors. Additionally trying to link the current and potential temporary visas to upskilling programs which will adopt the ethical AI guidelines in migration systems, and promoting the regional labor mobility agreements. Migration pathways also can be prioritized for those industries where some form of human qualities remain irreplaceable, such as in the caregiving, hospitality, and also in domestic services [20]. It is important to note that instead of completely trying to replace the low-skilled migrants with automation, governments can also develop types of incentives to enhance working conditions for a more gradual transition. Considering the temporary visas can be linked to the upskilling programs through bilateral training partnerships with source countries, which potentially equips migrant workers with AI-related skills such as robotics maintenance, AI assistance and automation programming to enable a potential transition into higher-value and more skilled roles while retaining the aims of efficiency and automation [29]. The ethical AI guidelines can be integrated into the migration systems and policies. the UNESCO's framework for fairness and transparency in automated hiring and visa allocation is just one example which can be implemented and incorporated into such systems in order to mitigate biases as much as possible [19]. Although not directly related to the topic, as a protective safeguard the algorithmic audits also can ensure that automated immigration decisions do not disproportionately exclude certain profiles and groups [33]. Additionally, some regional labor mobility agreements, e.g. the ASEAN-style pacts,⁷⁶ can also be promoted to allow more cross-border workforce flexibility. This also ensures that automation does not disproportionately disadvantage certain profiles and specific migrant populations [23, 32]. By implementing such policies, governments can better foster a more sustainable balance between technological progress and efficiency and the equitable migration

⁷⁴ The H-1B visa is a non-immigrant visa program that allows U.S. employers to temporarily employ foreign workers in specialty occupations requiring theoretical or technical expertise. A U.S. employer must sponsor the worker and file a petition with U.S. Citizenship and Immigration Services (USCIS).

⁷⁵ The H-2A visa is a nonimmigrant visa in the US that allows agricultural employers to bring foreign nationals to fill temporary or seasonal agricultural jobs when there are not enough domestic workers available.

⁷⁶ The ASEAN-style pacts, particularly the ASEAN Economic Community (AEC), aim to create a single market and production base with free movement of goods, services, investment, skilled labor, and capital among member countries.

opportunities which ensures labor markets will remain adaptable while upholding worker protections in an era of increasing automation and AI advancement.

5. Ethical and Legal Challenges in Ai-Driven Migration Policy

As the AI-driven robotics are reshaping the labor markets, the legal status and rights of migrant workers may face unprecedented and unexpected challenges. This section aims at examining the intersections of automation, migration policies and the labor rights, with a focus on how governments can potentially balance the technological efficiency with more equitable labor opportunities to better adopt to new changes without compromising key labor protection standards.

5.1 Erosion of Labor Protections in Automated Industries

The automation era is reshaping the demands for migrant labor in several sectors such as in agriculture, manufacturing, logistics, and in eldercare industries which have been historically reliant more on foreign workers [14, 17, 20]. While the AI-driven robotics can enhance productivity and efficiency, they can also introduce destabilization in the traditional labor protections. This could potentially lead to job displacement, wage stagnation, and more restricted mobility. It is important to remember that migrants in manual-intensive roles are increasingly vulnerable to the technological replacements without sufficient key legal and protection safeguards for reskilling [17, 22]. As robots and automation gradually take over the routine and even more complex tasks, many migrant workers will face the reduced wages and shorter contract durations which will exacerbating their economic insecurity [20, 29]. Moreover, the employer-sponsored visa programs such as the H-2A in the United States and the TITP in Japan⁷⁷ restricts the mobility and also prevents migrants from transitioning to other sectors that are less affected by the automation [15, 16]. On this note some legal scholars argue that the current migration policies are failing to account for the new evolving automation's role, leaving migrant workers in a rather precarious legal position, who are caught between the declining opportunities in the low-skilled sectors and facing limited access to the upskilling programs [19, 25].

