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CONTENT

INTERNATIONAL EDITING COMMITTEE	3
EDITORIAL BOARD.....	5
FOREWORD.....	9
BASIC DETERMINANTS OF DIPLOMATIC RELATIONS OF SERBIA AND THE USA.....	11
<i>Milijana Danevska</i>	
DOMESTIC AND INTERNATIONAL OILSEEDS MARKET IN THE CONDITIONS OF COVID-19	25
<i>Vera Krmpot, Aleksandra Gajdobranski, Milan Janković</i>	
THE IMPACT OF JOB ANALYSIS ON ORGANISATIONAL CHANGE.....	41
<i>Ranko Lojić</i>	
THE ROLE OF HUMAN RESOURCES IN ACHIEVING COMPETITIVE AND ECONOMIC ADVANTAGE OF AN AGRICULTURAL ENTERPRISE ...	53
<i>Darko Martinov, Aca Randelović, Aleksandra Brakus</i>	
DOMESTIC VIOLENCE AS A PROBLEM OF CONTEMPORARY SOCIETY	67
<i>Kristijan Šebešćan</i>	
ARTIFICIAL INTELLIGENCE AND THE LEGAL PROFESSION BETWEEN COOPERATION, COMPETITION AND CONFRONTATION.....	75
<i>Dušan Vasić, Maja Anđelković, Vladan Stanković</i>	

FOREWORD

When we launched our magazine twelve years ago, our desire was to bring together scientific ideas about economics and law, areas that can not be separated and that are equally important for the development of society as a whole. At the same time, we thought about the need to critically observe and overcome both these two types of public activities of people. We wished that there would be controversy on the pages of the magazine, because we expected that there would be more cognitive light and that there would be less misunderstanding on the way we chose.

The mission of the magazine is also the intention to present and appreciate the reach of both domestic and foreign experiences, all due to the critical theory of influence.

Over the past seven years, we have made great efforts not to succumb to the temptation to direct the concepts and institutions of economics, law and management from the last century.

We have long noticed that there is a variety of solutions for managing the economy, law, management..., for technologies in these areas. Through our journal, we made them available to the public, both scientific and professional, in order to meet the changes and, why not, to create them.

In the choice of content, we were guided by the knowledge that there are many elements to which economics, law and management must pay attention. Some of them are: economic convergence, information-communication technologies in business, deformation of market competition, challenges of transnational and virtual corporations to domestic companies, creating images, brands...

Large social changes also bring new activities that are expanding and bring about market deregulation and foreign investment. Changes bring a new environment, new hierarchical levels, new responsibilities, and bring us into contact with new people or with same people in new roles. All this leads inevitably to the creation of a competition of scientific explanations. In this game, our advantage should be this magazine which will also be an incentive for the spread of scientific thought and diversity in the field of economics, law and management.

For this reason, we are starting to index the journals in foreign databases, in order to expose the boundaries for disseminating our information and knowledge. In the following period, we want to be visible to the broad scientific public.

In achieving this intention, we count on, in addition to the experienced scientific staff, also on the scientific youngsters, PhD students from the scientific disciplines covered by our journal. It is our supply for the future - the filigree design of researchers for a new era of knowledge, as well as the critical and constructivist observation of reality.

We invite you to join us and give your contribution in spreading scientific dialogue.

Editor-in-chief
Emeritus professor Života Radosavljević

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BASIC DETERMINANTS OF DIPLOMATIC RELATIONS OF SERBIA AND THE USA

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Abstract: *Bilateral diplomatic relations between two countries are of exceptional importance for the overall political, economic, technical and technological development of a country. They have an impact on the cultural, sociological and wider milieu, and sometimes much more than that. Namely, those relationships can greatly influence the overall development of a society. This especially applies to relations, when one of these countries plays a decisive role in the determinants of the entire world development and the further direction of world social and economic movements. The analysis of bilateral Serbian-American relations all the more deserves special attention, where the clarification of the historical context of those relations can reflect certain trends in the further development of Serbian society itself, especially, if we take a relatively long period of over one hundred and forty years including a large number of changes, primarily Serbian statehood. This topic gains its complexity when all the challenges in that period of its organization from monarchy to republic, through changes in the ideological patterns of socialism and liberal capitalism, federative organization with a multi-national composition, up to the current status of the Republic of Serbia with autonomous provinces in its composition. In fact, the status of one of them - the province of Kosovo - is an open question, not so much for Serbia as for the USA, which in the last decade of the last century, in the majority of the Serbian professional and scientific public is of the opinion that the USA has become the patron of the independence of this entity and one of the the biggest proponents of Kosovo's independence, especially in the context of its integration into the European Union, where the Republic of Serbia sees itself. Today, in the form of a French-German proposal to resolve the status of relations between Belgrade and Pristina, the fact that the main initiative is the American side's, insisting on resolving the status of Kosovo within that framework, is becoming increasingly apparent, even though there is a UN Resolution that clearly indicates respect for the principles of international*

public law regarding respect for the territorial sovereignty of the Republic of Serbia. The current moment, in which the Ukrainian crisis has united the Western allies to respect this principle on the occasion of the self-declaration of the independence of the Donetsk and Lugansk republics, is a definite test for all of them that the principles of public international law regarding the inviolability of territorial integrity and integrity are consistently respected for all countries, and not on a selective basis. The role of the USA is extremely important in this sense, and the task of both the Serbian leadership and the Serbian diplomats is to be the biggest spokesmen for the principled application of international law. The US-led NATO attack on the Federal Republic of Yugoslavia in 1999 was a dangerous precedent in recent history. Later, the recognition of Kosovo without the consent of the mother country, starting with America, and then by most of the countries of the European Union, is another precedent that already seriously changes the standards. The consequences of this can already be seen in the secession of several entities without the consent of the mother country, accompanied by war events, whose the end is hard to predict at this moment. Therefore, the role of the USA has always been crucial, not only in the world context but also in the current diplomatic relations with Serbia.

Keywords: *diplomacy, Serbia, Kosovo, international public law, USA*

INTRODUCTION

On February 1, 1881, diplomatic relations had been officially established between Serbia and the United States of America with the exchange of diplomatic notes by Serbian and American diplomats - Filip Hristić and John Casson. There were long preparations for this act, and after suggestions and instructions from the Serbian Ministry of Foreign Affairs, the diplomat handed a note to his colleague in Vienna with a request to forward it to the American State Department in Washington. After that, the State Department reacted positively, sending a telegram from the US President to Serbian King Milan Obrenović with the information that he had appointed the first US resident ambassador in Belgrade. Ambassador Skjner soon came to Belgrade, and after numerous diplomatic activities in October of the same year, the first Trade Agreement between Serbia and the USA was signed.

Therefore, there began diplomatic activity with numerous ups and downs, major and minor results, lasting for 142 years. In this research paper, a chronological presentation of the determinants of diplomatic relations between Serbia and the USA is given, through which the crucial factors and factors that further determined the direction and goal of the relationship between these two countries over time, as well as its transformation, are presented.

The first phase of the relationship is the period from 1881 to 1919, when the Kingdom of Serbs, Croats and Slovenes was formed, which was recognized by America as a new entity. It is a period marked by a series of bilateral relations, where American President Wilson's favor with the support of the Serbian army in Corfu, at the end of 1917, was observed. The Ambassador of the Kingdom of Serbs, Croats and Slovenes addressed the

Congress, and at the same session, Woodrow Wilson, the President of the USA, presented the plan that was the basis of the Paris Peace Conference in 1919. The idea of founding the League of Nations, later the United Nations, was outlined in that document. Historians also record the period of exceptional relations between the two countries with documents from which one can see large financial support, sent, among other things, to the Kingdom of Serbs, Croats and Slovenes.

During the First World War both countries were allies and in the period between the two world wars there had lasted calm and rest between these two countries. On the eve of the Second World War, the presence of the Nazis in the Balkans and the growth of Hitler's power in Europe restored American interest in the European countries, especially in the Balkan Peninsula. As Serbia became a key country on the Balkan Peninsula, the influence, presence and promptness of American diplomacy were significantly increased. After the outbreak of the first war activities on our territory, and the appearance of resistance in the form of the formation of the People's Liberation Army, the contact of American diplomats was continuous with the Government of the Kingdom, which was in exile in London. Konstantin Fotić, as a representative of the Kingdom, received the rank of ambassador in 1942 in Washington, which raised the level of the mission to the rank of an embassy. With this, the US State Department sent a clear message that the US partner is the Kingdom, and not the NOV Supreme Staff headed by Josip Broz. With this act, America clearly supported the Chetnik movement of Draža Mihajlović, whose support lasted until the first unofficial visit of the American delegation to the Supreme Command of the People's Liberation Army of Yugoslavia on September 16, 1943 (Lopičić, Lopičić Ančić, 2021).

At that time, the American intelligence service - Office of Strategic Services, the forerunner of the Central Intelligence Unit, was active in Belgrade. The relations with the new authorities that took over from the Government in exile were unofficial, and only at the Tehran Conference, with President Roosevelt's address to Josip Broz Tito in May 1944, did they become official. The act of transferring the American embassy from London to Belgrade can be interpreted as the establishment of new relations between the two sides, with the newly elected authorities of the FNRJ, by becoming official. However, it remains one of the many open questions about the relationship between the two countries. Why, despite the American condemnation of the bombing of Belgrade at the beginning of the war in 1941 by the Axis Powers, in April 1944 and despite unofficial relations and regular contacts with the partisan authorities of Yugoslavia, entire cities and areas were bombed with dangerous weapons by American aviation, there were over ten thousand innocent civilian victims, of which approximately half of that number died in Belgrade alone (Lopičić, Lopičić Ančić, 2021).

1. HISTORICAL SEQUENCE OF BILATERAL RELATIONS BETWEEN SERBIA AND THE USA

Immediately before the liberation itself, American aid along with British aid was generous. After liberation, in the period of reconstruction, that continuity continued at

the same pace, with a large amount of aid coming from the newly formed UN, where the main contribution was from the United States. In the edition of the book *Economic relations between Yugoslavia and the USA*, the flow and dynamics of economic cooperation between the two countries in the post-war period can be seen in more detail. Behind that increased economic presence of America in Yugoslavia, in reality was the intention to distance it from the influence of the USSR, to send a signal to the eastern countries under the influence of the USSR that it is possible to live well without it, as well as to block access to Moscow The Adriatic Sea as an important route to the Mediterranean. Moscow tried to eliminate that danger with the Informburo Resolution, which Tito rejected and thus caused Moscow's anger. In this way, Yugoslavia was heavily involved in the Cold War period between East and West. The newly formed Yugoslav state, "by its nature and geo-strategic position, was a suitable ground for testing global forms of manipulation, revising the past and creating assumptions for the creation of collective simulacrum structures. (Stanković, Simić, 2022, 306)" Informbiro is a period of economic, political, diplomatic blockade of relations between the USSR and FNRJ, which resulted in the termination of friendly relations, boycott (economic, trade, military) and open conflict at all levels. This blockade in diplomatic, political, military and economic cooperation lasted until the visit of the President of the USSR, Nikita Khrushchev, to Belgrade on May 25, 1955, when the period of consolidation of relations at all levels began.

This was followed by a period of distancing Yugoslavia both from the USSR and from the influence of the USA, as well as an attempt to lead an independent policy outside of any of these blocs. The Yugoslav position and the division of the sphere of influence between the East and the West brought the leadership under great pressure from both sides. While most of the countries at Yalta were divided under the influence of one or the other, the fate of Yugoslavia was very special due to the intertwining of the influence of both. Thus, on the one hand, the political system was of a socialist character, more like the USSR, with a single party in power, the League of Communists, while at the same time, unlike the eastern countries of Europe, the influence of American culture, media and events and how it was present both in the homes of the citizens of Yugoslavia and in the influx of Western culture. The non-aligned, whose founder was Tito in addition to Nehru and Nasr, left a special mark on Belgrade's diplomatic relations, both with Washington and Moscow. Neither one nor the other world center was impressed by the role of Yugoslavia in that movement, which gained unexpectedly great popularity among all third world countries.

From that participation of Yugoslavia in that important world event, Yugoslavia had great benefits, but also strained relations, especially with the USA (Danevska, Stankovic, 2023). At the meeting in Brijun in July 1956, one of the first documents of this movement was adopted, and six years later, Belgrade became the host of the Non-Aligned Movement in September 1961. At this conference, which was attended by 25 countries and 3 observers, the founding document of the movement was adopted, where the basic goals and principles of the non-aligned (Radovanovic, 1974). The next meeting of the non-aligned

in Belgrade was held on the eve of the breakup of the country in 1989, so that, as an observer, Serbia would once again host this club of countries, which both have a significant influence, both in terms of the number and the dispersion of its members in virtually all parts of the world. Yugoslavia achieved significant contacts, economic cooperation with the third world, as well as in the cultural and educational spheres. This issue deserves special attention, but for us in this context it is important to single out the moment of cooling of relations with the USA, after, according to American diplomats, the pro-Russian performance of the President of Yugoslavia at the First Non-Aligned Conference in 1961 (Bogetić, 2006:71). The tightening of relations with the USSR after the Informburo resulted in blockades of a military, economic and technical nature, as well as a cooling of diplomatic relations between the two countries. In this case, Yugoslavia was faced with new challenges, which were greatly accelerated by the activities of the American services in the form of support for the hostile emigration of Yugoslavia, primarily by the support of Ustasha, Chetnik, Albanian extremism, which was supposed to attack the basic values of the then Federation, equality peoples and nationalities of Yugoslavia.

As a result, there followed a series of terrorist actions against Yugoslav diplomatic missions and personnel, as well as against foreign trade houses of the former Yugoslavia, behind which these very structures were. As it usually happens, the one you feed will easily turn the same weapon against you. With the hijacking of an American passenger plane by Ustasha emigration, where a certain number of American security personnel were killed, the US policy towards these forms of extremism changed (Bogetić, 2006:71). This ends this form of damaged relations between the two countries and begins a new period in which there were numerous visits from both sides at the highest level. First, Richard Nixon visited Belgrade in 1970 (and there were several visits by the Vice President of the USA to Yugoslavia), followed by the visits of Gerald Ford in 1977. The President of Yugoslavia, Josip Broz Tito, for his part, visited the presidents of the USA on several occasions. First, during the session of the United Nations General Assembly in 1960, then in 1963, 1971 and 1978 (Milošević, Pantelić, 2014).

The 1990s seem to be the period marked by the deterioration of bilateral relations between the Federal Republic of Serbia - on the one hand, and the USA - on the other. Publicly, the US has declared that it supports the territorial integrity and sovereignty of the former Federal Republic of Yugoslavia. In doing so, they declared their support for the integrity of the country, although it turned out later that they supported extremist, paramilitary formations, which committed numerous mass crimes against the Serbian population (Lopičić, Lopičić Ančić, 2021:132). The USA was behind the UN Resolution on sanctions against the Federal Republic of Yugoslavia on several occasions. Likewise, the USA was the initiator of the establishment of the Hague Tribunal, an ad hoc international criminal court for crimes committed on the territory of the former Yugoslavia (Milinković, 1994).

An event that remained unprecedented in the previous history of the United Nations is the bombing of NATO, whose member countries are attacked by the USA, without the

consent of the Security Council. Under the name Merciful Angel and with the justification that the reason for this is the prevention of a humanitarian disaster in Kosovo, where a huge number of bombs were dropped on that very area, which are still the subject of discussion, analysis and attempts to prosecute this case by the victims of these destructions, which certainly, they do not have a national characteristic, but the inhabitants of all those areas destroyed by NATO bombs suffer equally. The targets of the bombing were not only military facilities, but also civilian facilities, cities, settlements, hospitals, energy and road infrastructure, and a large number of civilian victims.

It was estimated that the material damage of that act amounted to more than 150 billion US dollars (Nato agresija na SRJ 99, 2000). The question of the motive of this act arises with reason, when Kosovo, which was later recognized by all the countries participating in the bombing, among others, as an independent state, was not questioned in any way, as a possible member of NATO in order to proceed to the eventual activation of Article 5 of the North Atlantic Alliance. It is worrisome that such an act remained unsanctioned, neither diplomatically in the UN Security Council, which is in charge of peacekeeping by the UN charter, nor legally, in front of the International Court of Justice, which found itself incompetent due to the lawsuit of the Federal Republic of Yugoslavia against NATO. Later, the lawsuit was changed individually against all participants in the act of aggression against a sovereign country. Such precedents are very dangerous and unfortunately, it gives anyone who has force the right to use force against a sovereign country, without looking for and applying all the mechanisms provided by international public law in cases of possible violations of human rights.

This precedent opened up a number of issues, especially the role of bilateral and multilateral diplomacy. It is known that there are numerous mechanisms that provide the possibility of investigating, initiating and sanctioning the behavior of any irresponsible subject. On the other hand, the case of the bombing, and later the recognition without the consent of an entity, both from America and EU member states, largely opens a Pandora's box of further upheavals on fragile European soil (Danevska, Stankovic, 2023).

1.1. Changes in diplomatic relations after the October events

As a result of events in the 1990s, there was a break in diplomatic relations between the two countries, and this break lasted until the election of new authorities in 2000, with the arrival of Vojislav Koštunica, when diplomatic relations were restored, and thus economic cooperation. The first decade of the new millennium brings a new phase in the development of bilateral relations, the period of which can be divided into several special phases. The first four years belong to the period of improving cooperation and mutual relations. "The period from 2005 to 2008 is marked as a period of cooperation and tightening of relations due to negotiations on the status of Kosovo. From 2008 to 2010 - a period of quiet confrontation and from 2010 to 2012 - a period of slight improvement (Vujačić, 2015: 207 – 216). The most recent period is the period marked on the world stage by the

Minsk Agreements, where an attempt was made to escalate relations between NATO, and more precisely America and Russia, to be de-escalated by the events in Ukraine, which followed the self-secession of Crimea from Ukraine. It was very reminiscent of the act of self-proclamation of Kosovo without the consent of the home state, but this time the American administration supported the territorial integrity and sovereignty of Ukraine.

After the change of the Milošević regime, a new phase of relations between the United States of America and the Republic of Serbia began, a period officially confirmed by the main topic of the Congress on trade preferences with the Federal Republic of Yugoslavia, which opened the possibility of more intensive trade relations, when the highest amount of foreign direct investments in the FRY was recorded. . By 2008, the tobacco industry in Niš received 800 million US dollars, and about 100 million in Vranjska. The largest American investors Philip Morris and BAT, significant investments in the steel industry as well. With the privatization of the Smederevo ironworks and other related facilities, a new period of industrial development begins in Serbia, which in that period becomes Serbia's largest exporter. The entry of Microsoft on the Serbian market and a number of other important global American players. This is the period when America gives great support to Serbia's approach to European integration.

The crown of such good relations resulted in the visits of several high-level congressional delegations, as well as the direct support of America, more precisely the American contingent in KFOR, to the Serbian population in March 2004, due to the extremist actions of certain groups of Albanians in Kosovo. In 2006, the State Partnership Agreement was signed between the Ministries of Defense of the two countries. That period also resulted in the cooperation of the Republic of Serbia, as well as some countries from the region, with NATO. This is the period when Serbia actively participates in the Partnership for Peace program, and in September 2007 it expressed its intention to actively participate in this program. At the same time, a clear distinction should be made between readiness for cooperation and the path of membership, followed by other countries in the region. All aspects of the post-October events in the cooperation of both sides are in marked growth, except for the issue of the status of Kosovo.

2. THE QUESTION OF KOSOVO AFTER THE EVENTS OF OCTOBER

In the period when the negotiations on the status of Kosovo under the auspices of the UN begin, the American Congress, in a debate specifically dedicated to Kosovo, among other things, emphasizes the unity of all members of the Contact Group, which consists of NATO, the EU, Russia and America, stressing that this matter should be handled very carefully, where as Nicholas Burns, then undersecretary of state, underlines: "We all understand that independence is one of the options, as well as wider autonomy". The Serbian leadership explicitly opposed the position promoted by the American side through Richard Holbrooke, which was more along the lines of Kosovo's independence with the guaranteed rights of the Serbian minority. Vojislav Koštunica made it clear at the

session of the United Nations Security Council dedicated to Kosovo, that the recognition of Kosovo's independence as an independent state would be a dangerous "precedent with severe far-reaching consequences for the world order". The United Nations has approved the start of negotiations on the status of Kosovo, Deutsche Welle, October 25, 2005. The beginning of the negotiations was also marked by the position of the American delegation, which adhered to the uniqueness of the case of Kosovo, as a "unique case".

In such an environment, the Kosovo provisional authorities are working to maneuver around the disagreement of the Russian delegation at the UN with the American position on the independence of Kosovo by unilaterally declaring the independence of Kosovo. This caused violent reactions from the Serbs, followed by riots that culminated in an attack on the American embassy as a sign of dissatisfaction with the American position on this issue. It was one of the most difficult periods of bilateral relations between the two countries, which is still burdened by the issue of Kosovo's independence. Serbia has developed a strong diplomatic activity to protect its sovereignty primarily within the framework of UN institutions. This is how it happened that the UN Assembly, as an official entity that had legitimacy, raised the question of the legitimacy of Kosovo's self-declaration of independence before the International Court of Justice. Unfortunately, with the unfortunate wording, whether the act of self-declaration of Kosovo's independence is not contrary to international law. The question so generally asked is whether there is a great possibility that the court in its opinion will express itself in support of those who extended that position.

During that period, we note the visit of the US Vice President to Serbia, Josef Biden, and talks with the future President of the UN General Assembly, Minister of Foreign Affairs, Mr. Jeremic. During that period, during the mandate of President Tadić, the negotiations were transferred from the UN stage to the European Union, which was a key mistake of the Serbian leadership, which prevented the possibility of Russian support for Serbian sovereignty. Since then, the EU has taken over the further course of normalization of the already significantly damaged relations between Belgrade and Pristina. Although, at first glance, the exit of the negotiations from the UN framework gives the impression that the big players, America and Russia, have remained on the sidelines, and that issue should be resolved within the framework of the EU, it is becoming increasingly clear that the USA still has the main initiative in the further course of negotiations.

