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THE ROLE OF WAR GAMES IN THE OPERATIONAL PLANNING PROCESS

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Over the past several decades, most regional and local conflicts have merely been the scenarios prepared in advance in the "kitchens" of great powers. The aforesaid scenarios are practically tested on simulation-based models that are formed as war games, which considerably save resources and improve the strategic and operational-tactical planning process.

Information technology has had the decisive impact on the development of war games resulting in the fact that various software packages have been developed, as well as the systems which provide support to commands and HQs in a decision-making process at all command and control levels. The findings showing that resources can be rationally exploited and financial funds considerably saved indicate the efficiency of applying war games in the operational planning process and cause specific simulation-based models to be developed in commands and HQs of modern armed forces.

The aim of this paper is to point out the role and importance of war games in the operational planning process. To that end, various models of war games have been analyzed, along with the possibility of applying them in the operational planning process and activities conducted by the commands and HQs of the Serbian Armed Forces. The paper examines the disadvantages of models that have already been applied in the drill of the Serbian Armed Forces units, at the same time indicating the modern models of war games. The topic has been addressed through four items: 1) the term and characteristics of war games; 2) the elements of war games; 3) the structure of war games and 4) the application of war games in the operational planning process.

It has been concluded by the research results that war games are an integral and inseparable part of the operational planning process in modern armed forces and that they are implemented as various models for making decisions during the preparation and execution of combat actions and armed conflicts. The collected findings have shown that war games are an integral part of the operational planning process in the Serbian Armed Forces too, as well as that the level they have reached is not satisfactory and should be improved by being more comprehensively imple-

mented in commands and HQs, provided that automated command-information systems have previously been established. Ensuring that the above-mentioned conditions are met at all command and control levels would contribute to introducing a decision-making support system in an organized manner and improving the efficiency of the operational planning process, and thus making timely decisions while conducting missions and tasks of the Serbian Armed Forces.

Key Words: *War Games, Commands and HQs, Operational Planning, Conflicts*

Introduction

At the beginning of this century, many countries experienced rapid economic growth which was driven by numerous achievements made in science and technology, and first of all, in the field of information and technology. The economic growth was mainly driven by achievements made in the military industry, especially at the time of the division into blocs, and the arms race of the world's most developed countries. The situation like this resulted in a need to strengthen the function of strategic planning, and to permanently analyze the opponent's capabilities in order to come up with warfare models which would give commands and units the initial advantage and provide better conditions for operational development. The actual testing of models by implementing real exercise-related activities required the employment of considerable human and material resources along with enormous financial expenses, which resulted in a need to develop simulation and create war games.

War games were made on the grounds of the game theory and were primarily developed within military sciences in accordance with the scenarios made by possible belligerents. Most research on basic concepts of the game theory and structural elements of war games is based either on looking for answers to some military and security-related questions or finding solutions to specific simulated conflicts (for example: the Battle of the Bismarck Sea, the Game of Intimidation, the Game of Deterrence (Mukić, 2014).

In the Serbian Armed Forces, war games are generally applied in the decision-making process while preparing and conducting tasks from the first Mission, which refers to the defense of the Republic of Serbia from the armed threats. Depending on the purpose and type of commands, the decision-making process follows the standard operating procedures where all phases and steps of the operational planning process have been implemented in accordance with the relevant instructions and standards and criteria that have already been set up (the General Staff of the Serbian Armed Forces, 2017).

The experiences gained by commands and HQs of the Serbian Armed Forces in applying war games in the operational planning process indicate that war games have been insufficiently, inadequately and very often superficially applied, especially by the army branches, which do not take them into consideration at all. In order to successfully eliminate shortcomings, it is necessary to observe the role and importance of war games, as well as the possibilities for procurement of new software solutions and introduction of the already existing ones all the way down to HQs of the lowest tactical units, which will make it possible for command staff to be trained during preparatory activities and execution of all actions and counteractions.

If the systematic approach to the development of war games is applied in order to enhance the operational planning process in the Serbian Armed Forces, the conditions will be made for applying new operational methods in commands and HQs and more successful standardized procedures. By attributing greater importance to war games in the Serbian Armed Forces, a comprehensive approach to the operational planning process would be made possible, and thereby timely decisions would be made at all command and control levels.

Concept and Characteristics of War Games

Over the course of history, military sciences have constantly advanced, striving to be fully developed and following, in doing so, the other social and liberal arts, technical-technological and other types of sciences, including all their constituents.[1] The greatest problems in defining military sciences and their scientific disciplines have arisen while selecting the methods of military sciences and laying their foundations, where war games have very often been, as a matter of priority, discussed to be the only possible and the most eligible solution. The selection of the accredited methods of military sciences has been addressed by a lot of foreign and national authors, where the greatest achievements have been made with reference to theoretical development of tactics and operational art (Liptai, 1996).

War games were derived from games, which people find entertaining and which contributed to introducing people to each other, making them closer and outsmarting each other, with no intention of inflicting losses, injuries, etc. to the opposing party, but with the aim to win by making higher-quality decisions. The situations in which interests of two or more parties are entwined, confronted or conflicted are called conflicts. That is why we often say that the parties which make decisions are in a conflict. For example, in the game of bridge, the result of the game does not depend only on a move of one player, but of the other, as well. Their interests are in a conflict because both parties want to win.

This concept of a game is impossible to apply when various governmental and non-governmental stakeholders have the same interests, and are ready to exercise not only political and military, but also regular and irregular forms of strength and power. Bearing in mind that in each conflict losses are inevitable due to diametrically opposite goals of adversaries, a war game is a mechanism for testing the strength and in doing so its duration and intensity directly depend on the quality of the decision made. In some cases, the consequences of the decision being made depend only on one party, as it is the case when a commander makes a decision which route should be used by a unit to move in the operation of preventive deployment of forces. However, the most frequent decisions are the ones whose the consequences do not depend on one party only, but also on the decisions made by the other party, as well, which is particularly typical for armed conflicts.

By experience, it is well-known that the bloc-divided countries and the leading world powers have different approaches to the interpretation of war and the definition of the concept and categories of armed conflicts, which is particularly characteristic for the be-

[1] Science constituents: subjects, theories, methods and language.

ginning of this century with the emergence of hybrid threats and asymmetric forms of conflicts. Such a situation resulted in having different approaches to the perception of war games, particularly with reference to their concept. The available facts have shown that a great number of authors think that the equipment makes a key element in war games, while not so many authors think that a human element is a decisive factor.

Generally, a war game is a model trying to present an armed conflict as real as possible through a descriptive and prognostic character (Radinović, 1983). In this respect, the previous, already waged conflicts can be modelled by war games, which, in that case, mainly have a descriptive character, or some future conflicts which, generally, have a prognostic character. The descriptive character of war games is used to confirm the long-time practical experience or to explain the knowledge gained in the previous period. The prognostic character of war games emphasizes that war games are focused on the prediction of outcomes in the modelled conflicts by introducing various variables, as well by evaluating their effects, so that scientific conclusions can be made.

War games are characterized by specific attributes or properties which are based on the attitudes gained by experience and the results obtained in the process of confronting capabilities between the opposing parties (players). These characteristics are based on the impartiality of a war game and avoidance of the subjectivity by commands and HQs, because the information collected should not reflect the commander's wishes, but the facts which reflect the real situation and create a clear operational picture of the battlefield. War games are most often characterized by a lack of relevant intelligence information, uncertainty in estimating the situation and the risk in predicting our own and the opponent's future steps. Apart from the above - mentioned characteristics, there are a lot of others, as well, which primarily refer to the insufficiency of the strength and assets, i.e. the limitations in human and material and, quite often, spatial and time resources.

Bearing in mind the technological progress, as well as the rapid development of information technologies and their growing presence in modern armies, war games are gaining more and more importance in the operational planning process, despite the various attitudes with reference to their characteristics and concept. The above - mentioned trend will lead to the conditions in which war games will not be applied only for solving operational combat tasks, but also for solving tasks of civil defense, emergency management and other security-related fields.

Elements of War Games

War games have evolved through history and they are widely used in other fields, as well, not only the military one. Nowadays, there are war games developed for entertainment (hobby war games), as well as professional war games, which are used solely in the military field (Perla, 1990). There is a large number of examples of war games, which have been developed for entertainment (a hobby), and which imitate historical conflicts with great accuracy of the final outcome (Figure 1). Thus, a lot of hobby war games have a descriptive character with the aim to bring armed conflicts from the past closer to a huge audience of players.

Figure 1 – *Examples of hobby war games: left – the strategic war game of World War II World in flames; right – the war game Flames of War: the Battle of Normandy in World War II (Salute 2014 – World War II)*

The expansion of hobby war games has brought about the development of professional war games, but the tools and rules of hobby games are adjusted and used for the improvement of professional war games (Perla, 1990).

The necessary elements of a war game, generally, are: goals, scenario, database, players, rules, models (simulation) and analysis (Figure 2).

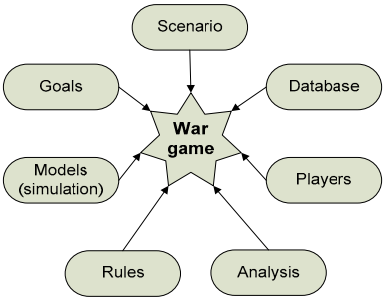

Figure 2 – *Elements of war games (taken, adapted and designed (Perla, 1990: United Kingdom Ministry of Defense, 2017)*

Goals of war games should be focused on collecting experiences and information required for conducting various processes related to security of countries, so that the desired situation is achieved. For example, during the operational planning process, the goals of a war game are set up in the phase of identifying required strength and assets, by means of which all conditions are provided for conducting the assigned missions and tasks. That is how the goals become guidelines for creating the game, and particularly for guiding players in the game.[2]

[2] Red player(s) will have their goals and blue player(s) will have different goals. Moreover, the goals of other actors can appear in a war game.

A scenario of a war game is a specific situation in which the players are placed and which has a decisive impact on all war game factors (Perla, 1990). The scenario can result from previous steps of the environment analysis and scenario development, i.e. classified and grouped factors from the environment, which have a decisive impact on a war game and their possible values. Furthermore, the scenario can be a product of the future steps of the environment analysis and scenario development, i.e. selected, interpreted and analyzed scenarios, which have been developed at a higher level[3]. In terms of hierarchy, high-level scenarios are the product of the morphological analysis-based methods and high-level war games. This is how the integration of the morphological analysis-based methods and war games has been established, being two techniques of the scenario development which complement each other.

A database comprises the information which players need to know, so they can make decisions while playing a war game (Perla, 1990). The database needs to have information on key factors and their values, as well as on some planning process products, and especially on analyses of adversaries and interested parties, analyses of strategy, concept and legal framework, as well as the identification of required capabilities and option development for achieving the required capabilities. In regard to key factors and their possible values, the selection of factors will, to the greatest extent, depend on the level of operations execution (Table 1).

Table 1 – *Types of factors found in the database with reference to the level of war games (Weiner, 1959)*

Types of factors involved in a war game	Type (intensity) of a conflict[4]			
	Duel	Battle	Campaign	War
Resources	X	X	X	X
Objectives	X	X	X	X
Military intelligence information	X	X	X	X
Environment characteristics		X	X	X
Background information		X	X	X
Logistics			X	X
Economy			X	X
Psychology			X	X
Politics				X
Other parties				X

In the low-intensity conflicts based on war games, such as duels, which consider a platform-to-platform situation, the factors describing the platforms themselves are important (for example: a number, tactical-technical characteristics, performances, etc.), as well as the objectives of each of those platforms and the basic intelligence information, which players should have about each other (Weiner, 1959) (for example: possible locations, the time of opponent's actions, the battle order, organization, support, etc.). The battles, which are

[3] Since the design of scenarios by using war games is, to the greatest degree, created for the purpose of the conflict scenario, higher level scenarios can be scenarios of the environment, threats and strategy.

[4] The break-up of conflicts by types (intensity) can be different, for example: by forms of combat operations, such as a fight, battle or operation (the Federal Secretariat of People's Defense, 1981); or by levels of objectives which have to be reached, at tactical, operational and strategic level (Djordjevic, 2012; General Staff of the Serbian Armed Forces, 2012).

high-intensity conflicts in war games, should, along with the aforesaid information, involve the background information, as well as the environment characteristics (Weiner, 1959). Campaigns, which are reviewed much longer than battles, should include the important information referring to logistics, economy and politics. War, as the highest type of a conflict, must include the information on political factors and other parties involved in war.

Models of war games are designed to transform the database data and players' decisions into events in a war game (Perla, 1990). While making a model, the following recommendations should be taken into consideration (Perla, 1990): the model flexibility, accuracy and uncertainty. Due to the complexity of war games, design of war games requires a combination of various models in order to increase the impartiality and reality. The selection of models, to the greatest extent, affects the establishment of war games rules. The theory of war games includes the following models (Weiner, 1959): mathematical, mechanical (computer-aided simulation), board games and umpired models.

Mathematical models imply that various mathematical models are applied and combined for the needs of war games. The application of mathematical models begins, in principle, with the methods of game theories (Weiner, 1959; Kahn & Mann, 1957), which later build on the mathematical methods for calculating the outcome. Mathematical models are based on developing and linking possible player's actions, as well as on using the data on the value factors from the database related to the characteristics of the strategy applied by both players, so the conflict outcomes can be calculated by applying the mathematical tools (Figure 3).

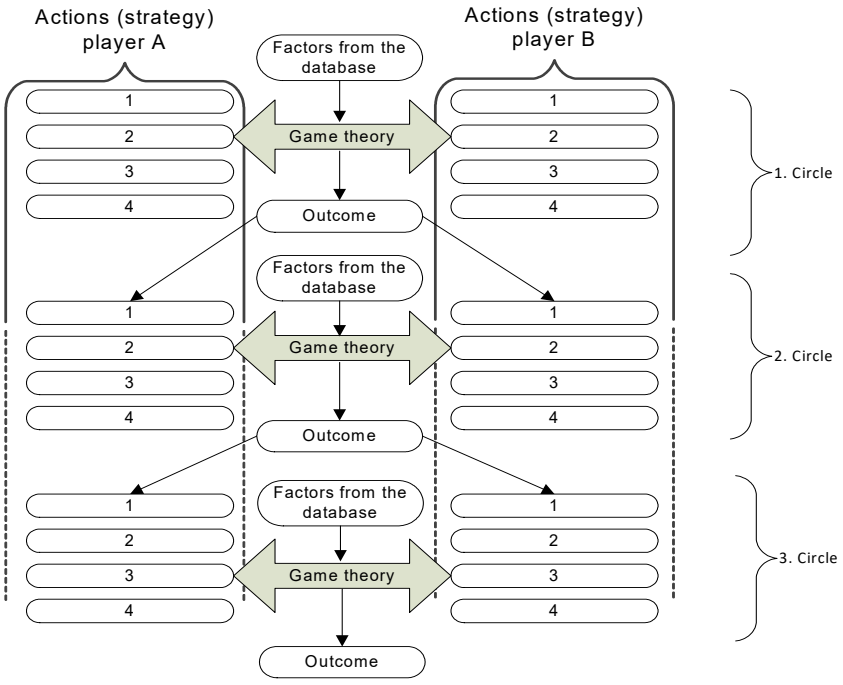

Figure 3 **–** *Mathematical model of war games – taken and supplemented (Weiner, 1959)*

By applying the methods which are based on the theory of games, the actions of one side are related to the reactions of the other side, so the form matrix of "the strategy of the player A" and "the strategy of the player B" is established, which presents a circle of the game (Weiner, 1959). Various combinations of strategies, i.e. actions taken by both players in one move will result in different outcomes[5]. The outcomes obtained should be in accordance with the required effects determined in the phase of identifying the required capabilities, so the war games are used to determine if some activities being implemented result in the required effects. The outcomes from the first circle have an impact on forming new strategies for both sides, the outcomes from the second circle affect the strategy for the third circle and it continues until one of the sides achieves the objectives. Professional war games are most often played by making sequential moves, such as action-reaction-counteraction[6] (General Staff of the Serbian Armed Forces, 217), i.e. the circle is made up of three moves made by players (the actions made by players A – the reactions made by player B – the counteractions made by player C)[7] (Figure 4).

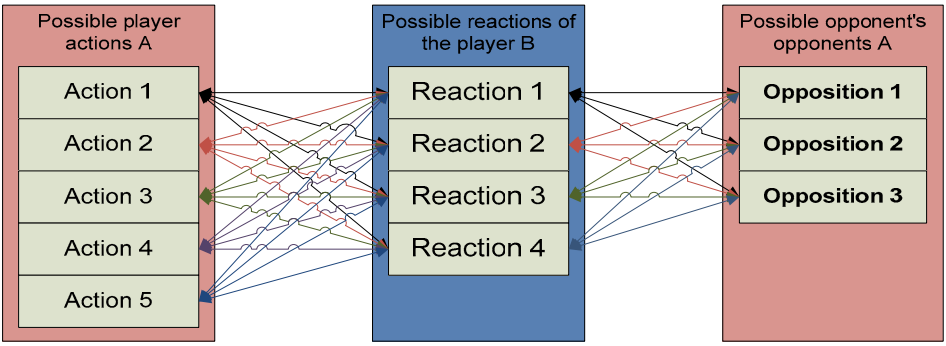

Figure 4 – *Possible movements made by players in one circle of a war game – taken and supplemented (Morgan, McLeod, Nixon, Lynch, & Hura, 2018)*

Every possible action of player A should be related to every reaction of player B, while every reaction of player B should be related to every counteraction of player A. Each of possible action-reaction-counteraction combinations in one circle needs to be

[5] The outcome provides the following information: if the player A plays strategy 1, and the player B plays the strategy 2, it will happen that… for example the player A makes *x* and player B makes *y* losses, etc.

[6] Actions of a player (actions-reactions-counteractions) are identified in the phase of identifying the required capabilities, but war gaming itself helps them to be identified, so a required parallel bond is obvious between the phase of identifying the required capabilities and the phase of analyzing the environment and scenario development, particularly in the domain of war games.

[7] Taking the objectives of war games into consideration, the player A can be either red or blue, which depends on the scenario, rules and objectives of a war game, but the red player is most often in the role of the player A, and the blue player in the role of the player B. Moreover, the sequence of players defining who of them makes the first move can be changed from one move to other, so one move can begin with the blue player, the second one with the red player and the third one with the blue player again.

evaluated from the point of factors which have the key impact. It can be seen that such a structure of actions taken by both players makes it possible for the morphological analysis to be used, so relevant morphological fields are here complemented with possible actions-reactions-counteractions. The morphological analysis can be used to test the possible intercompatibility (consistency) of the actions taken by both players, as well as the compatibility of the actions with key factors from the environment. The results of the morphological analysis can complement war games. That is how a parallel bond can be established between the methods based on the morphological analysis and war games.

Numerous mathematical methods have been developed and applied so far for calculating the outcomes. Since actions taken by both parties in one move put their resources in the interrelationship of conflicts, the mathematical methods based on the combat dynamics can be applied, i.e. Lanchester's equations, as well as more simple and practical models of calculating combat possibilities (Kovač, Dulanović, & Stojković, 2006; General Staff of the Serbian Armed Forces, 2015).

The mathematical models based on the combat dynamics take into consideration tactical-technical characteristics of platforms[8], the environment, as well as the information and assumptions about the conflict expressed by military intelligence information, on whose basis, they, by certain mathematical equations, calculate the outcome as the degradation of a specific platform, i.e. losses made by a party in a game (Przemieniecki, 2000), as in the case of the conflict of infantry units (Mitić & Petrović, 2015), unmanned anti-armor aircraft and armored personnel carrier (Petrović, Mitić, & Mudri, 2015), etc. The above - mentioned methods require a great number of experts from the field of mathematics and various military sciences to be involved. The mathematical models are not applied sufficiently in the Serbian Armed Forces because the methods based on the combat dynamics are not adjusted to be used by commands and HQs during the operational planning process, but they can be the good ground for the development of methods which are based on combat capabilities. On the other hand, the methods based on the calculation of combat capabilities take into account the same input data as the methods based on the combat dynamics, with the only difference of having simpler mathematical tools, which are based on the possibility of destroying the opponent, as well as on modifiers, i.e. coefficients of probability of decrease and increase, which depend on the environment where the conflict takes place[9]. The introduction of modifiers makes the calculations easier and enables the models based on combat capabilities to be used by commands and staff during the operational planning process, but the accuracy of the final outcome is lower than with the methods based on combat dynamics.

It can be concluded concerning the mathematical models that the measurement of outcomes is based on deduction, which can be presented as the if-then function:

$$\textit{if}\ ([\text{action A}] \wedge [\text{reaction B}] \wedge [\text{counteraction A}]) \Rightarrow [\text{outcome}] \qquad (1)$$

[8] Hit probability, rate of fire, radius of action, penetrability, range, rate of movement, kinetic protection, etc.

[9] For example, modifiers that reduce or increase the likelihood of destruction due to the effects of morale, capability level, terrain, the use of chemical and biological weapons, degree of preparedness, degree of land development and fortification and the like (General Staff of the Serbian Armed Forces, 2015)

Machine war games or computer-assisted simulation are based on the use of information technology and a game. Machine games have a database and maps relevant for war games and they use mathematical models in order to calculate the game outcome. All mathematical operations required for a game are processed by a computer according to previously set algorithms. With reference to machine war games, the following types of games can be distinguished according to the criterion of players participating in the war game (Weiner, 1959): machine-machine, machine-man and man-man war games.

A large number of computer-assisted war games have been developed so far, both for entertainment and professional purposes related to planning operations and conducting military exercises. Along with the computer simulation, a live one-sided or two-sided exercise can also be conducted by completing the war game database with the information[10] gathered in the field during the actual exercise (Sennersten, 2010), thus achieving the greater objectivity in the execution of the war game.

In the Ministry of Defense and the Serbian Armed Forces, the machine- (computer-) assisted war game of JCATS type is applied (Lawrence Livermore National Laboratory, 2018) – Figure 5. The JCATS software runs on the Linux operating system and represents a multi-sided, stochastic and interactive high-resolution simulation designed to model the interaction of forces, from joint forces to individual platforms. In JCATS software, players-users have different visual displays of JCATS during the simulation.

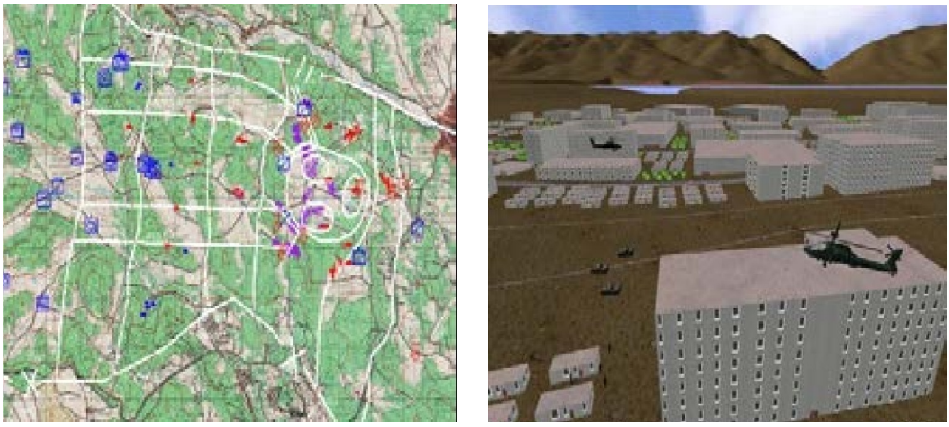

Figure 5 – *Examples of possible JCATS war games (Lawrence Livermore National Laboratory, 2018)*

[10] Information on the exact situation in the field can be entered in the computer war game either manually or automatically by using the telecommunication-information devices together with the devices for navigation, locators, fire and hit simulators and the like.

JCATS visual presentation is a physical model that includes all the parameters of the digital military topographic map (Military Geographical Institute, 2016)[11], as well as the database related to the characteristics of the combat platforms available to the players. The connectivity with the database ensures the accuracy in simulating reconnaissance and observation, as well as the accuracy of data collecting sensors, weapons systems, ammunition, vehicles, not only on the ground, but also at sea and in the air, as well as the connectivity with the real command-information systems (Lawrence Livermore National Laboratory, 2018). Based on the software algorithms, which are founded on mathematical models, the effects of the conflict are calculated and presented, which allows the examination of different decisions in the planning process.

Board war games are the most common model of war games that is implemented in military practice, especially because of its price and ease of production and use. The elements of board war games are most often a map (a board) or a topographic map of a certain scale, unit markers (Weiner, 1959), and often a grid that is placed over the map (Figure 6).

Figure 6 – *Example of RAND war game elements with the map, grid and unit markers – taken (Shlapak & Johnson, 2016)*

The maps used for playing war games can be topographic or relief maps of various scales (Military Geographical Institute, 1971-2001), which correspond to the area, where the combat operations are planned to be conducted, while the scale corresponds to the level of performance of the operations. Unit markers are most often two-dimensional cards made on cardboard, paper, plastic or other materials, and different types and levels of units are marked in accordance with the Instructions for Operational Planning and Work of Commands (General Staff of the Serbian Armed Forces, 2017). The grid is a transparent layer placed over the map, and it is recommended that it has a hexagonal form to allow the establishment of motion rules and actions of units in all directions, as well as the simulation of support to adjacent units (Figure 7)[12].

[11] For example: digital maps of the Military Geographical Institute (Military Geographical Institute, 2016).

[12] Unlike the quadrangular grid that allows forward-to-left-to-right directions.

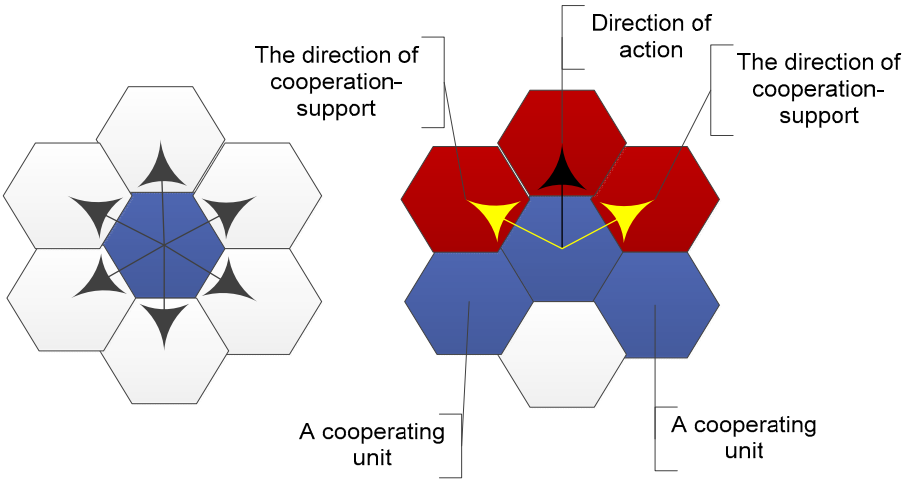

Figure 7 – *Example of the use of the hexagonal grid: left – possible directions for the movement of the blue player; right – possible directions of action and cooperation – support of the blue player*

The players in board war games are people, where there might be one man, teams or units at each side. Unlike machine games, players have countless possible actions they can take at their disposal (Weiner, 1959). Playing board war games is not possible without previously applied mathematical models, which establish the rules of board war games, and the calculations of combat capabilities are of particular importance.

Umpired war games are based on the assessment made by an umpire on the outcome of a player's actions. Umpires are usually the oldest and most experienced officers in commands-HQs. This type of games is applied when clear rules of the game are not elaborated, when there are no mathematical models that are used and when there is a lack of time as a resource (Weiner, 1959).The shortcoming of these games is subjectivity that can influence the assessment of outcomes, and give wrong information. Taking into account the practical experience gained on war games in the Serbian Armed Forces, which are described in the Instructions for Operational Planning and Work of Commands (General Staff of the Serbian Armed Forces, 2017) it can be concluded that although they are played on the map, these war games belong to a group of umpired war games due to the vaguely defined rules, as well as due to the assessment of the outcome made by umpires.

Rules are the next element of a war game that needs to be determined during the design of the war game. The choice of different models of war games will imply different rules, so the development of rules goes on concurrently with the selection and development of war game models. The purpose of rules in war games is to: dictate which models will be used and when; establish rules of connectivity between action, reaction and counteraction; provide the delivery of necessary information to players, as well as possible mistakes in information in relation to their reliability; determine the roles of players in a war game and the like (Weiner, 1959).

By analyzing a large number of sources dealing with rules, both professional and hobby war games (Exercise Aldershot Skirmish, 2016; Martin, 1982; KDV Technology & Consulting, 2004-2018; United Kingdom Ministry of Defense, 2017; McHugh, 1966; War games research group, 1972; First Battle Basic Rules, 1989), it can be concluded that some of the main rules of war games are based on the identification of the following elements:

– the flow of time, which regulates how long the cycle lasts and what the ratio of past time and movement by the coordinate system is;

– game sequences that regulate which player plays first and when, how many moves there is in one circle, and when the outcome of the circle is calculated (either after each move or when the circle ends);

– the size of the base because it specifies how much space on the map in relation to the grid elements a certain unit type and size occupies;

– detection radius and detection radius modifiers;[13]

– movement and movement modifiers, which define the rules of movement and regulate how many elements of a coordinate system a certain type of unit can pass in a unit of time, while modifiers change the number of possible elements of the coordinate system that can be crossed depending on the terrain, as well as the impact of various obstacles as movement modifiers and channeling of units;

– rules of direct and indirect fire and close combat, as well as fire delivering modifiers, which regulate the distances for each type of units when a direct or indirect fire occurs, as well as the distances when a close battle occurs because the modifiers determine whether and under which conditions the unit can achieve direct or indirect fire or be in close combat;

– the way in which the likelihood is carried out makes it possible to determine more precisely the probability of certain events and the way of their inclusion in the game (for example, the use of many-sided dice for playing is one of the ways of determining the likelihood of events in game theory - Figure 8);

– the hits and modifiers of the hits refer to the rules that specify when the goal is to be hit, and the different conditions that may affect the hit such as its modifiers[14];

– fire radii and radius modifiers refer to the effects that can be achieved at certain distances around the target center;

– ranges and range modifiers indicate conditions that can reduce or increase radius effects, and specify the range of certain types of weapons, as well as the different conditions that may affect the increase or decrease in range;

– target effects and effect modifiers are related to the scale of effects that can be achieved on a specific target depending on the weapon used for firing a target, as well as different modifiers that can reduce or increase the effects, etc.

[13] Modifiers increase the detection radius if some electronic and optical devices are used, i.e. they decrease the radius due to the impacts of terrain, part of a day, meteorological conditions and the like.