5.2 Legal Barriers to Workforce Adaptation

Governments, however have not yet developed comprehensive protective frameworks in order to integrate the migrant labor into an AI-driven economy. The current policies are mainly prioritizing high-skilled migration such as the H-1B visas for the technology specialist and at the same time are ignoring the lower-skilled migrants in some other sectors that are undergoing though the automation [17]. This will eventually create a structural exclusion. As the displaced workers in certain sectors like warehousing do not have the necessary access to the reskilling programs which could enable them to transition into these new roles such as AI-assisted logistics etc. [17, 32]. Additionally, many other migrants may face underemployment as automation can reduce work hours without providing the eligibility for social protections or unemployment benefits [20]. These legal ambiguities can also raise in the emerging hybrid jobs, where human-robot collaboration (e.g., robot-assisted eldercare) are not reflected in the existing visa options [15, 19]. Without the adaptive policies and regulations, automation will eventually lead to deepening labor market inequalities, limiting migrants to the low-paid and unstable positions without providing gradual access to the high-skilled roles due to visa policies and training programming gaps [19, 25].

5.3 Ethical Dilemmas in AI-Driven Labor Market Decisions

As the advancements in AI systems are becoming increasingly central to the existing labor market decision-making, several ethical dilemmas will emerge that requires more careful examination. The increasing reliance on the AI-powered recruitments, work permit approvals, and wage-setting algorithms is expected to introduce significant ethical concerns and challenges. One of the major risks expected is the algorithmic bias in visa and job allocations. The AI systems may unintentionally discriminate against migrant applicants based on certain criteria's, reinforcing the systemic biases [19, 25, 33]. Additionally, the automated labor evaluations also, which employers use to determine the contract renewals etc., often may lack the human oversight, leading to unjust decisions without the recourse needed for the affected individuals [25]. Data privacy is also another important factor, as migrants' biometric and employment records are increasingly recorded and stored in the AI-driven immigration databases, it raises some concerns regarding the unauthorized tracking and misuse of these personal data [19, 23]. Without such safeguard and stronger governance mechanisms the AI-driven decision-making in the migration policies can exacerbate the inequalities by reinforcing exclusionary practices and ignoring labor protections standards [25, 32].

⁷⁷ The Technical Intern Training Program (TITP) in Japan is a government-run initiative that allows foreign nationals to receive training and work in specific sectors for up to five years. TITP aims to provide technical skills and technology experience to workers from developing economies.

5.4 Policy Recommendations for Equitable AI-Driven Labor Markets

In this light it is important for the governments to adopt their migration policies to safeguard these rights, to promote economic mobility, and ensure ethical governance of AI and automation. To align existing and future migration policies with the evolving automation-driven labor shifts the governments are more and more encourages to employ more adaptive regulatory frameworks that promote protective labor rights, economic mobility, as well as ethical AI and automation governance. Expanding and exploring the legal pathways for migrants in the automation-resistant sectors can be a priority. The visa categories and options may require to be revised to introduce more options for roles where human skills such as empathy and adaptability still remain irreplaceable or the human interaction is considered essential (e.g., eldercare, education, creative industries etc.) [14, 17]. As well the regional labor mobility agreements such as the ASEAN-style pacts, can still help the redistribution of workforce demands across economies that are experiencing different rates of the automation [23]. Governments also can integrate work permits with the reskilling programs, e.g., establishing vocational training initiatives in the AI-related fields in order to enable migrants for a better and more smooth transition from low-skilled to higher-value roles [19, 32]. The transparency standards for the AI-based work permits processing and also the employment screening can be incorporated and implemented to mitigate the algorithmic biases with the regular audits to ensure fairness [19, 25]. Additionally, the employers may maintain the human oversight in their AI-driven labor evaluations in order to prevent the potential unjust decisions [25, 33]. And finally the safeguarding measures for migrant data privacy is needed and the regulatory measures are required to ensure that the AI-powered biometric databases do comply with the international data protection standards such as the EU GDPR,⁷⁸ to prevent any unauthorized tracking and misuse of the data [19, 23, 25]. By integrating these labor protections safeguards, legal adaptability, as well as the ethical AI standards, we can expect that migration policies can evolve beyond the reactive measures, leading to a more sustainable workforce strategy that can potentially introduce a balance in the technological efficiency with equitable economic participation.