2.1. The status of candidate for EU membership related to the progress of negotiations with Kosovo

The new Serbian government, led by SNS, begins new negotiations with Kosovo under the auspices of the EU, after which the so-called Brussels Agreement was initiated. Within that concept, the status of municipalities with a larger part of the Serbian population should be resolved, i.e. community of Serbian municipalities, but within the scope of Kosovo regulations. Obviously, what Holbrook advocated earlier, which is the independence of Kosovo with a certain guarantee of the rights of Serbian residents, is now being

implemented through this form. The question of the status of the Serbian communities is under ice, for more than a decade the Albanian leaders have ignored it as their obligation, thus bringing the Serbian leadership into the act of conducting negotiations on the union of Serbian municipalities, de facto admitting that they are conducting negotiations on the independence status of Kosovo. A Serbian delegation led by the Prime Minister, Ivica Dacic, is visiting the USA, where the emphasis is on strengthening economic relations and American investments in Serbia, as well as the issue of the status of Kosovo. In March 2014, as an occasion for the declaration of Crimea's secession from Ukraine, the West, under the leadership of America, announced sanctions against Russia, which the new leadership of Serbia did not join, which was again the reason for the cooling of relations between Washington and Belgrade.

3. CURRENT CONFLICTS IN UKRAINE AND RELATIONS BETWEEN AMERICA AND SERBIA

Actually, this conflict has a longer history, but it can be said that the Maidan events in 2014 were already a clear indication that this area is becoming one of the most critical points where the interests of NATO and the Russian Federation collide. It is the period of the rise of Chinese, above all, economic presence around the world. Thus, during Obama's second term, the focus of the American administration's interests became Asia, more precisely the Chinese-Russian alliance, as well as strengthening the military component of NATO's eastern bloc. Among the military measures, the deployment of the rapid reaction forces, the strength of several thousand soldiers of the alliance in four countries - Poland, Lithuania, Latvia and Estonia, as well as the renewal of the commitments undertaken by the members to increase their expenditures for defense budgets to 2 percent of the gross domestic product stand out (Jovičević, 2014). These decisions changed the plans for the implementation of the South Stream project, which had direct consequences on further energy flows to the Balkans, and especially to Serbia. Thus, the Russians withdrew from the project, and Serbia lost a large and significant political support in the form of Russian guarantees, given during the sale of the majority share to NIS. Thus, the current crisis hotspots, including Serbia and Montenegro, Kosovo, Georgia, Moldova and Transnistria, became crisis front lines, according to the words of the then US Secretary of State, John Kerry.

At the talks between the Serbian leadership and the American administration, in addition to issues in the field of IT cooperation, there is also the point of diversifying the gas supply, and gas from Azerbaijan is mentioned as an alternative. High-level bilateral visits are frequent, and cooperation is deepening with Serbia's participation in peacekeeping missions within the UN and EU. Serbia was especially supported in this activity with a special grant of 9.7 million dollars (FACT SHEETS US SERBIA relations. (2016).Progress through partnership, The White house, August 16, 2016).In that period, the American focus is on the energy dependence of the Balkans on Russia, as well as the strengthening of Russian power through Russian and pro-Russian media. Serbia gained

a little space exclusively through the view of Kosovo, which the USA views as “a process that is irreplaceable for regional stability” (Testimony by Deputy Assistant Secretary Hoyt Yee, US Department of State, House Foreign Affairs Committee, Subcommittee on Europe, Euroasia and Emerging Threats, May 17, 2017). Russia’s interest in acquiring diplomatic immunity in the NIS, as well as Serbia’s refusal to join the sanctions against the Russian Federation have left a great deal of mistrust within the American administration. Equally great fear remains on the side of the Serbian leadership, which is creating pressure for the recognition of Kosovo, even though it comes through European countries that have the largest economic and political presence in the country, fearing that it was initiated and supported by the White House. Relations of mistrust on both sides at a given moment, among other things, mark the bilateral relations of the two countries.

We are witnessing tectonic changes on the world geopolitical map, which are directly reflected in the bilateral relations between the USA and the Republic of Serbia. The consequences of the Minsk Agreements and their implementation, or rather the lack of implementation, are being felt by the entire world with today’s current events on the Ukrainian front, where the spears of the East and the West are clashing like never before. This period also marks the change of administration in the White House, when the Democrats are replaced by the Republicans, led by President Trump, when there are certain changes in the foreign policy of the White House, especially in an attempt to redefine US priorities.

On the plan of Kosovo, those changes were hardly reflected. To what extent the current events on the world stage, as well as the possible new composition of the administration would change the course of relations between the two countries and what is the perspective of further relations are questions that largely depend on both global geopolitical events and the skill of diplomatic activities of Serbian diplomats at all levels and forms of multilateral and bilateral diplomacy. How much will the Ukrainian crisis and Russia’s attack, or “special intervention”, as President Putin called this activity, explaining it as protection against the genocidal extermination of the Russian people, who are in the majority in these regions of Ukraine, affect the attitude of the Western allies towards the act of NATO aggression and time will show further support for the independence of Kosovo. The issue of Kosovo is gaining more and more attention not only in diplomatic circles, but also in the circles of legal science due to the self-secession of certain parts of Ukraine and their recognition as an independent Republic, and later the merger of these parts of Ukraine with the Russian Federation.

3.1. The geopolitical situation as a determinant of bilateral Serbian-American relations

There are several factors that generally affect bilateral relations between the two countries. One of the main determinants of relations between Serbia and the USA is the current geopolitical situation, and accordingly America and Serbia will determine their goals and priorities in concrete relations, both through its participation in multilateral

diplomacy, primarily through the work of the UN Security Council and in the UN system, as well and in regional forums and communities. At the same time, in bilateral relations with these countries. bilateral and multilateral relations are very complicated and the coordination of activities in them is, among other things, the result of the skill of diplomacy. This is especially characteristic of the great powers, which maintain their influence on the world stage through numerous mechanisms, both bilateral and multilateral diplomacy. America is especially able to ensure the control of its dominant position in parallel with political means, especially economic and military diplomacy, and certainly with particularly significant means of so-called soft diplomacy.

Current world events are of such high intensity that America is in the center of focus and relations with this power are extremely important. All the more so since it has always been a key participant in those events as is testified and confirmed by numerous historical events. The position of the USA has always had great importance on the further course of the entire social development in the world. Today, we are living witnesses of those claims and the duty of science is to make its contribution by analyzing this very complex period, especially through the aspect of diplomatic relations between Serbia and the USA. In this way, we can predict the further development of events, the position of American diplomacy towards the issue of the Balkans in the newly created circumstances, and especially the relationship towards Serbia. Bilateral relations presuppose reciprocity, respect for national interests, territorial integrity and sovereignty, primarily as a basic principle of international public law in the direction of strengthening friendly relations, by improving political, economic, cultural and all other areas of cooperation.

CONCLUSION

The world is changing at a rapid rate, and new alliances are being formed. Some are getting stronger, others are on the decline. Many social phenomena are in the process of being redefined, so that after this conflict, the biggest since the Second World War, the two most powerful parties of the East and the West will have to sit down at the table and agree on new international public legal frameworks for the functioning of the world, which will ensure world prosperity globally. Above all, they have to ensure a lasting peace in the world. The impossibility of diplomacy and the UN system to prevent this situation imposes the need for negotiations, which will respect all the principles of public international law. A number of initiatives have emerged to help mediate a diplomatic solution to the conflict, and this is to be commended.

Diplomatic solutions are essential for the prosperity of mankind. Serbia has often been the target of invaders, but also the interest of great powers, primarily because of its key role in a very important part of the world, as a place where eastern and western civilizations meet. That is precisely why Serbia can and should play a very constructive role in resolving this conflict. Serbia took a principled position towards the conflict, starting from the basic principles of international public law, as well as from its own

national interests. Although under diplomatic pressure and the influence of both the East and the West, Serbia maintains its position on a principled basis and, accordingly, can expect the resolution of its essential issues. In the first place this is about the protection of territorial integrity, peace and economic prosperity and its place both in the European Union and in Eurasian integration, while maintaining its neutral military stance. Undoubtedly, Serbia belongs both geographically and economically primarily to the European Union, with which it has the largest scope of cooperation, but it also has its deep traditional ties with Eurasian integrations, which also represent a powerful platform for cooperation and prosperity of Serbia. Any exclusivity is harmful, and the neutral military position gives Serbia the right and obligation to be a bridge between East and West, because they have all been destroyed, and to be a flow between the two sides of the world in the biggest possible crisis after the Second World War. In this sense, the internal changes of these integration communities are underway, new instruments and flows of world capital are being created as well as new values that must include the uniqueness and national interests of each country. Serbia should insist on the principled and consistent application of international law and will thus make its greatest possible contribution in overcoming the insurmountable differences between East and West. In this way, they will gain the trust of both American and European, on the one hand, and Russian and Chinese partners. Big states have always started from their own interests in these relations, but their interest now, when the world is facing the biggest challenge since World War II, should primarily be the consistent application of public international law, because that is the only way to ensure peace and stability. This is a time of great changes, and no matter how much you think that the American attitude towards Serbia is constant and that it will not change significantly regarding the issue of its integrity, you need to be careful, because time is working on Serbia's side. The role of the Serbian leadership and diplomacy is crucial. The next elections and pre-election activities on the American political scene and the relationship of all key factors to the Serbian issue will be especially important. This is the period when diplomacy must do its job, intensifying contacts with all actors who have or will have a decisive role in American society. Consequently, bilateral relations between Serbia and the USA have always been, and in the future, bearing in mind the current momentum, will be from of even greater importance above all for the Republic of Serbia.

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DOMESTIC AND INTERNATIONAL OILSEEDS MARKET IN THE CONDITIONS OF COVID-19

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Abstract: *The production of oilseeds (soybeans, sunflowers and oilseed rape) on the domestic market remains above average with a marked increase in production since 2018, while the area under oilseeds from 2018 remains stable. Compared to the five-year average, the area under oilseeds increased by about 12% in 2020 which contributed to this year's record. Based on data published in the "Green Book I", oilseeds in 2020 recorded a slight decline in production of 3.4% due to the decline in sunflower yields. Analyzing the time period from several years ago, significant changes have been noticed on the international market, which are reflected in the fact that the share of vegetable oils as oil products is increasing and the market price is increasing. In this regard, groups of oilseeds can be determined for which there are potential opportunities for export growth in the coming period, such as edible oil, seed goods and unmodified soybean products. This especially affects highly developed countries (such as the USA, Canada, Russia, Ukraine...) which have a developed processing industry, and which, thanks to high productivity, can realize the final, ie on the international market. more expensive products. According to the projections of the American Ministry of Agriculture, the covid-19 pandemic affected international trade, where a smaller decline in imports and exports was recorded at the international level. In this paper we apply the*

so-called. exponential trend, which is determined based on a review of the flow chart of the obtained data. The rate of change shows us the percentage of increase or decrease of individual phenomena with the application of the trend. Based on quantitative statistical indicators, such as arithmetic mean, coefficient of variation, interval of variation and rate of change, we will present areas, production, yields, imports and exports on both domestic and international oilseeds market in the period from 2019 to 2021.

Keywords: *domestic, international, market, oilseeds, covid-19.*

INTRODUCTION

Oilseeds belong to the field crop that is gaining more and more importance, regardless of the presence of accompanying problems. They are primarily reflected in the need to introduce modern technologies in order to produce the most profitable crops, improving agro-technical measures that would relate to more successful land cultivation, use of chemical pesticides (such as fertilization and other crop protection), further development of seed and oilseeds, and all to a system of precision agriculture that is accompanied by increasingly obvious climate change.

In the future, the production of GMO-free food, the production and packaging of products according to UNECE standards, the creation of new varieties, as well as the competitiveness of oilseeds in a particular target market in changing market conditions will be increasingly important. Globally, oilseed production is expanding due to growing demand for „green energy”. Of industrial plants, the sowing structure of the Republic of Serbia is dominated by sunflower (42%) and soybeans (32%), where the high share of soybeans in the sowing structure is uncharacteristic of European countries. Europe is therefore completely dependent on imports of soybeans and soybean meal from the United States, Brazil and Argentina. On the other hand, areas under sunflower have a tendency to grow, but unlike in recent years, areas under oilseed rape are becoming increasingly important, due to the growing need for production of bio-renewable energy sources and export of this oilseed to the international market.

In 2021, the Republic of Serbia, in cooperation with the UN FAO, in cooperation with the European Bank for Reconstruction and Development (EBRD), signed the continuation of the Agreement on Cooperation within the joint project started in 2020. Within the cooperation on the mentioned project in 2021, the impact of the covid-19 pandemic and its consequences on the oil sector was presented [Zita Srbije Monthly Report 4.21 / Belgrade, JUNE 2021 / e-mail: zitasrbije@gmail.com]. The total yield of oilseeds in the Republic of Serbia in 2020 is lower by about 6% compared to 2019 and was around 3 t / ha, while compared to the recorded five-year average yields, the total yield of oilseeds in 2020. year was higher by 5% [<https://www.freepik.com> or Green Paper I - Horizontal Review]. Production and non-production consumption is significant in our edible oil market. Production consumption includes reproductive and investment consumption,

while non-production consumption includes personal and general or public consumption, where sunflower oil is given priority.

Bearing in mind that the international market is increasingly looking for quality products, that competition in the production of oilseeds in the world is growing, and that only quality products can find their way to the end consumer, therefore the United Nations Food and Agriculture Organization (UN FAO) is very important, because in the Republic of Serbia there are all the prerequisites for the production of safe food. Favorable conditions for the proper development of oilseeds, especially soybeans, are provided by an appropriate system of measures: appropriate crop rotation, undermining, sowing, fertilization, weed control, installation of irrigation and drainage systems, as well as timely harvest [Miladinović et al., 2018]. According to the report of the Republic Bureau of Statistics (RZS), in 2021 in the Republic of Serbia only about 52.5 thousand / ha of agricultural land was irrigated, which is 0.4 percent less than in 2021. Arable land and gardens (with 94 percent) have the largest share in the total irrigated areas, followed by orchards (with five percent) and other agricultural areas (with a share of one percent). In the fall of irrigated areas, we should also look for the causes of the physical decline of agricultural production in Serbia in 2021 by five percent.

Significant changes are noticeable on the international market, which are reflected in the fact that cereals are losing their position in the market they had in the 80s of the twentieth century, while the share of vegetable oils as oil products is increasing. This especially affects highly developed countries (such as the USA, China, Russia, Ukraine...), which have a developed processing industry, and which, thanks to high productivity, can realize the final production, on the international market of more expensive products [Gajdobranski et al., 2016]. The production of oilseed rape, especially oilseed rape, is becoming increasingly important from the aspect of production of biodegradable energy sources, and it is also an important raw material for the food and pharmaceutical industry. Rapeseed production is growing internationally, which is a consequence of increased demand primarily from the processing industry as well as the growing food needs of the population, primarily in Asian countries. Based on analysts' estimates, the international market should stabilize in 2022, with an increase in total production to about 30.4 million / t, which is about 10.5% more than in the previous period. Oil consumption is forecast to increase, primarily due to increased demand for animal feed and a recovery in demand for vegetable oil (both for food production and biofuel production), which will require up-to-date monitoring of the main export markets [Gajdobranski, 2022].

RESEARCH METHODS

The set research task requires the application of various methodological procedures. The research is mostly based on the so-called „Desk research”, and on the collection of available primary and secondary data. The following scientific methods are used in the paper: analytical-synthetic, inductive-deductive, method of abstraction and concretization,

method of generalization and specialization. In addition to scientific methods, the paper also uses tables in which summarized data for oilseeds (soybeans, sunflowers and oilseed rape) are presented, and which are also illustrated. In this paper, the so-called exponential trend, which is determined on the basis of a review of the diagram of the obtained data, where the rate of change shows the percentage increase or decrease of individual phenomena with the application of the exponential trend [http://polj.uns.ac.rs/sites/default/files/udzbenici/Ud%C5%BEbenik_Beba%20Mutavd%C5%BEi%C4%87%20i%20Emilija%20Nikoli%C4%87%20C4%90ori%C4%87.pdf].

To show the average sizes of the observed phenomena, the middle shape method was used:

$$\bar{X} = \frac{\sum_{i=1}^n X_i}{n}$$

The degree of variation of individual phenomena was calculated by applying the coefficient of variation of shape:

$$V = \frac{\sigma \cdot 100\%}{\bar{X}}$$

where σ represents the standard deviation, which is obtained as follows:

$$\sigma = \sqrt{\frac{\sum_{i=1}^n (X_i - \bar{X})^2}{n}}$$

In the statistical literature, a large number of trends of different functional forms are known, among which the sum is made depending on the predominant form of the tendency of the development of the phenomenon in time. In this paper, an exponential trend is chosen, based on a review of the original data movement diagrams. Rate of change (showing either the percentage increase or the decrease percentage of individual phenomena using an exponential trend) using the following formula:

$$Y = a \cdot b^x,$$

where Y is a dependent variable, ie. a phenomenon whose motion is examined in time; X is independently variable (time); parameter a is the value of the trend for the period that has X = 0, ie. the ordinate value of the trend at the origin; b is a parameter (coefficient of function) of the trend, which represents a constant relative change in occurrence over time, ie, growth or decline. If the growth rate is denoted by r, then:

$$b = (1 + r),$$

and the rate is:

$$r = (b - 1).$$

Therefore, the previous exponential trend equation can be represented as:

$$Y = a (1 + r)^x$$

If $b > 1$, then the phenomenon has a tendency to increase, and if $0 < b < 1$, then the phenomenon has a tendency to decrease. If the value of r obtained from the previous equation $r = (b - 1)$ is multiplied by 100, it will be obtained by how much the estimated phenomenon increases on average, or decreases annually in the observed subperiod.

Thus, based on the exponential trend, a constant rate of change is assumed over the entire observed time interval.

SOURCES OF DATA AND RESEARCH HYPOTHESES

The main sources of data used in this paper are statistical yearbooks of Serbia, USDA (United States Statistical Date), Internal material of “Žita Srbije”, Internal material of “Ministry of Agriculture, Forestry and Water Management”, research published in books, other journals and publications as well as data collected via the Internet.

The paper starts from assumptions (hypotheses) that should be based on logical inference, as follows:

- analyzes of oilseed production in covid-19 conditions with sufficient supply of unmodified soybean products;
- availability in the use of existing arable land with increased production of oilseeds;
- export of oilseeds and their products to world and EU markets;
- increasing the share of vegetable oils and market prices, ie increasing competitiveness;
- improvement of agro-technical measures for proper cultivation of oilseeds; as well as
- marketing the concept of business.

In the market of oilseeds, the marketing concept of business must become dominant, because only in that way can better business results be achieved, which means satisfying the demands of foreign consumers. In the market of the Republic of Serbia, cereals and oilseeds are still the most represented in exports, as well as their products, which dominate in terms of quality, but with which we cannot compete with much larger producers, such as Ukraine [Gajdobranski et al., 2020].

DOMESTIC OILSEEDS MARKET IN COVID-19 CONDITIONS

The covid-19 pandemic is changing the markets and working conditions within them on a daily basis, where the domestic oil market has seen a change in the trend of imports and exports. In the period from September 2020 to March 2021, about 137 thousand / t of soybeans were exported, which is about 11 thousand / t less than in the same period last year. The main reason for lower exports is the domestic price, which has grown significantly faster than the price on the international market in the last three months.

The prices of oilseeds on the domestic market are formed in relation to the situation on world markets and on the markets of the surrounding countries, but also according to the demand of domestic oil mills, which are still the largest buyers of oilseeds. Extreme climatic conditions, which cause climate change, in recent years have had a great impact on production in our region, and thus on prices. These changes had the greatest impact on soybeans, and somewhat less on sunflowers.

The domestic price of soybeans reached 80 dinars / kg in mid-April 2021, which is about 810 \$ / t converted into dollars, and the price of American soybeans on the Rotterdam Stock Exchange in the same period was at the level of 580 \$ / t, while Brazilian 565 \$ / t. The difference is over \$ 230 / t, which sufficiently indicates that we cannot expect more serious exports in the coming period. In order to export the planned 300 thousand / t in the period April-August, 163 thousand / t of soybeans should be exported, which is practically impossible with such a ratio of domestic and export prices. A decline in exports will lead to a change in the balance sheet positions of exports and final stocks where exports will fall and stocks will grow [Žita Srbije Mesečni Izveštaj 2.21 / Beograd, APRIL 2021. / e-mail : zitasrbije@gmail.com].

No new record will be set in soybean production, regardless of the record area under soybeans, due to the fact that climatic conditions had the most negative impact on the crops of this plant species. Compared to 2020, the decline in production was as much as 27%, and compared to the ten-year average, it is 524 thousand / t. The expected production is higher by 4.7% and will thus meet domestic needs, as well as certain surpluses for exports. The expected production of soy protein products would be about 340 thousand / t, which would enable the export of these products of about 65 thousand / t, while the export of soybean oil could exceed 60 thousand / t.

Table 1 presents summary data on soybean production in the Republic of Serbia for the period from 2019 to 2021, which are processed by standard mathematical and statistical methods:

Table 1. Soybean production parameters of the Republic of Serbia (2019-2021)

Marks	Average value (in 000)	Variation Interval (in 000)		Coefficient of variation (%)	Change rate (%)
		min	max		
1. area (ha)	221	196	237	9,71	9,96
2. production (t)	699	646	752	7,58	7,89
3. yield (t/ha)	3,2	3,1	3,3	3,12	-1,53
4. import	8	0,2	20	128,11	-90,00
5. export	167	70	182	54,24	88,98

Source: SBS, Statistical Yearbook of Serbia 2021 (based on the author's calculation)

In the observed time period from 2019 to 2021, based on the data obtained in Table 1, the structure of soybean movement in the Republic of Serbia is as follows:

The area under soybeans averages 221 thousand / ha, and is about 3% smaller than the area under sunflower which is 227 thousand / ha. The area under soybean shows a tendency to increase at an average rate of 9.96% and a coefficient of variation of 9.71%. According to the engaged areas, soy dominates in relation to sunflower. In the structure of total arable land, soybean participates with about 2.9%. Absolutely the largest areas are in AP Vojvodina about 93%, due to habits and traditions in production, soil quality, processing capacity.