[14] For example, range, seclusion (shelters and revetments), morals, effects in case chemical and biological weapons are used, the target movement, the unit (platform) delivering fire and the like. When it comes to the rules of hits, the rules for direct and indirect fire, as well as close combat, have to be clearly specified.

Figure 8 – *Example of multi-sided dice that can include the likelihood in war games – taken (Memories from FRP, 2013)*

Players are one of the required elements of a game, regardless of a model being used. Even when it comes to machine games, i.e. computer simulation, the role of a man as a player making decisions about actions to be taken is inevitable. With regard to the number of players, war games can be with one player – most often computer simulation, with two players, which is the most common war game in the military with red-blue type and with multiplayers – red, blue, allies, neutral and the like.

The analysis is an element of a war game that is inevitable for professional games, and war games should focus on the analysis itself (Perla, 1990). The analysis of war games can focus on two aspects: the decision-making process, where the analysis focus is on actions made by players; and gathering evidence of certain events, where the analysis focus is on the outcomes, i.e. the effects (Perla, 1990). For the development planning process, both analyses are important and are related to the phase of identifying the required capabilities.

The analysis needs to be timely planned and human resources have to be provided, so that it can be conducted. The analysis process consists of two parts: the data collection, which is carried out during playing war games and the collected data analysis, which is carried out after the completion of games (Perla, 1990; War Gaming Department, U.S. Naval War College, 2015). When it comes to data collection, various methods can be used, particularly observation, content analysis, testing, and operational research methods (Radinović, 1983). For the purpose of collecting data, it is necessary to develop adequate instruments to collect data on players' actions in war games and outcomes of actions taken, which are relevant for the operational planning process.

The analysis of the collected data after completion of a war game includes the study of collected facts, data classification and categorization at a lot of levels of generality, data interpretation and data description (War Gaming Department, U.S. Naval War College, 2015).

Construction of War Games

The construction of war games is the most innovative and creative phase in the development of war games. At this stage, a large number of iterations are performed while the observed shortcomings are constantly removed in order to improve all elements of the war game. The models used during the construction of war games most often result from the requests submitted by a client, that is, by the entity that finances the project and directs the development of the war game scenario.

Taking into account the elements of war games, as well as the recommendations made in some books and related to the break-down of war game process into stages, one can conclude on the activities of the scenario construction steps when war games are used (Figure 9).

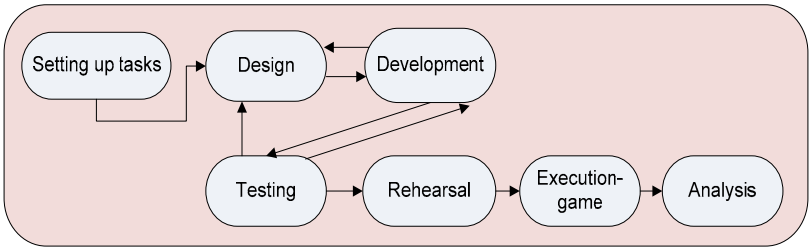

Figure 9 – *Construction of scenarios using war games – taken, adapted and supplemented (United Kingdom Ministry of Defense, 2017, War Gaming Department, U.S. Naval War College, 2015)*

Tasking is the first activity that determines the objectives of a war game for all players and the purpose of war games in the context of the development planning, and formulates the problem for which a war game is created. In the context of the development planning process, tasking is carried out on the basis of the phase of identifying the required capabilities, and particularly the analysis of key factors and the formulation of objectives.

The next activity is the design of a war game that primarily specifies the level of conflict, the number of players and the scenario. In this regard, the design is made on the results of the previous steps of the environment analysis and the scenario development phase, as well as during the scenario transfer.[15]

The development of war games refers to the activity that selects and develops models, specifies the rules of a war game, selects the methods of data collection and creates data collection instruments, determines preliminary data classification and communication in war games.

[15] Based on the results of the morphological analysis, where the scenarios developed by morphological analysis can be further developed in war games, or based on the results of the high-level war games.

The war game testing is an activity that integrates different elements of a game and checks their compatibility, and also the design or development itself is revised in case of a need. These forms of testing are more and more represented in open sources, and first of all between players on social networks (Saković & Terzić, 2018).

Testing refers to playing a game with real players in order to identify possible shortcomings and make the players familiar with the game.

Execution is the stage in which the game is played directly by the players following the rules of the game and making moves that produce certain outcomes.

War game analysis is the last activity of the scenario construction by war game application, by means of which the data is collected on the players' moves and outcomes of the moves and the reports are made. It is necessary to distinguish between the war game analysis and the stage of the scenario analysis, selection and interpretation. The stage of the scenario analysis, selection and interpretation requires players to try out more than one possible action in each move in order to get different scenarios based on different variants of use by both blue and red player. On the other hand, the war game analysis focuses on each individual variant of use, considering various actions taken by players and outcomes, so that the required skills can be identified. In this regard, the war games analysis needs to be made for each variant of use separately, as each will give different combinations of actions and outcomes (effects).

In addition to the scenario analysis, selection and interpretation, war game analysis data are also used to construct scenarios by using morphological analysis. The integration of the methods, which are based on war games and morphological analysis are conducted in the scenario employment (transfer) stage, when, based on the war game analysis, the parameters of the morphological analysis are formulated, and then the parameters are used in the scenario construction stage by using the morphological analysis.[16] In this way, a parallel bond is established between the methods of developing scenarios by using the morphological analysis and the methods of developing scenarios by using war games.

Application of War Games in the Operational Planning Process

Due to intensive changes in the strategic environment, many countries, insisting on the collective security system, have followed the trend of reducing financial expenditures for the development of their armed forces. In contrast, investment in modern telecommunications and information technologies has significantly increased in order to develop early warning systems for potential security challenges, risks and threats. This approach has determined the development of certain software solutions in the field of defense systems in the developed countries along with the prediction of potential scenarios in case of crisis and conflict situations worldwide. Regardless of security, economic, military and other forms of confrontation between states and military alli-

[16] For example, a parameter of morphological analysis can be: action, reaction, counteraction, effect, target and the like, which has been identified by war games.

ances, the scenarios are most often developed in the form of war games. The Republic of Serbia has the concept of total defense and military neutrality, and war games are exclusively within the framework of the employment of the armed forces, that is, in the field of engagement of the Serbian Armed Forces in order to conduct the assigned missions and tasks.

In the Serbian Armed Forces, war games are implemented in the fourth phase of the operational planning process – the analysis of employment variants.[17] In principle, war games identify which employment variants can conduct tasks with minimum losses and at the same time ensure that the forces maintain the initiative and supremacy in the planned operation. According to the Instructions for Operational Planning and Work of Commands in the Serbian Armed Forces (on temporary basis), war games are conducted in the HQs of the maneuver, special, river and reconnaissance units, as well as in the HQs of joint forces in the Armed Forces, while they are not conducted in other units, where the third stage in the operational planning (the development of employment variants) is directly followed by the fifth one (the comparison of employment variants). The process of analyzing employment variants (war games) is applied at all planning levels with the aim to help the commander and headquarters – the command to come up with a method of optimum employment of the unit combat power and, at the same time, to protect its own forces with the fewest losses.

In the above-mentioned correlations of operational planning, the role of war games is seen in selecting an optimum employment variant. The war games process provides an outline of the operation course and takes place according to certain rules and clearly defined steps, with full consideration of all key factors of actions and counteractions (human, material, special and time factors). While conducting analyses, commands and HQs inevitably rely on doctrinal attitudes, intelligence-security and other assessments, as well as previous training and war experience. The command conducts the analysis of employment variants through the continuous action, reaction and counteraction process, with which it encourages ideas and gives the picture of the state in the operations area and the wider environment. In this way, the command, by applying war games methods, ensures that major tasks are accomplished by connecting them to the combat capabilities of its own forces.

War games test the already-developed employment variants or improve them according to the analyses performed and the latest changes made in the operational situation. This means that the commander and the command staff can change the existing employment variant or develop a new one if unforeseen critical events, tasks, demands or problems are identified. For the sake of a proper and comprehensive approach to the implementation of the fourth stage of the operational planning i.e. the analysis of employment variants, the general rules, responsibilities of the staff officers and steps during the execution of war games are defined in advance.[18]

[17] The same.

[18] The Instructions for Operational Planning and Work of Commands in the Serbian Armed Forces (on temporary basis), defines eight steps of war games: 1) resources raising; 2) making the list of effective forces; 3) making assumption lists; 4) making the list of important events and decision items; 5) selection of war games methods; 6) selection of methods for marking and presenting results; 7) playing out military operations and results assessment and 8) briefing on war games (not necessary).

According to standard operational procedures, the operational planning process has been implemented at all command and control levels in accordance with the purpose and specifics of the Serbian Armed Forces commands and units, and thus the fourth phase of the operational planning process. When it comes to the steps of war games, the following steps deserve the special attention: work of the command during the fifth step (selection of war games techniques), the sixth step (selection of ways to record and display results) and the seventh step (the operation war-gaming and results assessment).

Within the fifth step, which refers to the choice of war games techniques, the operations officer in the command, i.e. HQ, selects the technique to be used in the further process of operational planning in accordance with the assigned time and mission specifics. At the moment, three techniques of war games – the belt technique, the in-depth technique and the technique of critical areas (boxing technique) are used at the operational-tactical level in the Serbian Armed Forces, each of them taking into account the area of interest and all enemy forces that affect the operation outcome. These techniques can be used individually or they can be combined (General Staff of the Serbian Armed Forces, 2017).

In the sixth step of a war game referring to the selection of methods to record and display results, the HQ, i.e. the command, writes and interprets data on the course of implementing the selected war game technique, on the basis of which it sets up the combat formation, coordinates the activities and, subsequently, makes plans or orders for the employment of units. The data are recorded through the synchronization matrix and a war games worksheet and, at the same time the employment variants are analyzed on the basis of the identified advantages and disadvantages.

Within the seventh step of a war game that refers to the operation war-gaming and results assessment, a commander and the HQ or the command try to predict the dynamics of combat actions, the action and reaction, and they analyze each selected event, identifying a task that the forces have to conduct at a lower level, and if necessary at two lower levels. The dynamics of war games does not decline in importance at this stage either, because the "action-reaction-counteraction" cycle continues until the important event ends or until the commander concludes that he has to change the employment variant, so that the mission can be conducted. During a war game, the command staff members analyze the risks for each employment variant, in order to obtain as realistic and objective indicators as possible. The results of the war game should provide all the elements necessary for making an appropriate decision, that is, to give answers to all essential issues and remove the majority of the commander's dilemmas.

One of key shortcomings of the existing instructions refers to the inadequate understanding and insufficient consideration of the employment variants in support units. By this approach, that is, by excluding support units from the analyses of employment variants at all planning levels, a complete operational picture of the battlefield is blurred and the conditions that can lead to making wrong decisions are created.

The role of war games in commands' operational planning process is of great importance because it represents a mechanism for checking the achieved level of the planning process and allows for the work of commands to be guided in preparing the elements, so that a commander can make a decision on timely basis. Basically, war games help the unit's commander use combat power optimally and at the same time protect the unit's strength with the fewest losses possible. The ultimate goal of war games is to select an optimal military em-

ployment variant. A special contribution of war games is made while analyzing the employment variants of maneuver units, for whose purpose numerous software solutions have been developed. War games represent an indispensable phase in the decision-making process of the developed militaries in the world, and therefore in the Serbian Armed Forces, as well.

Conclusion

The phenomenon of war games has begun to develop since the first conflicts in the human community. Throughout history, the everlasting aspiration of a nation to dominate the other one has caused the emergence of the first strategies and tactics of warfare. These forms of conflicts have mainly been fought over the territories rich in food and water, and later in other natural resources. Human nature has remained unchanged over the centuries, so the battle for domination still goes on, and the only difference is in the mechanisms that are applied to achieve projected goals. The greatest contribution to meeting strategic objectives is provided by countries through the strength and power, which they exercise in international relations in all areas of social life, and above all through exercising political, economic and military power.

In the field of standard armed conflicts, and according to the previously established set objectives, war games are conducted at strategic, operational and tactical levels. Irrespective of the implementation level and due to intensive development of information technologies, war games start to increasingly gain importance in the field of non-conventional conflicts. They do not only have the armed character, but also the hybrid one, because they represent the combined use of state regular and irregular forces in various forms of conflict. By this approach and partial relocation of war games from the standard battlefield into the sphere of civilian environment, that is, outside the operation zone, in the premises of certain power centers, the operational picture of the battlefield becomes increasingly complex under the conditions of dynamic changes in security challenges, risks and threats, and the defense of countries becomes more and more vulnerable, especially during asymmetric conflicts. The aforementioned changes in the strategic environment are one of the main reasons for the different approaches of the majority of authors to the conceptual determination and identification of key characteristics of war games.

The elements of war games are constantly improved, first of all when it comes to technology. It often happens that software games (hobby war games) that have been developed for entertainment quickly turn into war games, which, with certain modifications, are short-listed for professional war games. The current forms of war games are more widely applied than the conventional forms of warfare, which were characteristic for the conflicts in the past century. A special contribution to the development of war games, in addition to the development of weapons and military equipment, is made by the information technology, because, through social networks, it includes all social classes, even the whole population, into asymmetric forms of conflicts.

War games are a salient phase in the decision-making process in commands and headquarters of the Serbian Armed Forces, and especially in evolution units and special units. Insufficient development of the war game elements is a key problem in the process of implementing the operational planning process. The major shortcomings can be found in tactical units and are reflected in the lack of adequate models and the failure to establish clear rules for conducting a war game. In commands and HQs of arms and service units,

discrepancies during the implementation of the operational planning process increase, which is especially characteristic for the support units, where, along with the material-related, there are problems with the incomplete competence of junior commanding officers.

With regard to the development and construction of war games elements in commands and HQs of the Serbian Armed Forces, especially at the tactical level, the models showing how they should be used are not developed to the full extent because the economic base of training is slightly poor. This, to some extent, means that the ability of commands and HQs to analyze employment variants as real as possible is reduced in the operational planning process. In contrast, the conditions for the implementation of the operational planning process at the operational and strategic level are much better, primarily due to the introduction of some computer simulation, such as JCATS software, which is under the authority of the Training and Doctrine Department (J-7) of the Serbian Armed Forces General Staff.

The role of war games in the operational planning process is very important, although they are not sufficiently implemented in commands and HQs of the Serbian Armed Forces. Under these conditions, commanders of tactical units are forced to resort to improvisation and implementation of shortened work methods in the decision-making process due to the lack of adequate software solutions and models for the implementation of war games.[19]

By fully understanding the role of war games in the operational planning process, by training the commanding staff to implement the modern methods and management techniques, and by introducing adequate software solutions to the Serbian Armed Forces commands and HQs, the decision-making process can be significantly improved. By this approach, the rationalization of resources and risk reduction are ensured, and units' commanders and temporary formations are provided with necessary conditions for making timely decisions.

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TRAINING OF COMMAND STAFF FOR THE USE OF UNITS IN CRISIS SITUATIONS BASED ON THE APPLICATION OF MODERN TECHNOLOGY*

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Crisis situations of the last decades occupy a significant place due to the consequences they create (expressed in losses that amount to hundreds of human lives and enormous amounts of money). Management in such crisis situations is conditioned by a large number of factors that need to be analyzed in detail during the preparation for prospective (expected) future crises. A possible way of reducing the consequences is the preparation of command management staff for such situations. Preparations based on the application of modern technologies (remote and simulation software) significantly result in better training of command structures for response and handling crisis situations. The required quality is achieved through the application of the distance learning platform, where individuals choose the time and place of learning, which creates the conditions for more focused and higher - quality training on simulation software. The Janus simulation software has been used in this paper. It enables training people (through different scenarios) to respond in different situations. An unlimited number of repetitions of different or the same scenarios allow people to train to respond to an unlimited number of different situations.[1]

Key Words: *crisis situations, modern technologies, simulation software*

Introduction

Crises (caused by various factors) create different crisis situations that, as a result, often include numerous human lives, endanger human health and leave major material damagedue to destruction. In order to prevent, eliminate and reduce the conse-

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quences, it is necessary to undertake preventive and other measures, actions and procedures that would significantly influence the reduction of the consequences.

In accordance with the defined missions and tasks, the Serbian Armed Forces have the task to preventively influence and respond to different crisis situations. The answer is the manifestation of power and the performance of various operations. The training of command staff for carrying out operations is of paramount importance. The application of modern technologies (software solutions for distance learning and simulation of different situations) provides possibilities for better, more efficient and less expensive training of command staff.

The paper presents the possibility of applying the "Moodle" platform for distance learning and the JANUS software package for training officers in the decision - making process for engaging units in different operations. These technologies enable the preparation and training of personnel for planning various types of situations, simulating and performing operations without the use of resources and providing a real operating environment.

General on crisis

The term crisis has a wide range of applications and therefore a large number of different interpretations [22]. Interpretations from the medical, economic and social sciences point to a "difficult, comprehensive disorder in social, political and economic life, from which the exit is usually very difficult and usually long-lasting" [41]. Arjen Boin and Paul Hart have given a definition of the crisis as one of the comprehensive definitions of the crisis, which can be applied to various disorder and decision-making needs. They say that it is an "unpleasant event", which represents challenge to decision-makers, tempting them to act in conditions of endangerment, time constraints and unwillingness" [3]. It is important to note that the definition has two important characteristics. It can be applied to all types of disorder, which condition a multidisciplinary approach in understanding the crisis and directing attention to decision-making [36].

It is precisely the fact that there is an unpleasant event that is often perceived as a threat to give the spectrum of application of the term to everyday problems such as climate change, changes in pension funds, threats of mass destruction caused by natural disasters, financial collapse of the market, fears caused by potential warfare, the fear of spreading deadly viruses, the possibility of a sudden terrorist attack, the placing of war danger, the outbreak of armed conflicts, etc. In other words, "crises are a unique combination of weaknesses of the system, internal pathogens and climatic factors, of political and social nature" [41].

United Nations (UN) interpretation of crisis involves an extremely broad spectrum and type of events that can be physical, social and cultural in nature and occur during short or long periods of time. Like disasters that cause them [7,30], the disaster typology includes "different categories of slow or fast, concentrated or diffused, known and unknown, social/cultural/natural/technological/human, liner and complex, local/national/crisis – in short, the variety of typology of crisis situations is broad" [25]. It is important to point out that the transformation of the approach to security began to change at

the end of the 1980s (with the military threats ceasing to be central threats to state security and in addition to the state new subjects and security structures have appeared at the forefront and made the country lose its central primacy). The attention has spread from military to non-war areas (human rights, climate change, political and economic stability) and focus has shifted from the state to individual, society, region, international system and global society [27].

The overall complexity of crises and crisis situations imposes a need to consider the possibility of preventing or appropriately preparing certain forces for a timely task in the event of crises and crisis situations. Considering the need for rapid response, the availability of resources of enviable capabilities, the existence of the clear organization capable of effectively responding to the crisis situation and its successful resolution with minimizing the consequences, a clear focus on the need to engage the capacities of the Ministry of Defense (MoD) and Serbian Armed Foces (SAF) has arisen. In accordance with the aforementioned and performed analyses, the missions and tasks of the Serbian Armed Forces have been defined.

MoD and SAF undertake activities aimed at training commanders for crisis situations caused by immediate war danger, the need to counter internal threats to security, terrorism, separatism and organized crime or emergency situations caused by natural disasters, technical and technological and other disasters.

Ministry of Defense and Serbian Armed Forces in response to crisis situations

In accordance with their missions and tasks, the Serbian Armed Forces, as an integral part of the Ministry of Defense, are used when implementing different types of operations during response (unit engagement) to various crisis situations. Accordingly, operations are defined as "a set of combat and / or non-combat activities, movements and other actions undertaken by a single idea, alone or in cooperation with other defense forces, in order to achieve a general objective of a different nature" [12]. A type of operation is the operation of support to civilian authorities in countering unarmed security threats. It is performed in case of natural disasters, industrial and other accidents and epidemics. For the success of the operations, it is necessary to have "direct cooperation and coordination with the state authorities that run all forces in the affected area and the use of fully-equipped and equipped units of the Serbian Armed Forces" [12]. Crisis situations are an environment where security sector forces can present their value and usability because the crisis management process is an integral part of the overall management and management system and cannot be separated from the general planning process [20].

Operations are planned, prepared and performed with a constant assessment of future performance [21] and, in principle, they have the following stages: preparation, performance, stabilization and disengagement. Planning of operations is carried out during the operational planning process that defines the sequence of steps by stages and steps with "precisely defined and distinct responsibilities at the planning levels" [40]. Planning is "followed by a constant need for making, more or less significant decisions (that the lives of people depend on), which puts commanders of different levels, under constant

pressure" [5]. Harmonizing the efficiency and cost-effectiveness of the use of forces during the operation is becoming an imperative and one of the main indicators of the successful implementation of military operations [39].

In order to reduce the possibility of errors, each decision-maker is trained to work on decision-making in a variety of conditions [31, 13, 4]. For this reason, career education of senior officers is organized, during which contemporary practice is analyzed, compared with experience and historical events. The acquired knowledge is the basis to approach problem solving (decision - making on resource mobilization in achieving set goals) and subsequent check of the decisions made in the simulation center.

With the use of modern technologies (presented through different distance learning platforms or simulation software), the command staff gets acquainted with modern practice and follows the degree of development and application of achievements, adopts new knowledge, prepares and trains by applying the appropriate simulation representation of the reality of newly emerging situations (with a large number of unknown and aggravating circumstances), makes decisions and evaluates them (checking).

Modern technologies

The modern environment has imposed the application of various forms of modern technologies (especially Information and Communications Technology – ICT), which at the same time have a significant impact on education, as "the main driver of the development of the educational process" [6]. These include computer hardware and software, as well as electronic communications tools used to collect, process, store and exchange information, including appropriate services and content [6]. The often mentioned option is e-learning. E-learning can be defined as "the application of ICT in the teaching / learning process in order to improve the teaching process" [14]. Due to the scope of work, attention is focused on e-learning (broader concept – allows learning in situations where the computer does not have the Internet access – not online or only on a local network without the use of the Internet [43]),etc. "Online" learning (narrower term) represents learning organized through the active use of the Internet. The use of these methods of distance learning model is carried out in order to acquire knowledge, skills, attitudes and values of students, with the communication of the actors, to a certain degree, with the help of various media and technologies [6].

As a result, it is very often the case that distance education is identified with the so-called "online" learning. Such a factual situation has been imposed by increasingly complex requirements, directed towards the design and implementation of the e-learning system [24].

It is precisely the availability of a large number of materials that allows a significant number of students to study using particular distance learning (outside the place where the higher education institution is located). We can often meet the term "Distance Education" (e-education), which "represents the system and process of connecting users with distributed educational resources" [35]. In addition, the term "distance learning" (along with Distance Learning, Distance Training, Distance Education, eLearning, Online Education, Blended Learning ...), which represents an approach to open access to education and training, releasing students from time and place constraints, offering flexible learning

opportunities for individual and group learners [8]. It can be described as learning that involves the application of information, computing and communications technologies in multiple locations [44].

The mentioned electronic contents are also called educational materials in some papers [8, 9, 10, 34, 35]. As such, they are the most important element of distance education, since they represent the main source of new knowledge and skills. In addition, they have another role presented as flow controllers, since each participant is led through the training process and directed to the desired goal. Therefore, their role is very complex, and the impact on the quality and outcome of distance education is crucial [10].

The aforementioned information technologies make it possible to apply the Distance Learning System (DLS) using the Internet and Intranet to interact with content users, lecturers and other users. The distance learning system enables the complete management of courses on the Internet, as well as interactivity, two-way communication and data exchange. Developers use PHP, MySQL and Java Script for development. On this occasion, it is important to point out that Serbia is not in a big backlog compared to the countries that have previously started implementing the distance learning system. This can be proved by the establishment of the "Academic Network of Serbia – AMRES", which is primarily the scientific, research and educational computer network that provides modern information and communications services and connection to the Internet for its members. In the early 1990s, AMRES was created by connecting several major faculties to become the most modern computer network in Serbia with more than 150 connected research and educational institutions. The academic networks of Serbia today have over 200,000 active users [16]. In 2007, AMRES launched a project for the introduction of e-education in many faculties. It was decided to apply the open – source distance learning platform for distance learning Moodle. A large number of educational institutions have embarked on this project in order to increase the quality of their own teaching and successful study.

In order to improve study, different Learning Management Systems (LMS) are used in this way. The systems' basic task is to enable a professor to easily design, organize and present the course. The interfaces used both by teachers and students have to be simple, intuitive and user-oriented. Learning Management Systems are Virtual Learning Environment (VLE), commonly referred to as Learning Management System (LMS), Learning Support System, or Learning Platform (LP)... [2]. Simultaneously, modern technology allows the use of different types of simulation software to check individual decisions, modalities of the use of resources (units), or exercise individuals in the execution of complex actions (without the possibility of injuring a person or damaging the means used in the exercise).

Distance Learning Platform – Moodle

Distance Learning Platform Moodle (creator Martin Dougiamas) is an open-source Course Management System (CMS) or a software package whose platform is based on the free code supported by MAC and Windows OS [23]. Moodle is used by universities, schools and individual instructors to improve the courses using Web technologies. More than 18,000 educational organizations around the world use Moodle to enable on-line courses and replace traditional face-to-face courses [9].

The name Moodle has two meanings. The first is the acronym of the Modular Object-Oriented Dynamic Learning Environment. The second meaning is related to the word moodle, which in Australian slang means "overtaking some idea in the head, until it is viewed from different aspects".

The need to use this platform at different levels of education (from undergraduate academic studies and through various levels of career development) has imposed the need for more complete understanding of the platform's characteristics. The features of this software package are: high availability (possibility of serving a large number of users), scalability (the ability to increase the number of users without falling in performance), easy programming environment (the user adjusts very quickly to software capabilities), interoperability – the ability to connect without modification with most operating systems (Unix, Linux, Windows, Mac OS) or all operating systems that support PHP and databases. Data is in the database that can be set up on MySQL, PostgreSQL, Oracle, Microsoft SQL Server) [23].

In addition to the aforementioned features, it is necessary to emphasize certain advantages in practice, which indicate the following characteristics [46]: extremely simple procedure for the use by all participants; work on the Intranet and Internet variants; creating, linking and distributing courses and tests; defining the conditions for conducting training by the user; the high level of interactivity between the application and the user; tracking the ordering of the course users; accessing modules from any networked location in accordance with the access hierarchy; independence from server platforms and software tools (Open Source Technologies); the use without special requirements for the configuration of workstations and servers; the use of different Browser applications; the connection to the existing databases, the existing or new information systems, the input of the existing learning materials or the materials of independent authors.

Simulation software

Simulation software is often connected and replaced by the term simulation (latent simulatio – converting, blurring, displaying a real state differently than it actually is, as well as a method that determines the behavior of systems, models and the like, under changed conditions) [42]. According to Shenon, simulation is "the process of designing a real system model and conducting an experiment with that model to understand the behavior of a system or evaluate different strategies (within the limits of the given criteria or a set of criteria)" [37].

The syntagm "modeling and simulation" means a set of activities that construct a model of the real system, after which the dynamics of such a model are simulated on a computer. Each model represents a simplified image of reality, which does not include all aspects (elements and relations) of the real system. In addition to the static structure, each model has its own dynamic aspect, which can be determined analytically, numerically or by an experiment. The experimental determination of the behavior of the model is called simulation. If the experiment with the model is done using a computer, then it is computer simulation, and the model itself, which is then given in the form of a program

for a computer, is called simulation [32, 45]. Computerized high-resolution simulation represents an information-logical environment that challenges and encourages commanders and members of the tactical unit command [29].

The study of the physiognomy of crisis situations in which different operations are carried out, with all the complexity of phenomena and manifestations (during the state of emergency) imposes a need for more complete examination of the problem. The nature of the resulting situations with the complexity of conditions and the danger of resources (especially human and material resources) prevent the delivery of research (experiment) in real conditions, which imposes the need for the application of appropriate simulation as the key element for achieving progress in engineering and science" [1].

The application of simulation during the training of units for assigned tasks has been accompanied by a significant number of indicators that were written by Janković R. and Nikolic N. [19]. The existence of a large number of different types of simulation and computer models [15] enables their classification according to different criteria and in many ways. [28] The possible division can be done according to purpose; vision and gender; human involvement; treatment of coincidence; use of technology and others [29].

Problems about verifying certain assumptions or decisions are also recognized in other countries of the world. Therefore, they work on the improvement of the developed systems such as the following software: BBC, CBS, TACSIM, WARSIM 2000, SPECTRUM, EINSTAIN [5], JANUS, JTS (Joint Tactical Simulation), ABS Battlefield Simulation, HORUS (HLA Operative Relay Using Sockets), while some countries work to develop simulation packages of similar characteristics to their needs: Netherlands, United Kingdom, South Africa, Sweden and even Chile [18].

Simulation software JANUS

JANUS [26] is the constructive simulation software designed to train command structures and in particular a command team in which realistic suppositions (combat or non-combat) are created and it gives a complete picture of an operation of a different level (tactical or aggregated tactical). The resolution of the model goes to individual means (tools, weapons, vehicles or other means) and the maximum number of resources is 400 and 1200 units in the defined space. It was created in the 1970s, and so far it has been modified in several versions. Currently, the JANUS (T) version is used for training in combat operations and providing assistance during natural disasters. The important characteristics of the software are six-sidedness, independence, openness (closeness depending on needs), interactivity, unpredictability, field-combat simulation characterized by precise color graphics, real-time processing and processing based on scientific and empirical results [17].

JANUS system provides the possibility of repeating the entire "operation" or certain segments, the execution of time jumping and skipping certain segments. The ability to automatically record all activities (actions, movements, communications between all participants in the operation) and re-display allows for a better and more complete analysis of participants` activities in the simulation (Figure 1).

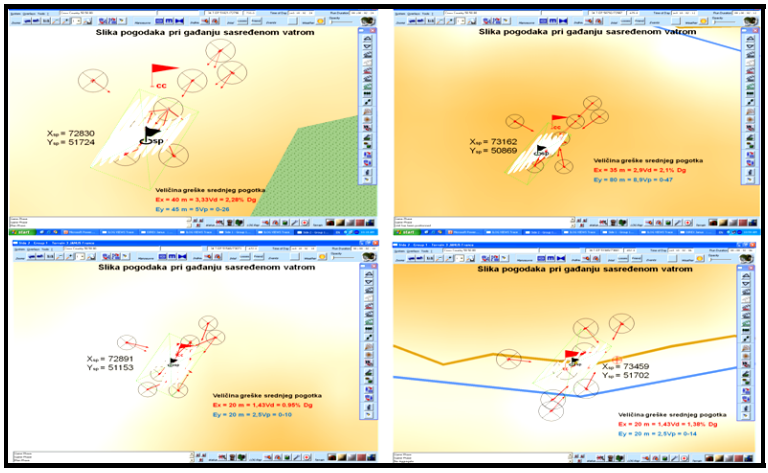


Figure 1 – *Automatically recording different results of a firearm model [33]*

The characteristics of the computer system enable the reliable determination of quantitative indicators that support decision-making (Table 1).