6. Conclusion

Looking forward, the future of labor migration in this age of AI-driven robotics and automation is likely and expected to be evolved by the pace and scope of technological advancements. Through a Baseline Adoption scenario (2023–2030), the slow automation can be expected to preserve the low-skilled migration routes while exacerbating other labor shortages in the aging societies. In a Moderate Adoption scenario (2030–2040), in those sectors where automation is key, such as robotic construction etc. this could prompt the introduction of the rotational visa schemes to address such dynamic labor needs. And finally, a High Adoption scenario (2040–2050) may potentially witness widespread robotics that can prioritize high-skilled migrants, potentially destabilizing the economies reliant on the remittances from the low-skilled workers [24].

In order to address these evolving challenges, strategic recommendations are needed to focus on creating adaptive and equitable migration policies. The upskilling partnerships between the source and the destination countries can be established. With joint investments in vocational programs that are building AI literacy and robotics maintenance skills allows migrant workers to transition into the higher-value and higher skilled roles. Additionally, the ethical AI standards such as those outlined in IEEE's Ethically Aligned Design principles⁷⁹ can be and should be integrated into migration algorithms to prevent biases and to ensure transparency in the visa allocations [25]. The digital remittance platforms leveraging blockchain technologies can further reduce the transaction costs and provide support to the economic stability of the remittance-dependent economies [26].

In conclusion, AI-driven robotics and automation will eventually reshape and redefine the labor migration by favoring the high-skilled workers while marginalizing the low-skilled migrants. This potential yet unavoidable shift presents a significant challenge for maintaining the equitable labor opportunities and protection of relevant rights. It is upon the policymakers to harmonize such technological advancements with more proactive governance measures including the upskilling initiatives, regional labor agreements, as well as adoptive binding AI ethics frameworks in in order to mitigate potential inequalities. By aligning automation with human rights imperatives, states can navigate and hopefully overcome the evolving challenges of an automated future while upholding the dignity and economic security of migrant labor.

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⁷⁹ The IEEE's Ethically Aligned Design (EAD) principles are a set of guidelines aimed at ensuring that the development and deployment of autonomous and intelligent systems (A/IS) prioritize human well-being, safety, and ethical considerations.

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Empowering Innovation: The Role of STEAM Facilities in Reducing Youth Emigration

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Abstract: The article presents a STEAM facility initiative aimed at reducing youth emigration and combating brain drain by fostering innovation among students. By integrating science, technology, engineering, arts, and mathematics (STEAM), the facility promotes critical thinking, teamwork, and creative problem-solving, equipping students with essential skills for career and college success. The facility aligns with Global Goal 4, which seeks to ensure equitable, inclusive quality education and lifelong learning opportunities. It encourages collaboration between universities, small and medium enterprises (SMEs), and experts to engage students in real-world tasks, thereby enhancing service quality and economic growth. The STEAM program will provide training, internships, job opportunities, and pathways for commercialization and internationalization, contributing to the development of a skilled workforce capable of addressing contemporary societal challenges. By bridging the gap between academic theory and practice, the facility enhances the educational experience while fostering essential management skills and safe work practices. Ultimately, this initiative aims to create a supportive environment that encourages young people to stay in their home country, helping to reduce emigration and promote sustainable economic development. The program seeks to bridge the gap between academic theory and practical application, ensuring that students gain valuable knowledge and experience while contributing to local economies. By equipping students with valuable knowledge and experience, the STEAM facility prepares them to succeed and contributes to local and national prosperity.

Keywords: STEAM program, youth and education, internships, commercialization, internationalization, contemporary societal challenges, emigration.

Introduction

A comprehensive educational foundation and a STEAM facility are essential since more people than in past generations are switching careers. Whether students decide to go to college or begin working as soon as they graduate, they must have the fundamental skills to adapt to whatever demands their academic or professional careers place on them. An expanding topic in educational research is the inclusion of the humanities and arts in the core curriculum alongside the sciences and technology fields.

Establishing a STEAM facility will incorporate meaning-making, empathy, personal expression, and the goal of the material being learned. The STEAM framework combines the five disciplines to provide an inclusive learning environment that welcomes involvement and contributions from all students. Students are encouraged to simultaneously exercise their soft and hard skills with this comprehensive approach as a component of interdisciplinary and transdisciplinary instruction.