The production of soybean averages 699 thousand / t, and is equal to the average area of sunflower which is 700 thousand / t. Soybean production has a tendency to increase at an average rate of 7.89% and a coefficient of variation of 7.58%. Average soybean production is lower than sunflower production by about 18%. The most important production region is AP Vojvodina with a share of 94%. The movement of production is influenced by climatic factors which are reflected in the occurrence of drought in one of the years of cultivation, which leads to a drastic reduction in soybean yield. In addition to climatic factors, economic factors also affect the movement of production, such as: the level of purchase prices, production costs, price parity with other lines of crop production, time of payment to producers, purchase conditions, etc.

The yield of soybean averages 3.2 t / ha, and is about 3% lower than the sunflower yield of 3.1 t / ha. Soybean yield shows a negative tendency to increase at an average rate of -1.53% and a coefficient of variation of 3.12%. In our country, quite satisfactory yields are achieved in relation to the European Union and the world. It is evident that we achieve higher average yields than the countries of Eastern Europe, but we lag behind the countries of Western Europe. The appearance of lower yields is influenced by the lack of water, which, primarily in addition to dry years, can be explained by insufficiently developed irrigation systems. The achieved yields are affected by a number of factors: climatic factors (especially the amount and distribution of precipitation during the vegetation period), application of agro-technical measures (especially fertilization and protection from diseases and pests), relatively large losses during harvest, etc.

Imports of soybeans average 8 thousand / t, and is about 77% lower than imports of sunflower, which is 24 thousand / t. Soybean imports recorded a negative upward trend at an average rate of -90 and a coefficient of variation of 128.11%. Soybean **exports** average 167 thousand tons, and is about 16% higher than sunflower exports, which amount to 141 thousand tons. Soybean exports recorded a tendency to increase at an average rate of 88.98% and a coefficient of variation of 54.24%.

In the period from the beginning of the harvest in 2021, about 682 thousand / t of wheat and about 69 thousand / t of flour were exported from the Republic of Serbia to the international market. According to the available data of the "Customs Administration", the export of wheat in the period from July 2021 to February 2022 was realized in: Romania (via the port of Constanta) about 251 thousand / t; Kosovo about 56 thousand / t; Montenegro about 6 thousand / t; Macedonia about 52.3 thousand / t; Bosnia and Herzegovina about 51.3 thousand / t; Italy about 226 thousand / t; Albania about 29 thousand / t; Germany about 810 t; Austria about 8 thousand / t; Other countries about 3 thousand / t. Exports of wheat flour in the given period were realized in: Bosnia and Herzegovina about 20 thousand / t; Montenegro about 27 thousand / t; Kosovo about 815 t; Macedonia about 22 thousand / t; Albania about 2.3 thousand / t; Greece 224 t; Croatia about 3 thousand / t; Romania about 21 t; Italy about 146 t; Other states about 536 t [<https://agrosmart.net/2022/02/12/izvoz-psenice-i-brasna/>].

According to statistical data, sunflower was sown on an area of 218 thousand / ha in 2020, which is 2.6% more than in the previous year and 16.2% more than the ten-year average. Spring sowing in 2020 took place in specific conditions, especially due to the epidemic caused by covid-19, as well as the lack of moisture in the soil. However, frequent rainfall in May and especially in June contributed to the accumulation of moisture in the soil, so the crops were in good condition. Based on five-year average sunflower yields of 2.92 t / ha, the production was about 660 thousand / t of sunflowers [<http://www.minpolj.gov.rs/download/izvestaj-o-trzistu-suncokreta-jul-2020/?script=lat>]. The sown area of sunflower in 2021 was 208 thousand / ha and took place in unfavorable temperature conditions. The decrease in sown areas compared to the previous year was 5.7%, and compared to the five-year average there was an increase of 4.8%. The realized production in 2021 is 620 thousand / t of sunflower, of which about 230 thousand / t of sunflower oil would be produced in industrial capacities as the most important export product of sunflower, of which 160 thousand / t would be available for the purpose. The expected export of sunflower meal would be at the level of over 100 thousand / t [<http://www.minpolj.gov.rs/download/izvestaj-o-trzistu-suncokreta-jul-2021/>].

Table 2 presents summary data on the production of sunflower in the Republic of Serbia for the period from 2019 to 2021, which are processed by standard mathematical and statistical methods:

Table 2. Parameters of sunflower production in the Republic of Serbia (2019-2021)

Marks	Average value (inu 000)	Variation Interval varijacije (in 000)		Coefficient of variation (%)	Change rate (%)
		min	max		
1. area (ha)	227	219	239	4,82	-3,84
2. production (t)	700	637	734	7,82	-6,84
3. yield(t/ha)	3,1	2,9	3,3	6,45	-3,28
4. import	24	20	29	20,28	-4,65
5. export	141	135	145	4,18	-0,34

Source: SBS, Statistical Yearbook of Serbia 2021 (based on the author's calculation)

In the observed time period from 2019 to 2021, based on the data obtained in Table 1, the structure of movement in sunflowers in the Republic of Serbia is as follows:

The area under sunflower averages 227 thousand / ha, and is about 3% higher than the area under soybean which is 221 thousand / ha. The area under sunflower shows a negative tendency to increase at an average rate of -3.84% and a coefficient of variation of 4.82%.

The production of sunflower averages 700 thousand / t, and is equal to the average soybean area of 699 thousand / t. Sunflower production recorded a negative upward trend at an average rate of -6.84% and a coefficient of variation of 7.82%.

The yield of sunflower averages 3.1 t / ha, and is about 3% lower than soybean yield of 3.2 t / ha. Sunflower yield recorded a negative tendency to increase at an average rate of -3.28% and a coefficient of variation of 6.45%.

The imports of sunflower average 24 thousand / t, and is about 77% higher than soybean imports, which amount to 8 thousand / t. Sunflower imports recorded a negative upward trend at an average rate of -4.65 and a coefficient of variation of 20.28%.

The exports of sunflower average 141 thousand / t, and is about 16% lower than soybean exports, which amount to 167 thousand / t. Sunflower exports recorded a negative upward trend at an average rate of -0.34% and a coefficient of variation of 4.18%.

The Republic of Serbia is the largest producer and exporter of unmodified soybeans in this part of Europe, as well as the only country that is self-sufficient in terms of soybean production, so it does not import this oilseed. Today, a soybean breeding program is being launched in countries where it did not exist, such as Austria, Germany and even Belgium [<https://scindeks-clanci.ceon.rs/data/pdf/0354-5881/2018/0354-58811802001M.pdf>]. On the other hand, the closure of certain markets for exports and exceptional imports to the People's Republic of China have influenced the price of soybeans and sunflowers, as well as oilseed rape, to reach a historical maximum. Thus, in September 2021 in the Republic of Serbia we recorded the following prices: sunflower 62-65 dinars / kg (in the same period in 2020 the price was 35 dinars / kg), soybeans 76 dinars / kg, and oilseed rape 64 dinars / kg. At the beginning of 2022, prices showed an increase again. The justification that the People's Republic of China is stockpiling a camp because of the war that is possible on several points in the world - is not true. In this crowded country, people migrated from

villages to cities due to industrialization. About 60 percent of the population, which needs food security, now lives there. By purchasing soybeans, sunflowers, wheat, corn and rice, the People's Republic of China has shown that it wants and knows how to ensure the consumption of all foods for its population.

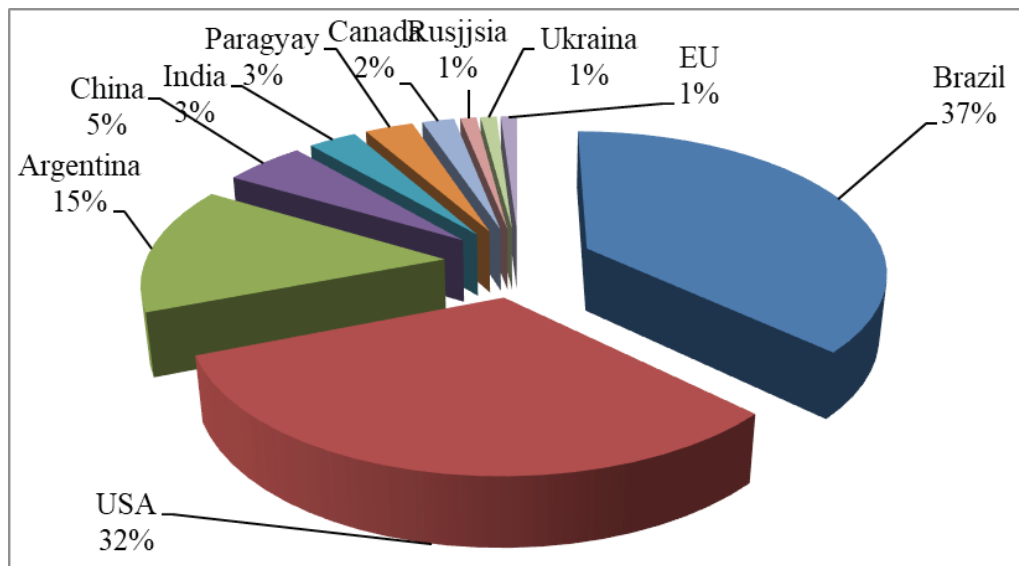
The market of oilseeds is considered to be very sensitive due to the seasonal offer, the limited lifespan of the product, as well as the lack of financial resources. Oil factories on the domestic market, in order to provide enough raw materials for production, must provide seed goods, mineral fertilizers, protective equipment, oil and other raw materials in advance. The goal is to ensure quality production of oilseeds and oilseed products, where very often there is a natural exchange between producers and processors of oilseeds on the basis of pre-established parities. Parities, ie price ratios are important indicators of the economic position of individual production lines and income levels of primary agricultural producers, which can affect the profitability and expansion of turnover [Gajdobranski, 2015]. The following factors can contribute to the reduction of the expansion of oilseeds [Pejanović, Gajdobranski, 2012]: stability of prices on the international market, market reduction of import growth by the two largest world importers (India and China), reduction of export volumes of the two largest world exporters, Argentina and Brazil). The specificity of the domestic market of oilseeds is reflected in the lack of significant warehouses as separate economic entities. In many countries, warehouses of mercantile oilseeds play a very important role in the market, because they enable primary agricultural production to keep the goods in their ownership and sell them at a time when it is most convenient. In such circumstances, stock market trading is most pronounced, where the risk of price changes is shared between producers and processors of oilseeds. In the Republic of Serbia, oil factories appear as warehouses, where the purchase of seeds is mostly done once a year with a slight mediation of the product exchange. Such conditions provide oil producers with security in terms of providing raw materials for production, but they take the risk of a possible fall in the world price of oilseeds. On the other hand, in the case of rising prices of oilseeds and vegetable oils on the world market, conditions are created for additional earnings in the international exchange of these goods.

INTERNATIONAL OILSEEDS MARKET IN COVID-19 CONDITIONS

According to the Report of the US Department of Agriculture (USDA), in 2021, there is a slight increase in world **sunflower** production, especially in larger producers such as Ukraine (with about 30% share) and Russia (with about 27% share). Total world production is estimated at about 57 million / t (about 3% higher than the previous year). Transitional stocks are at the level of 17%, where at the end of 2021 they will amount to about 2.6 million / t. According to analysts from UkrAgroConsult, the export of sunflower from Ukraine in 2020 amounted to 47.3 thousand / t, which is 45% less compared to the same period last year. The main importer in this analyzed period was the European Union, which bought about 49% of total exports, while Turkey reduced its purchase by

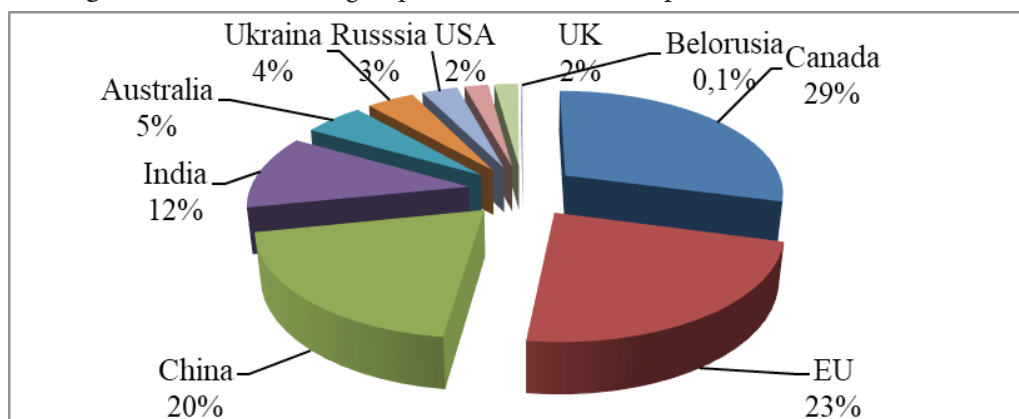
about 76%. Export growth was registered in Georgia, China and Iraq, while a slowdown in exports was observed in Azerbaijan, Sweden and Romania. Given that the covid-19 pandemic will affect international trade, a smaller decline in world-class imports and exports is estimated, and domestic consumption (both grain and sunflower oil and meal) is expected to grow. In the domestic market, sunflower was mostly exported to CEFTA countries, about 61% (of which most in BiH as much as 98%). Further, the export destinations are the countries of the European Union (Romania about 34%, Hungary about 29% and Bulgaria about 20%) [USDA United States Statistical Date, 2020-2021].

According to the Report of the American Ministry of Agriculture (USDA), in 2021, there is a growth of soybean production in the world by 5.5%, according to the growth of production and exports in Brazil and the United States. The four largest producers are Brazil, the United States, Argentina and China, which account for 86% of total production. China is still the world's largest importer of soybeans, the largest producer of soybean oil and the largest consumer of soybean meal. Argentina remained the world's largest exporter of soybean meal and soybean oil, while the European Union remained the world's largest importer of soybean meal. In the world, there are smaller initial stocks of this oilseed on an annual level, but with production higher by over 20 million / t compared to 2020. Therefore, in 2021, there is an adequate increase in consumption with closing stocks by almost 5 million / t higher on an annual level. Faster growth of consumption than production in the last three years has led to a decline in soy stocks in the world. The ten largest soybean producers in the world will participate in the total world production from 2019 to 2021 with about 97%. The four largest producers are Brazil, the USA, Argentina and China, and they participate in the total production with about 86.5%. Bearing in mind that China is the world's largest importer of soybeans (about 97 million / t) and the largest processor (about 91 million / t), it is obvious that the soybean crop in these four countries has a decisive influence on price formation on the international market. R. Serbia with average gender in the period 2019/2020. year of about 731 thousand / t in the total world share participates with 0.21%, so with such participation can not affect international prices. Brazil, as the largest producer of soybeans with a production of 128 million / t, accounts for a third (36%) of world production. It is followed by the United States (31%), which together with Brazil accounts for more than half of world production (67%), Argentina (14%), China (5%), India (3%), Paraguay (3%), Canada (2%), Russia (1%), Ukraine (1%), EU (0.7%) and Others (3%). Based on the presented data, the ten largest soybean producers in the world are presented in Figure 1:

Figure 1. The world's largest soybean producers (2019-2021)

Source: Žita Srbije Monthly Report 2.21 / Beograd, APRIL 2021. / e-mail : zitasrbije@gmail.com

According to the Report of the American Ministry of Agriculture (USDA), the production of oilseed rape in the world from 2017 to 2021 recorded a constant growth. The record in production was achieved in 2017, when it amounted to 17 mil./t. With the growth of production, consumption also grew, which led to a decline in closing stocks, which were constantly decreasing from 9.82 million / t in 2019, where in 2021 they amounted to 5.53 million / t. The world's largest oilseed rape processors are the European Union, China and Canada, which own about 67% of the world's total oilseed rape stocks (USDA-United States Statistical Date 2020-2021). Canada is the world's largest producer of oilseed rape with a production of 20 million / t, which is a quarter (28%) of world production. It is followed by the EU (22.5%), which together with Canada (28%) accounts for half of world production (50%). It is followed by China (19%), India (11%), Australia (5%), Ukraine (4%), Russia (3%), USA (2%), United Kingdom (2%), Belarus (0.1 %) and Others (0.2%). Based on the presented data, the ten largest world producers of oilseed rape we present in Figure 2:

Figure 2. The world's largest producers of oilseed rape (2019-2021)

Source: Žita Srbije Monthly Report 3.21 / Beograd, MAY 2021. / e-mail : zitasrbije@gmail.com

Like the market for many other agricultural products, the global financial crisis caused by the pandemic has seriously affected the oilseeds market internationally. In the export of oilseeds and oilseed products, the most important markets will be the countries around the CEFTA agreement, followed by European Union countries such as Germany, Italy, Hungary, Romania and Bulgaria, as well as the markets of Russia and the Middle East. In order to strengthen its position in these markets, the Republic of Serbia, as a future member of the European Union, needs to accept international standards, fully modernize agricultural production and improve its quality. In addition, it should advocate for the modernization of storage facilities and expand the range of agri-food products for greater competitiveness in exports [Gajdobranski, 2020]. In many developing countries, agriculture makes the largest contribution to GDP (gross domestic product), where it employs approximately 1.3 billion workers worldwide and is the main source of accumulation for industrial development, which is why this branch of the economy is extremely important.

International trade in vegetable oils in the future according to *Thoenes and Milo* (2006) will depend on the following [Gajdobranski, 2015]: climatic conditions and demographic development; macroeconomic environment and the urgency of developing the bio-diesel market; diseases of plants, livestock and their spread (*Asian rust, Avian influenza, FMD*); overseas transport costs (IMO-MARPOL); development of international agricultural policy (including multilateral negotiations); growing importance in the international trade of agro-industrial products with China and India; changing the preference of porters for the type of diet; as well as technological developments and their implications for GM-free markets. In the future, groups of oilseeds can be determined for which there are potential opportunities for export growth in the coming period, namely edible oil, seed goods and soybean products. [Gajdobranski, et al., 2021]. Of particular importance is the research of the following target markets: CEFTA countries, EU-27 member states, Russian Federation member states, overseas countries (USA, Canada, Middle and Far

East) [Gajdobranski, 2022]. International Food Market 2021/2022 is very shaky, especially when you take into account the so-called escalating tensions between the world's major food suppliers and the world's largest sunflower producers - Russia and Ukraine, which will most likely force sunflower oil buyers to seek alternative supplies. Russia and Ukraine account for about 80% of world exports of sunflower oil, which is of particular concern to traders, as importers would be forced to replace stocks from the region. Thus, supply disruptions from the Black Sea region would affect overall global availability, and buyers in the Middle East and Africa would seek other alternative sources [<https://biznis.telegraf.rs/agro-biz/3462756-preti-li-svetu-glad-upravo-je-skocila-cena-psenice-kukuruza-i-soje-rat-vec-trese-i-planetu>].

CONCLUSION

According to the presented results, we conclude that the turnover of oilseeds on the domestic and international markets in the conditions of covid-19 has changed significantly. In the production and trade of oilseeds, the market economy will influence the better use of production capacities, with the lowest possible energy consumption, in order to increase the existing competitive advantages and develop new ones. Competitiveness in the international oilseeds market is reflected in the ability of exporters to conquer foreign markets, to impose themselves on the requirements of foreign buyers with favorable conditions of production and sales, and to win them over for themselves. The production restructuring of oilseeds was considered, where greater competitiveness on both the international and domestic markets will be increasingly based on environmental, energy and economic criteria. The oilseeds market is considered very sensitive due to the seasonal supply and limited lifespan. The volume of production on an annual level is very difficult to predict, and the greatest advantages are reflected on the side of the industry, so it is very important to establish a system of storage of oilseeds.

The production of oilseeds (soybeans, sunflowers and oilseed rape) is an important raw material for the food and pharmaceutical industries, of which the production of oilseed rape is becoming increasingly important in terms of production of biorenewable energy sources. Rapeseed production is growing internationally, which is a consequence of increased demand primarily from the processing industry as well as the growing food needs of the population, primarily in Asian countries. Oilseed rape is mostly produced in China, soybean is mostly produced in North America, while sunflower is mostly produced in South America. Based on analysts' estimates, the international market should stabilize in 2022, with an increase in total production to about 30.4 million / t, which is about 10.5% more than in the previous period. Oil consumption is forecast to increase, primarily due to increased demand for animal feed and a recovery in demand for vegetable oil (both for food production and biofuel production), which will require up-to-date monitoring of the main export markets. The most important export products from oilseeds are soybean and sunflower oil, where soybean oil is the product most exported

to European Union countries, while refined sunflower oil is mostly exported to CEFTA countries. Factors that can contribute to reducing the expansion of turnover are reflected in the following: price stability on the international market, market reduction in import growth by the world's two largest importers India and China, reduced export volumes of the two largest exporters: Argentina and Brazil. Compared to the main competitive palm oil, it is expected that soybean oil will have a higher share in the world market compared to sunflower oil [Gajdobranski, 2015].