The advantage of the system is expressed in the precise determination of the capabilities of the resources and personnel in tasks in accordance with the type of operation, as well as the subsequent determination of the possibilities due to the need for adequate grouping of forces for the expected hazards, in order to ensure the conditions for successful performance of the set goals.

Table 1 – *A comparative overview of the results obtained by simulation [33]*

Broj simulacije	Vrsta minobacača	Priprema p/e	Vrsta vatre	SREDNJA VEROVATNA GREŠKA					
				po daljini			po pravcu		
				m	*Vd*	*% Dg*	*m*	*Vp*	*0-00*
S-1	82 mm M69	skraćena	*sasređena*	90	5,3	4,3	70	6,4	0-31
			za širinu cilja	90	5,3	4,3	70	6,4	0-31
S-2			*sasređena*	110	6,5	7,14	60	7,5	0-39
			za širinu cilja	120	7,1	7,79	70	8,75	0-45
S-3		potpuna	***sasređena***	**20**	**1,43**	**1,38**	**20**	**2,5**	**0-14**
			za širinu cilja	**20**	**1,43**	**1,38**	**20**	**2,5**	**0-14**
S-4	120 mm M75	skraćena	*sasređena*	40	3,33	2,28	45	5	0-26
			za širinu cilja	40	3,33	2,28	100	11	0-57
S-5			*sasređena*	35	2,9	2,1	80	8,9	0-47
			za širinu cilja	35	2,9	2,1	80	8,9	0-47
S-6		potpuna	***sasređena***	**20**	**1,43**	**0,95**	**20**	**2,5**	**0-10**
			za širinu cilja	**20**	**1,43**	**0,95**	**25**	**3,12**	**0-12**

Different data (calculated, processed and prepared by the decision maker) are necessary factors for realistic consideration of the capabilities of forces that the decision-maker can base his decision on, engaging the available forces that are important for the calculation of the capabilities of forces. Results – the data obtained from the calculation are in function of the decision made.

Training of the command staff for use of units in crisis situations assembled by the application of modern technology

Training of the command staff to use a unit in operations is a very complex and demanding process. This process is complex due to the fact that situations and their characteristics cannot be realistically presented and repeated. There is a wish to have high-quality training in order to protect the trusted resources, which creates the danger of the influence of subjectivity during the evaluation of the adopted solutions.

The way to overcome the presented problems is to use the tools that modern technology offers. The combination of training methods (which precedes learning), while innovating the capacity of modern technologies (simulation work or simulation), suggests the existence of realistic opportunities for achieving success at the end of training. The application of these tools and capacity allows the time necessary for the career development of participants and listeners to be organized in an optimal way. It is possible to create conditions that guarantee full commitment to the assigned tasks defined as the focus of preparation of future participants for the content that will be conducted during their training. For this part, the Moodle platform for distance learning is optimal.

The application of the above - mentioned characteristics of the platformcreates the opportunities for assigning tasks (general and specific), organizing forums (course participants), downloading documents (files), implementing evaluation process, instant messaging, activating calendar of course activities, presenting online news and announcements (at school level or within a group), setting quizzes for organizing certain types of competition and recording pages of documents in pdf format. In case of need, course - platform managers in cooperation with software developers have the authority to add and extend the functionality of Moodle software.

During the organization and conduct of distance learning, in addition to the above - mentioned characteristics, the following indicators of this kind of training of the participants have also been noted: the course attendance is not conditioned by the place of teaching, the participants are selected by the course participants, the course attendants do not have the cost of attending the course (do not travel outside the place of employment), the institution that organizes the development is exempt from a part of the costs (food, accommodation, energy), the quick availability of tutorials, the teacher has the opportunity to receive current information about the engagement of students during the course and remote access to the arrangement of the course, the participants have the opportunity to self-organize learning time, application and overview of necessary multi-

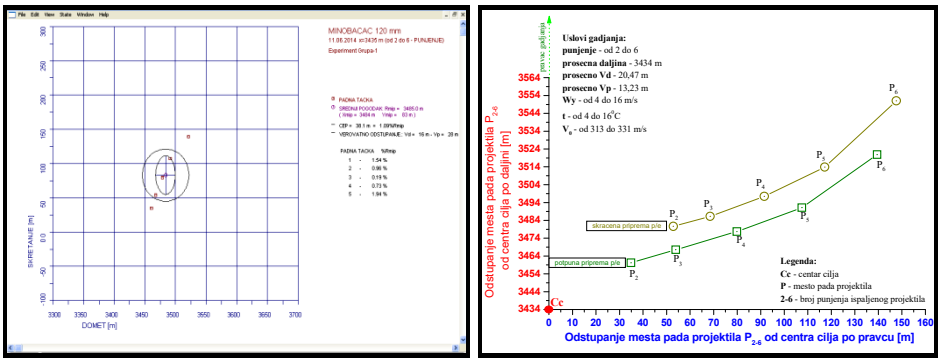
media materials in accordance with the available time, the possibility of unlimited listening to lectures and review of the presented material, the current availability of results (tests, colloquia), fast availability of terms and vocabulary. The characteristics of the platform are presented as an advantage for the students and at the same time offer significant opportunities for the teachers. The advantages are expressed through the possibility of preparing appropriate materials that will be available to future students from any place in Serbia and the world. The prepared material, distributed in the presented way, can be studied in accordance with the available personal time in an unlimited number of times and can prepare for the elimination test. Testing can be organized within a defined time period provided by the subject teacher. If the participant did not proceed to the examination or did not successfully learn it in the foreseen periods the student continues with the study of the submitted material until the next test term. The students who have moved to the next level may in consultation with the subject teacher proceed to study the next material and prepare for the next test.

The aforementioned characteristics and advantages of the platform with a responsible approach create opportunities for processing a part of the theoretical content of the subject outside the Military Academy, which makes the time spent at the Military Academy relieved of theoretical contents. At the same time, additional time is created during the course at the Military Academy, which can be directed to better solve a wide range of complex problematic tasks and processing of materials that require professional guidance of teachers through teaching.

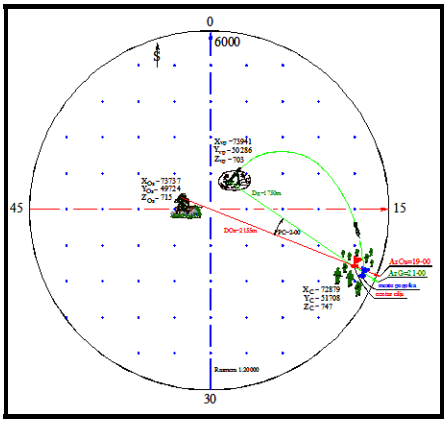
The first step in the preparation of command staff has been designed in the personal preparation of the students (distance learning), which created the conditions for conduct of training through simulation software during the course at the Military Academy.

The next step in the training of command staff is the elaboration of the scenario for exercising. In the development of scenario it is possible to engage a large number of experts from different fields (defense, police, health care, governments) to give the scenario a realistic picture of the facts on the ground. The scenario can be made by modeling problems based on experiential indicators and results obtained by numerical simulation of various programs or experiments (Figure 2). This conceptualized scenario allows for the creation of different problem situations that participants have to perceive, analyze and prepare adequate solutions.

For initial levels, scenario is encapsulated with smaller and simpler problems in order to get familiar with the work system and the potential provided by the simulation software. With the subsequent exercises the scenarios introduce "more complex" conditions and problems. Problem situations that the student has to solve (the problem occurs at night, in conditions of adverse weather conditions (precipitation, low temperatures), sudden occurrence of a flood wave, earthquake of certain strength, sudden appearance of refugees in the zone of operation, infiltration of terrorists acting for the needs of enemies, the appearance of civilians who cooperate with the enemy forces , the impact of hostile aviation, the aggravation of the situation due to reversible and irreversible losses caused by psychological problems, etc.) are based on experiences and generated problems that can be expected in accordance with the following developments.



a) Results of numerical simulation in FORTRAN b) Results of numerical simulation in ORIGIN 5.0 Server



c) Results obtained by experiment-shooting on the firing range

Figure 2 – *Modeling the problem for the production of scenarios using the results obtained in different ways [33]*

Command staff is prepared to review the situation in time and complete the picture of events in order to make a high-quality decision. Decisions made at a given moment should not be ambiguous, on the contrary, they have to be clear and practically feasible. They do not have to appeal to the majority, but they are necessary for maintaining peace, stability and success in rescuing people and material goods [37]. Commander with his assistants and headquarters should plan the engagement of forces and resources bearing in mind predictions for future events, while respecting the principle of the necessary reserve.

The influence of the media and public information is also included in the scenario. The seventh power should use its strength to calm the situation and tensions of the population. When it occurs, the commander has to "bring security and confidence to the authorities and his abilities" [37].

The scenario provides a wide range of engagement of the available resources of the SAF units on various tasks such as airborne and land survey, evacuation of the popula-

tion by air and land (river) through the use of various means (helicopters, boats, amphibious conveyors, motor vehicles, engineering machines), reception and care of vulnerable persons; reinforcement of embankment, transport of embankment materials, setting up crossing points (engineering machinery), biological decontamination, veterinary supervision, removing material from communications generated by the landslide and interrupting traffic, establishing new road routes to cut-off areas of municipalities, medical care and preventive protection of the population (by establishing light field hospitals), realistically setting up the available forces in accordance with the decision, response to the enemy's action, making various types of obstacles, overcoming different natural and artificial obstacles, organization and establishment of decontamination cells and stations of veterinary control. In addition to the aforementioned software, during exercising it enables a real representation of the enemy's action in a realistic manner, which reduces the possibility of subjective assumption of the enemy's actions (as when exercising tactile tasks on the map). It is precisely the fact that the forces of the enemy or changes in the environment (caused by the influence of a flood wave, the influx of refugees into the operation zone, the earthquake, the psychological impact on the human being caused by the propaganda effect) impose the need for continuous monitoring and analysis of the different results that the simulation software can display. Data can be expressed as the number of the engaged people, the number of people who were "thrown out of the machine" due to mental trauma, the number of people who have returned and irreversibly injured and diseased ones, the number of engaged combat and technical means, the degree of correctness of the assets involved (at the same time, it is possible to see the cause of the failure - a walkway or a motor or a firebox), the amount of ammunition consumed by species, the amount of material to be transferred, the number of persons transported, the delay in the execution of a certain movement conditioned by the quality of communication (poor communication or terrain coverage, if it is moving beyond communication,; time of navigation if the movement is carried out in a river flow, the delay in landing due to difficult or improper landing, the degree of influence of the flood wave on the execution of the set tasks, the surface area affected by the flood, the number of objects to be evacuated, etc.

The work of command staff and subordinates when performing tasks has to be organized and followed by a telecommunications system. It is precisely the transfer of commands and reports to be recorded and monitored the timeliness and regularity of issuing orders reporting on the situation and the level of orders executed. Analyses allow examination work of the commander and the commands, as well as subordinates, during the conduct of the defined assignments.

Conclusion

Engagement of the available resources of the Serbian Armed Forces for various tasks in crisis situations is conditioned by the quality and top-level capability of command structures. Previous experience on these tasks indicates that the implementation of such complex tasks has come very seriously and professionally. The experience gained in previous engagement poses as an imperative the obligation to improve the training and capability of the command

staff to respond in such and more complicated situations. The reason for this is the fact that the command staff has to constantly prepare for more complex and dangerous situations based on the experience acquired and its implementation in order to improve the future work. Simulation software is implemented to create complex and uncertain situations and offer a possible solution in order to accomplish the set request. The situations thus created indicate that the command staff should constantly think about possible solutions.

The advantage of simulation software is presented through the possibility of creating crisis situations without the possibility of damage, losses and other disasters on the ground. Moreover, regardless of resource savings, it is necessary to indicate the fact that it is possible to do countless repetitions and the next scenario will not be the same as the previous one. This allows for a variety of situations and makes it impossible to enjoy the view that everything is known and that there is no surprise. Such an approach requires the students to improve their care and attention in solving the defined assignments.

One of the possible ways to evaluate the quality of the simulation software or model that training is conducted through is the observation of the participants. It is often said that the situation created in the simulation model is unrealistic or demanding and that it is ahead of its time. These situations are important for the reason that the command staff has to be prepared for some new situations that have not been represented in the previous practice. The following questions related to the situations that are mismatched in their entirety arise: Is it realistic to expect that an enemy or natural disaster will always act in the same way or use the same composition and strength? Is it realistic to expect certain changes?

All the above-mentioned is the starting point for the work on the application of modern technologies in order to train the command staff for decision-making in simulation models for the sake of better and cheaper preparation for the following crisis situations.

The importance of the paper is reflected in the obligation of the teaching staff to constantly engage on improving the educational process and training the command staff for decision-making in various crisis situations.

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THE IMPORTANCE OF A STRATEGIC PARTNERSHIP FOR BILATERAL RELATIONS*

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This paper aims to determine a way how to assess the impact of a strategic partnership on bilateralism and check that impact. In that sense, the strength of strategic partnership influence on bilateralism areas has been probed. In order to check the impact the research has been conducted on the case of the strategic partnership between the Republic of Serbia and six countries. Under those circumstances, different methods have been applied: expert-based evaluation method, DEMATEL (Decision Making Trial and Evaluation Laboratory Method) and statistical method. Some data has been collected by a survey questionnaire on 15 specialists, but the main data is accurate data from statistical yearbooks. There are two general results of this research. One of them is the model of the assessment of the strategic partnership impact on bilateralism. The second result is the confirmation of the strategic partnership impact on bilateralism. That impact varies from zero to perfect impact depending on a strategic partner and bilateralism area. The original purpose of the model is to assess bilateralism and the strategic partnership impact. In addition, the model is multipurpose and can be used to assess different relationships in public and private sector. The research results can help to understand cooperation in general and relationship between different areas. This study extends prior researches by examining the comprehensive process of bilateralism scope assessment. On the basis of the research results, implementation of the comprehensive process has been confirmed and improved.

Key Words: *bilateralism, DEMATEL, expert-based evaluation, strategic partnership*

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Introduction

The main human characteristic is sociability, which enables the cooperation between people and establishment of human societies. One of human societies is a state. The state can be expressed as a compulsory political organization with a centralized government that maintains a monopoly of the legitimate use of force within a certain geographical territory (Cudworth, et al., 2007). Bearing in mind that states consist of people, the cooperation between them is inevitable.

There are more than 190 states in the world (Nations, 2018) and they should maintain and develop relations with numerous countries. One of very important ways of relationship between countries is bilateral cooperation – bilateralism. In order to increase bilateral cooperation, countries sign strategic partnership agreements. Currently, there are numerous agreements such as the Strategic Partnership Agreement between Canada and the European Union (2016), the Strategic Partnership Agreement between the European Union and Japan (Gilson, 2016), etc. By signing the agreement, improvement in all bilateralism areas is expected.

However, the improvement is usually different both in terms of total bilateralism and bilateralism areas. Bearing in mind the abovementioned, there are miscellaneous opinions such as the strategic partnership is significant to bilateralism; the strategic partnership is irrelevant to cooperation, etc. In that sense, the research has been organized with the aim to determine a way how to assess the impact of strategic partnership on bilateralism and check that impact.

Besides introduction and conclusion, this paper includes three chapters. The methodology chapter describes and elaborates the implemented methods. The methods have been used on the case of the strategic relationship between the Republic of Serbia and six countries. It has enabled the data for the conclusion. The last chapter, the research results, has inferred the confirmation of the strategic partnership impact on bilateralism.

Methodology

The research problem is complex and it requires selection and implementation of various methods. In such case, the research is conducted through two stages: bilateralism scope assessment and the ascertainment of the strategic partnership influence. Both phases enable the usage of different methods and improve the quality of research.

In order to assess bilateralism scope the comprehensive process is applied. Kankaraš et al. (2017) have proposed the process, which enables combining brainstorming, expert-based evaluation method, DEMATEL and statistical method. In addition, the process is dynamic, and there is a possibility of amalgamating other methods. The comprehensive process contains four phases: data requirement creating, overall scope assessment, overall scope presentation and required checking results (Figure 1).

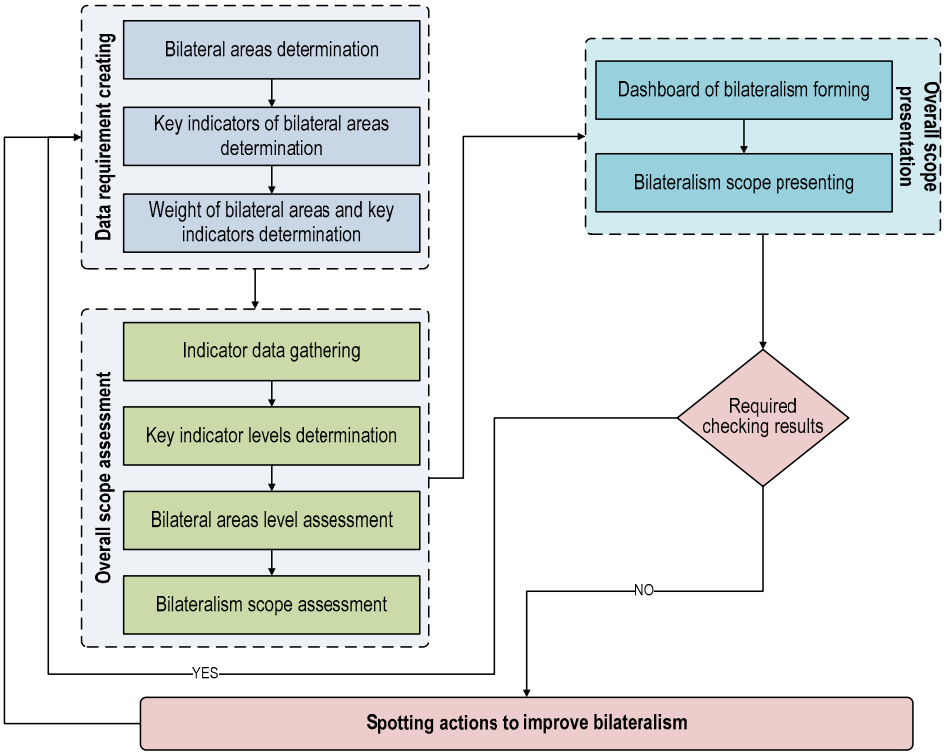


Figure 1 – The comprehensive process (Kankaraš, et al., 2017)

The process begins with determination of bilateral areas and their key indicators. In that sense, DEMATEL is the appropriate method, which enables determination based on mutual influence of bilateralism areas. The first step is creating an average matrix of experts' opinion (Wu, et al., 2007; Yang, et al., 2008; Yi Wu, 2012.; Moghaddam, et al., 2010; Kankaraš, et al., 2017). Each expert assesses the degree of direct influence between two bilateralism areas based on pairwise comparison. There are several scales to estimate the degree, but the most frequently used one is the five-step scale: 0 – no influence, 1 – low influence, 2 – medium influence, 3 – high influence, and 4 – very high influence (Sumrit, et al., 2013). Based on the individual experts' judgment (a_{kr}), average individual experts' opinion ($\bar{a}_{ij}$) is calculated by equation 1, and an average mutual influence assessment matrix is created ($\acute{A}$) by equation 2.

$$\bar{a}_{ij} = \frac{1}{n}\sum_{r=1}^{n} a_{kr} \tag{1}$$

and

$$\bar{A} = \left[\bar{a}_{ij}\right] \tag{2}$$

The key bilateralism areas are determined on the basis of total relation between them. In that sense, a matrix of total relation (*A*) is calculated by equation 3. (Moghaddam, et al., 2010)

$$A = \acute{A}\ (I - \acute{A})^{-1} \tag{3}$$

The elements of the normalized matrix ($\acute{A}$) are represented as a ratio of each element average mutual influence assessment matrix and the maximum amount of rows and columns (Sumrit, et al., 2013). In the last step, it is required to calculate a level of significance (α – threshold value) as an average value of all total relation matrix elements (Yang, et al., 2008). The key bilateralism areas are determined on the basis of the threshold value. The value of total relation matrix element greater than the threshold value is more significant, representing the key bilateralism areas. In relation to the level of significance, threshold can be performed as experts' agreement or quartile. Bilateral areas, which have all elements less than the threshold value, should be rejected.

As it has been mentioned, each bilateralism area consists of the required number of indicators and the key indicators are determined in the same way in the second step. However, the key indicators are not the same – the level of significance to bilateralism areas is different (for instance, the total external trade balance is potentially more significant than the number of tourists). The significance level can be solved by the determination of key indicators' weight as a ratio of total impact of the current bilateralism area's indicator (*r*) and the sum of total impact of the current bilateralism area's indicators – equation 4 (Kankaraš, et al., 2017).

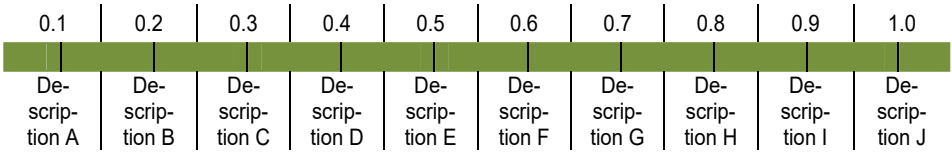
$$w_i = \frac{r_i}{\sum_{i=1}^{n} r_i} \tag{4}$$

The determination of bilateralism areas, their key indicators and indicators' weight are inputs for the second phase of the comprehensive process – overall scope assessment. Firstly, it is required to gather the value of indicators and determine indicator levels. However, there are difficulties because of indicator values expression (indicator values might be expressed in a quantitative or qualitative manner). Furthermore, quantitative value can be expressed as different measuring units (currencies, volume measures, surface measures, etc.) or different numbers (cardinals, fractions, decimals, percentages, etc.), while qualitative value can be expressed as assertion (yes, no, etc.) or description. Under those circumstances, the usage of indicator values to assess overall bilateralism scope needs some adjustment. Quantitative indicator values can be made suitable by normalization of their values ($\bar{I}_i$) – Equation 5 (Petrovic, et al., 2017; Kankaraš, et al., 2017).

$$\bar{I}_i = \frac{I_i - I_{imin}}{I_{imax} - I_{imin}} \tag{5}$$

However, qualitative indicator value should be transformed by the linear numerical scale (0-1, 1-10, etc.) In this research, qualitative values have been transformed in range 0-1 (Figure 2).

Figure 2 – *The linear numerical scale for transformation (Kankaraš, et al., 2017)*



Based on the assessed level, key indicators, bilateralism areas and overall bilateralism scope have been divided into three zones (normal, caution and critical) between minimum value (*mv*) and adequate value (*av*). Minimum value expresses the lowest acceptable value and any value less than that requires urgent action (Kankaraš, 2016; Kankaraš, et al., 2017). One of the possible ways is shown in Figure 3.

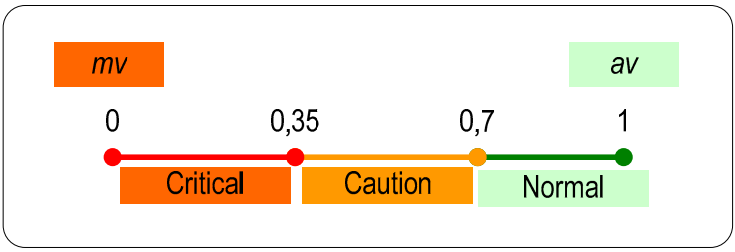


Figure 3 – *Satisfactory value (Kankaraš, et al., 2017)*

Key indicator level (I_l) has been determined by equation 6 as a ratio of the difference between indicator level and minimum value and the difference between maximum and minimum value (Kankaraš, 2016; Kankaraš, et al., 2017).

$$I_l = \frac{I_i - mv}{av - mv} \tag{6}$$

Such an approach enables the direct usage of the indicators value regardless of how they are expressed and in which measuring units. Hence, assessment of the bilateral area level (BA_l) is simple – the sum of the indicators level and their weights multiplication (equation 7).

$$BA_l = \sum_{l=1}^{n} I_l * w_i \tag{7}$$

In correlation with that, bilateralism scope assessment (*BS*) is the sum of the multiplication of bilateral areas assessment and their weights (equation 8).

$$BS = \sum_{l=1}^{n} BA_l * w_i \tag{8}$$

To ascertain whether the strategic partnership influences bilateralism, the impact can be checked through different criteria. In this research, the following criteria have been used: the trend growth of the period, the comparison of the end years of two sub periods (after and before signing an agreement) and the comparison of the trend growth of the sub periods in the second phase of the research. The period is divided in two sub periods: A-period (after signing an agreement) and B-period (before signing an agreement). Furthermore, trends of period and sub periods are calculated by equation 9 based on annual levels and number of years (*n*).

$$TG_i = \left(\sqrt[n]{\frac{end\ year}{begin\ year}} - 1 \right) * 100 \tag{9}$$

The comparison of the end years represents a relation between years (greater or smaller). If the end year of A-period is greater than the end year of B-period the strategic relationship has the impact on bilateralism. In addition, ratio of two trends (TG_{ai} – the trend growth of A-period and TG_{bi} – the trend growth of B-period) is one of the possible ways to compare the trend growth of sub periods (Equation 10). If trend ratio (TR_i) is greater than 1, the strategic relationship has the impact on bilateralism.

$$TR_i = \frac{TG_{ai}}{TG_{bi}} \tag{10}$$

There are numerous combinations of the criteria values (every criterion indicates the impact, some of criteria indicate the impact, etc.). The impact of the strategic partnership (I_{mi}) on bilateralism can be determined based on the share of criteria, which indicates the impact (Equation 11),

$$I_{mi} = \frac{n}{N} \tag{11}$$

where *n* is number of criteria, which indicates the impact and *N* is number of criteria. The strength of the strategic partnership influence is divided in the following levels:

– $I_{mi} = 1$ Perfect impact;
– $0.7 \leq I_{mi} < 1$ High impact;
– $0.3 \leq I_{mi} < 0.7$ Middle impact;
– $0 < I_{mi} < 0.3$ Low impact;
– $Ii = 0$ No impact.

The methodology enables the achievement of the research goal and application on the practical case.

Case study: the Republic of Serbia and its strategic partnerships

Bearing in mind that bilateralism is the relation between two nations and a general number of nations in the world, it is possible to make more than 18,000 bilateral relationships. However, the number of relationships is significantly smaller between strategic partners, but the total number of signed strategic partnership agreements is unknown. In that sense, the research has been carried out on the case of the Republic Serbia (hereafter: Serbia). Serbia has signed the strategic partnership with six countries (Min17):

– the Republic of Azerbaijan (hereafter: Azerbaijan) – agreement signed in 2013;
– the People's Republic of China (hereafter: China) – agreement signed in 2013;
– the French Republic (hereafter: France) – agreement signed in 2011;
– the Italian Republic (hereafter: Italy) – agreement signed in 2009;
– the Russian Federation (hereafter: Russia) – agreement signed in 2013;
– The United Arab Emirates (hereafter: UAE) – agreement signed in 2013.

The relationship between countries includes numerous areas. Bearing in mind a large number of countries and areas, the research has been limited on the economic area and the impact of strategic partnership has been examined on the example of the Serbia's economic area and its indicators. According to the comprehensive process (Kankaraš, et al., 2017), in the first step an expert group of 15 specialists (employed in Serbian governmental bodies) have suggested the indicators, which are important to assess the level of economic area. They have proposed the following indicators:

– the total export from the Republic of Serbia to strategic partners (hereafter: export);
– the total import from the Republic of Serbia to strategic partners (hereafter: import);
– the total trade between the Republic of Serbia and its strategic partners (hereafter: total trade);
– the total external trade balance between the Republic of Serbia and its strategic partners (hereafter: trade balance);
– the total trade share of gross domestic product (hereafter: share of GDP);
– the total number of tourists from Serbian strategic partners (hereafter: number of tourists).

According to individual experts' opinion, the average mutual influence matrix of economic area indicators is created by applying equation 1 and formed by equation 2 (Table 1).

Table 1 – *The average mutual influence matrix*

Indicator	Export	Import	Total trade	Trade balance	Share of GDP	Number of tourists
Export	0.00	0.07	0.07	0.07	0.07	0.07
Import	0.07	0.00	0.07	0.07	0.07	0.07
Total trade	0.21	0.21	0.00	0.21	0.29	0.07

Trade balance	0.21	0.21	0.21	0.00	0.21	0.07
Share of GDP	0.21	0.21	0.14	0.14	0.00	0.07
Number of tourists	0.14	0.14	0.14	0.14	0.14	0.00

The matrix of total relation between the indicators has been calculated by equation 3. Bearing in mind that threshold value is ***0.321*** (calculated by equation 4) and that all elements of export and import are less than the threshold, these indicators should be rejected (Table 2).

Table 2 – *The matrix of total relations*

Indicator	Export	Import	Total trade	Trade balance	Share of GDP	Number of tourists
~~**Export**~~	~~0.155~~	~~0.220~~	~~0.183~~	~~0.183~~	~~0.207~~	~~0.136~~
~~**Import**~~	~~0.220~~	~~0.155~~	~~0.183~~	~~0.183~~	~~0.207~~	~~0.136~~
Total trade	***0.567***	***0.567***	0.294	***0.467***	***0.587***	0.244
Trade balance	***0.536***	***0.536***	***0.445***	0.271	***0.503***	0.230
Share of GDP	***0.472***	***0.472***	***0.344***	***0.344***	0.266	0.203
Number of tourists	***0.413***	***0.413***	***0.343***	***0.343***	***0.388***	0.133

In the opinion of the experts, four indicators are significant for the assessment of economic area level. Considering that the sum of the indicators level and their weights multiplication represents area level, the levels of indicators have been determined on the basis of the data of Statistical Office of the Republic of Serbia (Statistical Office, 2006-2017) for every country (strategic partner) and all partners together in the period of 12 years (2006-2017) by equation 6 (Table 3).