Purpose of study

Everything begins with a concept closely related to an existing issue—establishing STEAM facility dregs innovation as an answer to this issue.

This PROGRAM is being worked on from several angles, and perhaps a solution can be found in integrating it with an appropriate business case, by increasing employment and preventing brain drain from the country. The milestones of this facility will integrate and include all the partners by delivering the tasks and assignments.

The center for entrepreneurship, education, and technology transfer of the universities that are participating in the program will collaborate with each other in the project proposal for establishing the STEAM facility, will rely on the collaborative efforts of experts, students, professors from various disciplines, intertwining their knowledge and experience with the unified aim of market recognition and a high standard of service quality, ensuring continuous.

Implementing the STEAM Program will provide training, offering advice, internships for foreign and local students, job possibilities, commercialization, and internationalization of the product. Engage in developing the national quality system in conference participation and organization, and collaborate with similar institutions domestically and internationally, by contributing to establishing STEAM facility. Activities that align closely with economic needs, the STEAM facility will lead the charge in promoting interactive learning through the program.

To increase agility in teaching and learning cycles, this facility will follow the innovation cycle of management by influencing the innovation lifecycle of companies, universities, leading partners etc. The innovation approach will enable the structure of the innovation

process from valuable networks to intellectual property. It involves the observation throughout time, shattered down into several phases that survey a bell-shaped pattern. These stages indicate the start and finish of the time frame by implying these stage phases of **ideation, identifying valuable and viable ideas, creating a prototype product, and tests, full implementation**. That will involve carefully planning, executing, and evaluating a program to gather necessary data and insights making significant investments and commitments.

Empowering innovation by establishing STEAM facility

Establishing a STEAM facility will incorporate meaning-making, empathy, personal expression, and the goal of the material being learned. The STEAM framework combines the five disciplines to provide an inclusive learning environment that welcomes involvement and contributions from all students. Students are encouraged to simultaneously exercise their soft and hard skills with this comprehensive approach as a component of interdisciplinary and transdisciplinary instruction.

The program will encompass many areas, such as new product launches, process improvements, and software implementations in social interventions. The success of this program will share certain key features. It clearly defined goals and objectives, a carefully planned execution strategy, and data-driven evaluations.

By conducting STEAM facility, students will minimize risks, optimize resource allocation, and gain valuable insights to inform decision-making. Approaches to learning that use Science, Technology, Engineering, the Arts, and Mathematics as access points will guide student inquiry, dialogue, and critical thinking.

Implementing the STEAM PROGRAM will result in students' thoughtful risk in experimentation learning, engaging persistence in problem-solving through embracing entrepreneurship with interns. The creative process by conducting innovators and meaningful efforts in the STEAM facility is a key to understanding the needs by filling the education gap today toward expanding economic growth tomorrow. To increase critical thinking and problem-solving skills through unique hands-on learning opportunities, the acronym, which stands for Science, Technology, Engineering, Arts, and Mathematics (STEAM) by establishing this facility, above, will ignite the curiosity innate to all students and encourage them to see their abilities to innovate⁸⁰ and solve problems in real-time.

The facility presumes to ensure of preparation of the jobs that don't even exist. This program aims to make it possible by facilitating learning environments with fluid, dynamic, and relevant job tasks. The integrated concept will stand for the request, of the students, companies, facilities, university programs, and research institute partners, standing as a think tank and by improving the standards as a powerful assessment to distribute typical courses for each one separately.

Integrating STEAM program will increase longevity of resources and collaboration

Beyond merely consuming and assembling technology, the goal of the STEAM facility is to inspire students to become innovators. Putting an emphasis on creative abilities to increase participation in all courses, it is an all-encompassing approach that incorporates STEM facilities (science, technology, engineering, arts, and mathematics) to foster creative problem-solving, critical thinking, and teamwork.

With STEAM facility students are given the tools to be inquisitive thinkers looking for original solutions, acquiring the hard and soft skills needed for career and college success.