In the Republic of Serbia, the quality and scope of supply of all types of inputs (seeds, mineral fertilizers and other protective agents) for the production of oilseeds, approximately corresponds to the standards of the most developed agricultural countries (Russia, Ukraine, China, USA, Brazil, Argentina...). On the other hand, the application of agro-technical measures (such as sowing and protection) as well as the cultivation of oilseeds in regions where there are good natural conditions (such as moisture, precipitation, appropriate soil quality) is not satisfactory, which can be seen on the basis of . Sunflower in the Republic of Serbia is experiencing a new renaissance with the use of varieties and hybrids of foreign companies that have been selected for stressful growing conditions. The main criterion in the cultivation of this oilseed is the content of crude oil in the grain, which affects the economy through processing. Experts have calculated that more than 2.3 kg of sunflower seeds to obtain one liter of oil makes this production unprofitable. Based on this data, the final price of oil in retail is formed, which increased by 50-60% during the pandemic in the Republic of Serbia, and some brands significantly more. The Republic of Serbia has great opportunities for the export of edible oil, as it has high quality and suitable packaging, as well as production facilities that can produce sufficient quantities for export. Therefore, production must be planned and adjusted to the needs and requirements of the market in the changed conditions marked by the pandemic crisis, where edible oil, seed goods and soy products will have priority.

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THE IMPACT OF JOB ANALYSIS ON ORGANISATIONAL CHANGE

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Abstract: *It is almost impossible to imagine the modern functioning of an organisation without the constant change of jobs and work conditions within the organisation, as well as adapting to the environment. In short, by analysing a job situation, we determine what issues need to be changed or adjusted, in what measure and in which aspect.*

This thesis includes an analysis of methods and techniques for job analysis and estimating the organization's state, as well as their influence on planning and executing certain organisational changes. There is a display of specific techniques that could be used, an explanation of how to apply them and all phases of the process of managing organizational changes.

The goal of this thesis is to provide insight as to what extent the results from analyzing the jobs and the state of the organization entail the necessity of executing organizational changes, with the aim of boosting the workers' efficiency and effectiveness at work. From the results gathered through methods and techniques and their comparative analysis, it was determined that they have a great influence on the process of organizational changes.

Nowadays, an organization's value is not perceived through its standing but rather through its ability to change. Only changes can enable the creation of something new and different. Changes have become an essential part of every modern organisation and are no longer a continuation of the past.

Keywords: *analysis, changes, leadership.*

INTRODUCTION

The analysis is usually conducted by a supervisor or an HR expert. This is because other management activities are based on job analysis. The main focus is placed on jobs within the organisation. These jobs change and adapt through time. As a result, there's

a change in the requirements that the employees need to meet. Every individual has his own response to these requirements. This depends on employees' potential and ambitions. Through job analysis, we can identify tasks, duties and responsibilities that refer to a specific job. A task is a work activity that consists of specific movements. A duty encompasses more tasks that are executed by an individual. Both tasks and duties consist of certain activities, making distinguishing them harder. For instance, if the manager's duty is to interview job candidates, his task is to ask questions. Responsibility entails an individual obligation of conscientious and responsible execution of tasks and duties. Jobs that require more responsibility are usually better-paying and more appreciated than those requiring less commitment.

For analysing jobs and the state of an organisation, we can use various methods and techniques, depending on the subject of the analysis, the level of expertise of the person conducting the study, the number of employees etc. By analysing the results, we conclude whether or not organisational changes are needed.

Changes can cause development, but in some cases, they lead to a downfall. People resist changes, wanting to save their routine behaviours and gestures. Leaders play the most crucial role in acknowledging the necessity of changes, defining phases of the change management process, and its implementation. It is of utmost importance that they master change management skills. Apart from possessing enough knowledge, they must have organisational change management skills. Changes shouldn't be the end goal but rather a means to boost effectiveness and efficiency, as well as strengthen or create a strategic position with a specific advantage. They represent the process of change and have a development dynamic. Adaptability means living and working with constant changes, which is much more complex in the practice of managing organizations. (Djuretic, Krasulja, Radojevic, 2021).

An organization's vision needs to be inspirational, clear, challenging and practical in execution to become as acceptable as possible and enable a more effortless execution. Without the right vision, any attempt in organisational changes can easily lead to unsynchronised projects that lead in the wrong direction. Organisational changes can work only if employees integrate new behaviour patterns. A safe way to accomplish this is through training and advising the employees on how to learn new skills and behaviours.

1. RESULTS OF JOB ANALYSIS

Job analysis is defined as a process of constant and organised gathering, arranging and assessing data and information about jobs, needed knowledge and skills, responsibilities and other requirements that are necessary for their execution. (Lojic, 2011) The final result of the job analysis is: 1) job description and 2) job specification. By conducting a job analysis, we gain the information necessary for creating and adjusting the job description and specifications.

1) Job description. Through job descriptions, we can determine the tasks, duties and responsibilities of a specific job. That way, we can assign jobs and tasks to employees for

every job position, and through execution standards, we can clarify conditions (quality, quantity etc.) that an employee needs to meet. Employees need to know what's expected of them, what's a well-executed job and what isn't. That way, they are more motivated to do their job correctly.

Common elements of the description are the following:

- job identification (includes data on the job, organisational part in which the job is done, location and date of the analysis);
- description of job essence (includes a general and detailed description of the job essence, or rather, work tasks);
- determining basic tasks and duties (refers to data on basic tasks, duties and responsibilities at work);
- other questions (the job description usually contains a clause stating that the employee is obliged to execute tasks that aren't contained within the job description, if necessary for the work process or if a direct manager demands it).

Depending on the needs, the size of an organisation and access of the job designers, the job description is structured in detail or in a general way. Both options have certain advantages and defects. Nevertheless, modern organisations are increasingly choosing the available job description.

2) Job specification. It's based on information gathered from multiple sources. Through job description, we can determine tasks, responsibilities and duties for all jobs, and through job specification – knowledge, abilities, skills, qualifications and other requirements necessary for the successful execution of a job. The starting and most valuable information for creating a job specification is found in the job analysis results. We can also gather important information by communicating with the employees, direct manager and HR experts.

In recent years, apart from said requirements, there's a rise in other conditions, such as computer literacy, creative and communication skills, knowledge of foreign languages etc. Apart from requirements related to knowing the job, intelligence and specific abilities, candidates must also meet the provisions relating to responsibility, principality, determination, spirit, credibility and other similar personality traits.

With that said, through job specification, as an essential part of a job description, we can determine: the knowledge, skills and abilities needed for doing the job; qualifications and experience required for an employee; desirable personality traits for doing the job; number of executors; other requirements for doing the job (knowledge of foreign languages, computer literacy, driver's license, etc.)

In order to objectively estimate a candidate and make a choice, we need to fill in the requirements profile. This profile includes translating job characteristics into the candidate's characteristics, and it contains professional requirements, a psychological profile, and medical requirements. (Przulj, 2002) People differ in many individual factors, such as abilities, personality traits, motives and interests, opinions and values. Attitude towards a specific job and work performance depend on these characteristics to a great extent.

2. METHODS FOR JOB ANALYSIS

In the job analysis process, we usually use the following methods: 1) observation, 2) interviewing and 3) questionnaires. For analysing the state of the organisation and environment, we can use a technique called 4) problem analysis.

1) Observation. This is a simple method which is used for analysing jobs that are simple and repetitive. That's why they're not adequate for analysing complex jobs. Surveillance or observation activities are given to an observer who's objective and trained for those jobs. An analyst observes the employee while he does his work, and from his observations, he writes notes on tasks and duties that the employee executes. The observation can be continual or based on sampling. Its use is limited because many jobs don't have clearly defined and easily spotted tasks or complete work cycles. That's why it's more helpful in analysing repetitive jobs. It's often combined with other methods for job analysis. For instance, job analysts who use other methods can observe how a part of a job is done to learn its nature and the conditions under which it is executed.

The observation method is accompanied by two additional methods: job sampling and work diary. Both are often applied. Job sampling doesn't require focusing on every detail and activity inside the work cycle. Instead, the job analyst determines a part of a typical work day through statistic sampling of specific tasks and duties to avoid wasting time on their long-term observation. That sampling is beneficial for analysing drab and "simpler" jobs. A work diary includes a method in which the employee is asked to "observe" the way he does his job and to write a work diary about it. The employee's task is to write down his notes and impressions in a special notebook, the work diary so the job analyst could use it.

2) Interviewing. This method includes the job analyst's obligation to hold interviews for every position. A standard interview form is usually used. To gather complete information about the job, it's often necessary to interview both the employee and his employer. However, in certain cases, we can use group interviews. Their use entails considerable expenses because it requires the presence of a great number of people, including HR experts. Apart from that, their use is almost inevitable when analysing jobs that are hard to define.

Interviews can be structured, semi-structured and non-structured. Preparations for holding an interview are very important. It's important that workers and managers who do their job well be interviewed since they know their job well. Before starting the interview, they must be informed why they're being interviewed. The success of the interview depends on the preparedness of the interviewer. An interview entails a lot of time, especially if complex jobs are analysed. As a result, its implementation is often combined with other methods. For instance, combining an interview with a questionnaire enables the analyst to ask the manager (supervisor) or employee for further explanation on specific data or information from the questionnaire.

3) Questionnaires. A well-written questionnaire is handed to employees and managers so they can fill it in. Questionnaires are considered to be the most used method for gathering data, and they consist of questions that are important for doing a job at the

workplace. These questions need to be answered by work executors and their managers to gather, in a short period of time, as much information about the job as possible. As a result, specific differences regarding the job can be noticed. If the differences are big, one can hold an interview or use other methods.

Questionnaires contain many questions from various fields, depending on the job that's the subject of the analysis, interview type and interview strategy. The advantage of a questionnaire is that the information about the job can be gathered quickly and with little expense. However, sometimes additional observations and discussions are needed. Considering that employees have different abilities for analysing and giving information about their job, the questionnaire is often combined with other methods for a more precise and complete clarification of the information gathered through the questionnaire.

4) Problem analysis. This is a technique for analysing the state of an organisation and the environment in which it functions. Problem analysis is based on two tools, problem tree and goal tree. These tools should enable a rational assessment of the problems and their potential solutions. Problem analysis can be applied at every level of the hierarchy within the organisation. It often serves as a basis for initiating and working out different programs and projects in the organisation.

Problem analysis uses one or more negative aspects of the current situation as a starting point. With every identified problem, we can determine the cause and consequences of that problem. The need to solve a crucial problem becomes the subject of creating the measures for its solving, and the statement about the problem, by inversion, becomes a statement about the goal.

Problem analysis is done by:

- determining key problems;
- determining direct causes and consequences of the problem;
- determining the relation between different levels of causes;
- determining the relation between different levels of consequences;
- translating the problem tree to goal tree.

The result of problem analysis, the so-called "problem tree", represents a simplified image of reality, while the "goal tree" means a simplified image of the wanted situation. Problem analysis is a useful tool applied successfully in different phases of organisational management. As such, it is used in combination with other techniques and methods.

3. THE PROCESS OF JOB ANALYSIS

Depending on what methods are being used and the scale of jobs subjected to analysis, the job analysis process goes through different activities. The basic activities include 1) job identification and document control; 2) explanation of the essence of job analysis and reasons for it; 3) direct job analysis; 4) putting together a job description and specifications; 5) observation and adaptation of job description and specifications.

Job identification and document control. The first step in the process of job analysis is the identification of jobs that are subjected to analysis. For instance, it is necessary

to know whether only specific jobs, jobs in a part of the organisation or all jobs will be analysed. A portion of activities is reserved for inspection of existing documentation, which contains job descriptions, organization and systemization act, results from previous job analysis etc. Also, choosing employees to participate in the job analysis and analysis methods is important.

1) Explanation of the essence of job analysis and reasons for it. It's deemed highly valuable. This is because an explanation is given to managers, employees and other subjects included in the analysis. It's essential to explain the purpose of the job analysis, basic activities in the process, the time schedule and type of participation of employees and managers etc.

2) Direct job analysis. It includes gathering data that are important for the job analysis. The data is collected through interviews, questionnaires, observations and other methods. When the information is gathered, the analyst thoroughly examines it to ensure completeness. Certain information can be additionally clarified by holding interviews or some other way if necessary.

3) Putting together a job description and specifications. Information gathered during the analysis is used while creating or correcting the job description and specifications. The first version, or rather its corrections, is done by the HR department. After that, it's sent to a particular circle of managers and employees for further reviewing to add modifications to the given text and make a final version of the job description and specification. After the completion of said activities, managers should provide feedback to the job executors and employees that were included in the analysis.

4) Observation and adaptation of job description and specifications. In this analysis activity, the employees and managers closest to the jobs estimate whether something needs to be changed in the job description and specification. After some time has passed, a new job analysis is conducted.

To determine if a job description or specification correction is necessary, the job analysis has to be conducted once in three years. This is rarely done in organisations. However, when determining new jobs, an investigation is done immediately to create the first job description and specifications.

4. PROCESS OF MANAGING ORGANISATIONAL CHANGES

The speed of change is possibly the most important factor influencing our lives today. We live in a time when changes happen faster than ever before in human history. Organizational changes don't occur independently, nor can they be made automatically. To successfully execute a turnaround strategy, we need a new vision and energy required for a positive outlook on changes. The changes can be made only when all conditions are met. The behaviour within an organization results from the balance between moving forces and those who oppose changes. Changes are unpredictable by nature, and they often entail the unplanned ceasing of brilliant plans and ideas due to a new and completely unexpected

turn of events that comes from a new and unexpected direction. Consequently, leaders must be flexible in their thoughts and actions.

The process of managing organisational changes consists of ten phases: 1) initiating changes, 2) diagnosis of the state of the organisation and the cause of changes, 3) creating a vision and planning a new organisation, 4) planning and organising the process of changes, 5) change motivation, 6) executing changes, 7) managing the power structure and political processes, 8) managing the personal transition, 9) stabilising changes and 10) monitoring and supervision of organisational changes. (Janicijevic, 2007)

1) Initiating changes is the first step in managing organisational changes. For organisational changes to begin, the organisation's management needs to: identify the causes of changes; develop awareness about the necessity of changes; form the desire for changes; decide to start with the change process; find and hire a change agent; define the task for the change agent and build productive relations with him. (Janicijevic, 2007)

Changes within the organisation or the environment can cause organisational changes. Changes in the background or external causes of organisational changes can generate an external disbalance. The organisation's performance is compromised by the disbalance of the environment. The organizational changes that can lead to internal disbalance are called internal causes of organizational changes. (Anderson-Meli, Koshy., 2020) After the cause of changes occurs, employees and managers start resisting the changes, which leads to a crisis. A crisis is necessary for implementing changes, but not too deep. When a problem occurs, the awareness about the necessity of fending off the cause of the concern and stimulating the energy needed for implementing change.

Modern organisations are increasingly hiring consultants as change agents. The consultants are helped by teams from the organisation. The main reasons are objectivity, neutrality and professionalism in executing the jobs related to managing changes and their success. For the process of organizational changes to succeed, support from the top is necessary.

2) Diagnosis of the organisation begins after initiating organisational changes and deciding to execute them. The goal of this activity is to determine the state of the organization and the causes of changes. Choosing the existing deficiencies of the organization or problems and opportunities from the environment contributes to increasing awareness about the necessity of changes and motivating employees to accept changes. To establish a diagnosis, we need data that are gathered through these methods: interviews, questionnaires, observation and gathering secondary data. (Lojic, 2019) An interview is a two-way communication between the change agent and members of the organisation. This way of gathering data provides a description of the state, drawing a conclusion and expressing emotions. Interviewing gives a lot of data and enables a thorough search of the organization, which are the main advantages of this method. The main deficiency of this method is in the fact that conducting an interview requires a certain amount of time and that interviews are often dishonest. Questionnaires are meant for gathering data from a bigger number of employees simultaneously. The advantage of the questionnaire is that it allows

for gathering a great amount of data simultaneously, and its deficiency is in the limitation of the answers and giving answers that are expected of them. Observation is a method for gathering data that is complementary to questionnaires and interviews. This method is rarely used systematically. The very presence of the observer affects the observed, which is the main deficiency of observation. The results of observation depend on the observer and his perception of the behaviour of the observed. The advantage of observation is that certain information is gathered that the respondent isn't aware of. Gathering secondary data is done through objective data on the functioning of the organization. Objective data, such as the number of employees, work leaves and others, become secondary because they're meant for other purposes, not for organisational diagnosis.

3) Creating the vision and planning a wanted state of the organization is the next phase in organizational changes. Based on state diagnosis and identified causes of administrative problems, it's essential to make a decision on what, how and when to change within the organization and plan the wanted state. The vision ensures a direction in which the organisation tends to go. (Nilsson, Petri, Westelius., 2020)

The changes and the wanted state of the organisation are clarified through the following activities: creating preliminary suggestions, giving feedback to the management, management's decision on changes, making the new organisation's vision and expanding the concept in the organisation. By creating preliminary suggestions regarding the changes in the organization and the target state after the changes, we define the description of a new organization, what needs to be changed, how, when, and who will do that. Giving feedback to the management about the state diagnosis and suggestions on the necessity of changes is the second activity in creating a vision and planning a wanted state of the organization. This activity shows the results of the diagnosis of causes and suggested change directions. Management's decision on changes is based on suggestions from the internal or external consultant. That's the mandatory decision with which we formally define what will change, the deadline and the tasks for implementing the changes. Creating the new organization's vision is to motivate employees to accept and implement changes. Thanks to the idea, which should be wanted, concise and clear, employees understand and accept changes. (Johnson, .2022) Expanding the organisation's vision requires that most employees be informed about it. To broaden the concept, we need to use all types of communication in the organization.

4) Planning and organising changes has the purpose of explaining to the organisation's members the expectations in the course of the changes, thus reducing the uncertainty in the path of the changes and resistance towards changes. When planning the process of changes, one needs to determine: the activities that will be executed; the order of actions and phases of the process; executors of activities; the time needed for conducting activities; control parameters of the process and its success.

The implementation of changes can be done by employees within their usual obligations or four teams can be formed: leading comity, an expert team, a team for encouraging changes and a support team. (Janicijevic, 2008)

5) Motivating employees to accept changes is a crucial task. Without execution, it is not possible to successfully implement changes. Before initiating change, employees need to be motivated, not just managers. Organizational change includes the difference in the behaviour of employees to a greater or lesser extent. For that change in behaviour to come, or for the employees to accept and implement those changes, they have to honestly believe that the changes will bring something good to them, but also to the organization. The motivation for changes can't be forced upon or ordered, it has to be created.

The basic strategies for motivating employees to accept change are: creating dissatisfaction with the current state and developing positive expectations from changes. Dissatisfaction with the current state can be caused in many ways: by informing on the real situation and perspectives of the organisation, setting high-performance standards and disconfirming existing behaviour, thus creating a sense of guilt due to the absence of changes. Positive expectations of changes are created by showing a vision and developing positive expectations of the new organization. The basic techniques for motivating employees to accept changes are: communicating with employees; subjecting employees to correct and objective information; teams and participating in them; changes in the rewarding system and evaluating performance; changes in the planning system; changes in the control system. (Janicijevic, 2008)

6) Executing changes represents the key phase in managing changes in which decisions are made and put into practice, solutions to problems are created and executed or where initiatives for progress are integrated and executed. The process of executing changes is done in six steps: creating a plan for executing changes; executing changes in the first cycle; accomplishing and using the first progresses; executing the next cycles of change; observing the changes; supporting and facilitating changes. (Carnal, 2003)

Changes can be executed in cycles of a few days or even months. The process of change can encompass all needed changes in on an organizational part, usually in the form of a so-called pilot project or modification of one component in the entire organization.

7) Managing the power structure is the next activity in managing organizational changes. In the course of changes, power plays a significant role, whether as a consequence of these changes or a means to them. Organizational changes lead to changes in the power structure, which causes certain problems that the organisation's management has to solve. However, leaders can use power structure for the efficient execution of organisational changes. Sources of power can come from resource control and control of interpretive schemes of members of the organisation.

Managing the power structure in the course of organisational changes includes: estimating individual and organizational power sources in the organisation, predicting the structure and power sources in the new organisation, developing a strategy for influencing participants in the changes (we have to know if the individuals or groups in power are for changes or against them); applying political methods of influencing participants in the changes.

8) Managing personal transition. Members of the organisation that are involved in changes go through personal growth. Personal evolution can be experienced through different emotions, psychological reactions and specific emotional states: shock, refusing to

accept the reality of changes, accepting reality and depression, leaving the previous state of consciousness, testing and trying a new reality, consolidating the executed changes and internalising or implementing changes. The management of the organisation and change agent have a significant role in providing support to members of the organisation in their transition by influencing their emotions for changes to be more efficient. (Goldsmith, Osman., 2020) The most efficient way of persuading employees to accept and execute changes is participation in changes. The most common method for ensuring participation are teams.

The resistance to change can be implicit, momentary and delayed. (Lojic, 2019) The implicit resistance is spotted when the top management publicly promotes the change, yet it stays on the same course in its behaviour, which leads to the words not coinciding with actions. The momentary resistance usually includes losing motivation, increasing mistakes, low productivity etc. The delayed resistance is confused about the very source of resistance. The dissatisfaction reaches its peak, and suddenly, there's an explosion that, at first hand, doesn't seem to match the scale of the change.

First, leaders need to discover and recognise resistance to changes to work on their elimination. The sources of resistance to change can be individual and organizational. (Robbins, 2003) To dominate the resistance to change, we can use different strategies. Strategies that we'll use depend on the type and source of the resistance and the situation in which the organizational unit is found. Usually, we apply the following types of strategies: strategy of informing and indoctrination (informing the employees on changes so that they are convinced of the necessity and use of changes); strategy of education, learning and training (acquiring relevant skills for the new organization); strategy of participation (involving employees in the change process in the early phases); strategy of communicating (uncertainty as one of the main sources of resistance to changes is reduced by constant informing through constant communication); strategy of support and rewarding (by supporting and rewarding employees where changes have already been executed, we reduce resistance to change in other employees); strategy of cooptation (involving those in power into the change process and those who pose a threat to it); strategy of negotiation and compromises (compromise with those in power in order to get their approval for changes); strategy of manipulation (thoughtful revealing or covering certain information in order to convince employees to accept changes); strategy of compulsion (threatening by sanctions if the changes aren't accepted). (Janicijevic, 2008)

9) Stabilizing changes is done to integrate the changes into the organization's culture. Certain cultural assumptions and values characterise every organisation. Employees adjust their behaviour according to values and opinions. For the changes in employees' behaviour to last, they need to be followed by a change in cultural values and opinions, or in other words, following the generally accepted values and opinions. If the changes in behaviour aren't following the generally accepted values and opinions, employees will obstruct changes and try to return to the previous way of behaving. Leadership in an organization is not a position (function), it is an action. (Nikezic, S., Nikezic, S., 2021)

10) Monitoring the success of organisational changes represents the last phase in managing organisational changes. Organizational changes and every other activity and process

need to be monitored and supervised to determine if the changes were executed as planned and if the intended effects of changes were achieved. To efficiently monitor and manage changes, every organisation needs to build a system for a settled, systematic and regular gathering of data on changes, their analysis and use for improving the change process.