Table 3 – *The levels of indicators*

Indicator	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total trade with Azerbaijan	0.213	0.213	0.213	0.213	0.386	0.316	1.150	1.731	0.642	0.213	0.213	0,228
Total trade with China	0.358	0.762	0.879	0.462	0.637	0.760	0.825	0.826	0.895	-0.464	-0.440	1,451

Indicator	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total trade with France	0.111	0.438	0.653	-0.063	0.136	0.030	0.229	0.539	0.699	1.217	1.511	1,516
Total trade with Italy	0.118	0.227	0.193	-0.095	0.095	0.168	0.334	1.029	1.110	1.129	1.194	1,151
Total trade with Russia	0.687	0.723	1.352	-0.571	0.366	0.792	0.599	0.274	0.900	0.304	0.076	0,331
Total trade with UAE	0.238	0.341	0.360	0.087	0.334	0.192	0.460	0.319	0.423	0.858	1.887	1.473
Total trade	***0.086***	***0.422***	***0.660***	***-0.462***	***0.105***	***0.337***	***0.505***	***1.082***	***1.379***	***0.661***	***0.727***	***1.238***
Trade balance with Azerbaijan	0.213	0.213	0.213	0.213	0.386	0.316	1.150	1.731	0.642	0.213	0.213	0.228
Trade balance with China	0.618	0.225	0.112	0.534	0.362	0.255	0.177	0.180	0.123	1.462	1.451	-0.353
Trade balance with France	0.716	-0.042	-0.502	0.175	0.606	0.669	0.386	0.396	1.153	1.212	0.731	1.058
Trade balance with Italy	0.411	0.030	-0.212	0.035	0.519	0.353	0.084	0.872	1.146	1.169	1.093	0.865
Trade balance with Russia	-0.116	-0.027	-0.331	0.490	0.370	0.392	0.803	1.162	0.780	0.848	1.128	1.175
Trade balance with UAE	0.238	0.341	0.360	0.087	0.334	0.192	0.460	0.319	0.423	0.858	1.887	1.473
Total trade balance	***0.247***	***-0.015***	***-0.288***	***0.334***	***0.396***	***0.311***	***0.380***	***0.795***	***0.714***	***1.266***	***1.361***	***0.958***
Share of GDP – Azerbaijan	0.211	0.211	0.211	0.211	0.388	0.315	1.166	1.720	0.646	0.211	0.211	0.226
Share of GDP – China	0.443	0.803	0.845	0.468	0.638	0.743	0.824	0.788	0.883	-0.477	-0.458	1.416
Share of GDP – France	0.376	0.551	0.590	-0.109	0.100	-0.068	0.194	0.450	0.704	1.257	1.454	1.471
Share of GDP – Italy	0.232	0.262	0.142	-0.122	0.076	0.134	0.328	1.013	1.145	1.146	1.145	1.071
Share of GDP – Russia	1.072	0.837	1.175	-0.473	0.384	0.719	0.584	0.180	0.833	0.251	-0.061	0.098
Share of GDP – UAE	0.248	0.349	0.355	0.076	0.335	0.184	0.465	0.313	0.424	0.871	1.881	1.466
Total share of GDP	***0.397***	***0.547***	***0.581***	***-0.536***	***0.077***	***0.279***	***0.508***	***1.023***	***1.442***	***0.616***	***0.565***	***1.115***
Number of tourists from Azerbaijan	0	0	0	0	0	0	0	0	0	0	0	0
Number of tourists from China	0.102	0.102	0.102	0.102	0.102	0.372	0.476	0.552	0.848	1.209	1.533	1.944
Number of tourists from France	-0.305	0.315	0.067	0.093	0.309	0.291	0.534	0.717	1.021	1.186	1.271	1.388
Number of tourists from Italy	-0.470	0.215	0.455	0.258	0.022	0.317	1.264	0.717	0.908	0.789	1.025	1.108
Number of tourists from Russia	-0.127	0.024	0.032	0.077	0.234	0.364	0.597	1.012	1.285	0.960	1.043	1.163
Number of tourists from UAE	0	0	0	0	0	0	0	0	0	0	0	0
Total number of tourists	***-0.223***	***0.094***	***0.117***	***0.096***	***0.149***	***0.335***	***0.719***	***0.836***	***1.118***	***1.041***	***1.218***	***1.560***

As shown in Table 3, the levels of indicators are different by years and countries. Some of them are below the expected minimum, but some of them are higher than the anticipated maximum. In addition, there were no tourists from Azerbaijan and UAE in the analysed period, so indicator for those countries is undefined. In that sense and based on the comprehensive process indicators, weights have been calculated by equation 4:

– total trade 0.295
– trade balance 0.268
– share of GDP 0.214
– number of tourists 0.223

Based on indicators levels and their weights the level of economic area by years has been determined by equation 7 (Table 4).

Table 4 – *The level of economic area*

Indicator	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total trade	0.007	0.075	0.122	-0.102	0.011	0.058	0.091	0.207	0.267	0.260	0.280	0.332
Trade balance	0.070	-0.042	-0.160	0.108	0.135	0.098	0.128	0.306	0.271	0.272	0.301	0.283
Share of BDP	0.055	0.082	0.087	-0.107	0.000	0.035	0.075	0.165	0.238	0.224	0.192	0.239
Number of tourists	-0.036	0.019	0.023	0.020	0.029	0.061	0.128	0.148	0.198	0.184	0.215	0.348
Economic area	***0.097***	***0.133***	***0.073***	***-0.082***	***0.175***	***0.252***	***0.422***	***0.826***	***0.973***	***0.941***	***0.989***	***1.201***

In accordance with the methodology, ascertainment of the strategic partnership influence on economic area has been checked through three criteria: the trend growth of the period, the comparison of the end years and the comparison of the trend growth of A-period and B-period. Bearing in mind that four of six strategic agreements were signed in 2013, B-period covers seven years (2006-2012) and A-period includes five years (2013-2017). The results, which have been calculated by equations 9-11, are presented in Table 5.

Table 5 – *Trend growth and trend ratio of economic area and its indicators*

Indicator	The trend growth of the period	The comparison of end years of sub periods			The comparison of trends growth of sub periods			
		A-period	B-period	Relation	A-period	B-period	Trend ratio	
Total trade	37.33%	0.332	0.091	A>B	9.91%	43.26%	0.229	<1
Trade balance	12.30%	0.283	0.128	A>B	-1.60%	8.94%	-0.179	<1
Share of BDP	12.93%	0.239	0.075	A>B	7.73%	4.34%	1.779	>1
Number of tourists	20.84%	0.348	0.128	A>B	18.57%	19.95%	0.931	<1
Economic area	**23.31%**	**1.201**	**0.422**	**A>B**	**7.77%**	**23.34%**	**0.333**	**<1**

Two criteria indicate the impact of strategic partnership on economic area (the trend growth of the period and the comparison of end years of sub periods), and one criterion indicates the lack of impact (the comparison of trend growth of sub periods). The impact of strategic partnership on economic area is determined by equation 11 and it amounts 0.67, which implies a middle direct influence.

Research Results

Bearing in mind that the research has been carried out through two phases, on the foundation of their outcomes, specific (stages outcomes) and general results (process outcomes) of the research can be noticed. The outcomes of the stages are the validation of the comprehensive process and its application to bilateralism scope assessment. Regardless of the fact that the comprehensive process has been applied to assess the economic area, it can be concluded that the process can be implemented for bilateralism scope appraisement.

The specific results are important, but the general result of research is more important. In accordance with the previous one, there are two general outcomes:

– the model of assessment of the strategic partnership impact on bilateralism;

– conclusion about the impact of strategic partnership on bilateralism.

The synthesis of phases has created a new model – the model of assessment of the strategic partnership impact on bilateralism. In fact, the model is the comprehensive model upgraded by new stage, the impact ascertainment. This impact is additional criterion for bilateralism assessment and spotting actions to improve bilateralism (Figure 4). Practically, a strategic partnership is additional criterion for bilateralism assessment.

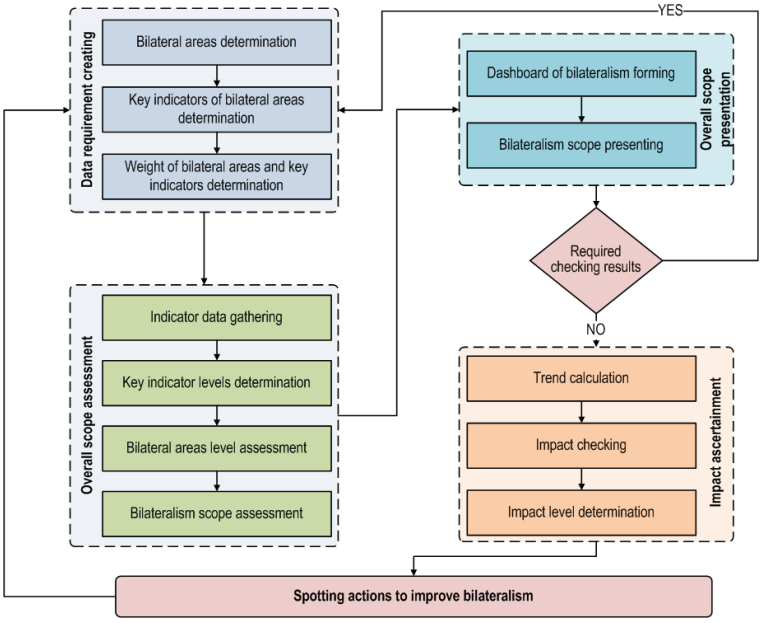


Figure 4 – *The model of strategic partnership impact assessment on bilateralism*

On the basis of the research results, it can be concluded that a strategic partnership has an impact on bilateralism, but the level of that influence can vary. According to the research results, the focus of bilateralism is different. For instance, the focus of cooperation between Serbia and China, France and Italy in economic area is total trade and tourism, between Serbia and Russia is trade balance and tourism, etc. In addition, the highest level of cooperation between Serbia and Azerbaijan in economic area was in 2013 (the year when the agreement was signed), but the total level is "low impact".

In accordance with the abovementioned, there are two reasons for the different levels of the strategic partnership – strategic partner (certain country) and bilateralism area. Every country defines significant areas and the desired level of cooperation. As a final point, the level of strategic partnership impact on bilateralism varies from zero to perfect level depending on countries, but the total impact is middle and strategic partnership has the impact on bilateralism.

Conclusion

There are different kinds of cooperation between countries. One of the modes of cooperation is the strategic partnership and it has impact on bilateralism in various areas. The purpose of this paper is to determine the way to assess the impact of strategic partnership on bilateralism and to check that impact. In that sense, the research has been organized, and the comprehensive process and different methods have been applied.

The impact has been checked in the case of strategic partnerships signed between Serbia and six countries (Azerbaijan, China, France, Italy, Russia and UAE). There are two main research results: the model of strategic partnership impact assessment has been created and the impact of strategic partnership on bilateralism has been confirmed.

The future research should consider the determination of indicators and areas weights and increase objectivity. In addition, the process of assessment should automate and decrease the possibility of mistakes.

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A NATURE OF THE US AND THE AMERICAN FOREIGN POLICY

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The paper deals with the essential nature of the US society and the American foreign policy in a global perspective. The fundamental aim of the paper is to get at the truth about the character of the US global politics as the only world hegemonic power currently, which uses the instrument of the war as the main source for the achievement of its main foreign policy goal: the *Pax Americana* as the global empire. The main conclusion of the research is that from the very beginning of the existence of the USA in 1776, the warfare is a crucial characteristic of the American culture. This very fact is a direct product and consequence of the nature of the economic system of the US followed by a consumerism mentality of the American society.

Key Words: *US, America, war, imperialism, global politics, international relations, Eurasia, foreign policy*

"If the Nuremberg Laws were applied,
then every post-war American President would have been hanged"
Noam Chomsky

„God created war so that Americans would learn geography"
Mark Twain

Eurasia

Henry Kissinger, one of the fundamental figures in creating and maintaining the US policy of global hegemony during the Cold War[1], was quite clear and precise in his overview of the issue of the American geopolitical position, national goals and foreign policy. His remarks can be summarized in the following points:

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[1] A Jew Henry Kissinger was the National Security Advisor and the Secretary of State during the mandate of the US Presidents Richard Nixon and Gerald Ford. He also advised many other American Presidents on the US foreign policy and global politics. He was one of the most responsible persons for the CIA-organized military putsch in Chile in 1973 and for the US involvement and atrocities committed in Vietnam. Nevertheless, H. Kissinger received the 1973 Nobel Prize and Medal of Liberty, among other awards. He is one of the most notorious symbols of the US gangster-style foreign policy.

A. The US is an island off the shores of the large land mass of *Eurasia*.

B. The resources and population of *Eurasia* far exceed the resources and population of the US.

C. The domination by any individual state from *Eurasia* (either from the European or the Asian part) is a critical danger for the American geopolitical and geoeconomic aims, as well as national interest both during and after the time of the Cold War.

D. A mortal danger for the US is the establishment of any political-military coalitions between the Eurasian great powers (primarily between the USSR/Russia and China), as such coalition would have a real capacity to outstrip both the US economy and military.

E. The US strategic global geopolitical interest is to thwart the creation of such Eurasian coalition (the USSR/Russia-China).[2]

In fact, H. Kissinger recognized two fundamental facts in dealing with global geopolitics: 1) *Eurasia* is of the crucial global geopolitical importance; and 2) Russia is the*Heartland* of *Eurasia*.[3] Therefore, to have the control over Russia means to have the control over *Eurasia* and to control *Eurasia* means to control the rest of the world.Therefore, the US struggle against the communist USSR during the Cold War or Putin's Russia today is nothing else than a formal pretext for the performance of the basic US geopolitical task from a global perspective: to have the control over the *Heartland* of *Eurasia*. Subsequently, any kind of independent and/or stronger Russia is not acceptable solution for the American policymakers.

A Nature of the US

In order to properly understand the post-Cold War global hegemonic foreign policy by the US Administration, it is necessary to realize the very nature of the US as a state. Basically, the US foreign policy of global hegemony is shaped by two most important internal processes, which exist from the very beginning of the US independence and statehood (declared in 1776): 1. A mass consumerist mentality of its citizens that is deeply permeated throughout American (sub)culture; 2. Corresponding policy of maintaining the world military supremacy for the sake of ensuring the privileged possession of the global goods, energy, natural resources and credit, for example, there are 800 US military bases across the globe and one of the biggest of them is located in Kosovo (Bondsteel) – one of the richest regions in Europe according to its reserves of the natural resources (at least 500 billion $US).[4]

The American strategy of global hegemony after the WWII was not only to compete with the Soviet military power and political influence, but it was and still is much more important - to establish the world that is going mandatory to be hospitable for the growth of the US economy. Therefore, the American military-political global dominance has ideologi-

[2] John Rees, *Imperialism and Resistance*, London−New York: Routledge, 2006, 18. On this issue, see more in: Henry Kissinger, *Diplomacy*, New York: Simon & Schuster Paperbacks, 1994; Henry Kissinger, *Does America Need a Foreign Policy? Toward a Diplomacy for the 21st Century*, New York: Simon & Schuster Paperbacks, 2001; Henry Kissinger, *World Order*, New York: Penguin Books, 2015.

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cally been justified by anti-communism and the US alleged leading role in defending the "free world". However, after the end of the European communism, dissolution of the Warsaw Pact and dismemberment of the USSR, Washington simply justified the continuation of its Cold War policy of global hegemony by defending Europe (and probably the rest of the world) from the "Russian aggression". The "free world" was identified with the full acceptance of the American values, norms, political and economic systems and (sub)culture. According to such geopolitical project, all those governments which rejected to "dance according to the American playing" were proclaimed the enemies of the "free world" and threatened to be bombed and occupied (like the Federal Republic of Yugoslavia in 1999). Nevertheless, the fundamental allegory of the American promotion of independence and democracy (the basic components of the "free world") is that this country is not either really independent (being the West Bank of Israel from 1948 onwards) nor fully democratic (not being even among the first 30 democratic states in the world).

The numerous US military interventions after 1945, as an instrument for the conduct of the geopolitical project of global hegemony, however, have very much undermined the very meaning of democracy, leading at the same time to large-scale human rights abuse. The crucial strategy of the concept of *Pax Americana* is to maintain cheap supplies of raw materials, especially the cheap supply of oil as the crucial energy source for the US consumerism economy. Therefore, immediately after the WWII, the basic US strategy was to establish the American hegemony in the oil-rich countries in the region of the Middle East, supporting there all kinds of non-democratic and even dictatorial regimes that expressed the political loyalty to Washington such as the regimes of Iran (Persia) from the CIA/M16-sponsored coup in 1953[5] up to the Islamic Revolution in 1978−1979, Kuwait, Bahrein, Qatar and above all Saudi Arabia.

The Middle East and the "Resource War"

The beginning of the process of making the regional client states started in 1945, when the US President Franklin D. Roosevelt established a strategic partnership with Abdul-Aziz ibn Saud, who was a founder of the modern Saudi royal family and ruling dynasty. The deal was that the US would protect the dynasty, which supported the fundamentalist Wahhabi brand of the Sunni Islam from the beginning, from all inner and outer enemies for the exchange of the US privileged access to the Saudi oil.[6] Iran was the second country of importance for the US regional "oil policy", where the fundamental American influence was established in 1953, when the CIA-M16 backed the coup against democratically elected PM Mohammad Mossadegh and brought to power in fact the Western oil companies.[7] Therefore, it is not surprising that the Iranian Revolution was

[5] James C. Van Hook (ed.), *Foreign Relations of the United States, 1952−1954: Iran, 1951−1954*, Washington: United States Government Publishing Office, 2017.

[6] Michael Klare, „Bush-Cheney Energy Strategy: Procuring the Rest of the World's Oil", *Foreign Policy in Focus*, 2004: www.fpif.org.

[7] On the CIA's „dirty wars", see (Douglas Valentine, *The CIA as Organized Crime: How Illegal Operations Corrupt America and the World*, Atlanta, GA: Clarity Press, INC, 2017).

ideologically and politically an amalgamation of the Islamic Shiite theocracy and very strong anti-Americanism. The US hegemonic design to prevent any hostile actor to gain any foothold in geostrategically and energetically extremely important region of the Middle East was clearly formulated in the 1980 "Carter Doctrine". One of the main reasons for formulating such doctrine was, of course, protection of the existence of the Zionist Israel and its policy of ethnic cleansing of the domestic Palestinians. Therefore, the US policy to project military power into the region of the Middle East became substantially increased followed by abnormal militarization of Israel.

In the years of R. Reagan Administration, the US transformed Afghani Talibans into its sponsored movement and created the long-time partnership with Saudi Arabia and Pakistan in order to maintain Islamist mujahedeen Taliban military capabilities against the Soviet army in Afghanistan, but at the same time to open possibilities for the establishment of different anti-Western jihadist military groups like al-Qaeda of Saudi Osama bin Laden, who would turn back their arms against their sponsors once the Soviet army left Afghanistan. Therefore, the regional militant anti-Western Islamism in different forms that emerged after the Cold War did not arise suddenly out of the framework of the US imperialistic and hegemonic geopolitical ambitions in the Middle East.

A new phase of the US policy in the Middle East came into force in 1990−1991 with the First Gulf War that was fought from the US point of view (like the Second Gulf War in 2003 that resulted in the military occupation of Iraq) for the geopolitical maintenance of the ideology of economic security that was just wrapped into the propaganda of the 2001 G. W. Bush's doctrine of the "War on Terror". In essence, the US Administration fought the First Gulf War for the sake of preventing possible post-Cold War challenges to its hyperpower in global politics in the face of "… the world's effective policeman".[8] G. W. Bush Administration skilfully exploited the atmosphere of fear of the further terrorist attacks in the US society after the terrorist attack of 9/11 that was most probably self-constructed US-Israeli action in which al-Qaeda just played the role of the executor in front of the TV cameras. Subsequently, the most hawkish faces around the US President had the fantastic reason to start the conduct of a long-prepared project of the US world supremacy, unilateral actions and non-limited use of the military capacity of the Pentagon. After the US-led coalition's invasion of Afghanistan in 2001 that was extremely important for having the direct control over the production and distribution of the Afghan heroin at the global market (one road goes via the US colony of Kosovo) and for founding a geostrategic base for the invasion of Iran (the main enemy to Israel after 1979), the invasion of Saddam Hussein's Iraq (fully sponsored by the US Administration of R. Reagan in the war against Iran in the 1980s) became the highest priority of Washington's foreign policy of establishing a global empire. The Pentagon calculated that a new Iraqi colonial regime would transform its country into the US base of military operations in the very centre of the region of the Middle East – the region which is of fundamental geostrategic global importance with huge reserves of oil and natural gas. Therefore, the region would be completely controlled by the US with its military bases in Saudi Arabia, Afghanistan and Iraq followed by strong Israeli and Turkish armies.

[8] John Rees, *Imperialism and Resistance*, London−New York: Routledge, 2006, 17.

Another fact is that the US is still the most oil-dependent economy in the world with the biggest mechanized war machine, which consumes enormous market and therefore Washington's goal was and still is to prevent any global supply disruptions and/or price fluctuations. Due to the fact that the demand for the oil consumption was constantly growing at the world level and that global oil reserves became of extreme importance for the global strategic power in the recent future, after the Cold War the US Administration decided to transform the whole region of the Middle East into its own courtyard for political and economic exploitation. The execution of the plan was going smoothly up to 2014, when Moscow finally decided to crucially defend Syria from the American policy of global banditry, in the same year when the Western Russophobic *Drang nach Osten* policy was finally stopped in the Euromaidan's Ukraine. From this point of view, the doctrine of "War on Terror" is crucially bound up with the American attempts to establish geostrategic dominance in extremely petrol-rich region of the Middle East for both oil consumption and prevention of the rising power of China to be significantly infiltrated into the region, which has to be reserved mainly for the supply of the US economy. Essentially, the US proclaimed "War on Terror" is nothing else, but profit driven the "Resource War".[9]

Pax Americana and the "Wars of Humanitarian Intervention"

President B. Obama Administration continued the same G. W. Bush's imperialistic policy of "Resource War" just embracing a more multilateral style of diplomacy and going slowly out of the big ground wars and direct invasions of sovereign states. Nevertheless, he practiced the vigorous use of the American military machinery to attack those who were perceived by the Pentagon to be mostly hostile to the US hegemonic ambitions in the Middle East, and also in the East Africa and the South Asia. The strategy included the expanded use of "kill/capture teams" operated by the US military Joint Special Operations Commandand drone strikes executed both by the CIA and the US army. B. Obama won the Nobel Peace Prize regardless of the very fact that during his presidency there was no a single day of peace. It is calculated that *Obama the Bomber* dropped during his 8 years of presidency (two terms) a bomb every 20 minutes. For instance, only up to February 2012,

"…the Obama's Administration has carried out at least 239 covert drone strikes, more than five times the 44 approved under George W. Bush. And after promising to make counter-terrorism operations more transparent and rein in executive power, Obama has arguably done the opposite, maintaining secrecy and expanding presidential authority".[10]

The US aggressive, from time to time brutal and inhumane foreign policy of the world militarism and globalization of war for the sake of *Pax Americana* can be understood only within the full context of the nature of capitalism and the logic of capital itself.[11] An inte-

[9] Michael Chossudovsky, *America's "War on Terrorism" in the Wake of 9/11*, Second edition, Montréal, Canada: Center for Research on Globalization, 2005.

[10] David Rhode, "The Obama Doctrine: How the President's Drone War is backfiring", *Foreign Policy*, 2012-02-27: http://foreignpolicy.com/2012/02/27/the-obama-doctrine/.

[11] On the US globalization of war phenomenon, see in (Michael Chossudovsky, *The Globalization of War: America's 'Long War' against Humanity*, Montréal, Canada: Center for Research on Globalization, 2015).

gral part of the US foreign policy of global hegemony is the implementation of bilateral agreements with other states to prevent the US soldiers from extradition to the International Criminal Court. In order to force certain countries to conclude such agreement, the US Government threatens them with the withdrawal of its military and other forms of support if they are not willing to sign the agreement. Many states have accepted such deal like Israel, Romania or East-Timor[12] and therefore legitimised the US Armed Forces to legally violate basic human rights and the rules of war.

On the other hand, the US authority formally uses the military means for interventions for the humanitarian purposes or the protection of human rights. However, that is just a moral excuse for the achievement of the American foreign policy goals, which was clear in many cases, but the most obvious one was in 1999 with the bombing of the Federal Republic of Yugoslavia for the formal sake of protecting Kosovo Albanian human and minority rights. Nevertheless, the prohibition of the use of force by the international law, as it is clearly formulated, for instance, in the UN Charter Article 2, Paragraph 4, is also extended to the so-called „humanitarian intervention" that refers to the unilateral threat or the use of the armed forces by some state against another one to protect the life and liberty of nationals of the latter from acts by their own governments.[13] However, there is only one possibility, according to the international law, to use the force, including the case of „humanitarian interventions": it has to be accepted by the UNSC. In other words, only if the UNSC according to the UN Charter Articles 39−42 decides that the human rights violation in some country poses a treat to the international peace and regional security and that the measures of military interventions are necessary, a military intervention against the other state (or its regime) is sanctioned by the international law and community. However, as a matter of fact, the US authority has never received such permission for any of its „humanitarian interventions", which practically means that the US Government is *de facto* above the international law and comunity.

The US „Wars of Humanitarian Intervention" in overwhelming majority of cases are based on politically motivated „false flags" produced by the intelligence service (CIA) information backed by the global mainstream media „fake news" at the same time. The Western academic writing even by the most prestigious world universities and publishing houses, unfortunatelly, directly supports such imperialistic wars by giving unproven and false „academic" feedback as it is, for instance, the case with the publication *Understanding Global Security* by a Senior Lecturer Peter Hough at Middlesex University and published by Routledge. The publication suggests, for instance, that the NATO „humanitarian intervention" in 1999 against the Federal Republic of Yugoslavia was to „Protect Kosovar Albanians from Serb massacres",[14] regardless of the fact that the only reason for such NATO aggression was to establish proper political conditions for Kosovo independence from Serbia, transformation of the region into the American political and economic colony and continuation of the historical Albanian ethnic cleansing of the local Serbs and non-Albanians.[15]

[12] Peter R. Baehr, Monique Castermans-Holleman, *The Role of Human Rights in Foreign Policy*, Third edition, New York: Palgrave Macmillan, 2004, 21.

[13] Arie Bloed, Peter van Dijk (eds.), *Essays on Human Rights in the Helsinki Process*, Dordrecht: Martinus Nijhoff, 1985, 34−35.

[14] Peter Hough, *Understanding Global Security*, 2nd Edition, London−New York: Routledge, 2008, 127.

[15] Hannes Hofbauer, *Eksperiment Kosovo: Povratak kolonijalizma*, Beograd: Albatros Plus, 2009.

The Soft Power as a Method

The use of the *Soft Power* is another method implied by Washington in dealing with the world politics and international relations. The method refers to the capability of state (or any other actor in global politics) to influence other states, governments or actors to do what the influencer wants, but through persuasion, not force or direct threats. In principle, the *Soft Power* attracts or co-opts members of government, politicians or citizens by different means including, for instance, bribing, financial donations, offering certain benefits, education, financing political parties, organizing public seminars, etc., but it does not directly force them to do what is required. In this respect, the formal NGOs can play a very important role in the promulgation of the *Soft Power* method of the American global imperialism like New York-based G. Soros' Open Society Foundation and his Central European University in Budapest. The method covers the wide scope of areas like culture, values, ideas, politics, national identity, history, rights, etc., representing in essence different, but in many cases not smaller forms of influence if compared to the method of the *Hard Power,* which implies much more direct and essentially coercive measures (like ultimatums, economic santions or threats of the use of the military force). Therefore, the *Soft Power* method is the other way of achieving the goals by involving persuasion and encouragement usually, but not necessarily, rooted in shared norms, values or/and beliefs.

In general, the method of the *Soft Power* relies on two instruments:

1. Persuasion – the ability to convince someone by real or false arguments.
2. An ability to attract the people by all possible means.

„Business as Usual"

The ruling US Neo-Con establishment already started to push the American foreign policy towards the US domination over *Eurasia* from the second half of the 1990s, which simply meant a geopolitical struggle with Russia. The Kosovo War in 1999 became the first direct challenge to Russian national dignity and geopolitical interests in the region. The architects of the US „Eurasia's imperialism" understood quite well that the broader Middle East (including the Balkans and the North Africa) was at the heart of the Eurasian problem from different points of view: geopolitical, ideological, economic and strategic. Therefore, both Gulf Wars, the Kosovo War and the Afghan War in between were fought primarily in order to demonstrate the US strong intention to absolutely dominate the Greater Middle East in the post-Cold War era. The Second Gulf War in 2003 was the war of showing to the rest of the world that the US foreign policy of the open banditry is going to be the „business as usual", which had to be silently accepted by the international community. As a matter of fact, it was quite clear that Iraq in 2003 could not develop any kind of effective weapons of mass destruction including some kind of the ABC weapons due to the effective UN economic and other sanctions against S. Hussein's Government. Furthermore, in 1991 Iraq was already so seriously defeated that it could not think for a longer period of time even about just

revitalizing its regular army, which became weakened even after the Iraq-Iran War in the 1980s. In general, after the First Gulf War in 1991, there was no any serious threat to the US interests in the Persian Gulf region and therefore there was no real reason for the Pentagon to keep up the US presence there.

The US Neo-Con right-wing hawks became influential enough in the Clinton and later the Bush Administration to decide to compel Kissinger's goal of the continuous US domination over the Greater Middle East as in their mind the First Gulf War was the failed war since the American unchallenged dominance over the region was not established. Such foreign policy shift in the Clinton Administration was led by the Secretary of State (a Jew) Madeleine Albright and her mentor a Polish born Zbigniew (Zbig) Brzezinski (not a Jew), who was the US National Security Advisor in the J. Carter Administration and above all an ardent Russophobe. Therefore, the US imperialism started and completed three wars in the area of the Greater Middle East during the Clinton and the Bush Administration from 1999 to 2003: the Kosovo War in 1999, the Afghan War in 2001 and the Second Gulf War in 2003. However, the Arab Spring in 2011 and especially the Russian military intervention in Syria since 2014 onwards have clearly shown that the area of the Middle East is still not an exclusive American colonial domain.

Conclusion

To conclude, from the very beginning of the existence of the USA in 1776, the warfare was, still is and is probably going to be the nature of the American life and (sub)civilization.[16] This very fact is a direct product and consequence of the nature of the economic system of the US and a consumerism mentality of its citizens. The effects on the world security and global peace are obvious.

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[16] On this issue, see (Paul Atwood, *War and Empire: The American Way of Life*, London: Pluto Press, 2010).