Practical projects combining as many STEAM disciplines as possible will be the first step in integrating STEAM subjects as are UNIVERSITIES and SMEs. This interdisciplinary approach helps students thoroughly understand a subject while reducing the need for them to plan, prepare, and pay for multiple separate, unconnected events. In order to improve the retention of ideas that students wish to address, chunk concepts are undoubtedly developed by processing, grouping, or organizing information into meaningful units. These chunks are smaller, easier to manage, and each one focuses on a different aspect of the project or problem while advancing the final goal. Additionally, this will increase the longevity of STEAM (actors) resources. In the meantime, this facility will encourage collaboration, in consideration of reaching out to other companies, entities, academia etc. by creating a sharing program to trade resources back and forth, for 100% of the activities at a fraction of the collaborating. This initiative anticipates establishing community ties by asking SMEs for help by hiring STEAM students as interns. The business will supply components and teach students how to put ideas and products together, which they can then commercialize.

Alternatively, it is possible to secure willingness to support a portion of the supply list in return for a tax write-off. These opportunities will be advantageous for many SMEs as a way to change the world. Real-world situations can serve as project inspiration because today's global concerns demand greater ingenuity than in the past. This enables students as a target group in problem-solving abilities and enables them to recognize themselves as citizens of a global society, in addition to the influential group of change-makers they will grow to be as the outcome of the urge to connect STEAM to the world, the process of **internationalization with foreign universities**. Partners (universities and businesses) will be involved in this program as contributors who will improve the STEAM curriculum. It will start with

⁸⁰ Law on Innovation Activity ("Official Gazette of the Republic of Macedonia" no.79/13, 137/13, 41/14, 44/15, 6/16, 53/16, 190/16 and 64/18).

a mandatory training session where participants will learn about the STEAM curriculum, proper sanitization, handling, using, and storing supplies, and other topics as a chance to take on new challenges.

Awareness in any new program is to **Accept Failure**: Any new task for the students will experience a growing rush and possibly even some complete failures. Not every endeavor will turn out as hoped and not every goal will be realized. Accepting occasionally the task that worked for students' intern is more than the one that didn't. Regarding critical thinking and STEAM education, **Study Visits** to the foreign universities partners is one of the best sources of inspiration. Encouraging students to learn soft skills will develop theories based on observations and develop into inquisitive scientists by developing their hard skills. The company ensure of these surveys to generate ideas for upcoming studies and research. The curricula will involve student participation in both study, design, and thinking on one hand, and to help with various business development opportunities of the SMEs students can work on that can offer value to small and medium businesses and that provide real-world experience for business students, many of whom are interested in pursuing consulting as a career. Establishing and expanding a STEAM facility will stimulate students' enlarged thought processes and strong connections. It will create a starting point by incorporating ideas with STEAM program techniques.

The role of STEAM facility is to provide lifelong learning opportunities

The objective of STEAM facility expands their purview to include but are not limited to, advancing scientific and technical careers and equipping students with the fundamental knowledge and abilities needed to tackle future issues through high-quality education. As stated in the Global Goal, Goal 4 aims to ensure equitable and inclusive quality education and to promote lifelong learning opportunities for everyone. This facility aims to change, encourage, and link the students with the SMEs with concrete tasks. Enforcing high standards and service qualities by developing an interactive approach with the economic expansion.

The center for entrepreneurship, education, and technology transfer⁸¹ of the universities that are participating in the program will collaborate with each other in the project proposal for establishing the STEAM facility, will rely on the collaborative efforts of experts, students, professors from various disciplines, intertwining their knowledge and experience with the unified aim of market recognition and a high standard of service quality, ensuring continuous.