The leader's skills and wisdom affect how the phases of the change process will be executed and how the resistance to change will be reduced and eliminated. More employees will support changes if they actively participate in planning and implementing changes. A leader needs to listen to the employees' advice and change his plans if they're not practical or accepted by the majority. Gaining supporters for change is a sign of leadership in modern organisations. A leader needs to know to what extent his employees can learn new ways of doing a job, and it's very important to give them confidence that they can do the job in a new way.

CONSLUSION

Which of the above listed methods will be used in a particular situation depends on the reason for doing a job analysis. Each of them has certain advantages and disadvantages, which is why it is best if we combine them to get more complete and usable data on the job subjected to the analysis.

Job analysis is tightly connected to other management activities. In other words, all essential management activities lean on job analysis and its results. Because of that, it's extremely important to approach the job analysis in a responsible and professional manner. In the same way that the gathered results can be helpful to other management activities, the results of other activities can be helpful for job analysis. Results of job analysis influence the decision to start the process of organizational changes and take a specific direction.

The management of the organisation starts the process based on formal or informal decisions. The management's decision defines the causes of changes, the field of differences, the width and depth of changes, the time of changes and a change agent. The process of change is led by a change agent, who can be an experienced manager from the unit where changes are executed or an expert outside of the organisation. A change agent can be one person or a team. The organisation's management usually leans on external change agents that possess specialised knowledge in the theory and methodology of change. They're more objective and not preoccupied with relations inside the organisation. Still, their disadvantage is that they don't know the organization's history, job procedures, people and the organization's culture. External change agents, compared to change agents from the organization, choose radical changes more quickly. Change agents from the organization want to maintain friendly relations and, simultaneously, bring about changes and improvement of the state. They're more cautious, and they often choose adaptive changes rather than radical ones.

The organization's success depends on people who should be treated accordingly. Inclusion of employees in the diagnosis of the organisation and establishing plans for changes both contribute to workers' satisfaction. For a valid diagnosis of the state and

cause of the changes, we often need to combine more methods of gathering data. After they've been collected, the data is processed and subjected to various analysis methods.

In the process of executing changes, managers have to monitor the process systematically, analyse, supervise and inform the employees on the results of the accomplished changes. Every big success represents a triumph of persistency through hard times and obstacles on the way to the goal. During the process of changes, resistances occur among the employees. The leaders can in no way eliminate this completely, but they can keep them on a certain level that's not damaging to the changes. The state of the organisation before the changes represents a familiar and safe situation and ambience to employees, with established positions, influences and functions in the organisation. After implementing changes, there comes a state that is usually unfamiliar to the majority of employees, and it causes a feeling and climate of insecurity. A natural response of employees to a situation like that is resisting the changes. That way, employees protect themselves from the unknown, significantly if the changes can disrupt individual positions.

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THE ROLE OF HUMAN RESOURCES IN ACHIEVING COMPETITIVE AND ECONOMIC ADVANTAGE OF AN AGRICULTURAL ENTERPRISE

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Abstract: *Farming differs from other businesses because it has to do with the constraints imposed by nature. The Common agricultural policy CAP provides EU citizens with food security and guarantees that food is safe and produced in an ethical and sustainable way. Direct payments help to keep sustainable farming viable throughout the EU. It does this by supporting and stabilizing farmers' incomes, ensuring the longer-term economic viability of farms. In this paper, we will deal with Human Resource Management and how good management of human capital by an agricultural company can achieve a competitive advantage in the market. Through the analytical part and comparative analysis, we will discuss the standards and goals of the EU and the possibilities of our country to get closer to them. The way in which human resources are managed becomes a decisive factor in the competitiveness, development and survival of an agricultural enterprise. The methodology will be based on several objectives. Books and articles by domestic and foreign authors dealing with agriculture of the Republic of Serbia and EU member states will be analyzed. The comparative analysis will lead to results that will help the Republic of Serbia to reach standards and strategies that it will apply, which will be modeled on the standards of agricultural development of*

EU countries, thus improving its work and seeing the disadvantages and advantages. In order to be able to reach conclusions based on that, which will be important for the further development of agriculture in the Republic of Serbia.

Keywords: *human resources, agricultural management, competitive advantage, EU*

1. INTRODUCTION

Economic and political changes that have taken place in Serbia in recent decades, transition, globalization, uneven regional development of the country, all this requires a well-designed systemic approach in conceptualizing economic development strategies and creating a prosperous economy based on the principles of knowledge economy.

The agricultural sector is one of the important national opportunities for development, and the impact of these changes on agro-economic science and education is significant. Agriculture and food processing represent one of the most significant economic sectors in Serbia.

Having in mind available natural and human resources invested in this sector, it extensively contributes both to the social and economic development of the country. It is one of dominating economic sectors due to the number of employees for whom it provides employment for Serbian agricultural and food industry, encompassing agricultural production and food and beverage processing, employs 557,000 people and accounts for around 16.6% of national gross domestic product (GDP) (Ratković, 2/2015: 353-367).

More and more attention is paid to the functions of agro economists who have become managers of rural development, with the need to improve their education and acquire specific knowledge of technology, organization, management and economics of all aspects of rural development.

Hence the need for permanent innovation of professional knowledge of managers and the knowledge of all actors in the agricultural sector, through the establishment of a system of training, as one of the priorities of economic and social development (Tanasković, Vasović, Kostić, 2019: 7-36; 7-41) 6% of national gross domestic product (GDP).

Good management is a basic condition for starting a business, progressing in business and maintaining a position in the market after the company achieves certain success. Managers in an organization need to address the issue of efficiency and effectiveness of the business process.

Efficiency means doing work with a minimum of effort and cost, while effectiveness means performing tasks that contribute to the achievement of organizational goals such as quality service and customer satisfaction. Henry Mintzberg followed five CEOs in the U.S. and analyzed procedures and interviews. He concluded that managers perform three key types of roles while doing their jobs: • interpersonal roles, • information roles, • decision-making roles.

In other words, managers talk to people, gather and provide information and make decisions. Human resource management is an area of organizational science that deals

with the study of all aspects of employment in an organization. Not only does it represent a recognizable scientific discipline but at the same time an important business and management function in the organization. The function of human resource management consists of various activities, policies, practices and systems that influence the behavior, attitudes and performance of employees (Bogićević, 2017).

For farmers who want to hire workers, human resource management is a process of attracting and motivating employees. Farmers make decisions, coordinate and supervise the work on a daily basis.

Agriculture developed with the simultaneous cooperation of a large number of people and this had to be harmonized and controlled. The village elders took on the role of manager.

The merging of ownership and management stems from the conditions and needs of running family farms. When market agriculture develops, with representation and various forms of ownership, when the scope of activity exceeds the possibilities of the individual, there is a tendency, as in industry, to entrust management to special, trained personnel for that purpose.

The farm is an agricultural production unit, and management is a kind of combination of exploiting its production potential, organization, control of the execution of the business goal, ie all elements of management.

Management in agriculture is specific due to the way of production and consumption of food products. Because of all this, human resource management is much more complex than in other economic organizations.

Here comes the management of specific factors of production: such as land, livestock, genetic and human resources. The functions of human resources management in the organization include a large number of different activities aimed at different aspects of employment in the organization (Bogićević, 2017).

1. Analysis and design of jobs - the process of collecting relevant information about jobs and defining the knowledge, skills and abilities needed to perform a specific job and design jobs;

2. Human resource planning - a process in which, based on anticipated changes in the internal and external environment, human resource needs are predicted;

3. Recruitment of candidates - the process of attracting qualified candidates in such numbers that will allow the organization to choose the best to fill vacancies;

4. Selection of candidates - a process in which a choice is made between the registered candidates for a particular job and a decision is made on employment, ie rejection of candidates;

5. Employee training - a process aimed at changes in specific knowledge, abilities, skills, attitudes and / or behaviors aimed at improving the performance of employees in their workplace or in a related workplace;

6. Employee development - the process of creating learning opportunities to assist employees in their personal development and preparation for future job or career development requirements;

7. Evaluation of employee performance - a process in which the individual contribution of employees in achieving organizational goals in a defined period of time is evaluated;

8. Remuneration of employees - creation and administration of the System of direct (basic salaries and salaries based on performance) and indirect salaries of employees (protection programs, payment of leave and benefits)

9. Relations with employees - improving relations between the employer and employees through collective bargaining and compliance with legal regulations in the field of labor and labor relations,

10. Protection of health and safety of employees - through the improvement of working conditions, stress reduction programs, reduction of accidents at work, counseling.

The reputation of a company depends on the expertise and ability of its staff. In the agro-industrial companies of Serbia, it is necessary for the staff to be able to realize organizational, property, personnel management and technological restructuring, and to be ready to accept innovations.

The importance of experts who are capable of being actors in the process of transferring modern technology to agro-industrial companies and family farms is of special importance. Improvement and change of staff structure must be done on the basis of a plan that respects the scope of agricultural capacity, technical and technological level of production and the position of the company in the market.

The effect of constant progress of technology and fierce market competition is manifested as the need to increase the number of workers working in the information system and marketing (Vujičić, Ristić, Malešević, 2006).

The situation in Serbian agriculture and the possibility of approaching EU standards The National Rural Revival Program of Serbia is the result of cooperation between the Academic Board for Rural Affairs of the Serbian Academy of Sciences and Arts and the Cabinet of the Minister of Regional Development and thanks to which more than seven hundred new cooperatives have been founded so far.

This is only the first step, but not a sufficient condition for demographic revival and sustainable rural development (Nacionalni program za preporod sela Srbije - stanje, problemi i prioriteti održivog razvoja, 2020:5). All systemic obstacles should be removed after the establishment of cooperatives; the most important thing is their business sustainability.

State systemic support is needed for agricultural cooperatives and farms that join them. Rural and agricultural modernization is needed as well as good governance. Emptying the village is a global tendency, but it has chaotic and security-dangerous consequences in our country.

Therefore, it is high time to slow down, if not completely prevent the extinction of more than a thousand villages in the mountainous, southeastern and strategically important border areas of Serbia.

Population policy should be based on appropriate economic, agrarian, regional development and cultural policy significantly different from the previous one - which pushed young people, especially women, out of the countryside and agriculture.

Serbian villages are increasingly empty, older and depend on state support. Favors of industrialization and non-agricultural occupations have led to mass abandonment of villages. Over 94% of rural settlements have a negative rate of natural increase. There is less and less youth in the villages and more and more elderly population.

Table 1: Villages in Serbia with less than 50 inhabitants

Year of census	Serbia – north	Serbia – south
1948	5	12
1953	2	13
1961	2	12
1971	2	23
1981	2	69
1991	4	183
2002	5	354
2011	5	546

Sources: *Republican Bureau of Statistics (RSZ), 2013.*

According to demographic projections, we can expect that the number of inhabitants in Serbia will be about one million less than in 2011. Social reform of local rural institutions is needed, which would systematically support the revival of traditional rural self-government of rural local communities and farms.

Greater support is needed for rural schools, cultural centers, health clinics, but it is necessary to introduce human resource management because people are the most valuable capital in all areas, especially in agriculture.

Increasing attention is being paid to human resource management. By this term we mean a management activity that enables the provision, maintenance, development, adaptation, direction and use of human resources in accordance with the goals of the agricultural enterprise.

2. AIMS OF THE COMMON AGRICULTURAL POLICY

Launched in 1962, the EU's common agricultural policy (CAP) is a partnership between agriculture and society, and between Europe and its farmers.

It aims to: support farmers and improve agricultural productivity, ensuring a stable supply of affordable food; safeguard European Union farmers to make a reasonable living; help tackle climate change and the sustainable management of natural resources; maintain rural areas and landscapes across the EU; keep the rural economy alive by promoting jobs in farming, agro-foods industries and associated sectors. The CAP is a common policy for all EU countries.

It is managed and funded at European level from the resources of the EU's budget. Farming is unlike most other businesses, as the following special considerations apply:

despite the importance of food production, farmers' income is around 40% lower compared to non-agricultural income; agriculture depends more on the weather and the climate than many other sectors; there is an inevitable time gap between consumer demand and farmers being able to supply – growing more wheat or producing more milk inevitably takes time.

While being cost-effective, farmers should work in a sustainable and environmentally friendly manner, and maintain our soils and biodiversity. Business uncertainties and the environmental impact of farming justify the significant role that the public sector plays for our farmers.

The CAP takes action with: income support through direct payments ensures income stability, and remunerates farmers for environmentally friendly farming and delivering public goods not normally paid for by the markets, such as taking care of the countryside; market measures to deal with difficult market situations such as a sudden drop in demand due to a health scare, or a fall in prices as a result of a temporary oversupply on the market; rural development measures with national and regional programs to address the specific needs and challenges facing rural areas (European Commission, 2018, The common agricultural policy at a glance – The common agricultural policy supports farmers and ensures Europe's food security).

In 1989, the European Commission set up guidelines relating to the preparation of the countries of Central and Eastern Europe for membership of the Union, which were later integrated into the IPA program, namely:

- PHARE (Program of Community aid to the countries of Central and Eastern Europe).

Aid for investment and project management, administrative reform, economic and social cohesion of candidates

- ISPA (International Sleep Products Association). A program designed to build infrastructure for transportation, environmental protection;

- CARDS (Community Assistance for Reconstruction, Development and Stabilization).

This program concerns the period from 2000 to 2006 and was aimed at the countries of the Western Balkans, at the rebuilding of the region and the reduction of poverty, market reform, interregional cooperation, etc.

3. FAMILY FARMS IN SERBIA AND THE EU COMPARATIVE ANALYSIS

Family farms are considered to be adaptable and durable because they are able to preserve structure, functionality and identity despite the fact that they are exposed to risks, numerous uncertainties that are typical for the agricultural sector. There are claims that family farms are more resilient than those run by large corporations. Family farms are better adapted to changes in technology, economic changes, social and political conditions. From an economic point of view, the advantage of family farms is that they use family members as workers, unlike corporations that employ other workers.

Certainly, those who work on family farms have a greater interest in maintaining the production process and a good end result. Family farms use different strategies to increase their adaptability and endurance. This farms provide a number of benefits to

society, such as ecosystem services, food and nutrition security, high-quality agricultural products, employment and family income.

Table 2: Farms by number of members and permanent employees on the farm

	Total	1-2 person	3-4	5-6	7 person and more	Average per household
Republic of Serbia	564 541	65,1	29,9	4,5	0,4	2,4
Serbia – North	157 103	73,9	23,2	2,5	0,4	2,2
Belgrade region	30 033	64,9	29,3	5,2	0,5	2,4
Region Vojvodina	127 070	76,0	21,8	1,9	0,4	2,1
Serbia South	407 438	61,8	32,5	5,3	0,4	2,4
Region Šumadija and West Serbia	242 636	61,1	33,0	5,5	0,4	2,5
Region East and South Serbia	164 802	62,7	31,9	5,1	0,3	2,4
Region Kosovo and Metohija	--	--	--	--	--	--

Sources: RZS, Survey 2018.

Family farms have the knowledge and habits to use agricultural land in such a way as to preserve ecological characteristics and adapt to local resources.

The knowledge of farmers in family farms is a cultural heritage for the whole society and has additional value for agriculture and the food sector by preserving the diversity of local races and methods of production. Not only for Serbia, but for the whole of Europe, it is important that family farms contribute to and enrich Europe's cultural heritage, food and food safety, as well as environmental sustainability.

The relatively low utilization of available labor force indicates that the agriculture of Serbia is dominated by labor-extensive type of agriculture, smallholdings, low-productivity agriculture, and that a significant part of farms are directed to additional income from non-agricultural sectors or other sources.

The number of persons engaged in agricultural work in Serbia in 2018 was 1,335,871, which is an average of 2.4 persons per farm (2.3 in 2012). In the structure of farms according to the number of persons engaged in agricultural work, a high share (65%) of farms where one to two persons were engaged in agriculture is observed (Table 2).

There are the most farms with one to two persons engaged in agricultural activity in the Region of Vojvodina (76% of the total number), which can be explained by the production structure of agriculture, which is dominated by production lines that are not labor-intensive, greater use of mechanization in labor operations in agriculture, but also higher employment of household members in this region in non-agricultural sectors.

In addition, the influence of the tradition of earlier economic independence of young families in the region of Vojvodina should not be neglected, and thus the formal, physical division of farms (not always economic), which has been stimulated by newer agricultural policy solutions over the last decade (Bogdanov, Babić, 2014:37).

There is still a high concentration of labor on family farms, and this is especially pronounced in Šumadija and western Serbia, where there are 3.9 people per household.

In these regions, this was mostly due to changes in the production structure of households that are increasingly abandoning crop production and turning to more profitable branches of economy such as fruit growing, vegetables, viticulture, which requires greater employment of virtually all able-bodied household members and seasonal labor.

The shortage of seasonal labor in recent years is one of the biggest problems in Serbian agriculture. It is becoming increasingly difficult to reach the season, and in practice, work in the fields and orchards is mostly done by people aged 50 to 70, while young people, regardless of their daily allowance, are generally uninterested in this type of work.

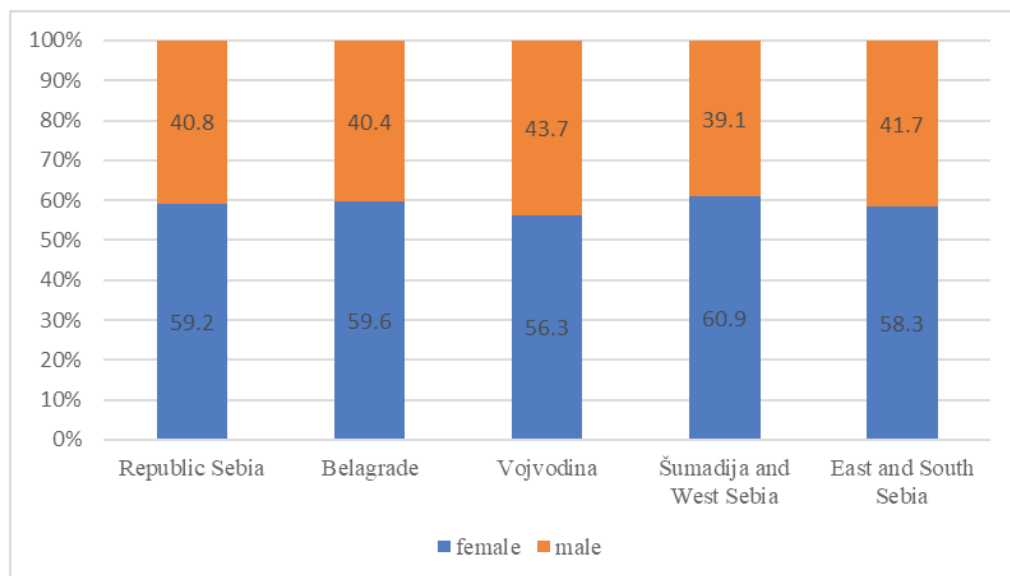
As mentioned earlier, the family labor force is the most important pillar of agriculture on family farms. Differences in the share of family labor in the total labor force on family farms are very small between the Belgrade region, the Region of Šumadija and Western Serbia and the Region of Eastern and Southern Serbia (56%, 59% and 58%). A lower share is recorded only in the Region of Vojvodina (49%).

The majority of this family workforce on farms is made up of women. At the level of the Republic of Serbia they make up 59.3% of the family workforce. Their share is somewhat smaller only in the Region of Vojvodina (56%).

The latest published data from Eurostat, the EU's statistical agency, indicate that 51,000 able-bodied people are moving out of Serbia every year, or an average of 4,250 a month.

This worrying outflow of the working age population is felt in all sectors of the economy, and is especially pronounced in agriculture, forestry and fisheries.

Graph 1: Labor force in agricultural holdings by sex in 2018 (Serbia)



Sources: RSZ author's calculation

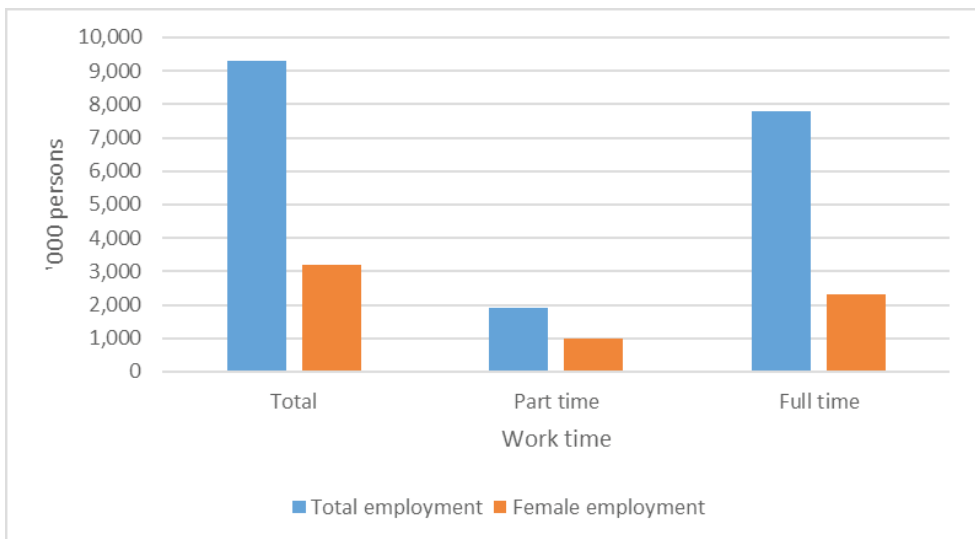
The data show that in the sector of agriculture, forestry and fisheries, more than half a million people worked in 2016 - 506,100, which was 18.6 percent of the total number of employees, and that number dropped to 372,800 or 15 percent of employees only two years later.