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MIGRATION AS A HUMAN RIGHT IN MEDIA REPORTING

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Reporting on the migrant crisis phenomenon and the possibilities for its mitigation has been very important. Regardless of whether it has been written about migrants in Croatia, Serbia or Bosnia and Herzegovina, professional accountability is expected from the media. The results of the research indicate that there are differences between the analyzed daily newspapers in the writing approach to migration issues as human rights. There are a few texts on the migrants' integration processes, and there are almost none of affirmative texts regarding the migration issues. Regardless of the country's official position on the Moroccan Agreement, the objective reporting on such a universal phenomenon should be implied. The level of problems accompanying migrants often goes towards the attitude of the society that is often and mainly formed through media discourse. Migration is today a human right, and this vulnerable population deserves a non-discriminatory media attitude and response to it. The professionals should act and directly contribute with their activities to the full respect of all people, and at the same time, respect professional ethics including the topic of migration, asylum seekers, or refugees.

Key Words: *migration as a human right, universal phenomenon, non-discrimination, ethics*

Introductory considerations

Economic problems and war risks, threats to the population security, and the overall political turbulence and strategic combinations, which have been inflicted on the countries such as Libya, Congo, Syria or Afghanistan, have caused mass migrations in recent years. The estimates of the UNHCR court are that there are, in the mobile states, several million refugees[1], who try to find salvation from militant formations in the countries of the Western Europe, as well as their existence (Pavlović, 2017). The migration problem is multiple. There is also a difference in social responsiveness, depending on whether migration is talked about as a phenomenon or as a resulted consequence, in the countries of origin, transit or as a destination. An unbalanced and often negative pol-

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[1] https://www.b92.net/info/vesti/index.php?yyyy=2018&mm=06&dd=19&nav_category=78&nav_id=1406760 visited on August 20th, 2018.

icy towards the admission of migrants is a clear challenge that is posed not only at national, but also regional and international level. The risk factors for the victimization of the migrant population, as well as the correlation with the occurrence of human trafficking, the illicit crossing of the state border and human smuggling, etc., are numerous. Accepting the position of states and the international community's responsibility regarding the protection of human rights, dignity and migrants perspective, with preventive activities directed towards the reduction of violence against migrants, activities on the preparation of documents, whose implementation would significantly improve the existing situation, have been initiated. These documents have to be consistent with global goals, such as the UN sustainable development goals by 2030, which represent a universal call for action in order to eradicate poverty, protect the environment and ensure peace and prosperity for all.[2]

On this basis, one of the UN strategic documents developed in December 2018, titled the Global Migration Agreement and signed in Marrakesh, affirms the basic human rights of migrants, and it has been accepted by more than 160 countries. The agreement itself is a catalogue of various measures agreed upon by the states. There are the following five outlined goals: the access to a migrant crisis based on human rights, the protection of vulnerable migrants, the fight against xenophobia, racism and discrimination, the fight against illegal immigration and the assistance to returning migrants.

The document does not require ratification in the countries that have worked on it, with the possibility to decide what they would and would not like to use from the document. The difference between migrants and refugees has been made and it is stated that this is regulated by a special legal framework. At the same time, it has been emphasized that migrants are not only people fleeing from the war and other disasters. There are also economic migrants, people who go to other countries in order to work or for the purpose of education. The Declaration pays special attention to the labour and administrative protection of migrants.

It is envisaged that the educational programmes will be provided to children, who do not have the access to formal system, all the way to the training in the workplace. Finally, the health needs of migrants have been included in national and local health policies[3].

The fact is that even during the media reporting on this Declaration, it has not been affirmatively written everywhere about the document whose only idea is the promotion and protection of basic human rights. What is fiction and what is reality in migrations becomes a very problematic issue. Fraudulent news or marketing content are often included in reporting on migrations. One thing is for sure - it is the media that plays an important role in creating an image of society and individuals about the migrants themselves and the competent institutions in the governmental and non-governmental sector. Without media coverage, migrant crises and migrations would remain unregistered for some groups of people and individuals, and the support would lack. This is why the public needs more accurate and verifiable information which, due to the role that the media has, contributes to building up the true picture of reality (Pavlović, 2018).

[2] http://www.rs.undp.org/content/serbia/sr/home/sustainable-development-goals.html visited on August 20th, 2018.

[3] https://www.b92.net/info/vesti/index.php?yyyy=2018&mm=12&dd=10&nav_category=78&nav_id=1480090 visited on January 5th, 2019.

An example and a few questions

At the end of 2018, the media in Serbia reported on a forty-year-old migrant, named Abdullah[4], who decided to continue his life here in Serbia. This event was covered in various sections, from chronicle to fun. Such reporting caused a series of positive and negative comments. The issue we have raised is the following: what the justified interest of the public is to know, what the information is, and also the implications for the migrant. Can one predict which information can be published in accordance with the Marrakesh Agreement? So far, the institutions responsible for protecting migrants' rights have not taken a stand on media writing and an attitude towards migrants and migration.

In Serbia, more than 30 migrants in 2018 received a work permit and were employed with the assistance of the Asylum Protection Center (APC), and Abdullah from Afghanistan, who has been living in Serbia for three years, is one of the 30 persons who received asylum last year. He opened an agency for the provision of translation services and thus became the first migrant entrepreneur. In order to start the translation business, with the support of the APC, and to assist refugees, asylum seekers and migrants, he was supposed to master the great way in order to get an ID card, be entitled to work/get his right to work, and receive asylum. He was even supposed to master the problem of opening a bank account.

In order that migrants in Serbia can get a work permit and be hired, it is necessary to apply for asylum, and they would get their right to work, that is, they would be entitled to work nine months from the beginning of the asylum procedure. In order to open a bank account they should have an ID card with a chip. An attempt has been made to answer some of these questions, according to the Marrakesh Agreement, by replacing a number of legal gaps, ambiguities and inaccuracies. Furthermore, in seeking these answers there should be public support, but the dilemma is whether it really exists, without prejudice, not only in Serbia, but also in the countries in the region. However, let's start searching for some answers.

Methodological framework of the research

The subject of this research is defined as the relationship of the media to migration and migration law, as well as to the Marrakesh Agreement in such context. Although, at first glance, it can only be dealt with the subject of international public and administrative law, the media discourse itself includes the inadequate response of the society to media reactions in relation to migrations and the consequences that it has in the countries of the region.

For the empirical research, a research technique for quantitative and qualitative content analysis has been selected. This method is one of the most common ones in social sciences with the model of structuring messages into general categories, so that they can be understood by more people. The results of the study of the analyzed text should show the presence or absence of certain characteristics, that is, their frequency and

[4] http://www.politika.rs/sr/clanak/423161/Abdulah-iz-Avganistana-prvi-migrant-preduzetnik-u-Srbiji visited on February 20th, 2019.

variability (Weber, 2010; Neuendorf, 2002; Krippendorf, 1980). The initial assumption about migrations as a human right, depending on the nature of the media, has been that this issue is reported in an inappropriate way to some extent, and contrary to the current media and information regulations, professional codes, etc., also with often negative consequences for migrants and minimum human rights vested with them.

The topic of the concrete analysis has been the articles related to the adoption of the Marrakesh Global Agreement on Migrants. The texts were analyzed in the period from October 1st to December 31st, 2018 published in the online editions of the following daily newspapers: Večernji list and Jutarnji list (Croatia); Blic and Večernje novosti (Serbia); Dnevni Avaz and Oslobodjenje (Bosnia and Herzegovina).

The above-mentioned analysis has included the following:

1. Number of articles
2. Type of articles (direct / indirect)
3. Sections in which articles are published
4. Themes
5. Final considerations

Number of articles

When collecting articles from the online editions of the listed daily newspapers, it has been noticed that in the given period, a total of 62 articles related to the Marrakesh Agreement were published.

Table 1 – *Number of articles*

Daily newspapers	Number of articles
Večernji list (HR)	17
Jutarnji list (HR)	25
Blic (RS)	4
Večernje novosti (RS)	5
Dnevni avaz (B&H)	8
Oslobođenje (B&H)	3
Total	62

Out of the total number of articles, 68% were published in Croatian online editions of daily newspapers, 14% in Serbian and 18% in Bosnian and Herzegovinian.

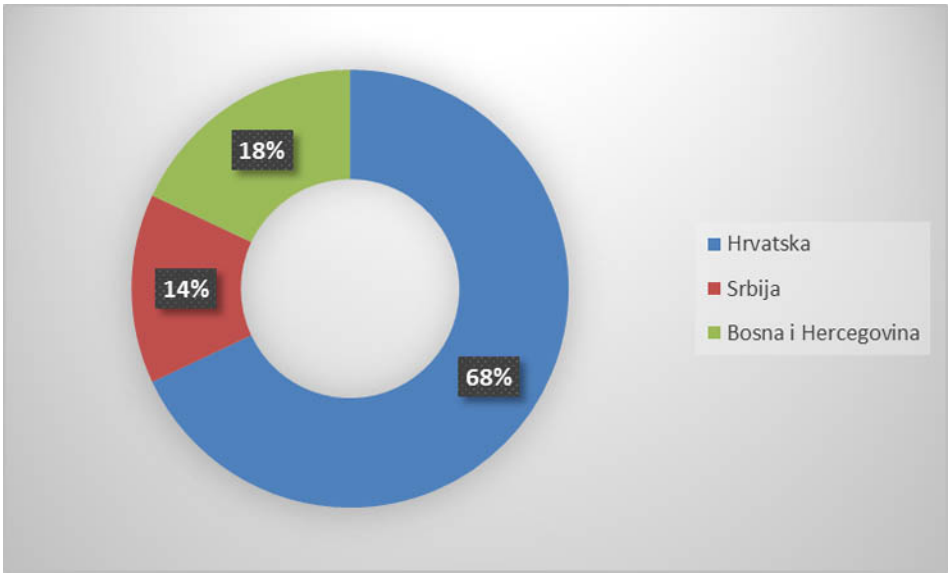

Chart 1 – *Percentage of articles by country*

When collecting the articles, it has been noticed that the greatest interest in this topic has been found in the Croatian daily newspapers that were the subject of observation. In the analyzed Serbian and Bosnian-Herzegovinian newspapers, there has been much less interest in writing and reporting on this topic. It can be concluded that for some reason the topic has not been attractive to them, as it is the case with the Croatian media.

Types of articles and sections

When it comes to the type of articles, or the representation of articles that address this topic directly or indirectly, the situation is the following:

– *Večernji list*: **65%** direct, **35%** indirect;
– *Jutarnji list*: **48%** direct, **52%** indirect;
– *Blic*: **100%** indirect;
– *Večernje novosti*: **40%** direct, **60%** indirect;
– *Dnevni avaz*: **25%** direct, **75%** indirect;
– *Oslobođenje*: **33%** direct, **67%** indirect.

The obtained data indicate that the highest percentage of articles, which have been written directly on this topic, come out in the online editions of daily newspapers that are published in Croatia while in the observed online editions of daily newspapers published in Serbia, as well as Bosnia and Herzegovina, a significantly higher percentage of articles that approach the topic in an indirect way have been noticed, and often using it (the topic) as a supplement to the central topics of the articles.

In continuation of the analysis of the articles dealing with Marrakesh Migrant Agreement, we have looked at the sections in which these articles have been published.

Table 2 – *Heading/Sections*

Heading/ Sections	Večernji list (HR)		Jutarnji list (HR)		Blic (RS)		Večernje novosti (RS)		Dnevni avaz (BiH)		Oslobođenje (BiH)	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
World	3	18%	11	44%	4	**100%**	0		6	**74%**	1	33%
Croatia	9	**53%**	12	**48%**					1	13%		
Columns	4	24%										
Interviews	1	6%					2	40%			1	33%
Society							3	**60%**				
Globe			2	8%								
Region											1	33%
Zagreb									1	13%		

The sections in which the articles have been located are the following: world, Croatia, columns, interviews, society, globe, region and Zagreb. When we look at the daily newspapers in the countries where they come out, we see that the column dominating in the online editions of daily newspapers Vecernji and Jutarnji list is the section called Croatia. When it comes to daily newspapers Blic, the dominant section is the world; while the society is dominant in the daily newspaper Večernje novosti.

When it comes to daily newspapers from Bosnia and Herzegovina, we notice that most articles in Dnevni avaz are in the world section, while in the online edition of daily newspapers Oslobodjenje articles are evenly distributed in the sections of the world, the interviews and the region.

Topics of the articles

Analyzing the contents of the articles, we have tried to sort them out based on sub-topics, within the central processed topic.

Table 3 – *Večernji list*

Topics of the articles								
Večernji list	Opposition to the MarrakechAgreement		Who will attend from the representatives of the Croatian government?		Conference holding and consequences of the Marrakech Agreement		Other	
	9	**52%**	**2**	**12%**	**3**	**18%**	**3**	**18%**

In the online edition of daily newspapers Večernji list, three thematic units have been singled out.

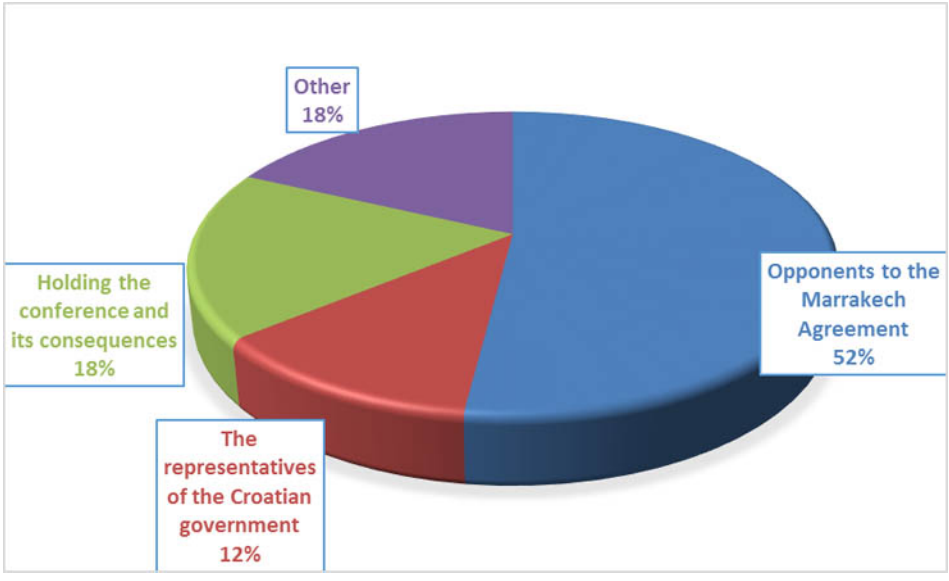

Chart 2 – *Večernji list*

The majority of texts (52%) are the texts that speak directly about the bad sides of the Marrakech Agreement and its opponents. We have come across the titles such as: The Marrakesh Agreement is the fraud of the UN; The Marrakesh Agreement is bad for Croatia; How is the Marrakech Agreement non-binding when it says "we commit" for 46 times? Some of these texts are an attempt to critically review this Agreement. However, some texts are openly opposed to this Agreement, and often the authors of the texts declare themselves as opponents of the Agreement. The texts represent the Agreement as a kind of fraud that is not sufficiently approached and explained to citizens. Also, two articles dealing with the participation of the representatives of the Croatian government in the conference have also been highlighted. They welcome the Croatian government decision that the participant is going to be the Minister of Internal Affairs, believing that thus Croatia has made it known to the world powers that the issue of migrants is its internal problem that it will deal with or address in its own way. The headlines of these articles are the following: Plenković: The government will determine who goes to Marrakesh; Prime Minister: Božinović will represent Croatia in Marrakech. As far as the texts from the third group are concerned, they are mainly related to reporting from the conference itself, the government representative clarifying what kind of significance and the consequences for Croatia and its policies towards migrants the conference has, but there can be found negative effects on the Croatian participation and support of the Agreement.

Table 4 – *Jutarnji list*

Topics of the articles								
Jutarnji list	Opposing the Marrakech Agreement		Croatian government on the Agreement		EU countries on the Agreement		Other	
	7	**28%**	**8**	**32%**	**8**	**32%**	**2**	**8%**

When it comes to the online edition of daily newspapers Jutarnji list, which has published the greatest number of articles during the observed period on this subject, we note that three thematic units have been re-separated: opposing the Marrakech Agreement, then the articles that represent statements and actions of the members of the Croatian government regarding the Agreement, and also the articles that convey the events and reactions from the European Union countries on this topic. The articles that represent the negative sides and the opposition to the Agreement constitute 28% of the texts published in the daily newspaper Jutarnji list on this topic.

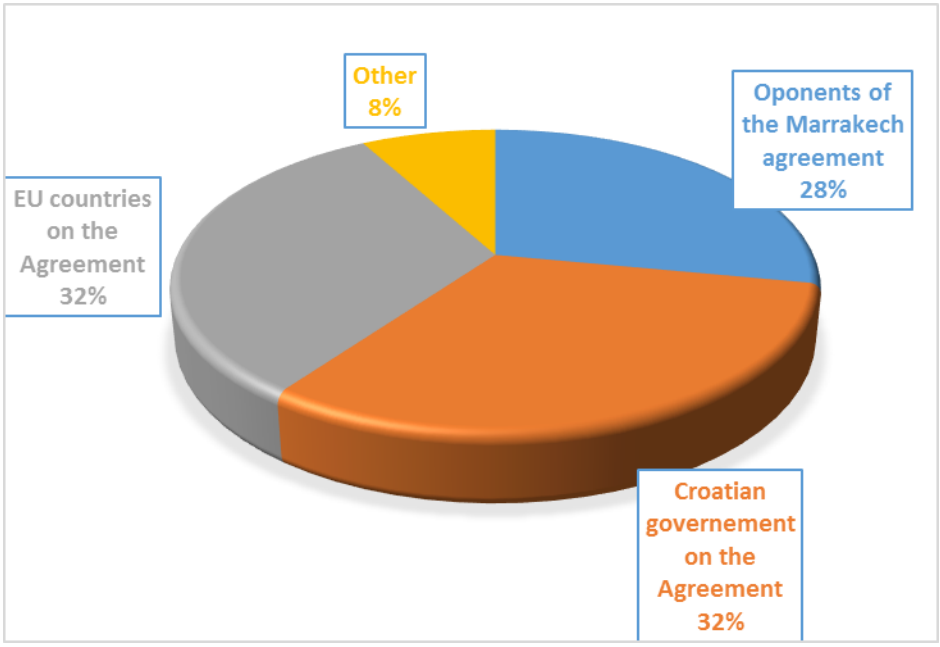

Chart 3 – *Jutarnji list*

These articles are the warning ones because they point to potential problems that might arise from the acceptance of the global migration agreement (Some of the titles: "Croatian Euro parliamenters warn about the radicalization of immigrants"; "The Marrakech Agreement has a disproportionate goal: to undermine the rule of law under the guise of human rights and introduce Sharia Law on Blasphemy"). The second group of texts (32%), as we have already said, are the texts concerning the statements and views of the members of the Croatian state summit on this issue. These articles are in most cases related to conflicts and disagreements between the she-president and members of the government about who will go, and whether the representative of Croatia should go to the conference at all: "I agree that someone is trying to introduce strife between me and the government, but I do not know who. The President commented on rumors related to the Marrakesh Declaration"; "Plenković: Are there any attempts to disturb relations with the president or her advisers? Whoever is not with the Government, will not win elections."; "Plenković: Marrakech Agreement? The government did not change its position. Why has someone else changed the position, for example, the president, she must explain it to the public."The third group consists of the texts that broadcast events from the European countries on this issue. The articles are mainly dedicated to the events in Belgium, Slovenia and Hungary. They are mainly targeted at events in the countries that have refused or raised doubts in terms of supporting this Agreement: "The Marrakesh Agreement demolished the Belgian government. First the right-wingers left it, and then the Prime Minister resigned because the left-wing threatened him with mistrust." "Less support for the Marrakesh Agreement. Another member of the EU has rejected the UN Global Compact on Migration!";

"The Slovenian Parliament rejected the demand for a referendum on the Marrakesh Declaration. The Janez Janša initiative has failed."

At the beginning of the analysis, we have pointed out that in Serbian, as well as Bosnian-Herzegovinian media, much less has been reported and written on this subject. The online editions of daily newspapers Blic and Večernje novosti have a total of 9 articles, which mostly transmit reactions in Croatia and Slovenia.

Table 5 – *Blic/Večernje novosti*

Topics of the articles						
	Reactions in Croatia		Reactions in Slovenia		Serbia supports the Agreement	
Blic	**3**	**75%**	**1**	**25%**	**0**	*I*
Večernje novosti	**2**	**40%**	**1**	**20%**	**2**	**40%**

The online edition of daily newspapers Blic has only 4 texts on this subject, 3 dedicated to the events and reactions in Croatia when it comes to the Marrakech Agreement. Two texts are dedicated to President Kolinda Grabar-Kitarović and her remarks on this Agreement: "The extreme right-wing is praising Kolinda:"She is a ruler close to the people that Germany nowadays can only dream about. "Kolinda got a hold of microphone during a grievous debate with a journalist." One text is dedicated to the protests against this Agreement that took place in Split: "Walking Against the Migrants", Split against the Marrakech Agreement, they carried a "SAY NO to THE VIOLENT ISLAMIZATION OF CROATIA" banner. One text is dedicated to the events in Slovenia and dilemmas about the acceptance of this Agreement: "Cerar: We will review the Marrakesh Agreement again."

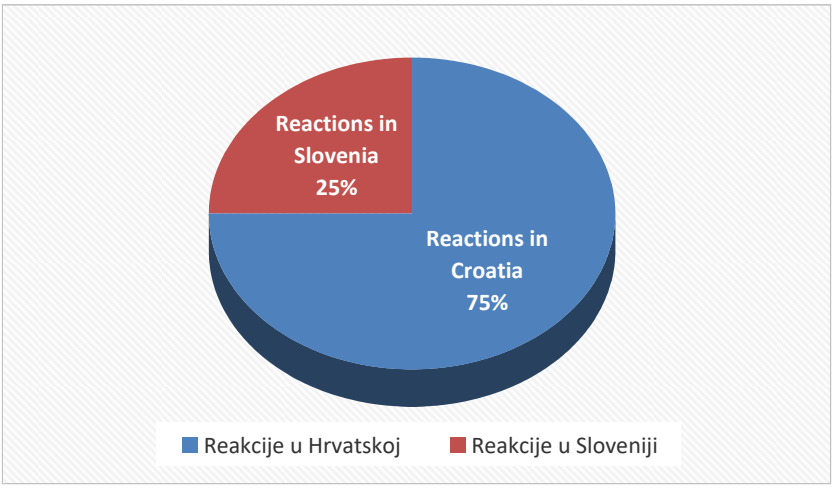

Chart 4 – *Blic*

The online edition of daily newspapers Vecernje novosti includes two texts dedicated to events in Croatia and Serbia. Both texts speak about developments in Croatia and convey a negative attitude towards migrants and the acceptance of a global agreement: "Croatia: 31 local TV stations temporarily remain without a concession due to the hate speech"; "The neighbors will not agree on the rights of migrants." It is interesting that the text on the loss of the concession for 31 local television stations from Croatia because they broadcast TV content filled with hate speech towards migrants, before the adoption of the Marrakech Agreement, has not been found in any of the two daily newspapers in Croatia, and also in the daily newspapers in B&H. Both texts refer to Serbian position to support this Agreement: "Serbia supported the UN Declaration on Migrants." One text refers to the rejection of a referendum on this issue in Slovenia: "The Slovenian Parliament rejected a proposal for a referendum on the Marrakesh Agreement."

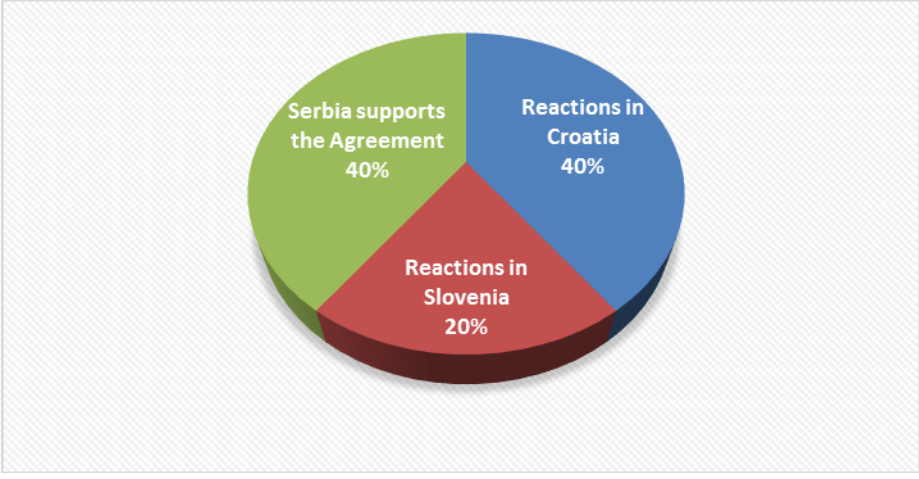

Chart 5 – *Vecernje novosti*

The analyzed online editions of daily newspapers that are published in Bosnia and Herzegovina also show less interest in reporting and writing on this topic. Only 11 texts have come out in both of them. The online edition of the daily newspapers Dnevni avaz has published 8 articles on the topic of the Marrakech Agreement.

Table 6 – *Dnevni avaz/Oslobođenje*

Topics of the articles								
	Reactions in Croatia		Reactions in the EU countries		Protests in Brussels		About the Agreement	
Dnevni avaz	**2**	**25%**	**2**	**25%**	**2**	**25%**	**2**	**25%**
Oslobođenje	**1**	**33%**	**1**	**33%**	**0**	*/*	**1**	**33%**

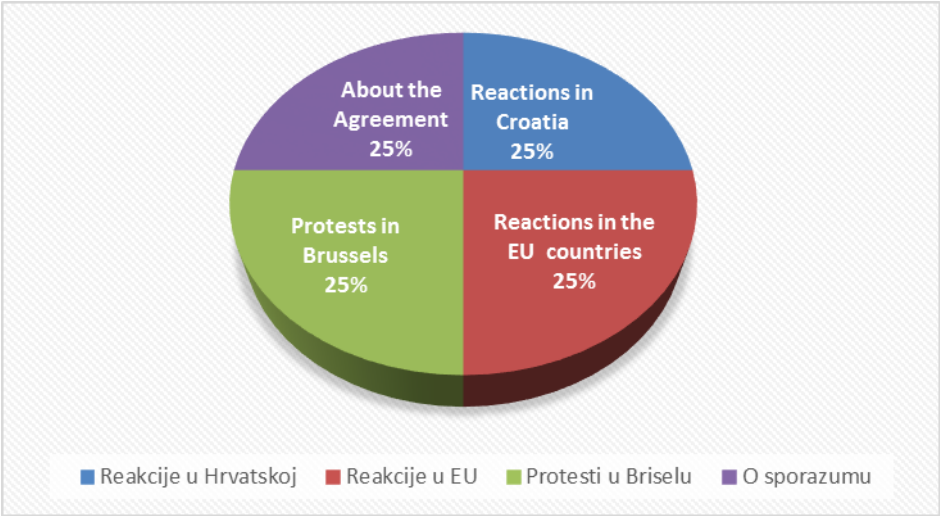

Chart 6 – *Dnevni avaz*

Two articles have been devoted to reactions in Croatia, one about President Grabar-Kitarović and her reaction to the issue related to this Agreement: "Grabar-Kitarović was upset by questions about migrants and took the microphone out of journalist's hand"; while the other generally deals with attitudes in Croatia on the subject of the Agreement. Two articles refer to the reaction to the Agreement in Belgium and Austria: "The Prime Minister of Belgium has resigned to King Philip."; "The following is an example of the United States and Hungary: Austria withdraws from the global agreement on migrants." Two articles are devoted to protests against agreements held in Brussels: "95 protesters have been arrested in Brussels against the Marrakech Agreement"; "Clashes at the protests, the police used water cannons." Both texts are informative. As the fourth thematic unit, two texts on the Agreement itself, informative ones, are set out: "The UN has accepted the Global Agreement on Refugees."; "The Marrakesh Agreement has been adopted by more than 160 countries."

The online edition of the daily newspapers Oslobodjenje has published 3 texts on this topic.

One text is concerned with the Agreement itself and presents an interview with Luis Arbur, a UN representative for migration. The text is affirmative in character, as the title itself suggests: "Building the human mobility of the 21st century." One text is devoted to the events in Slovakia and the withdrawal of their foreign minister's resignation, and in the context of his dissatisfaction with the fact that Slovakia has decided to reject the support of the Marrakesh Agreement. Also, an article is dedicated to the events in Croatia, namely protests against the support of the Agreement that took place in Split: "In Split – Protests against the migrants: We will not have Arabs!"

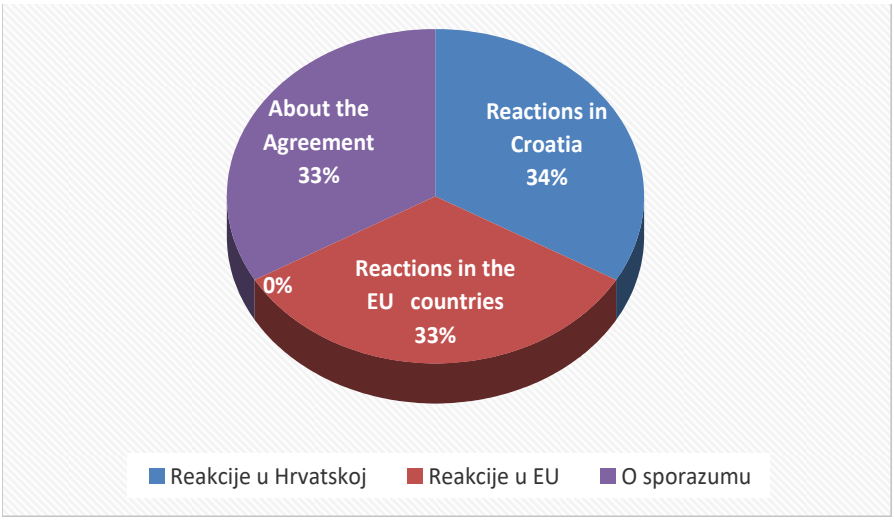

Chart 7 – *Oslobodjenje*

Instead of the conclusion

After collecting the articles and carrying out the comparative analysis of them in the previously mentioned online editions of the daily newspapers, we have come up with several conclusions. Certain differences in reporting and the lack in the reporting on the phenomenon of the migrant crisis and the possibilities for its mitigation exist in all three countries, whose media have been monitored. The interest in reporting on this topic is different from newspaper to newspaper, from country to country. There are a few texts on the integration of migrants, and almost none of affirmative texts. Regardless of the country's position on the Moroccan Agreement, the objective reporting on such a universal phenomenon should be implied. The level of problems accompanying migrants often leads to the attitude of the society that is often and largely formed through media discourse. Despite the widely agreed platform of the Agreement itself and the fact that it has been accepted by more than 160 countries, in some countries and power centers the Agreement has not come across reception. As the reason for opposing the Agreement, it is said that it will question the national sovereignty and lead to greater influx of migrants. Some answers will only be given to us by the future, and some, in concrete cases, are already visible now.