Implementing the STEAM Program will provide training, offering advice, internships for foreign and local students, job possibilities, commercialization, and internationalization of the product. Contribute to the establishment of STEAM facilities in order to work with comparable institutions both domestically and abroad, and participate in the development of the national quality system in conference participation and organization

Activities that align closely with economic needs, the STEAM facility will lead the charge in promoting interactive learning through the program. The approach will undoubtedly lead to the cultivation of skilled professionals in the labor market, capable of effectively addressing contemporary societal challenges and championing the advancement and implementation of sustainable practices. The relationship between theory and practice bridges the gap between the university as a scientific institution and companies in the economy. The diverse structure and expertise of the academic staff contribute to a high-quality education, fostering management skills, dedication to safe work practices, and informed technology selections essential for business expansion. Our vision through this program is to deliver services of the highest quality, engaging our students in a journey to acquire valuable knowledge and practical experience. Companies will acknowledge this, aiding them in crafting their success stories.

The Influence of STEAM Programs in Reducing Emigration Flow Among Young People

In recent years, the emigration of young people from certain regions or countries has become a significant socio-economic issue. A key factor contributing to this trend is the lack of opportunities for personal and professional development in their home countries, particularly in fields related to science, technology, engineering, arts, and mathematics (STEAM). To combat this, universities have increasingly embraced STEAM-based educational programs, which have the potential to not only enhance the skill set of young individuals but also foster innovation and entrepreneurship, making them more likely to remain in their home countries or return after gaining experience abroad.⁸²

STEAM programs are inherently designed to equip students with interdisciplinary knowledge and practical skills, essential for addressing real-world challenges. These programs often emphasize critical thinking, problem-solving, and creativity—skills that are highly valued in today's globalized economy.⁸³

By offering robust curricula in subjects such as computer science, engineering, digital media, and environmental sustainability, universities create an environment where young people can develop cutting-edge expertise that is directly aligned with the demands of the local job market. As a result, these programs can reduce the "brain drain" phenomenon by offering better employment prospects and

⁸¹University "Mother Teresa" Skopje, Republic of North Macedonia.

⁸² Cunningham, S. D., & McKeen, S. (2019). Innovation, entrepreneurship, and talent retention: The role of university-led ecosystems in fostering economic development. *Journal of Technology Transfer*, 44(5), 1379-1401.

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stimulating a culture of innovation within the local economy.⁸⁴

In addition to skill development, STEAM programs encourage young people to think entrepreneurially, promoting the creation of startups and the development of new technologies. Universities often collaborate with industries and government bodies to create incubators, innovation hubs, and research centers that facilitate collaboration between students, researchers, and entrepreneurs. By providing young people with the tools, mentorship, and resources needed to turn their ideas into viable businesses, these programs empower them to contribute to the local economy rather than seek opportunities abroad.⁸⁵ In turn, the establishment of a thriving entrepreneurial ecosystem can become a compelling reason for young people to stay or return home, knowing that they have the support needed to succeed.⁸⁶

While STEAM programs undoubtedly open international doors for students, they also foster a sense of responsibility and connection to their local communities. Many universities are now integrating social impact projects into their STEAM curricula, encouraging students to use their skills to address local issues such as climate change, public health, and infrastructure development.⁸⁷

This focus on creating sustainable and impactful solutions for their home countries nurtures a sense of pride and purpose among students. As a result, young people are less inclined to emigrate in search of meaning or professional satisfaction, as they recognize the opportunities for making a difference in their own communities.⁸⁸

Conclusion

In summary, STEAM programs in universities play a crucial role in mitigating the emigration flow of young people by providing them with the necessary skills, entrepreneurial opportunities, and a strong sense of social responsibility. These programs not only meet the current needs of the global job market but also enable local innovation that attracts and retains young talent. By empowering young people to contribute to their communities through science, technology, engineering, arts, and mathematics, universities can reduce the pressures that lead to emigration, creating a more sustainable and dynamic future for both individuals and their countries.⁸⁹

The approach will undoubtedly lead to the cultivation of skilled professionals in the labor market, capable of effectively addressing contemporary societal challenges and championing the advancement and implementation of sustainable practices. The relationship between theory and practice bridges the gap between the university as a scientific institution and companies in the economy. The diverse structure and expertise of the academic staff contribute to a high-quality education, fostering management skills, dedication to safe work practices, and informed technology selections essential for business expansion. Our vision through this program is to deliver services of the highest quality, engaging our students in a journey to acquire valuable knowledge and practical experience. Companies will acknowledge this, aiding them in crafting their success stories.

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