These data are the best indicator that agriculture, as well as the entire agricultural economy, pays the guild, primarily hasty and poorly done privatizations, as well as the overall attitude of the state towards agriculture.

The fact is that little or insufficient investment is made in agriculture, that most villages are without basic infrastructure, that young and qualified people are leaving rural areas in search of a better quality of life. - The production structure, mostly in the fruit and vegetable sectors, will continue to show the need for manual workers.

If something is not done, this will be the most critical point for the further development of overall agriculture, because, as things stand now, there are no indications of rejuvenation and since young people are leaving rural areas, the problem of lack of able-bodied population in rural areas is evident.

Graph 2: Total employment and employment of women taking into account working hours in the EU



Source: EUROSTAT, 2018

However, in recent years, significant trends of change have also been observed in the countries of southern Europe. Formal employment, full-time or part-time, predominantly in the food industry or textile production within the modern home industry, is increasingly being replaced by unpaid work on farms.

In Italy and Portugal, a growing number of women are also taking on the roles of farm owners, and in Spain, seasonal paid work is an increasingly important form of employment for women in rural areas. The trend of an increasing number of women taking over the management of farms is related to the trend of growing employment of men - farmers outside the farm.

The penetration of the service sector in rural areas also leads to increasing employment of women in the tertiary sector. In addition to changes in economic structures and labor markets in rural areas, certainly one of the key trends is due to the reduction of this category of population and leaving rural areas and going to cities, especially the younger population.

An integrative approach to rural development in the EU is aimed at strengthening local potentials and resources of the rural population, with coordinated activities to solve structural problems and lag behind in development through policy measures that are transferred from institutional to local communities.

This combination of bottom-up and top-down actions should allow for cumulative and synergistic effects in rural development and tackling rural poverty. In these policies, among others, women's resources play a key role (SeCons - UNDP, 2008). There are about 12 million farms in the European Union, and 44 million people are employed in the entire food supply chain in the EU.

Farmers are the first link in that food production chain. They are therefore very important strategic and economic actors and the EU cannot afford to lose them. Basic, instinctive agricultural skills are not learned from books, but are passed on from one generation to the next.

However, many young people no longer consider farming an attractive occupation and as a result of that the number of farmers is declining. In 2013, farmers under the age of 35 ran only 6% of farms, while 31% of farms were run by people over 65.

Farmers perform various tasks, from the production of food and non-food agricultural products to the management of rural assets, nature conservation and tourism. So, it can be said that agriculture has a multiple function.

Europe is both a major exporter and the world's largest importer of food, primarily from developing countries; the European agricultural sector uses safe, clean and environmentally friendly production methods and creates quality products that meet consumer requirements;

The EU agricultural sector serves rural communities. Its role is not only to produce food, but also to guarantee the survival of rural areas as places to live, work and visit.

The European Union wants to ensure that agriculture is sustainable and competitive. In order to contribute to the achievement of this goal, the European Union finances farmers who are market-oriented, ie towards production that satisfies consumer demand, and at the same time preserves nature, health and animal welfare.

The annual budget used by the European Union for this purpose is about 59 billion Euros, and implements it through the European Agricultural Guarantee Fund (EAGF)

and the European Agricultural Fund for Rural Development (EAFRD). The number of agricultural population in the world and the EU is in a significant constant decline, and productivity and production are on the rise.

This creates economic assumptions that rural areas do not require a large number of people to produce food and therefore tries to find a new role for them - to be not only a place where raw materials are obtained and where food is produced, but also places to enjoy, rest, live and work (there is a growing representation of rural tourism, around the world, even in our country).

States make rural areas more competitive for life in various ways, and among them the concept of the European Union stands out, which is characterized by high public investment and participatory approach. The share of agricultural employment in total employment in Serbia is extremely large compared to other European countries, showing that only in Romania the share of this sector employment in total employment is higher (27.8% in 2014), while in Hungary and Slovakia this share is higher single digit.

The share of industrial employment in Serbia is lower compared to other European countries, and the share of employment in the service sector is only slightly below the level recorded in the 27 countries of the European Union.

All branches of agriculture and industry had a declining trend in the absolute number of employees in the first decade of the 21st century. The increase in the share of employees in the service sector was the result of a decrease in employment in the other two observed sectors, and an increase in employment in the sectors of public administration, education, utilities and social services.

Although it is unrealistic to build the future of rural areas at the expense of productivity in agriculture, i.e. returning to the old rural model, where unproductive agriculture dominates, and the desire to employ as many people as possible on limited land resources is often not achievable, because productivity increases production, increasing agricultural production would lead to an increase in human demand in all segments of production and processing (food industry) which would increase economic activity and the economy would achieve progression.

CONCLUSION

Various demographic indicators point to unfavorable demographic characteristics of the rural population, namely: on average older age of the population, more pronounced aging process and more unfavorable relationship between the working age population, children and the elderly.

Despite the extremely dynamic process of deagrarization and demographic depopulation of villages in Serbia, households in Serbia still have a relatively strong connection with agriculture and / or the countryside.

The largest part of the agricultural labor force on family farms in Serbia consists of family members or relatives (56.3%), which indicate a large amount of informal work

that is engaged in agriculture within family farms and with the help of relatives. Enlarged areas, modern and highly technically-technologically developed mechanization, digitalization, as well as information technologies have had the greatest impact on reducing the number of employees in agriculture.

It is realistic to expect that, with increasing specialization of production and technical-technological progress, this trend will be more pronounced in the future.

Modern digital technologies provide a far more detailed insight into agricultural processes than it has ever been possible before and they make it possible to reconcile different contradictory requirements.

Every segment of production - from land preparation, determination of management zones, through sowing, irrigation, nutrition and plant protection, to harvesting and post-harvest activities can be digitized and thus made more efficient.

Digital transformation is currently taking place in all areas of human activity, but its impact on agriculture can be crucial.

The principles of precision agriculture are already changing the way in which agricultural production is carried out.

In future there will survive those who can follow the demands of the market and who can respond to challenges such as population growth on the planet, climate change, limited natural resources, increased demand for safe food, technical and technological development, etc.

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DOMESTIC VIOLENCE AS A PROBLEM OF CONTEMPORARY SOCIETY

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Abstract: *Domestic violence is an important global issue and a contemporary society faces this serious challenge on a daily basis. Every type of a behaviour where family members jeopardise each other can be characterised as violence. Studies have shown different types of domestic violence: physical, sexual, psychological, economical and passive violence. Victims can be persons of both sexes and of any age: women, children, the elderly, and, lately, violence against men is on the increase.*

Violence against women happens within a family and, in most cases, it remains unreported to the authorities. There are a lot of reasons why women tolerate violence. However, those reasons are usually divided into those referring to subjective feelings of a victim and those referring to cultural surroundings.

Violence against children involves all types of domestic violence in a family with children. The most frequent types of violence against children are physical, sexual, and emotional. Child neglect is also increasingly present.

Currently, violence against men committed by women is on the increase. A great number of these cases is recorded during a divorce proceeding.

When it comes to violence against the elderly, all types of violence are present. Due to fragile health conditions of older people, consequences can be very serious.

As a matter of practice, there three main types of abusers: a typical abuser (a seemingly normally socialised person), an abuser with a personality disorder syndrome (thinks that violence is a normal reaction to a conflict situation) and an abuser with an antisocial personality disorder (in most cases they have a confirmed mental illness diagnosis).

The statistics divide the data on victims of violence into types of violence, gender structure and age structure. Psychological violence is most common. It is followed by physical, economic and sexual violence. The largest number of victims are women, but male victims are also becoming more common.

Victims of violence are mostly adults. When it comes to children, most victims are under the age of fourteen.

In the Republic of Serbia, the problems of violence are dealt with by the Criminal code, the Criminal procedure code, the Family law, the Law on Police, the Domestic Violence Prevention Act which includes determining the level and type of the imminent violence threat, the means of law application and the application of different regulations. This law defines the authorities of the state bodies and institutions.

The problems of violence should be spoken about more often and without hesitation. The intervention should be quick and direct. The community should support and help all the victims of domestic violence

Key words: *domestic violence, family, victims, society, problem, abuser*

INTRODUCTION

Domestic violence is a global issue and a contemporary society faces it on a daily basis. Since a family is a basic unit of a human society, all the problems concerning its functionality influence all the segments of the society. Strong emotional bonds create a high level of interdependency which can be misused. Domestic violence occurs in such cases.

1. TYPES OF DOMESTIC VIOLENCE

Domestic violence is a pattern of behaviour in a family where family members threaten personal integrity and physical and mental wellbeing of other family members. The types of abuse can be verbal, physical, and sexual. Passive or active neglect of family members is also a type of domestic violence.

Domestic violence takes many forms. These are the prevailing types:

- **Physical** violence involves causing different levels of physical injuries;
- **Sexual** violence “includes a physical, visual, verbal or sexual act, which is experienced as a threat or an assault by a woman at the time being or afterwards, and which hurt her or degraded her, and/or which deprived her of a control in the intimate act” (<http://www.recporec.com/seksualno-nasilje/>);
- **Psychological** violence includes all sorts of a psychological pressure, such as threatening, blackmailing, constant criticising, degrading, creating insecurity, verbal abuse, humiliating, blaming the victim, inducing the act of abuse (blame-shifting), harassing, restricting the freedom of movement, isolation.
- **Economic** violence refers to taking away the money and other valuable belongings, control of the earnings, non-fulfilment of the maintenance obligation, making it impossible for the victim to
- exercise the right to dispose of personal and joint money and income, preventing the victim from entering into employment and earning their own money,

controlling and demanding insight into the smallest details regarding money spending;

- **Passive** violence (abuse) cannot be easily seen. In the beginning it is intolerance, aloofness, neglect and later it is physical abuse.

2. VICTIMS OF DOMESTIC VIOLENCE

2.1. Violence against women

It can be said that violence against women happens within a family. In most cases this type of violence stays unreported to the authorities. Therefore the experts on the matter think that the number of victims is a lot higher than the one found in the statistics. Beside all the quoted types of violence referring to all family members, violence against women takes some specific forms.

Rape is a way of showing dominance and gaining control over a raped woman. The consequences are serious and multiple (physical: difficult injuries and sexually-transmitted diseases; psychological consequences: fear, lack of sleep, concentration problems, depression, decrease of self-esteem, suicidal ideas, alcoholism, drug addiction; social consequences: unwanted pregnancy, impaired family relationships, sense of shame, silent treatment of the surroundings)

Rape is not easily proved unless there are physical injuries.

There are a lot of reasons why women tolerate violence. However, they are usually divided into those referring to subjective feelings of a victim and those referring to cultural surroundings. The most frequent reasons are: promises (made by abusers), sense of guilt, lack of support, illusion of an eventual abuser character change, lack of self-esteem, fear of solitude, fear of the effects of a divorce on the children, fear of running away because of eventual consequences, traditional beliefs, unfamiliarity with legal options concerning the protection from violence. (The woman who is a victim of domestic violence could talk to a trustworthy person, use the strategy of leaving, document injuries and contact the police and, preferably, plan going to a safe place.)

2.2. Violence against children

Svaki Every type of domestic violence within a family with children is violence against children regardless of

The most frequent types of children abuse are:

- Child neglect which refers to the lack of satisfying physical needs of a child (food, clothes, and hygiene), emotional needs of a child (lack of love, caring, and warmth), and educational needs (preventing a child from getting an education and going to school).
- Physical violence which refers to a child being a victim with light or heavy injuries. This type of violence is perceived as a correctional disciplinary measure by the perpetrator.

- Sexual violence is any kind of a sexual action between an adult and a child, as well as seduction or coercion of a child. Most studies show that a perpetrator is a member of a family, in more than 90% of cases. Four-fifths of these perpetrators are men.
- Emotional violence includes belittling, excessive punishment, not showing love to a child.

2.3. Violence against men

Currently, violence against men committed by women is on the increase. A great number of these cases is recorded during a divorce proceeding. This type of violence includes verbal assaults (swearing, insults, and provocation) with a desire to provoke a physical assault feedback. There are cases of physical assaults without a reaction from men in fear of being reported for physical violence against women. Preventing men from applying their paternal rights (done by ex-partners) is also a type of violence.

2.4. Violence against the elderly and the weak

When it comes to violence against the old and weak, it can be said that it includes all forms of violence. Older people often hide the consequences of the violence they suffer because of fear of loneliness and fear of rejection. Economic dependence on the perpetrator of violence is often present, which is why the number of cases of violence against the elderly is always higher than the number officially reported and registered. Due to the fragile state of health of most of the elderly persons, the consequences of violence can be serious and often lead to death outcome.

2.4.1. *Slave Grandparent Syndrome - Exploitation*

The International Health Organization characterizes this syndrome as violence against women. We are talking about elderly women who often willingly take on a large part of the obligations, with the intention of providing help to their families: preparing meals, looking after children, maintaining households, taking care of sick family members, going shopping etc... Over time, the victim experiences exhaustion and health deterioration. Family members silently skip over the obvious, because it suits them. Victims of this type of violence can also be men (in rural environments) although on a lot smaller scale than it is the case with women.

3. PROFILE OF THE ABUSER

In practice, three basic types of abusers are most often encountered

- **A typical abuser** - at first glance, a normally socialised person, with no history of conflict with the law, publicly expresses a negative attitude towards violence,

during the abuse they are rarely brutal, after the aggressive behaviour they show strong remorse;

- **An abuser who shows a personality disorder syndrome** – represents an attitude that violence is a normal and desirable reaction to a conflict situation, shows signs of personality disorders (narcissism, theatricality...), most likely regularly consumes alcohol or narcotics and usually already has a police record;
- **An abuser with an antisocial personality disorder**– in most cases they have a confirmed mental illness diagnosis, they exhibit a markedly sociopathic behaviour and an addiction to alcohol and drugs.

Neil Jacobson and John Gottman present two types of abusers in their book “When men batter women” (When Men Batter Women by Neil Jacobson, John Gottman): cobras that attack a victim in a cold-blooded, blitz-style attack and do not lose control over themselves, and pit bulls who are explosive, insecure and lose control easily.kontrolu.

4. S STATISTICAL DATA ON DOMESTIC VIOLENCE FOR PERIOD 2018 – 2020

4.1. Data on cases of domestic violence by the type of violence

The number of reported cases of domestic violence between 2018 and 2020 was 85,498 and in the same period 89,018 perpetrators were recorded and 96,594 people were victims of violence. Psychological violence occurs in the largest number of cases, 58,926 (59.7%), and it is immediately followed by physical violence 35,780 (36.2%), economic violence 3,361 (3.4%) and sexual violence with 676 (0.7%) cases. Records in the Ministry of the Interior of the RS include more type of violence within one violent case.

4.2. Data on victims of domestic violence by gender structure

Between 2018 and 2020, 96,594 domestic violence victims were reported to the Ministry of the Interior of the RS. The largest number of victims was recorded among the female population (approximately 70%) and a certain increase in the number of male victims was noticed too. In 2018, 22,235 (71.68%) victims of domestic violence were women, and 8,786 (28.32%) were men. In 2019 23,693 cases of female domestic violence victims were recorded (70.70%) and 9,818 (29.30%) male victims. In 2020, the number of female victims of domestic violence was 22,205 (69.26%) and the number male victims 9,857 (30.74%).

4.3. Data on the age of victims of domestic violence

Evidentiranje žrtava The official record of victims in the three-year period indicates that the majority are adults – 89,936 (93.10%), while minors are 6,645 (6.8%). “More than half of the minor victims are under the age of 14 – 3,855 (58.01%), and 2,790 (41.98%) are aged 15 - 17. Among adult victims the majority are aged between 31 and 40 (22%),

they are followed by seniors between 41 and 50 years old (20%)”(Stepanov, 2022, p.53). As for the data by age, in 2018, 29,125 (93.89%) were adult victims and 1,888 (6.09%) minors. In 2019, 31,057 (92.68%) were adults and 2,451 (7.31%) minors, while in 2020, the number of adult victims was 29,754 (92.80%) and minors 2,306 (7.19%).

4.3.1. Minor and adult victims of domestic violence 2018-2020

In this period, the data refers to 93% of adults and 7% of minors. There are 42% of people under the age of 14, and the percentage of people between the ages of 15 and 17 was 58%.

5. LAW ENFORCEMENT AND LEGAL MEASURES

In the Republic of Serbia, the issue of domestic violence is dealt with by the Criminal Code, the Criminal Procedure Code, the Civil Procedure Code, the Family Law, the Law on Police and the Domestic Violence Prevention Act which has been in force since the second half of 2017 and it was brought due to the increase in the number of victims in the Republic of Serbia in the last few years. *“The aim of this law is to regulate the organization and the actions of state bodies and institutions in a general and uniform manner and thereby enable effective prevention of domestic violence and immediate, timely and effective protection and support for victims of domestic violence.”*(Zakon o sprečavanju nasilja u porodici („SL glasnik RS“, br.94/2016) član 2) The Law on Prevention of Violence includes determining the degree and form of imminent threat of violence, ways of applying the law to certain criminal acts, enforcing different regulations. It also specifies the competences of institutions and state bodies such as the police, Public Prosecutor’s Office, courts and centres for social welfare. This law also regulates the rules of procedure, forms of protection and support for victims of domestic violence as well as protection of recorded data. Monitoring the implementation of the law on the prevention of domestic violence is under the jurisdiction of the Domestic Violence Suppression Council established by the Government of the Republic of Serbia. The task of the Council is regulated by the Government Act on the establishment of the Council.

CONSLUSION

It is estimated that every single person is a victim of some form of domestic violence. In almost two-thirds of murders involving women, the perpetrators are their intimate partners - husbands or fiancés. Victims of domestic violence very often do not have the courage to confront the abuser. Judging by the data of an interesting private research, 36,000.00 headlines about violence against women were published in the media from 2019 to 2021, in Serbia alone. Partner violence is the most common, followed immediately by violence against children. Last year, 2022, 5,233 cases of domestic violence were reported

to the Center for Social Work, and the total number of victims was 7,666 (3,112 children and 3,226 women). These data are frightening and a common awareness of the scale of the problem of domestic violence is needed. It is necessary to speak loudly about this important issue, to intervene directly and quickly. The community must provide support and every possible type of assistance to all victims of domestic violence.

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ARTIFICIAL INTELLIGENCE AND THE LEGAL PROFESSION BETWEEN COOPERATION, COMPETITION AND CONFRONTATION

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Abstract: *Humanity has stepped into a new era, exciting, fascinating and terrifying. One could say revolutionary. Until now, man has thought about artificial intelligence, and now artificial intelligence has started to reason about man. It even tries to get into his psyche and encode his emotions. It has been recognizing people by their appearance, voice and way of speaking for a long time. It monitors them electronically, knows their intimacy, preferences, aspirations and interests. It penetrated, faster than anyone expected and deeper than could be imagined, into all spheres of public and private life, from the media, through medicine, education, finance, energy, production and insurance, to traffic, sports and ecology. Of course, it could miss the legal profession either: the legal profession, the judiciary, the state administration and the legislature. AI has begun to transform that area as well, encroaching on all the tasks immanent in this activity - research, counseling, writing documents, representation, processing, adjudication and so on. Faced with artificial intelligence, the legal profession is faced with a major challenge. The dilemma is to what extent and how to use the tools of artificial intelligence, without jeopardizing the basic rights of people and parties to the*

proceedings, how to avoid that justice and ethics do not succumb to the speed of work and savings that these tools bring, and finally, whether society in general should and may delegate the function of a judge to a creation that exists only in cyberspace (for now) and cannot be held accountable and subject to criminal law. The application of artificial intelligence tools will have both positive and negative effects on the legal profession. There will be less work for people and more for machines. The interests and needs of the participants themselves in all kinds of legal traffic will intertwine, supplement, but in some areas they will differ when it comes to the attitude towards the engagement of artificial intelligence systems. This relation will range from cooperation, through competition, to confrontation. In order to clarify some of the above-mentioned dilemmas, in this paper we investigated the following questions: (a) what are the basic difficulties in defining artificial intelligence, (b) is artificial intelligence capable of obtaining a law degree and passing the first court exam, (c) which AI tools have already found application in the legal profession; (d) can AI be a legal representative of a party (barrister), (e) what effects will the first court judgment written by the “hand” of the ChatGPT-4 system in Colombia have and other important issues of importance for the application of artificial intelligence in the legal industry and the judiciary as a whole. By studying extensive foreign literature and practice in a number of countries, we came to the belief that artificial intelligence tools will continue to play a significant role in jobs such as legal analysis, researching laws and regulations, finding documents and arguments, predicting the possible outcome of a dispute or the behavior of suspects before, during and after the court process. Such application of these tools will lead to a reduction in litigation costs, to a faster and more cost-effective resolution of disputes and to the facilitation of work in the legal profession. That is why many law offices, lawyers and numerous employees in the judiciary will be interested in obtaining the most modern and effective artificial intelligence tools. In doing so, they will have to take care that efficiency and speed do not suppress justice. As for the engagement of artificial intelligence in court proceedings, it is most likely that it will mainly be used to perform less complex tasks and resolve disputes of lesser value, disputes related to private contracts and cases resolved by tribunals (administrative and labor disputes, etc.). It is unlikely, at least in Western countries, that these tools will have any significant role in the work of the highest judicial instances, such as the Supreme Court, the High Court or the Constitutional Court. There the right to make decisions will remain with the individual judge and the judicial panel. It is not yet possible to assess with certainty whether one day artificial intelligence will acquire the status of a subject of law and in what form, as well as whether futuristic announcements about the potential symbiosis of man and artificial intelligence will one day lead to artificial intelligence wearing a judge’s robe. In conclusion, the authors reinforce the thesis that despite the differences and ambiguities surrounding the legal regulation of artificial intelligence, its spread and penetration into the judiciary are unstoppable. But this whole relationship must be strictly regulated and predictable, subject to laws, imbued with ethics and intended for the benefit of humanity. The more we hesitate on that front, the more severe the consequences will be, because the judiciary is one of the foundations of any social order and a mirror of its democratic development.