In this context, we could also set up a research hypothesis: how long it would take Abdullah to open an entrepreneurial agency in the other two countries, whose media has been analyzed; with or without the Marrakesh Declaration; and to give some recommendation regarding the protection of his rights, through the prism of the obligations and experiences that we have so far assumed, which we inherit from the past. But let's start orderly.

We have already noticed by counting and sorting the articles that there are some differences in the interest on this topic, depending on the country in which the observed daily newspapers come out. The online editions of daily newspapers that are published in Croatia show a significantly higher interest in writing on this subject than daily newspapers in Bosnia and Herzegovina

and Serbia. Such a situation can be linked, in general, to the relations of these countries in regard to migrants and the Marrakesh Agreement. The impression is that the Marrakech Agreement is, for some reason, recognized in Croatia as "controversial", while in Serbia and Bosnia and Herzegovina it is viewed as something that does not need to be further examined.

The articles we have analyzed differ in the way they deal with the topic. The daily newspapers from Croatia, in most cases, approach the topic in a direct way, putting the Marrakech Agreement, as well as the dilemmas associated with it, as the central theme of articles, paying it the full attention. The daily newspapers in Serbia approach this topic in a more indirect way; articles are more dedicated to events in other countries, such as protests or disagreements of the governments of the European countries, which in fact have conflicting views on this Agreement.

The sections where the articles are mostly placed suggest a different approach to reporting on this subject. Most of the articles in the observed daily newspapers that are published in Croatia are located in the section called *Croatia*, while the daily newspapers that are published in Serbia, have classified their articles mainly in the sections called the *world* and *society* whereas the daily newspapers from Bosnia and Herzegovina dominate the *world, region* and *interviews*. Such findings match the previously observed and they again suggest that daily newspapers in Croatia have come to this phenomenon as an important internal issue, while newspapers from Serbia and B&H have reported the Agreement as a global social phenomenon.

Having observed articles and their central themes, we have noticed that there is a significant percentage of texts in the Croatian daily newspapers (especially in Večernji list - 52%) that are opposed to this Agreement and emphasize its negative sides, even the call for its rejection while newspapers in B&H and Serbia mostly report only on the reactions to this Agreement in the region (Croatia and Slovenia), as well as other European countries (Belgium, Hungary, Slovakia, etc.), without calling for rejection or acceptance of the Agreement.

We conclude that in the media reporting the full respect for basic human rights of migrants is expected, without discrimination on any basis. Working on raising the expertise of such reporting could result in the higher quality in respecting the rights of those who are being written about, regardless of what is provided by the legally non-binding Marrakesh document.

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HOW TO READ LAW*

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Where does the reading of law come from? The answer lies in the following: the imperative and pressure. After the imperative postulations, it is very important to estimate how law is interpreted by reason. Therefore, completely unexpectedly, we open the issue of the construction, reading and interpretation of law with the issue of pain, which is often very skillfully avoided. Pain may come out of the construction, reading and interpretation of law because law is not created just for the sake of creating, but in order to be applied, or for people to behave in compliance with it. In this way, it can be a source of immeasurable pain.

Key Words: *law, value, value reading, interpretation, construction*

Introduction

Is it justified to stand behind the following idea: "Just votes for unjust laws"?[1] History demonstrates very impressively the horrors of such an approach. Therefore, we need the idea of the value reading of law, since: "Dealing with conflicts of interest is inherent in a lawyer's life" according to Geoffrey Hazard.[2] From such everyday life, a man-lawyer must come up with a solution that corresponds to the idea of the UN Commission on Human Rights, and we quote the following: "In 1994, the UN Commission on Human Rights recorded that it was "convinced that an independent and impartial judiciary and an independent legal profession are essential pre-requisites for the protection of human rights and for the ensuring that there is no discrimination in the administration of justice."[3]

The inseparability of law from the society indicates an association between value and moral life and reading of law, since: "It is the morality of the Good Life, of excellence, of the fullest realization of human powers,"[4] so "sin as a failure in the effort to

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[1] J. Finnis, *Philosophy of Law*, Volume IV, Oxford University Press, Oxford, 2011, 436.

[2] R. Mullerat, *Conflict of Interest: Serving Two Masters*, in *Teaching Ethics*, ed. by R. M Thomas, Centre for Business and Public sector Ethics, Cambridge, 2011 38.

[3] Ibid., 36.

[4] L. L. Fuller, *The Morality of Law*, Yale University Press, New Haven and London, 1964, 5.

achieve a realization of the human quality itself."[5] In the same way, Webster's New International Dictionary defines sin in the following way: "To depart voluntarily from the path of duty prescribed by God to man."[6] And if we want to take the position of reason, we can use the idea that Greeks took because: "Generally with the Greeks instead of ideas of right and wrong, of moral claim and moral duty, we have rather the conception of proper and fitting conduct, conduct such as beseems a human being functioning at his best."[7] It is possible that man is not judged "for failing to embrace opportunities for the fullest realization of their powers", but for "failing to respect the basic requirements of social living."[8] We can conclude from this that the value reading of law is a kind of "deep play"[9] since: "Every action must be appraised in the light of its contribution to the perfect life."[10]

When Law is a Good Law?

We can only then vote for a law, even if it is unjust or "(A) law which a man cannot obey, nor act according to it, is void and no law: and it is impossible to obey contradictions, or act according to them."[11] One more thing that an unjust law can produce, and it is fast, is almost "everyday" change of law, which is characteristic for unstable legal systems, so, the following appears as a reaction: "A law that changes every day is worse than no law at all."[12] Such a postulation directly introduces the conflict between justice and legal certainty, in order to protect man from "a bad system of law."[13]

It is then absolutely justified that: "Certainly there can be no rational ground for asserting that a man can have a moral obligation to obey a legal rule that does not exist, or is kept secret from him, or that came into existence only after he had acted, or was unintelligible, or was contradicted by another rule of the same system, or commanded the impossible, or changed every minute."[14] Thus, it is possible to create a legal system that will offer value and guarantee legal security, which is very important for the value reading of law. Of course, it does not mean anything without the other values. Since the second factual part of the legal order is human behavior by legal norms, it becomes quite clear why it is necessary that the value of legal certainty and absence of daily changes of legal norms is achieved, because "introducing such frequent changes in the rules that the subject cannot orient his action by them."[15]

[5] Ibid., 3, f.. 1.
[6] Ibid., 3.
[7] Ibid., 5.
[8] Ibid., 5-6.
[9] L. L. Fuller, *The Morality of Law*, 6.
[10] Ibid., 10.
[11] Ibid., 33.
[12] Ibid., 37.
[13] Ibid., 39.
[14] Ibid.
[15] Ibid.

Since legal norms exist and are directed towards people, "the legislator has a moral duty to make his laws clear and understandable."[16] That is the only possible way to achieve a sense of the legal order. However, what appears as a problem in the functioning of the legal system is a constant "discrepancy between the law as declared and as actually administered"[17], that does not occur only in unstable legal systems, it is a "thing" that is present in all legal systems. That is why Kant has the following idea: "We must not expect a good constitution because those who make it are moral men. Rather it is because of a good constitution that we may expect a society composed of moral men."[18] However, the same as Plato, there is the issue how such imperfect people can create such perfect constitutions and laws. What is imposed as a conclusion by practice is the following: "Law has been often used as an instrument of legislative omnipotence. There was an attempt to make a whole nation sober by law. It failed." "The Italian dictator is trying to make his intelligent, cynical, and peace-loving people into courageous heroes. The fundamentalists have tried in some states of this Union to make people God-fearing and bibliolatric by law. A great communists Union has tried to abolish God, marriage, and the family, again by law."[19] This is the problem of the past, present and future, because the affinity of man to arrange everything and to govern everything will never change.

That is why we quote Talmud: "If I am not for myself, who shall be for me? If I am for myself alone, what am I?" If we, according to Lon Fuller, "put this in the plural, we have, "If we are not for ourselves, who shall be for us? If we are for ourselves alone, what are we?"[20] That is why we talk about the value reading of law because what we are if law is created only for us and obligations for others?

Of course, with the value reading of law, one starts from the language, which is the first level of reading, one from which all starts, but it is also very often the limiting factor because, according to Wittgenstein, "The limits of my language are the limits of my world."[21] Thus begins the value reading of law, with its own language restriction, which then limits our understanding of the world and man. In this case we ask how language restricts the position and the role of judges, especially on the occasion of the value reading of law that is "Judge's moral authority".[22] Such value reading of law is something that is expected from a legislator while creating laws, but in a special way it reflects the position and the role of the judge in, namely, functional legal order, because the court judgment directly realizes the part of the legal norms that affects the life of people in the "negative" way, the so-called sanctions. Therefore, it is particularly important for us that "Ronald Dworkin has urged American judges and lawyers to embrace the "moral reading of the (United States) Constitution." The moral reading insists that the Bill of Rights and the Fourteenth Amendment "invoke moral principles about the political decency and jus-

[16] Ibid., 43.

[17] L. L. Fuller, *The Morality of Law*, 81.

[18] Ibid., 152.

[19] Ibid., 169.

[20] Ibid., 183.

[21] Ibid., 186.

[22] S. Breyer, *Introduction: The "International" Constitutional Judge*, in *Exploring Law's Empire*, *The Jurisprudence of Ronald Dworkin*, ed. S. Hershovitz, Oxford University Press, Oxford, New York, 2006, 1.

tice."[23] Of course, the response is as follows: "Some critics worry that the moral reading emphasizes morality too much. They believe that it gives short shrift to text and history and that it calls upon judges to become philosophers instead of lawyers."[24] However, we do not find anything wrong in the assumption that judges ought to be philosophers, actually this is required of them and they are not merely "screws" in the legal system, but can be creators, as well. This does not invoke mixing two governments, legislative and judicial, speaking of the need for judges to be not only independent, but also "creative" in difficult cases. This again does not mean that it invokes a situation where judges, especially in the post-revolutionary period, render judgments that are not based on the text of norms, but in the situation when the law does not say anything about something, when the laws have criminal content, this especially, because judges are not soldiers that can "hide" behind the famous phrase "I am a soldier and I just follow orders."

Moral Principles and Reading the Law

Since moral principles that can be built into general legal acts can be very abstract, such as the principle of "government must treat everyone as of equal status and with equal concern"[25], it causes the need for legal acts to be often seen by philosophical methods, and they require a special "intellectual style"[26] that would enable what Dworkin was referring to as "a fusion of constitutional law and moral philosophy."[27] The question remains: "Can Dworkin's "moral reading" in fact accommodate historical argument and other traditional forms of legal reasoning, or does it require constitutional judges to become philosophers?"[28] It is possible to come to non-matching of moral values and the subsequent interpretation of general legal acts including the Constitution as the most important and the highest general legal act because: "For example, when Dworkin analyzes Equal Protection Clause, he says that there are only two possible interpretations of it. One possibility is that the Clause merely requires government to honor the terms of its laws, whatever those laws may say. If the law prohibits theft, then the police must enforce that law against anybody who steals, without regard to the race of the culprit or victim. This principle is very week one. It does not preclude the government from writing racially discriminatory terms straight into its laws; it merely prohibits the executive and judicial branches from discriminating when the legislature has no authorized them to do so."[29] In this way, it becomes clear that the divergence of moral values and legal acts is absolutely possible. However, it remains an important place in the general value reading of law, the endeavor to include moral values in legal acts and to apply legal acts through them later.

[23] C. L. Eisgruber, *Should Constitutional Judges be Philosophers?*, in *Exploring Law's Empire*, *The Jurisprudence of Ronald Dworkin*, 5.

[24] Ibid.

[25] Ibid.

[26] C. L. Eisgruber, *Should Constitutional Judges be Philosophers?*, in *Exploring Law's Empire*, *The Jurisprudence of Ronald Dworkin*, 5.

[27] Ibid., 6.

[28] Ibid., 5.

[29] Ibid., 6.

The value reading of law "refers to abstract moral principles and incorporates these by reference, as limits on government's power" and it "invokes moral principles about political decency and justice."[30] This could be an adequate response to "dead hand"[31] theories of law, representing only the emphasis on dogmatic-normative method. Very often there is the conflict between the value reading of law and absolute faith in the legal system, and, in many cases such as, for example, "Brown v. Board of Education" it happens that: "In their personal moral codes, these scholars could recognize a role for principle and could apply it to conclude that racial segregation was a bad thing, causing injustice. But their commitment to law as a system of rules, with no place for morality or principle, led them to argue that the power of judges recedes when the law runs out, leaving them no authority to resolve a constitutional issue by resort to principle."[32] Only with the value reading of law it is possible to enable law to "find its soul"[33], since it often happens that: "One fascinating historical account of this period illustrates the schizophrenic condition of the academy with its frequent use, in describing the views of the theorists, of the qualifiers, "publicly" and "privately". Publicly the theorists would take one position, while privately, in correspondence, for example, they would hedge or qualify."[34]

The value reading of law is also a condition "for moral membership in our political community are themselves preconditions for the legitimacy of the outcome of majoritarian political processes."[35] Since nothing created by man is perfect, the value reading of law can help us to make our imperfect general legal acts somewhat acceptable, except those with criminal contents that do not deserve to be considered for legal acts because then the legal system would have "lost its Soul".[36] Such legal systems reject the postulation that "moral rights" are "democratic conditions".[37] Such a climate has resulted in the situation that classes were destroyed by pure legal positivism, and: "He argued that the moral skeptics of the 1930s and 1940s were impoverished in their rejection of morality as part of law. The positivist emphasis on law as command with authority commensurate to its source in the people, erroneously limited law to a formal set of rules that had no use for morality in its enforcement and application. To Dworkin, this was an unacceptable mask to impose on law of any kind, but his attacks on positivism and utilitarianism had particular resonance for constitutional law. Because Dworkin saw law as a system of rights recognition and protection."[38] The value reading of law enables law to

[30] Ibid., 9, f. 16.

[31] Ibid., 19.

[32] R. L. Braun, *How Constitutional Theory Found its Soul: The Contributions of Ronald Dworkin*, in *Exploring Law's Empire*, *The Jurisprudence of Ronald Dworkin*, 45.

[33] Ibid., 41.

[34] Ibid., 45.

[35] J. E. Fleming, *The Place of History and philosophy in the Moral Reading of the American Constitution*, in *Exploring Law's Empire*, *The Jurisprudence of Ronald Dworkin*, 27.

[36] R. L. Braun, *How Constitutional Theory Found its Soul: The Contributions of Ronald Dworkin*, in *Exploring Law's Empire*, *The Jurisprudence of Ronald Dworkin*, 42.

[37] J. E. Fleming, *The Place of History and philosophy in the Moral Reading of the American Constitution*, in *Exploring Law's Empire*, *The Jurisprudence of Ronald Dworkin*, 29.

[38] R. L. Braun, *How Constitutional Theory Found its Soul: The Contributions of Ronald Dworkin*, in *Exploring Law's Empire*, *The Jurisprudence of Ronald Dworkin*, 49.

introduce the principles into general legal acts that would again be "recognition of moral rights against the government".[39]

The value reading of law at the same time helps the judges who do not doubt legal acts that protect man from his government because: "Courts are moral actors, and a court can display integrity in much the same way that an individual can."[40] The issue of the value reading of law becomes especially important in situations which can be referred to as discretion, so Hart "says that when the judge's discretion is in play, we can no longer speak of his being bound by standards, but must speak rather of what standards he 'characteristically uses."[41] The discretion of a judge to decide is particularly evident in difficult cases, especially if we accept the attitude of nominalists that: "judges always have discretion, even when a clear rule is in point, because judges are ultimately the final arbiters of the law."[42] Yet, his discretion "means not that he is free to decide without recourse to standards of sense and fairness, but only that his decision is not controlled by a standard furnished by the particular authority we have in mind when we raise the question of discretion."[43] Therefore, his reading of law is not by discretion itself free of moral values, so a judge, as anybody else, is "bound to follow the principle that no man profit from his own wrong"[44] which happened in 1889 in New York in the case *Riggs v. Palmer*, when the court "had to decide whether an heir named in the will of his grandfather could inherit under that will, even though he had murdered his grandfather to do so."[45] Thus: "The judge who looks outside the Constitution always looks inside himself and nowhere else."[46] We can only conditionally agree with this attitude because we want to avoid subjectivity, therefore, judges do not face only their own view of reality, but also regulations provided and guaranteed by the state and the moral values of the society, as well as the value reading of law. This shows the tension in coming to "happy endings" between "strict adherence to legal norms and their logical implications, and on the other hand, the entirely understandable urge to "do justice"-as the judges see it-to the flesh and blood individuals who stand before them".[47] The case *Riggs v. Palmer* showed that it was not true that "moral reasoning is too subjective, mystifying, and irresolvable to rely on in legal contexts. Were moral reasoning necessarily embedded in legal argument, it would only infect the law with endless controversies characteristic of morality. This would be especially intolerable in the law, since the main function of law is to settle disputes, put an end to argument, and get on with deploying the state's power in an orderly way."[48] It pointed out the following: "We all know that there are "hard cases" where the law is to some extent indeterminate, as when it is ambiguous,

[39] Ibid.

[40] S. Hershovitz, *Integrity and Stare Decisis*, in *Exploring Law's Empire*, *The Jurisprudence of Ronald Dworkin*, 115.

[41] R. Dworkin, *The Model of Rules I*, in C. Johnosn, *Philosophy of Law*, New York, 1993, 109.

[42] Ibid.

[43] Ibid.

[44] Ibid.

[45] Ibid., 101.

[46] S. Macedo, *Morality and Constitutional Law*, in: C. Johnson, *Philosophy of Law*, 425.

[47] J. Goldsworthy, *The Limits of Judicial Fidelity to Law: The Coxford Lecture*, Faculty of Law, Monash University, Reasercs Paper, No 2011/14, 307.

[48] C. Johnson, *Legal Reasoning and Its Conceptual Tools*, in C. Johnson, *Philosophy of Law*, 366.

vague, inconsistent, insufficiently explicit or even silent as to issues that judges must resolve. Judges must resolve disputes properly brought before them, and when the law does not resolve them, they must act creatively and make new law, guided by political morality."[49] Thus, we must disagree with the opinion of Posner on "value judgements": (It is) inevitable that many judicial decisions will be based on value judgements rather that technical determination not scientific, and therefore are not readily falsifiable and hence not readily verifiable either – and as a consequence are not always profitably discussable."[50] Of course, in these cases there is a danger of subjectivism, but it can be overcome by the constant construction of value mentality because: "It is important in a democracy in which the governed are conceived to be free persons that the actions of officials, ranging from judicial decisions to enactments of the legislature, be based on a foundation of moral defensibility. It is not enough to say, "This is our decision; it needs no justification other that our power." The giving of orders backed by nothing else than threats and cutting off all requests for moral justification might promote legal certainty, but it is not the giving of law to free people. As one writer puts it, "the public morality of law creates a certain kind of moral community, one in which political official answers to the public not only for following the rules but also for their conscientious adherence to shared political principles."[51] Is it then possible that discretion allows for judges the "legitimate scope for creativity"?[52]

Conclusion

The value reading of law also requires the construction of value mentality and integrity as Dworkin said "Integrity becomes a political ideal when … we insist that the state act on a single coherent set of principle even when its citizens are divided about what the right principles of justice and fairness really are. We assume, in both the individual and political cases, that we can recognize other people's acts as expressing a conception of justice or decency even when we do not endorse that conception ourselves, this ability is important part of our more general ability to treat others with respect, and it is therefore a prerequisite of civilization."[53] What the value reading of law shows us is that states and governments cannot act "capriciously in matters of importance", and "we want the state to strive to act morally", as well as the creation of "coherent vision of what we owe to one another."[54]

The value reading of law and the ideal of integrity "requires government to speak with one voice, to act in a principled and coherent manner toward all its citizens, to extend to everyone the same substantive standards of justice or fairness it uses for some."[55] Thus,

[49] J. Goldsworthy, *The Limits of Judicial Fidelity to Law: The Coxford Lecture*, 307.

[50] S. Macedo, *Morality and Constitutional Law*, in: C. Johnson, *Philosophy of Law*, 426.

[51] C. Johnson, *Legal Reasoning and Its Conceptual Tools*, in C. Johnson, *Philosophy of Law*, 367.

[52] J. Goldsworthy, *The Limits of Judicial Fidelity to Law: The Coxford Lecture*, 307.

[53] S. Hershovitz, *Integrity and Stare Decisis*, in *Exploring Law's Empire*, *The Jurisprudence of Ronald Dworkin*, 115.

[54] Ibid., 115-116.

[55] D. Smith, *The Many Faces of Political Integrity*, in *Exploring Law's Empire*, *The Jurisprudence of Ronald Dworkin*, 120.

it is true that "most eminent non-positivist, Ronald Dworkin, acknowledges that on rare occasions the law might be so unjust that even judges morally ought to disobey it."[56] Thus, a judge becomes a real guardian of legality if we do not understand the law in formal legal sense, because "a judge is confronted with having to deliver a judgment that seems to him… to contain too much law and not enough justice"[57], all this because, according to Oliver Wendell Holmes Jr. "the life of the law has not been logic…".[58] Therefore, we are back on the ground of the claim that the link between faith and reason in every kind of social activity is necessary, and thus in legal industry understood in the widest possible way.

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[56] J. Goldsworthy, *The Limits of Judicial Fidelity to Law: The Coxford Lecture*, 308.

[57] Ibid., 315.

[58] J. Goldsworthy, *The Limits of Judicial Fidelity to Law: The Coxford Lecture*, 324.

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COMPUTER CRIMES IN SERBIA

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Criminal Legislation of the Republic of Serbia, which started applying as of 1 January 2006, provides for criminal responsibility and punishment for several criminal offences against the safety of computer data. Those are computer criminal offences, which a perpetrator (who obviously has unique, special knowledge of information technology, computing – IT sector) commits by the abuse of computers, computer systems or network, thereby causing material or non-material damage to other natural or legal persons, as well as the whole social community. The basis of those incriminations is the European standards established under the Budapest Convention on Cybercrime and Additional Protocol to this Convention, as well as many other European documents. The paper analyses the basic characteristics of computer criminal offences in Serbia and the degree of their compatibility with the European standards.

Key Words: *computer abuse, European standards, crime, responsibility, sanction*

Introduction

When adopting the Convention on Cybercrime, ETS 185 of 23 November 2001 the Council of Europe tried to set up the basis of a unique European system of substantial and procedural criminal law in the field of necessary cooperation of the State members in fighting various forms and kinds of cyber crime[1]. The Convention itselft (Articles 2-13) stipulated five such crimes directed against the security, entirety and availability of computer data and computer systems. Hereby, the basis for some national legislations has been set more precisely in terms of defining the features and characteristics of individual computer crimes, their basic, minor and more severe forms, and prescribing criminal sanctions for their perpetrators (natural and legal persons)[2].

An additional Protocol on criminalisation of the acts of racist and xenophobic nature committed through computer systems has been adopted with this Convention. In Articles 3-7 this Protocol stipulates criminal responsibility and penalties for the abuse of computers in committing crimes out of racial and xenophobic impulses (motives)[3].

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[1] B. Petrović, D. Jovašević, Međunarodno krivično pravo, Sarajevo, 2010, pp.178-181.

[2] D. Jovašević, Međunarodno krivično pravo, Niš, 2011, pp.211-214.

[3] D. Jovašević, V. Ikanović, Međunarodno krivično pravo, Banja Luka, 2015, pp.116-118.

By accepting the above - mentioned Convention, and amending the Criminal Code of the Republic of Serbia[4] in April 2003, numerous computer crimes have been introduced into the criminal and legal system in Chapter 16a, under the title „Crimes against security of computer data". The same crimes were introduced into the 2003 Criminal Code of Montenegro in Chapter 28 under the same title[5].

General Characteristics of Criminal and Legal Protection of Computer Data

The object of protection from these crimes is the security of computer data and systems, that is, computer network. The legislator uses the term computer crime for it. However, besides this term, the legislation of the Republic of Serbia uses the term hi-tech crime for crimes that are systematized here.

Article 112 of the 2005 Criminal Code of the Republic of Serbia[6] (hereinafter: the Criminal Code) defines the term and characteristics of computer data, computer network, computer programme, computer virus, computer and computer system in terms of the object of attack in case of these crimes. The term computer crime encompasses all various shapes, kinds and forms of the expression of illegal behaviors directed against the security of computer and information systems as a whole or some of their parts, in different ways and with different means, with the intention to gain the benefit for themselves or other person (of material or non-material nature) or to cause damage to other person. The characteristic of computer crime is huge dynamics and extreme variety of its forms and kinds and manifestation forms[7].

Perpetrators of these crimes belong to a specific category of persons. They are mostly nondelinquents and socially adjustable, non-violent persons. They should have certain special, expert and practical knowledge and skills in the domain of information and computer techniques and technologies[8].

In practice, there is a greater or lesser time difference between the action taken and the moment when the consequences occur. These crimes are difficult to detect and even harder to prove.They remain practically undiscovered for a long time, until the damaged person suffers harm in the domain of information and computer data or systems.

Individual Computer Crimes

Damaging computer data and programmes

The crime under Article 298 involves the unauthorized deletion, alteration, damage, concealment or otherwise making computer data or programme unusable[9].

[4] D. Jovašević, Komentar Krivičnog zakona Republike Srbije sa sudskom praksom, Beograd, 2003, pp.429-431.
[5] Lj. Lazarević, B. Vučković, V. Vučković, Komentar Krivičnog zakonika Crne Gore, Cetinje, 2004, pp.561-566.
[6] The Official Gazette of the Republic of Serbia, No. 85/2005, 88/2005...108/2014 and 94/2016.
[7] D. Jovašević, Krivično pravo, Posebni deo, Beograd, 2017, pp.218-221.
[8] D. Jovašević, Leksikon krivičnog prava, Beograd, 2011, pp.511-513.
[9] B. Petrović, D. Jovašević, Krivično pravo 2, Posebni dio, Sarajevo, 2005, pp.189-191.

The object of protection is the security of computer data or computer programmes, and the object of attack is computer data or programme.

Computer data is every representation of facts, information or concepts in a form suitable for processing by a computer system including appropriate computer software necessary for the functioning of the computer system. A computer programme is a regulated set of orders that serves to control computer operations, as well as solve specific tasks using a computer.

The consequence of this crime is the violation of protected goods – computer data or programme belonging to natural or legal persons in terms of its usability or usefulness in general, or for a specific time, at a specific place or for specific purpose.

The perpetrator of the crime may be any person, and the guilt requires intent.

A fine or sentence of imprisonment of up to one year is prescribed for this crime. The court shall obligatory impose a security measure of the seizure of equipment and devices on the perpetrator if the following two conditions are fulfilled:

1) the equipment and devices have been used for the commission of the crimes and

2) the equipment and devices are the property of the perpetrator.

This crime has two heavier forms[10].

The first form of this crime exists if the action taken in the execution of the basic crime has caused the damage amounting to over RSD 450,000. The amount of material damage caused at the time of the commission of the crime in the amount established under the law constitutes a qualifying circumstance.A sentence of three months to three years of imprisonment is prescribed for this crime.

The second form of this offence, for which a sentence of three months to five years of imprisonment is prescribed, exists if the action taken in the execution of the basic crime has caused the material damage amounting to over RSD 1.500.000.

Computer sabotage

This crime set out in Article 299 of the Criminal Code is committed by whoever enters, destroys, deletes, alters, damages, conceals or otherwise makes computer data or programme unusable or damages or destroys a computer or other device for electronic processing and transfer of data, with intent to prevent or considerably disrupt the procedure of electronic processing and transfer of data that are of importance for government authorities, public service, institution, enterprise or other entities[11].

The entry means entering or storing new, previously non-existing data or alteration of the already existing computer or other data in computer programme. Destroying means complete and permanent destruction of a substance or form of a specific object, so that it cannot be used for any purpose or previous intention it was used for. Deletion means removing computer data or programme in its entirety or a part of it, often by use of mechanical or other means. Alteration is a partial change of the existing data in terms of its substance, whereabouts or nature, or entering other untrue data into computer system. The damage is temporary, partial or short-term disability of computer data, programme, computer or other device to serve its regular purpose.

[10] D. Jovašević, V. Ikanović, Krivično pravo Republike Srpske, Posebni deo, Banja Luka, 2012, pp.221-223.

[11] B. Petrović, D. Jovašević, A. Ferhatović, Krivično pravo 2, Sarajevo, 2016, pp.311-313.

Concealment is the removal of data or object from the place where it used to be, the place known to everyone, and its transfer to other, mostly hidden place, where other persons cannot be introduced to its contents in general or for a certain period of time. Making computer data or programme unusable is any action which, to a greater or lesser extent, affects the usability of computer data or programme.

The perpetrator of the crime may be any person, and the guilt requires a direct intent characterized by mentioned intention. A sentence of imprisonment of six months to five years is prescribed for this offence.

Generating and introducing computer viruses

The specific crime set out in Article 300 of the Criminal Code consists of generating computer virus with intention of its introduction or the introduction into somebody else's computer or computer network[12].

The object of protection is the security of a computer and computer network from viruses of different kinds and nature, and the object of attack is a computer virus. That is a computer programme or some other set of commands introduced into the computer or computer network generated to multiply itself and affect other programmes or data in a computer or computer network by adding that programme or set of commands to one or more computer programmes or data.

The perpetrator of the crime may be any person, and in practice those are persons having special knowledge in the scope of computers and information technology. As to the guilt, a direct intent characterized by mentioned intention is necessary.

A fine or sentence of imprisonment of up to six months are prescribed for this crime. Equipment and devices for the commission of this crime are obligatorily seized when applying security measure of the seizure of the object.

The heavier form of this crime, for which a fine or sentence of imprisonment of up to two years is prescribed, exists if the damage is caused by a virus generated in this way and introduced into somebody else's computer or computer network[13].

For the existence of the crime it is important that the perpetrator is aware and knows that during the time of committing a crime – work on a computer, they thereby introduce a computer virus into somebody else's computer or computer network. The damage caused thereby may be of material or non-material character. It is important that the damage caused is a result of the commission of a basic crime and that the perpetrator acts with negligence in relation to it.

Computer fraud

Computer fraud set out in Article 301 of the Criminal Code consists of entering incorrect data, failure to enter correct data or otherwise concealing or falsely representing data, thereby affecting the results of electronic processing and transfer of

[12] M. Kokolj, D. Jovašević, Krivično pravo, Opšti i posebni deo, Bijeljina, 2011, pp. 471-474.

[13] D. Jovašević, Lj. Mitrović, V. Ikanović, Krivično pravo Republike Srpske, Posebni deo, Banja Luka, 2017, pp.289-291.

data with intent to acquire for themselves or other person unlawful material gain and thus cause material damage to other person[14].

The object of protection is securing computer systems from entering incorrect and false data and trust in those systems.

Concealing is the failure to enter data by a person who is obliged to enter it into a computer or a computer network. It may involve any data. The false representation of computer data exists when false data (either entirely or partialy false) is represented, published, entered or used in a computer network. Both actions have to be taken in relation to the data which is, by its significance, nature, character and time of entering or use, capable of affecting the result (course and procedure) of electronic processing and transfer of data in computer system[15].

All the actions in terms of the commission of this crime have to be taken with certain intent – intent of the perpetrators to acquire unlawful material gain for themselves or other person. The perpetrator should have that intent during the commission of the crime, but does not have to be acquired in the concrete case. A result of this crime is the violation causing material damage to other person.

The perpetrator of the crime may be any person, and as to the guilt a direct intent characterized by mentioned intention is necessary.

A fine or sentence of imprisonment of up to three years is prescribed for this crime.

The lighter form of crime exists when a perpetrator commits a crime – hiding or falsely presenting data in a computer or computer network in a legally prescribed manner with intention to cause damage to other person, that is, to cause damage to other natural or legal person. Malicious intention of the perpetrator to cause material or non-material damage to other person is a privileged circumstance for which a fine or sentence of imprisonment of up to six months is prescribed under the law.

This crime has two heavier forms.

The first one, for which a sentence of imprisonment of one to eight years is prescribed, exists when material gain (for perpetrator or other person) is acquired by committed basic crime in the amount of over RSD 450,000. The amount of acquired material gain is a qualifying circumstance. It has to be in cause-and-effect connection with the commission of the crime.

The second form of the heavier crime exists if a perpetrator has acquired illegal material gain by committing the crime in the amount of over RSD 1,500,000. A sentence of imprisonment of two to ten years is prescribed for this crime.

Unauthorised Access to Protected Computers, Computer Networks and Electronic Data Processing

This crime set out in Article 302 of the Criminal Code consists of the access to a computer or computer network without authorisation, or the access to electronic data processing without authorisation by breaching protection measures[16].

[14] M. Simović, D. Jovašević, Leksikon krivičnog prava Bosne i Hercegovine, Sarajevo, 2018, pp.691-694.

[15] S. Petrović, Kompjuterski kriminalitet, Bezbednost, Beograd, No. 1/1994.

[16] D. Jovašević, Lj. Mitrović, V. Ikanović, Komentar Krivičnog zakonika Republike Srpske, Banja Luka, 2018, pp.641-644.

The object of protection is the security of a computer or computer network, or the system of electronic data processing protected by special technical and other measures.

The perpetrator of the crime may be any person having specific knowledge in the field of the protection of computers or computer systems. As to the guilt, a direct intent is necessary.

A fine or sentence of imprisonment of up to six months is prescribed for this crime.

This crime has two heavier forms[17].

The first one exists in the case of recording or using computer data obtained by accessing somebody else's computer or computer network or the system of electronic data processing without authorization, given that this has been done by breaching protection measures. A fine or sentence of imprisonment of up to two years is prescribed for this crime. It has no significance which purpose or intention such obtained (recorded) computer data has been used for.

The second heavier form of this crime, for which a fine or sentence of imprisonment of up to three years is prescribed, exists if computer data (one or more) is obtained by accessing somebody else's computer or computer network or somebody else's system of electronic data processing without authorization by breaching protection measures, and it is subsequently used, which results in suspension or serious malfunction in electronic processing and transfer of data or the network, or other serious consequences have occurred for other (natural or legal) person.

Preventing or Restricting Access to Public Computer Networks

The crime prescribed under Article 303 of the Criminal Code consists of preventing or hindering the access to a public computer network without authorization[18].

The object of protection is a public computer network and its free access to individually undefined number of persons. The motive of this incrimination is the prevention of monopoly on using a public computer network.

Prevention prevents other person to access a public computer network completely, permanently or for certain shorter period of time[19]. It may be done by physical prevention, setting some requirements or obstacles, or requesting fulfillment of certain assumptions. Hindering means partial complication, making difficult or inaccessible, or conditioning other person to access or use a public computer network without disturbances and freely, at its own discretion.

The perpetrator of the crime may be any person, and as to the guilt a direct intent is necessary.

A fine or sentence of imprisonment of up to one year is prescribed for this crime.

The heavier form of this crime, for which a sentence of imprisonment of up to three years is prescribed, exists if the crime is committed by an official in dischargingduties.

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[17] N. Kitarović, Kompjuterski kriminalitet, Bilten sudske praske Vrhovnog suda Srbije, Beograd, No. 2-3/1998.

[18] V. Vodinelić, Metodika otkrivanja, razjašnjenja i dokazivanja računarskog kriminaliteta, Priručnik, Zagreb, No. 4/1990.

[19] Z. Đokić, S. Živanović, Kompjuterski kriminal kao obeležje progresivnog kriminaliteta, Zbornik radova, Kazneno zakonodavstvo – progresivna ili regresivna rešenja, Beograd, 2005.

Unauthorised Use of Computer or Computer Networks

The crime prescribed under Article 304 of the Criminal Code consists of the use of computer services or computer networks without authorization and with intent to acquire unlawful material gain for themselves or other person[20].

The object of protection is the legality and conscientiousness in the use of computer systems – services or networks, from all forms of abuse and negligence.

There has to be an intent of the perpetrator at a time of the commission of the crime, but it does not have to be conducted in the concrete case.

The perpetrator of this crime may be any person, and as to the guilt a direct intent characterized by mentioned intention is necessary.

A fine or sentence of imprisonment of up to three months is prescribed for this crime.

Manufacture, Procurement and Provision of other Means for Committing Criminal Offences against the Security of Computer Data

This is a new computer crime (Article 304a of the Criminal Code) introduced into the Criminal Code by novelty from 2009. Actually, these are punishable preparation acts for the commission of a computer crime.

The crime itself consists of possession, manufacture, procurement, sale or giving other person computer, computer system, computer data or programme intended for committing crimes against the security of computer data for use[21].

The prescribed sentence for this crime is imprisonment from six months to three years, while the objects of the commission of the crime shall be seized from the perpetrator by use of the special security measure of the seizure of the object.

The object of protection in this case is also the security of computer systems and data, which is applied in a specific manner – just before the commission of the crime.

Conclusion

When implementing provisions of numerous relevant European documents finally inaugurated by adoption of the Convention on Cybercrime, the State members of the Council of Europe have created in their national legislations the legal basis for the introduction of a specific kind of „computer" crimes, with the aim to enable performance of various tasks and services by use of a computer with confidence and in an efficient, high-quality, lawful and secure manner.

Accordingly, in the Republic of Serbia many crimes of this kind have been introduced into its criminal and legal system and the legislator, having respect for the established European standards, has provided criminal sanctions for some forms and kinds of

[20] D. Jovašević, Obeležja kompjuterskog kriminaliteta, Pravni informator, Beograd, No. 3/1998.

[21] B. Brvar, Pojavne oblike zlorabe računalnika, Revija za kriminalistiko in kriminologijo, Ljubljana, No. 2/1990.

prescribed computer crimes. Thereby, with appropriate process requirements (establishment of special organs for fighting hi-tech crime within the police, public prosecution and the court), the basis for the efficient fight of our state against these modern forms and kinds of criminality knowing no boundaries between the states has been created.

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[16] D. Jovašević, Lj. Mitrović, V. Ikanović, *Komentar Krivičnog zakonika Republike Srpske*, Banja Luka, 2018.

[17] N. Kitarović, Kompjuterski kriminalitet, *Bilten sudske praske Vrhovnog suda Srbije*, Beograd, No. 2-3/1998.

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[19] Z. Đokić, S. Živanović, Kompjuterski kriminal kao obeležje progresivnog kriminaliteta, Zbornik radova, *Kazneno zakonodavstvo – progresivna ili regresivna rešenja*, Beograd, 2005.

[20] D. Jovašević, Obeležja kompjuterskog kriminaliteta, *Pravni informator*, Beograd, No. 3/1998.

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COMPARATIVE ANALYSIS OF TAX SYSTEMS IN GERMANY AND SERBIA

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The tax systems in Serbia and Germany are based on the same principles and they consist of very similar types of taxes. Both of these tax systems are decentralised in accordance with state regulations. The tax system in Germany is more developed. It encompasses more tax types, it is more oriented towards environmental protection, more efficient in tax collection, and it is more consistent and fair regarding the burden of taxpayers in accordance with their tax power.

Key Words: *tax, tax systems, tax burden, contributions*

Introduction

Tax competitiveness is a part of an economic environment, which greatly influences the level of investment inflow and economic growth. Creators of the tax system, economic and development policy in Serbia, highlight the competitiveness of the tax system in Serbia because of its low rates of certain taxes. On the other hand, business circles complain about the high fiscal burden. The comparative analysis of the tax systems in Serbia and Germany, the countries with a regulated tax system, aims to help resolve this dilemma.

Literature, methodology and goal

The following comparative analysis has been conducted using the relevant constitutions and tax laws in Germany and Serbia, the tax system in Germany being in the forefront. Moreover, the analyses and findings of Seibert (*The German Economy – Beyond the Social Market*), Schubert, K. and Klein (*Das Politiklexikon*), Jochum (*Introduction to German Tax Law*) have been employed in the analysis, as they provide an analysis of the basis of the tax system in Germany. Raičević, B. and Ranđelović, S., 2008 analysed the tax rates in Serbia, and the labour taxation system has been analysed in NALED's research, which also provided recommendations for potential avenues for its reform.

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German companies are one of the biggest investors in Serbia. This analysis aims to provide an answer to the question whether the tax system in Serbia is a factor, which contributes to the decision of German companies to invest in Serbia. What are the similarities, and what are the differences between the tax systems of these two countries? Are the similarities of tax systems and lower tax burden an advantage for Serbia when it comes to attracting German investment?

Structure of the countries and tax systems

Germany and Serbia have multiple differences. Germany (Bundesrepublik Deutschland) is the most populous country in European Union (82 million citizens, 42.65 million of work capable citizens), and it is one of the most developed countries in the world, with the strong industry and economy, which exports one third of its gross domestic product. On the other hand, Serbia has 7.3 million citizens, it is not a member of the EU, and it is still an underdeveloped country. According to the World Bank data[1], Serbian GDP is 88.75 times lower than German. Gross domestic product (purchasing power parity) in 2017 was 105.5 billion $, 15,000$ per capita, whilst in Germany it was 4.171 million $, 50,400$ per capita, which puts Serbia on the 83rd and 112th place, and Germany on the 6th and 27th place[2].

Still, when it comes to the fiscal burden, these two countries are quite comparable. The fiscal burden in Germany is around the EU average and it is 44.5%[3], whilst in Serbia it is 39%[4], according to the Chamber of Commerce of Serbia, and it is thus around the average in the region.

Serbia and Germany also have different constitutions. While Serbia is a unitary state with two autonomous regions, Germany is a federal parliamentary republic with 16 constituent states. With the 1949 constitutional document, the authorities including the taxation authorities were separated into three levels: the federal government (Bund), the states (Länder), and the municipalities (Gemeinden).

The basis of German financial system lies within the constitutional principle of equal access to public goods and benefits. From this principle, the principles of equality in taxation and the lawfulness of taxation (Federal Constitutional Court (BVerGE) 49, 148, 98 and 3659) have emerged. The equality in taxation principle, or the payment capability principle, states that there are different tax burdens for different economic powers. The principle of the rule of law, or the lawfulness of taxation principle, entails the protection from the arbitrariness of the state and abuse of power by the authorities (Schubert, K., Klein, M., 2011., pp. 9). The fourth basic taxation principle stems from the welfare state, and it states that the income necessary for sustaining the minimal life standard should not be taxed, and that the income tax of citizens must not be over half of their income (Federal Constitutional Court (BVerGE) 93, 121). According to Siebert (Siebert, H., 2005, p. 18.), nearly one third of the gross domestic product in Germany relates to the so - called “social budget”.

[1] http://databank.worldbank.org/data/download/GDP.pdf , 11.9.2018.

[2] https://www.cia.gov/library/publications/the-world-factbook/geos/gm.html , 3.9.18

[3] https://data.oecd.org/gga/general-government-revenue.htm , 11.9.2018.

[4] https://data.oecd.org/gga/general-government-revenue.htm , 11.9.2018.

Jurisdiction

Customs, fiscal monopolies[5] and law-making in whole or in part (Constitution, clause 105, paragraph 1-2) fall under the federal level. The constituent states have legislative competence related to the local taxes on consumption, local expenditures, and taxes which are essentially not similar to taxes regulated by the federal legislation (Constitution, clause 105, paragraph 2a). Municipalities do not have legislative power related to the taxation law. They have jurisdiction when it comes to the municipal multiplier for estimating the immovable property tax and the sales tax. The federal republic can adjust to the taxes which bring income to the federal state and municipalities (in part or in whole), with the permission from the Parliament (Constitution, clause 105, paragraph 3).

Types of taxes

In both countries, all three groups are represented: property taxes (in statics and dynamics), income taxes (citizens and corporations), and taxes on expenditures (consumption, fiscal monopolies and customs).

The Law on Budgetary System of Serbia involves public revenue (taxes on income, profits, property and transfer of property of natural and legal persons), social security contributions, taxes, and fees (Articles 14 and 15).

Affiliation

The tax systems of the two countries do not differ so much by the types of taxes, but they differ in their affiliation because the state structures are also different. In Germany, the federal level (Bund) includes the revenues from fiscal monopoly, income from customs duties, insurance taxes, capital transaction tax, one-time property tax and equalization of tax burden, tax on income for the citizen and corporate income tax, solidarity allowance and charges imposed within the EU. The constituent states have revenues from property tax, inheritance, motor vehicle tax, transactions that are not at federal level or do not belong together to the alliance and constituent states, e.g. VAT, beer, and casinos.

Revenues come from income tax on citizens, profits of companies and VAT of the federal republics and constituent states. The constituent states with higher incomes in the process of "horizontal equalization" are obliged to pay off part of the revenue for "equalization" to the constituent states with lower tax revenues (Constitution, Article 107, paragraph 2). Along with the horizontal, in the process of "vertical equalization", the Federal Republic pays additional funds to the constituent states if necessary.

[5] Fiscal monopoly - mostly state-owned enterprises, quasi-corporations and government-owned jobs that are legally monopolized.

Municipalities are the part of the income tax on the income of the municipality's residents, the part of the VAT revenue, after the distribution between the federal level and constituent states (Constitution, Article 106, paragraphs 1, 2 and 5), income from immovable property tax, income from local taxes on consumption and remuneration, and the part of the income tax imposed by the constituent state to which the municipality belongs. According to the Constitutions of the Federal States it is an imperative to equalize the tax revenues of municipalities as support to the municipalities with lower (tax) revenues.

Unlike Serbia, the most expensive tax for municipalities is the tax on additional value. In Serbia, the Republic's budget includes VAT, excises, duties and taxes on using, holding and carrying certain goods. Local self-governments belong to property tax, inheritance tax, gift and transfer tax on absolute rights. A portion of corporate income tax belongs to the republic level, and the part of the corporation income tax is retained in the province. Income tax on citizens is divided into three levels depending on where it is collected.

Taxes at the Federal Level

Excises

Like in Serbia, the income from excise taxes is handled on the federal level in Germany. Serbia has regulated its excise system based on the EU member states one. However, there are also differences in the way in which the excise rates are determined, the products for which the excise is paid, as well as the levels of excise rates. In Germany, energy tax (electricity, coal, oil, petrol, kerosene, liquefied gas, natural gas, and lubricating oil) is paid in the form of excises. In addition to the energy products, excise products in Germany include tobacco, alcoholic beverages, and coffee. Excise on electricity is paid in the form of ecotax. It is collected from the supplier, and paid by the consumer (Law on Electricity Tax, Article 3). It is not paid for sustainable energy.

Insurance tax

Insurance tax is treated as transfer tax. The value of the insurance premium is taxed for immovable property, motor vehicles and travel insurance (Law on Insurance Tax - Versicherungsteuergesetz, Article 1, paragraph 2). The tax rate is up to 19%. In their entirety they belong to the federal level. Health insurance, life insurance, unemployment insurance, reinsurance, social security, etc. are not taxed (Versicherungsteuergesetz, Article 4). Fire protection tax (for fire insurance) belongs to the constituent states. The taxpayer is an insurance company, and the tax base is an insurance premium.

Motor vehicles tax

Until 2009, it was collected at the constituent state level, and now it is collected at the federal level. It is highly elaborate according to the vehicle categories. The amount of taxes is influenced by the emissions of harmful gases, noise, engine type, and its volume.

Air travel tax

Air travel tax refers to each passenger flight embarked from any location in Germany and ranges from € 7.50 to € 42.18 depending on the destination.

Solidarity tax

The solidarity tax, introduced in 1991 to finance the cost of reunification of West and East Germany, is in fact a tax on taxes, so its survival is controversial. The solidarity rate is 5.5% of the income tax and corporate income tax. This burden also applies to the deduction tax. Both residents and non-residents are subject to payment (Jochum, H., 2013, p. 52).

Taxes imposed by the constituent states

The constituent states are responsible for inheritance and gift taxes. The inheritance (property) tax, gift and property of the foundation (Law on inheritance and gift tax, Article 19) are paid by natural and legal persons (Law on inheritance and gift tax, Article 2, paragraph 1). The tax rate, just like in Serbia, depends on the degree of kinship, the estimated value of inheritance or gifts, and, unlike in Serbia, the tax class (there are three of them) the recipient or the successor belongs to (Law on inheritance and gift tax, Article 19, paragraph 1). Individuals are exempt from paying taxes at the rate that depends on the value of the inheritance or gift and the tax class they are assigned to.

Real estate tax

This type of tax is regulated in a very similar way in both countries. The real estate tax rate in Germany, unlike Serbia, is not the same in all federal states and ranges from 3.5% in Bavaria and Saxony to 6.5% in North Rhine-Westphalia, Saarland, and Schleswig-Holstein.

Betting and lottery tax

The betting and lottery tax (horse racing and sports betting) is a federal tax and the income belongs to the federal states. The rate is 5%, and the taxpayer is the betting organizer, while the tax base is the stake. For national lottery, the tax rate is 20% of the nominal stake value, while the tax rate for the foreign lottery is 0.25 euros for each invested euro within the nominal stake value. The taxpayer is a national lottery organizer, and in the case of a foreign lottery, the taxpayer is the individual who brings the lottery ticket into the territory of Germany.

Church tax

It is charged by the tax authorities and the income belongs to religious communities. The taxpayers are the members of religious communities that are in the register. These taxes (about nine billion euros a year) make up about 70% of the income of religious

communities. These communities can also collect this tax by themselves. The rate is 8% in Bavaria and Baden-Württemberg and 9% in other countries (Jochum, H., 2013, p. 41). The tax base is the income tax for citizens.

Beer tax

The revenue from this tax belongs to the constituent states, which are also responsible for regulating it.

Taxes at the Municipal Level

Commercial activity and entrepreneurs' tax

It should not be confused with the corporate income tax, which is in Germany paid by larger companies with a higher income. The tax rate consists of a base rate (3.5%) and a municipal multiplier. Depending on the municipality, the rates range from 7% to 17%.

The taxable tax base is obtained by multiplying the taxable income with the base tax rate of 3.5% and the final amount by multiplying the base with the corresponding municipal multiplier (350-400%, and never less than 200%) (Gewerbesteuergesetz (GewStG), Article 16). There is no upper limit for the size of the multiplier and it is generally higher in urban than in rural areas. Currently, it does not exceed 490% in any major city.

Partnership companies are exempt from tax in the amount of up to 24,500 euros. For this tax a solidarity burden[6] is not charged, unlike for the tax on income of citizens and the corporate income tax.

Tax on real estate

Like in Serbia, the taxpayer is the owner of the real estate, and the tax base is its value. Taxation is performed in the same way as with the tax on commercial activity and entrepreneurs because there is also a municipal multiplier.

Taxes on dogs and horses

These taxes are treated as property taxes and are paid by the owners of dogs and horses annually. The amount is not the same in all municipalities. It is not paid for dogs that help people with disabilities. In some countries, the hunting tax is paid. Serbian tax system does not include this tax.

Entertainment tax

It is paid for the entry price for individual events (tax on tickets), slot machines, game machines, and video game machines. Berlin, Hamburg, Bremen, Bavaria, and Saarland are municipalities that do not have a regulated tax on entertainment.

[6] http://www.nrwinvest.com/Business_Guide_englisch/The_tax_system/Company_Taxation1/index.php (24.08.2018.)

The objects of taxation are also the game machines that are paid for, regardless of whether there is a possibility of winning. The tax base depends on the number of devices, token sales, etc., or the lump sum. The tax rate is 10% - 13% on the amount of turnover represented by the tax base, regardless of the number and location of the machines.[7]

Tax on sexual services

The legalization of prostitution has also introduced a tax on sexual services. The taxes for clubs and bars amount to three euros per 10m2 area, and for prostitution is six euros per service.

Taxes divided into three levels

Income tax on citizens (I natural persons)

In Germany, a synthetic income tax system is applied, which takes into account numerous personal circumstances of the taxpayer. In addition to the general non-taxable minimum, there is also a very well-developed set of tax incentives, standard and non-standard deductions to reduce the tax base or calculate the tax.

Employees pay income tax that is treated as a tax on deduction (tax on the source). Taxpayers who only make revenue which is subject to a deduction tax are exempt from the general obligation to submit tax returns. However, the taxpayers (also applies to married couples) have the right to file a tax claim because some of them may be entitled to a deduction and a tax refund.

The taxpayers are residents (Income Tax Law, Article 1). The revenue from agriculture and forestry, business ventures, self-employment, employment, i.e. employment with an employer, capital, and renting assets is recognized (Income Tax Law, Article 2, paragraph 1). Some income (Income Tax Law, Article 3, paragraph 1-3) is not taxed. The taxpayers are divided into six tax groups (Income Tax Law, Article 38b, paragraph 1-6). The tax rate is progressive and ranges from 0% to 45%. The amounts up to 8,354 euros for singles and up to 16,708[8] euros for married couples are not taxed. The basic tax rate is 14%, and grows with income up to 45% for taxable income of € 250,731, i.e. € 501,462 for married couples. The tax base can be deducted based on the defined costs[9].

Non-residents in Germany may be in a limited or full tax liability, depending on their income. Limited tax liability refers to the income from employment by an employer, capital property, rental, private disposal of parcels in the territory of Germany. Tax rates for non-residents are the same as for residents, and some deductions are also implemented.

[7] http://www.bremische-buergerschaft.de/drs_abo/Drs-17-966_404.pdf (24.09.2018.)

[8] Couples can report their income together and be taxed at a more favorable tax rate.

[9] Savings costs: insurance premiums, additional retirement savings, donations, extraordinary financial burdens (costs in case of illness, for example), cost of professional training, non-taxable child allowance, and childcare allowance, educational or professional treatment of the child.

Serbia applies a mixed system, cedular taxation being dominant. As in Germany, there is a special rate for each type of income of a natural person subject to taxation. Except for the annual income tax, rates are proportional and range from 10% for the revenue from independent operations to 20% for capital gains. The effective rate, calculated on the basis of average earnings, is 10.45% (Raičević, B., Ranđelović, S., 2008, page 4).

The income tax on citizens' base in Serbia is significantly lower than in Germany. Germany has a highly developed system of standard and non-standard deductions (personal exemption, for dependent persons, housing issues, education and training, treatment and rehabilitation, etc.). In Serbia, that is not the case. There is only a non-taxable minimum (15,000 dinars for earnings tax) and two standard deductions for annual income tax, personal exemption at the rate of 40% of taxpayer's average earnings and 15% of the annual average earnings for each dependent family member. The total deduction cannot exceed 50% of the taxable income.

The annual income tax on citizens is paid by residents whose annual income is higher than the average annual income – three times higher (for resident aliens - five times) and six times higher (for resident aliens – eight times). The rates are progressive and they range from 10% to 15%. The non-taxable amount is fairly high, so a relatively small number of people are affected by this tax.

The exemption from the income tax and contributions for compulsory social security at the expense of the employer is allowed for certain categories of newly-employed persons over a period of three years.

Capital gains tax

The capital gains tax is a type of income tax on citizens and corporate income tax. The income from capital assets is taxed at the rate of 25% (plus a solidarity burden of 5.5%) in Germany and in Serbia at the rate of 15%.[10]

Taxation of partnership companies

Partnership companies in Germany, companies with partners as entities, do not pay income tax, but each entity pays the income tax at the rate applicable to the income tax for residents.

Dividend income tax (capital assets)

In Germany, dividends are taxed at the rate of 25% (plus a solidarity burden of 5.5%). When dividends are paid to companies with a full tax liability, they are almost completely exempt from paying taxes.

[10] http://www.steuerliches-info-center.de/ (visited on: 25.08.2018.)

Social Security Contributions

Compulsory social security contributions have a significant impact on the level of fiscal burden because they have a high share in the total public revenue. Obligations and structures of the social security systems in Germany and Serbia are identical. In both countries, one part of the contribution is paid by the employer, and the other part is at the expense of the employee. The employer calculates, suspends, and pays the total amount of contributions. In both countries, the basis for calculating contributions for compulsory social security is the gross earning of the employee.

Table 1 – *Social contributions and the percentage paid by the employer and employee in Germany*[11]

Insurance policy	Annual amount	Employer	Employee
Retirement insurance	West 72,600 € East 62,400 €	9.35 %	9.35 %
Unemployment insurance	West 72,600 € East 62,400 €	1.5 %	1.5 %
Care	49,500 €	1.175 %	1.175 % – 1.425%
Health insurance	49,500 €	7.3 %	7.3 %
Additional contribution of an employee depending on the insurance company	/	/	0.9 %

Source: http://www.lohnsteuer.de/

Tax and social security contributions rates in the Republic of Serbia are as following[12]:

1) Pension and disability insurance - 12% at the expense of the employer and 14% at the expense of the employee;

2) Health insurance - 5.15% at the expense of the employer and 15% at the expense of the employee and

3) Unemployment insurance - 0.75% at the expense of the employer and 0.75% at the expense of the employee.

Given that the average earnings in Serbia are substantially lower than in Germany, where taxation is progressive, the burden on earnings in Serbia is lower and probably at the level of the EU average. The total tax labour burden, or the so-called "tax wedge" in Serbia is 39.2%, and in Germany 49.8%[13].

Corporate Income Tax

Corporate income taxpayer in Germany is the business society, a resident who performs a business activity in the country. In both countries, a legal entity which is registered (founded) or has the headquarters and/or place of actual administration and control

[11] http://www.lohnsteuer.de/

[12] http://www.croso.gov.rs/cir/Statistika/Stope_doprinosa/ (18.09.2018.)

[13] http://uzmiracun.rs/htdocs/Files/00458/NALED_Sistem-oporezivanja-rada-i-moguci-pravci-njegove-reforme.pdf

in the territory of the observed state, is considered a resident. In Serbia, the taxpayers are all legal entities, whereas in Germany they are bigger business societies. The so-called 'companies with limited liability' (Gesellschaft mit beschränkter Haftung or GmbH) or joint-stock companies (Aktiengesellschaft or AG) with headquarters or administration in Germany are subject to this tax with full tax liability. Their dividends, both generated and taxed or paid abroad, may be exempt. Companies that do not have headquarters or administration in the country (dual, i.e. double residents), established abroad, are subject to German unlimited tax liability if the legal character of the company is similar to the German type of company and its management in Germany. There are limitations in the case of group taxation of dual residents who hold companies.

Corporate income taxpayers are also non-residents when it comes to income made in the territory of the country in which they are non-residents. Between Germany and Serbia there are no systemic differences in defining the tax base and the tax base does not affect the differences in the level of the fiscal burden. The German rates are: general (upper) 38.7%, special 40%, 30%, and in Serbia it is 15%. Taxable profit is determined on the basis of the final account (balance sheet and success balance). In Germany, a solidarity tax of 5.5% is charged for this tax, as well (Jochum, H., 2013, p. 43).

Value-Added Tax

VAT is to a great extent harmonised at the EU level. The principles which this type of tax should be based on have been established with the EU Sixth VAT Directive, and they have been incorporated into the legislations of both the EU members and Serbia. Therefore, there are no significant differences when it comes to this part of the tax systems of Serbia and Germany.

Table 2 – *Short comparative display of important tax rates of Germany and Serbia*

Tax	Germany	Republic of Serbia
Income tax on citizens	from 0 to 45% with a standard rate of 14%; depends on the income and the tax class of the taxpayer	10%-15%
Value-added tax	general rate 19% lower rate 7%	general rate 20% lower rate 10%
Corporate income tax	15% + solidarity tax at the rate of 5.5% = 15.825%	15%
Capital gains income	25% + solidarity tax at the rate of 5.5%	15%
Dividend income	25% + solidarity tax at the rate of 5.5%	15%
Inheritance and gift tax	from 7% to 50% depending on the income and the tax class of the taxpayer	1.5% to 2.5%
Motor vehicle tax	According to the emission class and engine volume; the lower the emission class, the lower the cost	volume and engine power

Source: processing of the author

Conclusion

Taken globally, the tax systems of Serbia and Germany are very similar. One can draw this conclusion based on the existing types of taxes. Nevertheless, the tax system in Germany is much more elaborate, as it contains the types of taxes which do not exist in Serbia. Dog tax and horse tax, for example, do not exist in Serbia. There are a few unusual types of taxes including prostitution tax (as part of the entertainment tax) and church tax.

German tax system is structured in a manner that supports environmental protection. Motor vehicles tax, for example, is regulated so that citizens are encouraged to use the so-called "eco-friendly" and electric vehicles. Similarly, the excise on electricity is not paid if it is derived from sustainable sources.

The ability-to-pay principle is being implemented much more consistently in Germany. Tax burden on small entrepreneurs and businesses is lower than the burden on large companies which, unlike the former, pay the profit tax. In Serbia, this tax applies to all legal entities.