Keywords: *Legal profession, Artificial intelligence, Court proceedings, AI tools, EU Code on AI, Court judgment in Colombia 2023;*

INTRODUCTION

For the first time in the history of world judiciary, on January 30, 2023, in the Latin American country of Colombia, a court verdict based on the views of artificial intelligence was passed. That ruling represents a dramatic echo of the changes brought about by the accelerated development of AI and its even faster application in the “legal industry”, meaning by that industry all lawyers, legal advisers, attorneys, law offices, legal associates, defense attorneys, judges and judicial assistants and clerks, legal theorists, professors of legal disciplines, legislators and other members of the huge “*world legal family*.”

Technological penetration and IT innovation in the sphere of law, computerization and digitization of lawyers’ work and the introduction of artificial intelligence systems to assist judicial bodies in their work have also led to language innovations. This is how expressions such as “*artificial legal intelligence*”¹ and “*artificial intelligence justice*” appeared. Both terms basically start from the point of view that legal decision-making has its own special logic, however, artificial intelligence systems that intend to be applied in the judiciary do not possess legal, but mathematical logic, and it is fundamentally different from legal reasoning.

Not only in the USA and the EU, but also in China, Russia, Kenya, Malaysia, Saudi Arabia and a number of other countries, systems and mechanisms for the application of artificial intelligence in the sphere of law have been elaborated to a greater or lesser extent. Towards this purpose, a number of states, organizations and professional associations brought instructions for the application of “lawtech” tools, which we will present and describe here. So far, the European Union has gone the furthest in terms of regulating this matter.

On March 11, 2023, two competent committees of the European Parliament reached an agreement on the amendment of the Draft Law on Artificial Intelligence. Then, on June 14, the EU Parliament adopted the negotiating position on the Law on Artificial Intelligence. Talks with EU countries and the Council on the final form of the law will now begin. By the way, the European Commission presented a proposal for the regulation of artificial intelligence as early as April 2021. This act would essentially be the **world’s first comprehensive code in the field of artificial intelligence** (*Corpus Iuris Artificialis Intelligentia*²), which protects the EU’s fundamental values and rights, as well as user safety. It will impose clear obligations on manufacturers of systems deemed high-risk to meet requirements regarding reliability, non-discrimination, transparency, accountability

1 *The term was first formalized in a monograph entitled "Artificial Legal Intelligence", written in 1997 by Pamela N. Gray and published by Dartmouth Publishing co, of London, UK;*

2 *By using the analogy with the Latin name for Justinian’s Codex (a kind of legal Bible), we derived the above Latin coinword (author’s note);*

and monitoring. The EU is trying to adopt these standards before the USA and China, so that they can create a roadmap for establishing uniform international standards and regulations at the global level.

The two-year long discussions in the EU have come to an end; now the last stage is coming, the agreement on the revised Draft Law. It is expected that this Code will be accepted by the end of 2023, but its implementation will not begin before 2024, and maybe even 2025. The problem, however, is how to bridge this period until the law enters into force, because artificial intelligence is spreading unstopably in areas such as internet commerce (prediction of consumer tastes), home appliances (intelligent programming), self-driving vehicles (autonomous control without driver participation), information (independent social networks), entertainment (personalization of content) and electronic equipment (use of virtual assistants such as Siri or Alexa, among others) and so on. European union needs ...“ *something to bridge that time period because the development of AI right now seems to be exponential, and a lot of good things can be said about democracy, but the speed of the work is not exponential*”...“*T(t)his is not criticising anyone, [...] it just means that there are a huge number of issues to be discussed when it comes to making full use of this technology*“ [Vestager 2023, May 29].

1. DIFFICULTIES IN DEFINING ARTIFICIAL INTELLIGENCE

Almost everyone is talking about artificial intelligence today and, it seems, everyone understands it. “*Some believe that it brings great benefits, some believe that it poses dangers, and some believe in both. It is unusual then that, on the other hand, there is no general agreement on what artificial intelligence is and what it does*” [Jančić 2023:7]. There are a number of reasons why at today’s level of development of science and practice “*the concept of artificial intelligence cannot be precisely defined*” [Prlja et al. 2021:61].

From a theoretical point of view, the biggest difficulty is caused by the fact that, in the strict sense of the word, artificial intelligence as a phenomenon does not yet exist. There is only human intelligence and there are machines that to a certain extent imitate the way of human thinking. How, then, to define what does not exist and compare it with human intelligence, which itself has not yet been sufficiently studied? “*We know a lot about intelligence and the human brain, but that knowledge is far from complete and there is no consensus on what human intelligence actually is. Until this is achieved, it is impossible to say precisely how this intelligence can be artificially imitated* [Sheikh et al, 2023:16].

The second group of difficulties arises from the fact that the vast majority of the development of artificial intelligence is carried out by private information technology companies, which strictly guard their research, independently develop it and market it in accordance with their commercial interests, driven above all by profit. The state authority and international institutions only react to certain processes, breakthroughs and findings that come from there, with a limited ability to direct them.

The third group of difficulties arises from the insufficient normative regulation of this field, the absence of an even approach on the international level, large differences between

countries in terms of assessing the risk of secret and uncontrolled artificial intelligence research, the dominance of the group of the most powerful countries in the development of artificial intelligence compared to most countries in the world, etc.

The fourth group of difficulties is related to the technical complexity of the development of artificial intelligence, its fragmentation, insufficient understanding of all its dimensions, problems of supervision and control in this area, conflicting opinions about the dangers it poses to the existence of humanity and the survival of the human species as a whole.

Given that the development of technical innovations and artificial intelligence had its own economic and commercial interest, in 2015 an international ISO standard was established regarding the quality management of the production of these systems, which defines artificial intelligence exclusively in the technical sense. That definition was somewhat modified in 2022, but the essence remained the same: “*Artificial intelligence (AI) systems, in general, are engineered systems that generate outputs such as content, forecasts, recommendations or decisions for a given set of human-defined objectives. AI covers a wide range of technologies that reflect different approaches to dealing with these complex problems.* ML (Machine Learning) is a branch of AI that employs computational techniques to enable systems to learn from data or experiences. In other words, ML systems are developed through the optimisation of algorithms to fit to training data, or improve their performance based through maximizing a reward. ML methods include deep learning, which is also addressed in this document” [ISO/IEC 2022].

For the purpose of writing this paper, instead of providing definitions, we will only point to specific explanations and descriptions of what artificial intelligence is currently doing. From the above explanations, a certain evolution can be observed not only in the development of these systems, but also in the understanding of the nature, capabilities and purpose of artificial intelligence.³

Artificial intelligence has gone through several stages of development from the middle of the last century until today. In the beginning, it was reduced to the programming of machines that can imitate human actions (*repetitive machine*), then machines that are capable of learning without special programming (*learning machine*), and now we have reached the stage of machines that are capable to a certain extent of finding new, an original solution in a way that makes them think (*thinking machine*). The further development of artificial intelligence is unstoppable, but how far it will lead is difficult to estimate. There are already a number of theories about it. The controversial American futurist Raymond Kurzweil even put forward the thesis that around 2045 artificial intelligence will surpass natural intelligence, and he called that moment the singularity [Kurzweil, 2005:122]. Looking even further into the future, he predicts that the nature of man will be forever changed, but “*the intelligence that will then be created will continue to represent human civilization*”.

3 For a detailed review of the definitions of artificial intelligence and its development throughout history, see more in „*Artificial Intelligence: Definition and Background*”, Chapter II, in Haroon Sheikh, Corien Prins & Erik Schrijvers (2023): „Mission AI“, pp.15-41;

2. THE EVOLUTION OF THE EUROPEAN VIEW ON ARTIFICIAL INTELLIGENCE

As for the definition of artificial intelligence, the wording from the joint statement of the four most important bodies of the European Union from April 2018 was initially used within the EU. It states the following: “*Artificial intelligence (AI) refers to systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals. AI-based systems can be purely software-based, acting in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications)*” [EU Communication 2018:1].

A little later, in December 2018, EU experts came to the conclusion that the previous definition was outdated, so they proposed a more complex definition: „*Artificial intelligence (AI) refers to systems designed by humans that, given a complex goal, act in the physical or digital world by perceiving their environment, interpreting the collected structured or unstructured data, reasoning on the knowledge derived from this data and deciding the best action(s) to take (according to pre-defined parameters) to achieve the given goal. AI systems can also be designed to learn to adapt their behaviour by analysing how the environment is affected by their previous actions.*” [EC HLEG 2018:7].

Then in April 2019, they once again updated their explanation: “*Artificial intelligence (AI) systems are software (and possibly also hardware) systems designed by humans³ that, given a complex goal, act in the physical or digital dimension by perceiving their environment through data acquisition, interpreting the collected structured or unstructured data, reasoning on the knowledge, or processing the information, derived from this data and deciding the best action(s) to take to achieve the given goal. AI systems can either use symbolic rules or learn a numeric model, and they can also adapt their behaviour by analysing how the environment is affected by their previous actions*” [EC HLEG 2019:6].

However, in the largest number of countries in the world, the explanation of artificial intelligence and its life cycle, which is given in the Recommendations of the OECD Council for artificial intelligence, is used: “*An AI system is a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments.*” [OECD 2019:7].

According to the Encyclopedia Britannica, artificial intelligence (AI) is “*the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalize, or learn from past experience* [Britanica, 2023].

The famous British mathematician, logician and cryptographer, Alan Turing, in 1950 devised a test (“Imitation Game”) [Turing, 1950:433] to assess whether a computer possesses intelligence, i.e. whether it has become an “*intelligent thinking entity*”⁴. So far,

⁴ The Turing Test is a specific way of determining whether a machine can demonstrate human intelligence by putting it through a complex process of questioning by a large number of experts. The basic premise

no computer has passed that test. But with the advent of ChatGPT, in late 2022, the conversation about the likelihood that the components of the Turing test have finally been met has been rekindled [Blackemore, E 2023:1].

This has encouraged many other countries, professional groups, professional organizations, scientists and researchers to pay special attention to the regulation of all important issues regarding artificial intelligence. This was discussed in May 2023 by the G-7 group of the most developed countries, but they did not reach an agreement on what and how this area should be regulated. Nevertheless, with the aim of converging positions, the G-7 Group launched an initiative for a global overview of the situation with AI, called the Hiroshima Process [G-7, 2023:9].

In a number of countries in the world and on all continents, artificial intelligence has long been widely used in almost all areas, including the judiciary, but the degree of its regulation is very uneven. From numerous researches, scientific papers and literature, it follows that China and the USA are leading in the application of artificial intelligence in many areas, especially in the judiciary.

3. CAN ARTIFICIAL INTELLIGENCE GET A LICENSE TO WORK IN THE LEGAL PROFESSION

Initially, it was thought that the legal profession would generally remain outside the influence of artificial intelligence. However, as early as 2013, scientific papers appeared proving that artificial intelligence will profoundly transform the legal profession and the judiciary as a whole.⁵ Today we are witnessing the realization of that colossal transformation. Literally, in the most developed countries, not a single legal area has remained outside the influence and interference of artificial intelligence.

Several reasons have contributed to the massive influx of artificial intelligence into the legal profession. First, in this area there is a number of less complex or simple jobs that can be performed using various IT tools and automated systems. Secondly, the starting point and support for legal action are numerous laws, regulations, contracts, conventions, court decisions and principles which can be computer processed, classified, sequenced and converted into algorithms for use at all levels of judicial decision-making (in administrative, civil and criminal matters). Thirdly, the use of artificial intelligence tools in all stages of court proceedings, especially in populous countries, brings numerous benefits: it shortens the duration of proceedings, reduces court costs, facilitates access to judicial protection for the lay part of the population, increases court efficiency, enables the unification of judicial practice, strengthens the centralization of judicial authorities, strengthens its homogenization, etc.

Naturally, the basic assumption for the transition of the legal profession from classical methods and work tools to highly sophisticated methods and tools was the creation

is: if a machine can engage in conversation with a human without being detected as a machine, it has demonstrated human intelligence;

5 See more in: Richard, Susskind (2013): *Tomorrow's Lawyers: An Introduction to Your Future* (2nd ed.). Oxford University Press, p.320;

of such artificial intelligence systems whose memory contains a huge amount of legal knowledge, information, data and materials, and which are capable to, in the matter of seconds, from that “black hole” obtain an answer to every question that is put to them or perform a legal-technical task entrusted to them.

An even higher level of artificial intelligence was reached by the systems that appeared in 2022. The results of their testing were as unexpected as they were worrisome; not only for lawyers, but for humanity as a whole. So far, the most advanced system ChatGAP-4 marked the birth of such a generation of machines that are capable of learning in real time. From the total amount of given examples that exist in the digitized memory of the world (in the so-called “internet world”), they find the rules themselves and they apply them to every new case that is “assigned” to them.

Parallel with this breakthrough, a large number of papers appeared, both globally and in our country, warning of the danger of introducing artificial intelligence into the field of justice. Apart from reducing the number of employees, it is feared that AI will replace not only lawyers, but also judges, investigators, experts and other participants in court proceedings. Each of these application segments is *“necessarily ‘closing down’ certain hitherto exclusively legal jobs, and it is obvious that the trend of narrowing the scope of legal jobs will inevitably continue as the application of software and artificial intelligence increases in ways similar to those mentioned above”* [Stefanović, 2023, 11 January].

The USA and China have advanced the most in the application of artificial intelligence in the sphere of judiciary. Having said that, due to the different nature of judicial systems in these countries (the first rests on precedents, and the second on laws), the introduction and application of artificial intelligence proceeded differently. In the USA, they were the result of entrepreneurial initiative and commercial interest, and in China they were the result of recommendations or obligations prescribed by the competent authorities. In addition, in China, artificial intelligence, acting as a voluntarily accepted mediator, already automatically resolves a certain type of disputes, while in the US, artificial intelligence systems currently remain only an auxiliary tool in the work of lawyers and judges.

3.1. The ability of artificial intelligence to obtain a law degree

In order for someone to practice law, he must first obtain a law degree, and if he wants to advance in this profession, he must also pass the bar exam. Considering that artificial intelligence systems have shown a certain degree of learning ability, which is similar to human learning, scientists decided to test their legal “knowledge”. They were inspired by a scientific paper from 2016, which was published under the title „Can robots be lawyers? Computers, lawyers, and the practice of law” [Remus & Levy 2016].

The experiment was first performed at the Faculty of Law in Minnesota (USA). A group of professors subjected the ChatGTP system to a simulated written final exam in four subjects (which included answering 95 questions and writing 12 essays). The “Robot” “passed” the exam with a grade of Ce Plus (C+), which is below average, but is enough for a passing grade [Choi J, et al. 2023:5]. The system passed these exams without human

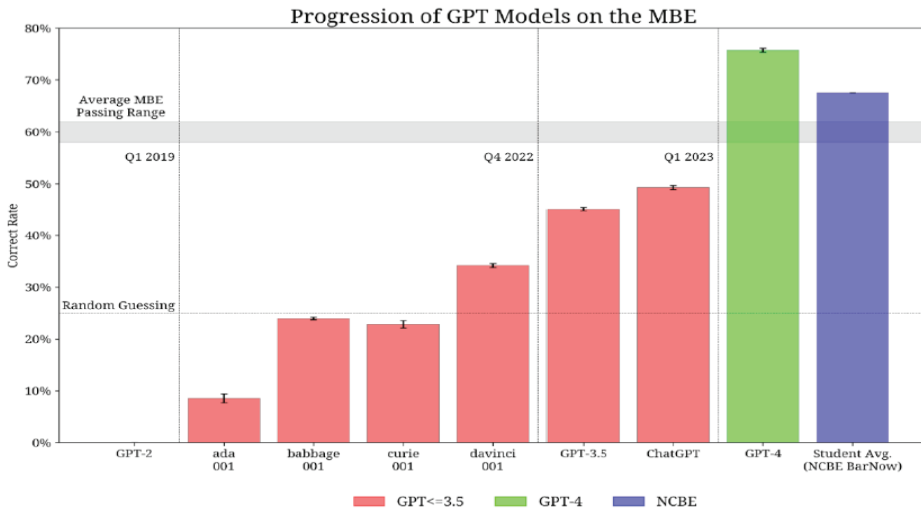
assistance. Of course, there were some omissions in the answers, but with such a result, any student could obtain a law degree.

3.2. The ability of artificial intelligence to pass the bar exam

Another group of professors (from Illinois Tech College in Chicago, Stanford Center for Legal Informatics, Bucerius Law School in Hamburg and others) went a step further. They experimentally tested whether the latest generation ChatGTP-4 (a multimodal deep learning system) would be capable of passing the bar exam. The total number of points scored in the currently most advanced GTP-4 system on the MBE exam, which allows lawyers to practice law in several federal states⁶, was 297, which is 76 percent of the maximum (while, for example, in Arizona the upper threshold is 276, and in Illinois 266 points) [Koetsier 2023, march 14].

Figure 1 shows that the previous models of this System, GTP-3 in 2022 and GTP-3.5 in 2023, had a significantly lower result than GTP-4 in the first quarter of 2023 when taking the bar exam. [Katz et al. 2023:4-6]. The improved ChatGPT system in five subject areas, out of a total of seven, surpassed the results obtained by candidates with a law degree in this year's bar exam. *"This research shows that AI has the potential to supplement human judgment and make decisions based on the law,"* said Daphne Linzer, executive director of 'Politico' magazine.⁷

Figure 1: Advancement of ChatGTP System's ability to pass MBE



Explanation: The bar shaded green shows the average achieved by ChatGTP-4 in the first quarter of 2023, and the bar shaded blue shows the average achieved by all students within the framework of the USA National Bar Exam Conference. Source: [Katz et al. 2023:5].

⁶ *Multistate Bar Examen*

⁷ <https://24sedam.rs/lifestyle/tehnologije/203760/vestacka-inteligencija-polozila-pravosudni-ispit/vest>

4. SPECIFICS OF CERTAIN APPLIED AI TOOLS IN LEGAL PROFESSION

4.1. Artificial intelligence systems used by lawyers

Artificial intelligence systems have been used in the legal profession in a number of Western countries for almost a decade. They have brought about significant benefits and savings. For example, a survey among law firms conducted by the agency “*Blue Hill Research*” shows that the use of a modern technological tool called ROSS, compared to the classic ones (such as “*Boolean search*” and “*Natural Language search*”) by 30% shortened the time of legal research in law offices, and increased the volume of relevant data obtained by 40% [Andrew, A, & Matt, S., 2017:5].

Lawyers in the US and Canada for the purpose of online legal research most often rely on such private providers as “Westlaw”, “Lexis” “Bloomberg” or on publicly available data offered by “Justia” (United States) or “CanLII” (Canada), but also on global search engines, such as Google and others. [Benjamin, et al., 2017:7]. Given that these providers can be accessed from anywhere in the world, it is no surprise that many legal file providers have over ten million subscribers in the English-speaking world alone.

Among the tools based on artificial intelligence that are now used for legal research in the judiciary and in general in the legal profession in the Anglo-Saxon area, it is possible to single out several basic groups, which we will explain herewith.⁸

4.1.1. Legal Text Analytic Tools

These are systems that are capable of extracting the meaning from court decisions or laws, thanks to a built-in algorithm. For example, they (a) search legal archives and look for arguments that can be used in new cases and (b) produce a diagram as a graphic representation of the connection of certain legal facts. Such common research systems include “Ravel” (contains scans of numerous US court decisions and allows them to be cited), “CARA” (provides texts or summaries of any additional cases that support the requested legal arguments), “Casatekt” and “Fastcase”. (providing a network of linked citations to individual statutory provisions and court rulings) and “Luminance” (which suggests to paralegals how to extract key points about a particular case).

4.1.2. Legal Question and Answer (Advisory) Tools

This set of tools enables lawyers to get an answer to any legal question based on a detailed search of large collections of texts. For example, the “ROSS” system can provide

8 A detailed review of these tools is provided in the following text: „*The Impacts of Artificial Intelligence on Research in the Legal Profession*“, koji je objavljen u *International Journal of Law and Society*, Volume 5, Issue 1, March 2022, Pages: 53-65, the authors are Biresaw M.S. & Saste U.A. In addition to the above, there are a number of other tools, such as those that convert oral speech into written texts, and vice versa, then tools that simultaneously translate presentations into other languages, etc., but listing them and explaining how they work would require too much space;

an answer, quotes, suggestions and materials for each query, can arrange them according to the degree of importance and timeliness, and even provide a draft of a legal petition. The “Lexis Answers” system is able to offer its authentic legal answer, complete with citations, from the analysis of millions of documents. The “Watson Debater” system is capable of thoroughly considering each topic and offering convincing arguments and ruling precedents related to it. The “CCLIPS” system is somewhat narrower as it provides the retrieval of all relevant cases and provisions from an integrated database related to the Civil Code of the State of Louisiana.

Recently, one of the IT companies offered the courts the software tool ALEXEI, which, based on an artificial intelligence algorithm, can in a very short time obtain examples from court practice, precedents and the appropriate argumentation that is needed to act in a specific case. For every question asked, the software is able to not only provide information within 24 hours, but also to generate a corresponding legal act, decision, submission and the like. It can also provide a valid assessment of the outcome of the litigation [Hendry, M, 2022].

4.1.3. Legal Prediction Tools

These are systems that, based on previous court decisions, give their assessment of the outcome of the case represented by the lawyer. Among the numerous such tools in the USA, the most common ones are “Scotus” (whose prediction accuracy reached 70%) and “Lex Machine” (which, in the field of intellectual property, reached a prediction accuracy of 64%). This group also includes the “Motion Kickstarter” system, which provides an insight into all court-approved or rejected judgment proposals by type and content of cases. In Great Britain, the highest level of accuracy in predicting the outcome of court cases was achieved by the artificial intelligence system developed by Cambridge students “Case-Cruncher Alpha” (with an accuracy of 86.6%). In Canada, a platform called “Blue J Legal” was developed, which, based on a large database of judgments in tax and related matters, also shows a high degree of accuracy in predicting the success of a lawyer’s engagement.

4.1.4. Contract Review and Analysis Tools

The specificity of the above artificial intelligence systems is that they possess knowledge of all legal clauses, which allows lawyers to search and get to know all the documents and contracts in which those clauses were used. Thus, the “LawGeex” application summarizes relevant contracts with 94% accuracy and forms the appropriate clauses, saving time up to 80%. The ThoughtRiver system scans contracts and presents their most important elements on an online dashboard.

The “Legal Robot” system successfully performs a preliminary test and analysis of the contract and draws attention to the perceived shortcomings from the point of view of expressing the will and intention that the lawyer wants to achieve through that contract.

The “Beagle” system is intended for entrepreneurs who are not lawyers, but must independently prepare, review and conclude contracts with business partners. The “COIN” system deals with the analysis and preparation of commercial loan contracts, while the “HIPO” system deals with all aspects of legal research, whereby its predictability of the outcome of cases corresponds to a high degree with later court decisions. Artificial intelligence analytical tools similar to the above are also the following: „Relativity“, „Kira Systems“, „Modus“, „OpenText“, „kCura“ and others.

4.1.5. *E-discovery (Technology Assisted Review) Tools*

Generally speaking, these are software tools that provide lawyers with a type of technological assistance in obtaining and reviewing large amounts of electronically generated and stored information, as opposed to databases that contain scanned paper documents. Searches are automated, so that in the course of court cases, they enable all users to quickly find all relevant laws and regulations.

Courts in the USA, England and Ireland as early as 2012, and in the Australian state of Victoria since 2015, have accepted the “TAR” system as a reliable method for conducting reasonable research. Thanks to the automation of the search, this system allows lawyers to obtain more accurate information with less effort and very quickly, in contrast to the laborious, time-consuming and insufficiently reliable manual search of files. After all, recent research has shown that most of the 1,000 companies listed on Forbes’ list of the largest, annually spend over 5 million dollars on *e-discovery* systems for automatic processing, which brings savings of 70 percent compared to manual searches of electronic materials.

4.1.6. *Drafting Tools*

These tools concern automated systems that perform only one type of lawyer’s work, but work that is particularly important because it needs to draft the most important documents and submissions to the court in legal language, persuasively and argumentatively. Systems such as “Clifford Chance Dr@ft”, “Desktop Lawyer”, “Legal Zoom”, “Rocket Lawyer”, “Legal Vision”, “LavPath”, “ClickLaw” and others have become popular in practice. All of them greatly increase the efficiency of law offices, reduce work time and costs, and contribute to the top quality of legal submissions and proposals.

4.1.7. *Citation Tools*

This last group of tools includes those narrower systems that provide citations relevant to legal research and practice. Among the most represented systems is “KeyCite” which informs where a certain quote was contained and whether it is still suitable for the lawyer’s purpose, that is to what extent it is relevant as an argument in a specific case. The first system of this kind, which is still in use today, was “Online Shepard’s Citations”, which extracts all relevant requested citations from numerous sources [Biresaw, 2022:53-65].

4.2. The attempt for artificial intelligence to take on the role of defender

Since it has already been proven that artificial intelligence could “pass” the bar exam and “acquire” a lawyer’s license, can it appear in court in the capacity of “defender of accused persons”. In Great Britain and the USA, one such system has had success in the courts. It is an artificial intelligence system called “DoNotPay”, which was invented in 2015 by British student Joshua Browder, who later moved to the USA.

The system does not enter the courtroom, but directly watches, listens and follows the course of the trial via the party’s mobile phone, and gives instructions to the party on what to say or how to answer a question. It also possibly suggests certain action or which document to submit. Therefore, the system automatically, in real time, manages the defense of the party before the court. It was most often used to defend persons who were fined for traffic violations, mainly due to non-payment or expiry of the parking card. This Chatbot, based on an AI logarithm, has freed 160,000 customers from paying fines in the course of several years, both in the UK and the USA. It charges only \$3 per month for its services. This is also the reason why the American Bar Association in early 2020 awarded the owner of this system a special award for helping those with insufficient income and for exceptional inventiveness in the “lawtech” sphere.

The company founded in San Francisco by Browder advertised the AI system as “The world’s first robot lawyer.” The system saved customers money, but reduced revenue for public and private parking services. At the same time, it had put law offices in an unenviable situation.

This was actually the reason why on March 3, 2023, one of the law offices, which believed that AI was taking away its clients, filed a lawsuit against the “robot lawyer” in the competent court. In the lawsuit, the firm stated that DoNotPay is neither a robot nor a lawyer, that it does not possess a lawyer’s license, nor is its work under the supervision of any legal expert or institution. “*DoNotPay is merely a website with a repository of—unfortunately, substandard—legal documents that at best fills in a legal adlib based on information input by customers.*” [Wilkins 2023, March 8]. The prosecuting attorney referred to California law that prohibits “*unlawful, unfair or fraudulent business acts or practices.*”

As soon as he realized that this could put him in danger because the penalty for the said crime is 6 months in prison and includes the obligation to return money to the clients, the owner of the AI system, Browder, announced that his company immediately “stops all activities for which it is not authorized by law.” Whether that will be enough for the court to let him off will not be known until the end of the proceedings. It is also uncertain whether in the end the “robot” will end up in prison or his owner will have that honour.

4.3. Presentation of artificial intelligence systems used by judges in certain countries

The use of artificial intelligence could not bypass the courts either. In doing so, a different practice arose. So far, the largest number of states have implemented this process of

automation in the form of digitalization of court work. Herewith we will list examples of individual countries at random, because a separate study would be necessary if we were to provide a comparative analysis of practice in the world.

4.3.1. Implementation of AI as an auxiliary tool in the judicial system of selected countries

In *Hungary*, the National Office for Justice first implemented the “*Digital Court Project*” as a tool that facilitates court operations and court administration. Furthermore, this country has enabled electronic submission of lawsuits. The next step was the “*Via Video*” project, which enables remote video hearing of the parties. Then, a program for converting oral statements and statements into written text was applied, and then a system for assisting judges, which searches court decisions with one click and browses through electronic files and public registers [Papp et al. 2019:274].

In *Canada*, artificial intelligence has also not yet occupied the judge’s chair, but it has stepped into the judicial virtual network. In fact, in 2019, for the province of Ontario, the digital platform “*Digital Hearing Workplace*” was put into use, as a system for managing documents in court proceedings related to commercial disputes. Parties who pre-register are enabled to submit electronic copies of documents and information needed for the hearing through that platform. They also have immediate all-day access to documents related to the dispute. The AI system represents a great benefit for all participants, both judges and court officials, as well as prosecutors, parties and their lawyers. However, regardless of this electronic delivery, the condition for starting the proceedings before the court is that all submissions to the court must also be submitted on paper [Superior Court 2019, March 29].

The Netherlands was one of the first members of the European Union where an online private court completely digitized the conduct of court proceedings. Nevertheless, the final decision-making remained in the exclusive authority of the authorized judge. Subsequent attempts to introduce such online courts proved unsuccessful. Despite the initial expectation that IT systems will gradually be overwhelmed by the judiciary, the biggest reach of artificial intelligence in that regard was the making of electronic judgments by default in backlogged debt collection cases. It was the only classic case of judgment without the participation of the human factor [Nakad-Westrate, 2015:1103]. By the way, the Dutch judiciary, like most others in the world, uses different types of information technology. These include case management, office technology and a host of information, news and case law websites (files include more than 50,000 judgments per year). For the same purpose, various tools for court administration, intranet, e-mail, submission of electronic reports and various digital procedures are used. All this is managed by a special IT organization of the judiciary, within the Council for the Judiciary of the Netherlands [Reiling, 2020].

Research into practice in the Netherlands shows that there are two main reasons why it is unrealistic to expect a greater penetration of AI in this area. On the one hand, the

Dutch judicial system uses artificial intelligence systems to a rather limited extent when it comes to making court decisions, and on the other hand, the tools used in certain cases are not able to evaluate arguments, evaluate elements or understand the competences of e- court. Finally, “*despite the benefits of using AI in decision making, Dutch legislation does not provide for the possibility of a digital judge*” [Nakad-Westrate, 2015:1108].

Estonia is faced with a controversial situation. Although in 2019 expert texts appeared in magazines around the world that Estonia plans to launch a public procurement for the creation of a “robot judge” software program for adjudicating small claims, this has been denied. The first time in February 2022, and then in March 2023, the Estonian Ministry of Justice explained that they were only considering the process of automating the system for collecting monetary sums based on court decisions and nothing more. So far, only one court and one department has a service that, based on judgments, delivers electronic payment slips to the parties for making payments within the deadline. These are mainly civil lawsuits and it is estimated that the automation of this procedure would bring significant savings. In any case, a robot has not entered a courtroom in Estonia and it will not do so in the foreseeable future [Republica Estonia, 2022]

France has taken a very conservative standpoint regarding the application of AI tools. In 2019, it had passed a law banning the use of artificial intelligence tools to detect patterns of behavior by former judges in new cases. Furthermore, the use of public information from previous trials for “assessment, analysis, comparison and prediction” of the future behavior of individual judges is prohibited. [Livermore 2019, June 21] Violation of this ban is punishable by no less than five years in prison.⁹

In *Brazil*, the digitization process in the judiciary had started very early. According to a report by the National Council for the Judiciary “from 2008 to 2018, 180.8 million court cases were initiated digitally” [Ferreira 2020, March 10]. SOCRATES is the name of the first artificial intelligence system selected for use in the Brazilian judiciary, which enables the automatic search of all relevant legal acts and regulations. In the course of two years of operation, the system collected and analyzed more than 300,000 judgments, thus providing judges with significant assistance in their work. A system called VICTOR was also approved for use in the judiciary, which performs a preliminary analysis of cases, extracts key arguments from previous judgments and enables the translation of disputes from indigenous languages into Portuguese (via an NLP tool, i.e. NaturalLanguageProcessing system).

Similarly, the judicial system in *Singapore* already makes extensive use of speech translation tools. Singapore’s NLP (Natural Language Processing) system relies on neural networks, is equipped with language models and specific terms, as well as the technical tools necessary to transcribe court hearings in real time. Thanks to this, the judges as well as the participating parties have the opportunity to instantly review oral testimonies, statements and proposals.

9 See more in: “*France Bans Judge Analytics, Five Years in Prison for Rule Breakers*”, *Artificial Lawyer*, (June 4, 2019, <https://www.artificiallawyer.com/2019/06/04/france-bans-judge-analytics-5-years-in-prison-for-rule-breakers/>)

Likewise, the *Austrian* judiciary uses an artificial intelligence system to manage documents, whereby court decisions are anonymized (by omitting the names of judges and parties). This system also digitizes analog files, turning them into numerical content, which is suitable for machine processing. At the time of the Covid 19 pandemic, Austria changed the regulations to allow virtual trials to take place. Namely, the judge would sit in his office and through the screen, thanks to a special platform, similar to the one used for business video conferences, talk to all participants, listen to them, ask questions and the like. But decisions were made by himself or in the council, where no artificial intelligence system was used to make decisions. The application of such and similar virtual trials was time-limited to the period until December 31, 2022.

The AI tool used by both Argentina's Public Prosecutor's Office and Colombia's Constitutional Court is called PROMETA. This analytical tool is used to assess the outcome of cases, and so far has recorded a success rate of a high 96%. The aforementioned system is also able to identify emergency cases among numerous files. It takes him less than 2 minutes, while a judicial associate would need an average of 96 days for the same job [Rivera 2021, November 5]. A few more specifics are typical of Colombia. In that country, for the first time among Latin American countries, a robot assistant, whose name is the acronym SIARELIS¹⁰, was used. It is mostly used in litigation concerning the business of corporations due to its ability to prepare a draft of a court decision.

5. THE FIRST VERDICT IN THE WORLD PASSED BY ARTIFICIAL INTELLIGENCE

Colombian judge *Juan Manuel Padilla Garcia* is the first judge in the world who delivered his verdict based on text generated by artificial intelligence (or at least he is the first who publicly disclosed it) on January 30, 2023. The subject of the decision was the request that a minor autistic child be exempted from paying compensation to the Health Insurance Fund for the costs of engaging a therapist in his treatment.

Among the questions posed there had been also two questions for which the artificial intelligence system gave very convincing arguments in favor of the child, and they were: "Is a minor with autism exempt from paying co-payments for therapy?" and "Has the jurisprudence of the Constitutional Court brought favorable decisions in similar cases?"

The judge entered the answer he received from the ChatGPT AI system into the text of the sentence and wrote that the AI arguments strengthened his own argumentation in favor of the rights of the child [Taylor 2023, Feb.23]. Padilja achieved this by referring to law no. 2213 of 2022, which allows judges to use artificial intelligence in certain circumstances [Ley 2022, art 1].

Explaining the reasons why a judge in Colombia could quite comfortably issue such a verdict, unlike a judge in the USA, Kathryn Forrest, who was a judge of the New York court for a long time and is now a lawyer, stated that it was due to differences in the

¹⁰ Full title: „Sistema con bases de Inteligencia Artificial para la Resolución de Litigios Societarios“;

legal system.” *Colombia has a civil law system, meaning judges place greater emphasis on a legal code rather than case law. She said the U.S. follows a common law system in which more weight is placed on precedent and assessment of facts in individual cases, like witness credibility. The issue for ChatGPT is if it pulled all of the cases and it were to write a bench decision, it can never assess the credibility of the witnesses who are testifying in front of it*“ [Zappo 2023. march 13]. U vezi sa nedoumicama oko toga šta je sve sistem koristio u procesu istraživanja, navela je: *“Where ChatGPT draws its information from isn’t completely known, Forrest said. ChatGPT was built by the research company OpenAI and trained using 570GB of data from the internet, including from books, Wikipedia and other writings on the web, according to BBC. But biases can exist in the algorithm and more transparency about its boundaries is needed if judges were to utilize the language generator”* [Ibid].

Unlike the South American judges, who did not express many objections to the decision of the judge from Colombia¹¹ to trust a “robot”, the North American judges in turn had a number of objections. They objected that it remains uncertain what the “black box” contained and that the “robot” did not take into account the statements of the witnesses. Furthermore, they claimed that this judgment would be overturned at the appellate court because the opposing party did not have access to the material on the basis of which the artificial intelligence wrote the judgment, which is not in accordance with the rules of the procedure.

Regardless of the above and other objections, for which we do not have enough space here, the fact remains that it will be recorded in the annals of world justice that the first judgment with the text prepared by artificial intelligence was delivered by a judge from Colombia, a country not so important, nor highly developed, and even less democratically exemplary. The circumstances of making that judgment, the facts on which it was based, the manner in which it was made and the disputed legal issues from the case all this requires that this verdict and its consequences be analyzed in a separate paper.

CONCLUSION

Our research makes it obvious that the application of highly sophisticated IT tools in the legal profession, and above all among lawyers and the judiciary, has gradually led to the development of a specific and complex relationship between artificial intelligence and the legal industry. That relationship ranges from cooperation to competition to potential conflict. It often oscillates and shows both the good and the bad side of this reciprocity. The advantages of mutual intertwining are great, but they also have disadvantages. The interests that exist within these two spheres of engagement of people, capital and state politics, in many respects coincide with each other, but they also diverge to a large extent.

For creators of artificial intelligence tools, the most important thing is to increase the demand for their goods and to make their systems as advanced, independent and successful as possible in performing legal tasks. For lawyers who work in the bar and judiciary, the

11 The official name of this country in Spanish is: *República de Colombia*;

most important thing is that these “thinking machines” do not take away their jobs and do not threaten their profession. The general social interest is that justice, understood as a sublimated expression of the highest values to which people aspire, preserves its ethical essence, human dimension and the virtue of justice, regardless of who will pronounce judgments or who will provide legal services. State, perceived as a democratically organized and legally constituted community of people, must take care not to let the judicial power out of its hands, as it is one of the three key levers of power. In addition to that and above all, it is now obvious that the development and scope of artificial intelligence must be “brought to justice”, regulated by law, directed, limited and controlled, because it inherently carries a danger for the survival of humanity.

Because of the technical complexity, rapid progress and elusiveness of artificial intelligence, reaching its definition turned out to be very difficult and contradictory. How to define what is not sufficiently known and researched and which is increasingly escaping our ability to understand and explain it. In any case, we have herewith stated that a generally accepted definition does not yet exist, and we have explained the main reasons for that.

The complex nature of the problem of artificial intelligence, the unevenness of its development and the lack of regulation in this area have also influenced that the conceptual approach differs and changes, depending on the angle from which these systems are viewed - technical, philosophical, legal, expert or layman, etc. Even the European Union, as a union of 27 states, and the entity that has so far made the most progress in creating policy, strategy and norms in this and related fields, has gradually evolved in terms of defining artificial intelligence. The EU approach has been changing rapidly, and now it has reached the stage when the drafting of the world's first comprehensive act with the highest legal force to regulate all important issues of artificial intelligence, including its application in the legal profession, is nearing completion. Considering the number of issues it covers, the areas it concerns, the scope it has and the degree of obligation, we believe that for the further regulation of the sphere of artificial intelligence in the world that act will be inspiring and stimulating, just as Justinian's Code was stimulating in the past for the development of law, legal sciences and practices in a large number of countries. By using the analogy (with *Corpus Iuris Civilis*), and starting from its importance, we allowed ourselves to predetermine the name of that future European artificial intelligence code with the Latin name “*Corpus Iuris Intelligentia Artificialis*”. In defense of this freedom of providing a name, we can only say that the preference of lawyers for Latin names is immanent in the legal profession.

By studying the practice and areas of implementation of artificial intelligence tools globally, we noticed a significant diversity, but also a multitude of solutions. In order to facilitate further study, we have classified the artificial intelligence tools that are used in the world at the bar and among lawyers into six groups, and described them according to their purpose and the tasks they perform. These are tools for analyzing texts, for providing answers to legal questions, for forecasting the effect of the client's legal defense before the court, for reviewing and analyzing contracts, for retrieving targeted documentation from

files, for writing drafts of legal acts, lawsuits, appeals, petitions, etc. and for extracting the appropriate citations. Our research has shown that even currently the most advanced systems, such as ChatGPT-4, cannot replace a lawyer in providing legal advice, defending a client in court and solving many complex issues that require expertise, experience and making brilliant moves in the most sensitive moments of the procedure.

Regarding artificial intelligence systems used in courts, we studied the practice in about twenty randomly selected countries, mostly in developed Western countries, because AI is the most represented there (the USA, for example), although there is also the reverse example of a less well-known country that made a big step forward (Colombia, for example). The above classification is not applicable herewith, because some countries use the same tools, others use different tools, and the purpose is also different, so we listed and described them individually.

Observing the representation of those tools and the degree of their engagement, we drew the conclusion that systems for the extraction of legal provisions, court decisions and legal practice on the one hand, and systems for drafting legal acts on the other hand, as well as systems for third-party analysis are the most widespread in the legal profession. It could be said that they are elementary or less complex systems. Among them, the systems belonging to the group of tools for legal analytics have more pronounced disadvantages compared to the others. As the matter of fact, *“they are still subject to some major limitations concerning their inability to read or to explain their answers and their dependence on manually annotated training sets”* [Ashly 2019:1135]. From a technical point of view, this restriction is temporary and will probably gradually be overcome. Improvement of the software and upgrading of the algorithms (so as to include the network diagram) will enable the leap of analytical tools to a higher level of legal reasoning *„Such analytic techniques in the future might overcome the bottleneck if the relevant computational program can be developed so as not to rely solely on manual techniques (by humans) to input what legal texts mean in ways programs can use, but rather so that knowledge can be input automatically. If this occurred, AI could, potentially, link these text-analysis tools to computational legal reasoning and legal analysis algorithms, to produce a wholly AI-derived legal solution. This has not happened yet; however, the amount of work being done in this area should not be underestimated — legal analytics is a well progressed field“* [Ibid].

A special chapter in this paper we dedicated to the Decision of a judge in Colombia, in a civil suit against the state Health Insurance Fund. We did this because it is the first decision in the world made by artificial intelligence. More precisely, the acting judge stated in his sentence that he took over the argumentation written for him by the ChatGPT system, in order to strengthen his argumentation for making a decision in favor of the autistic child, and against the request of the Fund. The verdict passed in this way caused numerous controversies, some of which we mentioned and commented on, but this one case, which represents a legal precedent among precedents, undoubtedly demands to be separately investigated and described.

Research into the relationship between artificial intelligence and the legal profession is faced with the visionary assessments of one group of scientists, as well as the fears of

others, that law will gradually evolve into a kind of codified computer system for providing legal services. Would the justice that would be created as a result of the combination of human intelligence and machine intelligence preserve its original nature and meaning? This is a huge and very complex issue that requires further research and the passage of time to be able to answer it. Those who criticize excessive fears, believe that even in these changed circumstances and the new constellation of forces between natural consciousness and artificial consciousness, the law will still remain compatible with the existing structures of society and its values.

We find it difficult to agree with this. It is because history has shown that the future always remains unknown to a certain extent, even when people know all the parameters, elements and projects of development, and the instruments for shaping it are firmly in their hands and under control. In this sense, the conclusion of our paper could be summed up in the statement that the development of artificial intelligence and its impact on the work of the judiciary, lawyers and the legal profession as a whole, as well as on the normative and legislative architecture of society, will undoubtedly change the landscape of the overall living and working environment of people but all this in a way that we cannot predict and in a direction that may be the least desirable and the most uncertain.

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