The same goes for the income taxation of natural persons. The advantage of this type of taxation in Germany are tax brackets, which support families and young married couples with lower tax rates and tax incentives. On the other hand, there are also very high tax rates (up to 45%) for the highest earnings. This is, aside from the inheritance tax and a gift tax of 50% for the third tax class, one of the highest tax rates.

In Serbia, the cedular system with a very modest correction for synthetic income taxation in the form of annual taxes remains. With mostly proportional nominal tax rates (10% to 20%), Serbia is one of the countries with lower tax burdens. There is no vertical equity of taxation, which is achieved by progressive taxation.

The total tax burden on labour in Serbia is lower than in Germany. Moreover, tax rates are generally lower in Serbia than in Germany. One could conclude that the level of fiscal burden is significantly lower, but that is not the case because of the share of grey economy, which in Serbia constitutes 30.1%, whilst in Germany it constitutes only 12.2%, i.e. it is around the average for the OECD countries.

Unlike Serbia, Germany has a very effective tax system and a high rate of tax collection. Furthermore, the fair distribution of tax revenues has been established in Germany.

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Legislation in Germany

[1] Constitution (*Grundgesetz)*

[2] Law on the Budget System

[3] Tax Duty Act (*Tabaksteuergesetz)*
[4] Law on motor vehicle tax
[5] Law on tax on anti-fire protection
[6] Tax Act on Commercial Activity
[7] Law on Immovable Property Tax
[8] Income Tax Law
[9] Law on Electricity Tax
[10] The Insurance Tax Act (Versicherungsteuergesetz)
[11] Law on inheritance and gift tax
[12] The Law on Income Tax
[13] Customs Law

Legislation in Serbia

[1] Constitution
[2] Law on Property Taxes
[3] Law on Income Tax on Citizens
[4] Law on Profit Tax on Legal Entities
[5] Customs Law
[6] Excise Law
[7] Law on Financing Local Self-Government
[8] The duo law
[9] Value Added Tax Act
[11] Law on Pension and Disability Insurance
[11] Employment and unemployment insurance Act
[12] Law on Health Care
[13] Law on Compulsory Social Security Contributions
[14] Health Insurance Act

EU legislation

[1] Commission Directive 2001/116/EC
[2] Directive 2002/24/EC

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POPULATION SKILLS AS AN INDICATOR OF EUROPEAN COUNTRIES' COMPETITIVENESS IN THE MODERN ECONOMY

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Human capital and population skills are the main drivers of economic growth and national competitiveness in the modern economy. The paper investigates the current state and development potential of selected European countries in the field of population skillscompetitiveness. Particular attention is paid to this issue in relation to the Balkan countries. The aim is to identify the factors of population skills that are critical for competitiveness of the Balkan countries and which have to be improved in the future. The analysis is based on the data published by the World Economic Forum in „The Global Competitiveness Report 2018". The research has been done by applying the comparative analysis and benchmarking method. The research findings indicate that the level of population skillscompetitiveness of the Balkan countries lags significantly behind the top European countries. This study contributes to the skills and human capital literature and it could have practical implications in formulating the development policy of population skills in European countries.

Key Words: *skills, human capital, competitiveness, Balkan countries, European countries*

Introduction

The term "skills" is used in the relevant literature to indicate what a person knows, understands, and can do. Consequently, skills are an important indicator of human capital quality. Starting from the assumption that the competitiveness and strategic development of national economies depend to a large extent on the quality of their human resources, the continuous investment in the formal education system and training programs of population has become an indispensable prerequisite for development in the contemporary business environment. Highly educated and skilled populations are more

productive in the market because they have greater collective ability to perform tasks and transfer knowledge quickly, and also to create new knowledge in the era of the fourth industrial revolution (The World Economic Forum, 2018). Therefore, only "lifelong learning" provides a competitive position in the modern labour market.

The European Union (EU) members recognized the need to invest in human capital long time ago, which has enabled some countries from this group to become leaders in global terms. The European Commission Initiative termed "Investment in human capital" (2017) stated that "human capital is essential for boosting productivity, pivotal for economic growth and also vital with regard to the resilience of economies" (p. 1). This clearly indicates the importance and role of human capital in the economic development and national welfare of the EU countries. For example, the European Social Fund and the European Regional Development Fund alone will inject over € 30 billion to support skills development in the period 2014-2020, and the Erasmus+ program supports skills development in education and training with nearly € 15 billion (The European Commission, 2016).

Despite the respectable results that some EU countries achieve in terms of population skills, it is far from the fact that all EU countries are at the same level of development. It is quite expected that the level of population skills development varies from country to country in the EU region. Particularly, large differences in the level of development could be expected if other European countries (non-EU members) are included in the analysis. The European countries represent a heterogeneous group with very different results in various segments of national economy competitiveness. It is quite understandable since the mentioned countries are on the different stages of economic and social development.

The objective of this paper is to estimate the level of the European countries competitiveness in the field of population skills. The purpose is to measure the extent to which the Balkan countries lag behind the top-ranked European countries in terms of population skills, and also to identify the indicators of population skills that are critical for the Balkan countries competitiveness and which have to be improved in the future. The research is appropriate for all those who influence the formulation and implementation of formal education and training programs in the European countries, especially in the Balkan countries.

Theoretical background and literature review are considered in the first section of the paper. Research methodology and hypothesis are explained in the second section. The third part of the paper presents research results and discussions. The final section contributes conclusions.

Theoretical background and literature review

The conditions for participation and survival of companies in a modern global market have become more and more complicated in recent years. Some researches (Narula & Dunning, 2000; Bevan & Estrin, 2004; Bevan, Estrin & Meyer, 2004) consider that the revolution in information and communications technology has led to the shifting of business activities from the resource-based towards capital-intensive economic sector. Technological revolution brings fundamental changes in the organization and structure of companies and industries, and also in the factory layout and the management structure, procedures, and attitudes of large companies (Singh, 1994). Rapid changes and con-

stant adjustments to the business environment have become preconditions for success. The ability of any market participant to adopt and implement a new idea or to redefine its business concept depends onworkers' skills. This is the cause of unconditional acceptance of the philosophy of continuous education and lifelong learning, not only in the general context of society, but also every organization and individual.

Numerous theoretical and empirical studies point to the influence of human capital on economic development (Barro & Lee, 2001; Dunning & Lundan, 2008; Krstić, 2014; Jovanović, Nešković & Kostić, 2016; Rađenović & Krstić, 2017). Herciu & Ogrean (2015) identify strong correlations between national wealth, national competitiveness, and national intellectual capital based on data from 40 countries. The paper of Bhattacharya, Gibson, & Doty (2005) analyses the components of human capital flexibility and their potential relationship to firm performance. This study confirms that flexibility of employee skills, employee behaviors, and human capital practices represent critical factors of human resource flexibility and they are related to superior firm performance. The research conducted by Kottaridi, Louloudi & Karkalakos (2019) estimate the role of human capital, skills, and competencies in the location of inward FDI by comparing Western, Central and Eastern EU members. The results of this study indicate "a major difference regarding theoretical and vocational education programs for both sub-regions; in addition, a major difference is obtained for particular qualifications in international scores". Doppelt (2019) regards that the economy grows endogenously as agents accumulate human capital in the long run.

The importance of human capital and population skills is highlighted in many studies as significant factor of creating comparative advantages of nations (Wright, McMahan & McWilliams, 1994; Baldacci et al., 2008; Suri et al., 2011; Sverdlova, 2014). Under the constant influence of political, cultural, and economic changes at the local and global level, every national economy and its business micro-institutions should develop their comparative advantages if they would like to maintain and strengthen their competitive position in the market (Plantić, 2005; Krstić, Radivojević & Stanišić, 2016; Radivojević, Krstić & Stanišić, 2018). Improving the quality of human capital and population skills is a complex process that requires long-term, thorough planning, and coordinated action of diverse sections of the national economy.

The European Union has adopted several strategic frameworks and initiatives related to the improvement of education and population skills. For example, the strategic framework for "European cooperation in education and training" is a forum that allows the EU member states to cooperate in building best practice, and it has the following four common objectives (The European Commission, ET2020 framework): (1) make lifelong learning and mobility a reality; (2) improve the quality and efficiency of education and training; (3) promote equity, social cohesion, and active citizenship; and (4) enhance creativity and innovation including entrepreneurship at all levels of education and training. Furthermore, according to the European Commission (2016) the initiative termed "New Skills Agenda for Europe" was "number one in the list of major initiatives in the Commission Work Programme 2016" (p. 3). This initiative indicates the strategic importance of skills for sustaining jobs, growth, and competitiveness in the EU member states. Its main goals were: improving the quality and relevance of skills formation, making skills and qualifications more visible and comparable, and improving skills intelligence and information for better career choices.

Research methods and data basis

The purpose of this research is to analyze the indicators of the European countries' competitiveness in terms of population skills. The data basis for the research consists of the secondary data published by the World Economic Forum in "The Global Competitiveness Report 2018". The methodology used by the World Economic Forum is based on measuring "Global Competitiveness Index" that combines 98 indicators of competitiveness, which are grouped in 12 pillars (see Figure 1). The score of pillars and indicators range between 0 and 100. The highest score of 100 corresponds to the goal post for each indicator and typically represents a policy target for each country.

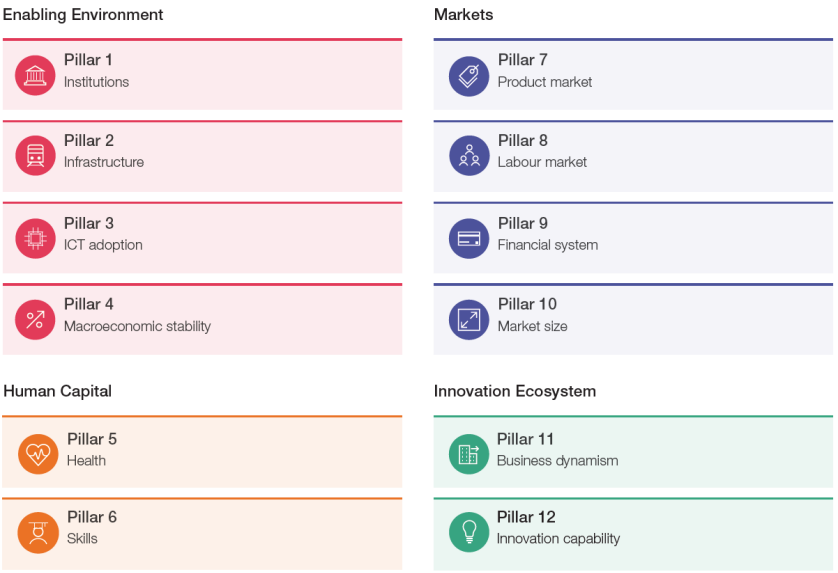

Figure 1 – *The conceptual framework for measuring the Global Competitiveness Index*
(Source: The World Economic Forum, The Global Competitiveness Report, 2018, p. 39)

One of the 12 pillars in the Global Competitiveness Index that belongs to the group of "Human Capital" is "Skills" (Figure 1). According to the World Economic Forum (2018, p. 41), the Skills pillar captures the general level of workforce skills and the quantity and quality of education, whereby it is assumed that "while the concept of educational quality is constantly evolving, important quality factors today include: developing digital literacy, interpersonal skills, and the ability to think critically and creatively".

The Skills pillar is the 6th pillar of the Global Competitiveness Index, and it consists of the following nine indicators:

1) Mean years of schooling;
2) Extent of staff training;
3) Quality of vocational training;
4) Skill set of graduates;

5) Digital skills among population;
6) Ease of finding skilled employees;
7) School life expectancy;
8) Critical thinking in teaching; and
9) Pupil-to-teacher ratio in primary education.

The research has been conducted through benchmarking and the results of the Skills pillar of 10 Balkan countries are with the top 10 European countries. The following ten Balkan countries are included in the analysis: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Montenegro, North Macedonia, Romania, Serbia, and Slovenia. A benchmark group of countries consists of the following 10 European countries that have achieved the best scores in the Skills pillar: Denmark, Finland, Germany, Iceland, Ireland, Netherlands, Norway, Sweden, Switzerland, and the United Kingdom. The research has been conducted through comparative analysis and benchmarking method.

Results and discussions

Analysis of skills competitiveness of top 10 European countries

With the ambition to evaluate the skills competitiveness of the Balkan countries, it is applicable to identify the competitive position of the top 10 European countries with the highest score of the Skills pillar. This is important because the top 10 European countries would be a benchmark group of countries, which serves for comparison of the Balkan countries.

The World Economic Forum (2018) analyzed the performance of 140 national economies. Table 1 shows the position of the top 10 European countries, according to score and rank of the Skills pillar.

Table 1 **–** *The score and rank of the top 10 European countries in the Skills pillar (2018)*

Indicators	**Finland**	**Switzerland**	**Germany**	**Denmark**	**Netherlands**	**Sweden**	**Norway**	**Iceland**	**U. Kingdom**	**Ireland**	**Average score for the top 10 European countries**
I_1Mean years of schooling	94.7	91.5	93.8	82.8	80.9	82.3	85.2	83.3	84.6	83.3	86.24
I_2Extent of staff training	70.5	80.9	69.9	71.3	72.6	72.0	68.2	65.8	63.4	67.0	70.16
I_3Quality of vocational training	73.4	92.3	73.1	74.2	75.7	66.6	69.8	67.9	62.0	64.7	71.97
I_4Skill set of graduates	73.8	83.3	71.8	69.1	75.0	71.1	66.1	71.6	63.7	68.5	71.40
I_5Digital skills among population	80.3	77.5	70.4	72.4	78.9	80.6	71.6	78.9	65.5	70.0	74.61
I_6 Ease of finding skilled employees	72.3	70.1	70.1	64.3	66.6	66.2	70.6	66.2	69.2	67.4	68.30
I_7 School life expectancy	100.0	90.0	94.2	100.0	100.0	100.0	99.2	100.0	96.9	100.0	98.03
I_8Critical thinking in teaching	73.8	73.9	70.7	75.2	70.9	72.0	64.0	60.2	67.6	52.6	68.09
I_9Pupil-to-teacher ratio in primary education	91.7	99.7	94.4	98.2	95.7	94.8	100.0	99.6	81.5	84.8	94.04
Skills pillar	***87.9***	***87.3***	***85.4***	***84.9***	***84.5***	***84.2***	***83.9***	***83.3***	***80.2***	***79.9***	***84.15***
	1	***2***	***4***	***5***	***6***	***7***	***8***	***9***	***13***	***15***	**-**

(Source: The World Economic Forum, The Global Competitiveness Report, 2018)

With eight countries in the world's top 10, Europe is an absolute leader in population skills competitiveness in global terms (see Table 1). Finland records the highest skills score among 140 countries (87.9). There are a lot of empirical studies which confirm that Finland has the best education system in the world. This is supported by the fact that the students from Finland have showed high academic achievement in international studies such as the OECD Programme for International Student Assessment (PISA) (Green, Preston & Sabates, 2003; Savolainen, 2009; Schleicher, 2009; Bulle, 2011; OECD, 2011; Yada, Tolvanen & Savolainen, 2018).

Finland is followed by the second-ranked Switzerland (87.3), and the third-ranked Germany (85.4). The first three European countries are followed by Denmark, Netherlands, Sweden, Norway, Iceland, United Kingdom, and Ireland. The average score of the top 10 European countries in the Skills pillar is 84.15.

Table 1 indicates that Finland records the best score in I_1 (Mean years of schooling) and I_6 (Ease of finding skilled employees); Switzerland is the best-ranked in I_2 (Extent of staff training), I_3 (Quality of vocational training), and I_4 (Skill set of graduates); Sweden in I_5 (Digital skills among population); Denmark in I_8 (Critical thinking in teaching); Norway in I_9 (Pupil-to-teacher ratio in primary education); while 6 European countries achieved the maximum score of 100 in I_7 (School life expectancy).

Comparative analysis of skills competitiveness determinants within the Balkan group of countries

In order to analyze the results of the Balkan countries in terms of population skills, Table 2 presents the scores of each nine indicators of the Skills pillar for all Balkan countries. The data shown in columns 12 to 15 in Table 2 provides comparative analysis of average scores between the Balkan countries and the top 10 European countries, and also the best-scored country of each of these two groups in every indicator of the Skills pillar.

Table 2 – *The score of indicators within the Skills pillar of the Balkan countries (2018)*

Indicator	Slovenia	Greece	Albania	Montenegro	Serbia	Bulgaria	Croatia	Romania	North Macedonia	Bosnia and Herzegovina	The highest score of the Balkan countries	Average score of the Balkan countries	The highest score of the top 10 European countries	Average score of the top 10 European countries
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I_1	82.5*	71.6	68.0	74.7*	73.4*	73.3*	74.7*	73.3*	65.3	60.0	82.5 Slovenia	71.6	94.7 Finland	86.2
I_2	55.1*	43.5*	49.5*	46.9*	44.2*	40.1	34.7	40.0	33.2	33.8	55.1 Slovenia	42.1	80.9 Switzerland	70.2
I_3	52.7*	41.5	49.1*	48.8*	48.3*	44.1	41.4	48.4*	35.3	35.7	52.7 Slovenia	44.5	92.3 Switzerland	72.0

I_4	55.7*	56.0*	53.4*	48.7*	53.9*	43.8	41.1	37.8	41.4	36.0	56.0 Greece	46.8	83.3 Switzerland	71.4
I_5	63.9*	53.3*	61.2*	52.3	52.7	54.0*	43.5	57.2*	43.6	47.1	63.9 Slovenia	52.9	80.6 Sweden	74.6
I_6	54.4*	56.6*	50.5*	49.3*	51.7*	39.1	38.7	37.3	38.2	38.1	56.6 Greece	45.4	72.3 Finland	68.3
I_7	95.6*	95.9*	85.4*	82.8	81.3	82.3	83.1	79.3	74.0	78.9	95.9 Greece	83.9	100.0 6 countries	98.0
I_8	36.0*	27.7	58.0*	44.5*	41.8*	37.0*	21.4	24.7	27.5	24.5	58.0 Albania	34.3	75.2 Denmark	68.1
I_9	82.7	100.0#	79.5	86.6*	88.7*	81.0	90.7*	76.7	89.0*	81.8	100.0 Greece	85.7	100.0 Norway	94.0
Skills	***73.5***	***70.4***	***68.7***	***68.1***	***67.5***	***64.7***	***63.4***	***61.8***	***59.0***	***57.5***	-	-	-	-
	29	***39***	***47***	***52***	***56***	***60***	***65***	***69***	***81***	***87***	-	-	-	-

(Source: The World Economic Forum, The Global Competitiveness Report, 2018)

Legend:

Indicates that the score is below the average score of the Balkan countries.
* Indicates that the score is above the average score of the Balkan countries.
# Indicates that the score is above the average score of the top 10 European countries.

The best-ranked Balkan country according to the score of the Skills pillar is Slovenia that reached the score of 73.5 and 29th place in the world (see Table 2). The second-ranked is Greece with the score of 70.4, while the third-ranked is Albania with the score of 68.7. The first three Balkan countries are followed by Montenegro, Serbia, Bulgaria, Croatia, Romania, North Macedonia, and Bosnia and Herzegovina. Slovenia achieved the highest score in four indicators of the Skills pillar (Mean years of schooling, Extent of staff training, Quality of vocational training, and Digital skills among population); Greece in the other four indicators (Skill set of graduates, Ease of finding skilled employees, School life expectancy, and Pupil-to-teacher ratio in primary education); and Albania in Critical thinking in teaching indicator.

Bosnia and Herzegovina is the worst-ranked country in terms of skills competitiveness in the Balkan group. This country achieved the score of 57.5 and 87th place in the global ranking. Also, the scores of all nine indicators in the Skills pillar in the case of Bosnia and Herzegovina are below the average score of the Balkan countries, which points to the fact that there are great disparities within the Balkan group when it comes to the results achieved in the skills competitiveness. Namely, the worst-ranked country in the Balkan group (Bosnia and Herzegovina) lags behind the best-ranked country (Slovenia) for even 58 places (the difference in achieved score is even 16.0).

The data presented in Table 2 demonstrates the great superiority of the European countries over the Balkan countries in the field of population skills. The comparison of the results presented in column 13 and 15 shows that the average score of every indicator in the Skills pillar of the Balkan countries lags much behind the average score of these indicators of the top 10 European countries. The biggest difference (even 33.8) is recorded in Critical thinking in teaching indicator. The next biggest difference is measured in Extent of staff training indicator (28.1), followed by Quality of vocational training indicator (27.5), and Skill set of graduates indicator (24.6).

Only one Balkan country in only one indicator of the Skills pillar achieved a better score than the average score of the top 10 European countries. Namely, Greece records the maximum score of 100 in Pupil-to-teacher ratio in primary education indicator, which is a better score for 6.0 than the average score of the top 10 European countries. The same result in the group of the top 10 European countries is achieved by Norway.

The results of the above-mentioned analysis provide the appropriate basis for the identification of critical indicators of the Skills pillar in each Balkan country. It is the indicators that deviate from the average score of all Balkan countries. Therefore, those indicators require priority in the further development policies and improvements. The list of the critical indicators of the Skills pillar in the Balkan countries is presented in Table 3.

Table 3 – *Indicators within the Skills pillar which require improvements and priority of skills development policy by the Balkan countries (2018)*

Country	The critical indicators which show the deviations from the average score of the group of the Balkan countries	Number of critical indicators
Slovenia	I_9	1
Greece	I_1, I_3, I_8	3
Albania	I_1, I_9	2
Montenegro	I_5, I_7	2
Serbia	I_5, I_7	2
Bulgaria	I_2, I_3, I_4, I_6, I_7, I_9	6
Croatia	I_2, I_3, I_4, I_5, I_6, I_7, I_8	7
Romania	I_2, I_4, I_6, I_7, I_8, I_9	6
North Macedonia	I_1, I_2, I_3, I_4, I_5, I_6, I_7, I_8	8
Bosnia and Herzegovina	I_1, I_2, I_3, I_4, I_5, I_6, I_7, I_8, I_9	9

The interpretation of the data presented in Table 3 suggests some important performances of the Balkan countries, i.e. it highlights the key indicators of the Skills pillar that need urgent improvement in the future period. Bosnia and Herzegovina is the worst-positioned country with 9 critical indicators. North Macedonia has poorer performances in 8 indicators. Croatia shows deviations in 7 indicators. These countries are followed by Romania and Bulgaria (6 critical indicators) and Greece (3 critical indicators), while Serbia, Montenegro and Albania have 2 critical indicators. Slovenia as the best-ranked country in the Balkan group has only one critical indicator.

Benchmarking of skills competitiveness of the Balkan countries and top 10 European countries

The benchmarking of skills competitiveness of the Balkan countries and top 10 European countries allow a deeper analysis of the results achieved by these groups of countries. The purpose is to specify the priorities in skills development policy for each country from the Balkan group. The methodology is based on determining the benchmark standards that are relevant to defining and implementing skills development policy, goals, and actions.

According to Radivojević, Krstić & Stanišić (2018) benchmark standards could be defined as target levels that each Balkan country has to accomplish in the skills development strategy at the national level. The determination of benchmark standards provides a detailed specification of priorities in development policy for each analyzed country. The criteria is founded on the urgency or time priority. Firstly, each Balkan country should upgrade the indicators in which it has poorer performances than the average score of the Balkan countries. When they accomplish the mentioned target, the goal should be the average score of the top 10 European countries. After the achievement of that goal, Balkan countries should put a higher target – the level of performance of the best countries in the group of the top 10 European countries.

Specification of the indicators within the Skills pillar according to the priority of their necessary improvement by the Balkan countries is shown in Table 4.

Table 4 **–** *Specification of the indicators within the Skills pillar according to the priority of their necessary improvement by the Balkan countries*

Country	The first level priority of indicators – the benchmark is the average of the Balkan countries	The second level priority of indicators – the benchmark is the average of the top 10 European countries
Slovenia	I_9	I_1, I_2, I_3, I_4, I_5, I_6, I_7, I_8
Greece	I_1, I_3, I_8	I_2, I_4, I_5, I_6, I_7
Albania	I_1, I_9	I_2, I_3, I_4, I_5, I_6, I_7, I_8
Montenegro	I_5, I_7	I_1, I_2, I_3, I_4, I_6, I_8, I_9
Serbia	I_5, I_7	I_1, I_2, I_3, I_4, I_6, I_8, I_9
Bulgaria	I_2, I_3, I_4, I_6, I_7, I_9	I_1, I_5, I_8
Croatia	I_2, I_3, I_4, I_5, I_6, I_7, I_8	I_1, I_9
Romania	I_2, I_4, I_6, I_7, I_8, I_9	I_1, I_3, I_5
North Macedonia	I_1, I_2, I_3, I_4, I_5, I_6, I_7, I_8	I_9
Bosnia and Herzegovina	I_1, I_2, I_3, I_4, I_5, I_6, I_7, I_8, I_9	-

Slovenia has only one indicator in the first level of priority, and eight indicators in the second level of priority (see Table 4). Albania, Montenegro and Serbia have two indicators in the first level of priority and seven indicators in the second level of priority. Bosnia and Herzegovina as the worst-ranked country in the Balkan group has all nine indicators in the first level of priority. A number of critical indicators of other Balkan countries in the first level of priority vary from three to eight, while a number of critical indicators in the second level of priority range from one to seven. The exception is Greece that has three critical indicators in the first level of priority and five critical indicators in the second level of priority.The indicator I_9 (Pupil-to-teacher ratio in primary education) is not stated in Table 4 in the case of Greece because this country reached the highest possible score of 100 in this indicator.

It is very indicative that the indicator I_7 (School life expectancy) is in the first level of priority (need urgent improvements) in even seven Balkan countries, while six of the top 10 European countries achieved the maximum score of 100 in this indicator (see Table 2

and Table 4). All other indicators of the Skills pillar (I_1, I_2, I_3, I_4, I_5, I_6, I_8 and I_9) are equally represented, i.e. every of these indicators is present in the first level of priority of five Balkan countries.

Conclusion

The paper has attempted to examine the current state and development potential of the selected European countries in the field of population skills. A general conclusion that can be reached in this paper is that the level of population skillscompetitiveness of the10 Balkan countries lags significantly behind the top 10 European countries.The comparative method that has been applied in the study suggests that the average score of the Balkan countries in all nine indicators of the Skills pillar is seriously below the average score of the top 10 European countries. The largest score differences are recorded in the following indicators: Critical thinking in teaching (for 33.8), Extent of staff training (for 28.1), Quality of vocational training (for 27.5) and Skill set of graduates (for 24.6). Also, the analysis has showed that only one Balkan country in only one indicator of the Skills pillar has achieved a better score than the average score of the top 10 European countries.

The best-ranked country in the Balkan group is Slovenia (that reached the score of 73.5 and 29th place in the world), while the worst-ranked is Bosnia and Herzegovina (that reached the score of 57.5 and 87th place in the world). The second-ranked is Greece (70.4) and the third-ranked is Albania (68.7). The first three Balkan countries are followed by Montenegro, Serbia, Bulgaria, Croatia, Romania, North Macedonia and Bosnia and Herzegovina. It is obvious that there are great disparities even within the Balkan group when it comes to the results achieved in the skills competitiveness. More precisely, the worst-ranked country in the Balkan group (Bosnia and Herzegovina) lags behind the best-ranked country (Slovenia) for even 58 places (the difference in achieved score is even 16.0).

The authors selected the top 10 Europan countries as a benchmarking group because Europe is an absolute leader in the population skills competitiveness in global terms. According to the The Global Competitiveness Report 2018 Europe has eight countries in the world top 10. Finland records the highest skills score among 140 countries (87.9) followed by the second-ranked Switzerland (87.3) and the third-ranked Germany (85.4). The first three European countries are followed by Denmark, Netherlands, Sweden, Norway, Iceland, United Kingdom and Ireland.

The research findings of benchmarking method specify the possibilities for the improvement of performances that determine the population skills competitiveness of the Balkan countries, and also the urgency or time priority of their improvement. The analysis shows that the factors such as "school life expectancy" should have priority in the further development process of the population skills competitiveness in the Balkan countries in order to get a better place in the European region. However, formulating particular national strategies, objectives, priorities and timing of their achievement in the skills competitiveness development in the Balkan countries requires in-depth analysis of the current position of the particular Balkan country both in the Balkan group and in accordance with the top 10 European countries.

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THE ROLE OF THE LEADER IN EMPOWERING AND SUPPORTING EMPLOYEES TOWARDS SUSTAINABLE DEVELOPMENT

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The modern world is moving from an industrial society towards a knowledge-based economy. In such a society, there is a need for inventive leaders, i.e. the leaders who will become the key comparative advantage of modern organizations. Therefore, in today's business conditions, more attention is paid to leadership. As a specialized management discipline, leadership is becoming the inevitable factor that has an impact on the business performance of organizations. Leadership can be seen as a process in which an individual influences the other members of the group in order to achieve common goals. Leadership should not be focused on one single position or one single individual, but on certain characteristics that have to be developed by all the members of the organization. Bearing in mind the fact that sustainable development is an important issue for mankind, as well as for organizations, the paper is aimed at determining the role that a leader has in empowering and supporting employees towards sustainable development.

Key Words: *leaders, leadership, empowering, sustainable development*

Introduction

Modern organizations pose major challenges to leaders. Based on growing demands, the manager of the 21st century will have to possess four basic characteristics, namely to be a global strategist, the master of technology, a "par excellence" politician, and a leader – a motivator (Vujić, 1999).

Leadership is an important determinant of organizational development. Hogan et al. (1994) states that the role of leadership is to motivate and inspire others in order to create positive attitudes at work while creating a sense of contribution and significance

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among employees. According to Stefanović and Stefanović (2007), leadership is a manager's function that includes the process of communication, influence, belief, group management and motivation of others for the purpose of successfully accomplishing their tasks and achieving organizational goals. Northouse (2010) says that leadership is a process by which an individual influences a group in order to achieve common goals. He also states that management and leadership are different overlapping concepts. The difference between them is that management traditionally focuses on planning, organizing and controlling activities, whereas leadership emphasizes the overall impact of the process. Milisavljević (2005) states that leadership is the key component that will enable organizations to achieve a competitive advantage in the future because leadership generates intellectual capital. However, leadership is defined as an act or behavior that affects others. Therefore, leadership is the process that involves influencing the achievement of goals and it occurs in a particular situation of a group or organization. Gardner (1993) sees leadership as the persuasion process by which an individual (or a leadership team) encourages a group to pursue the goals set by the leaders.

There is the authors' general agreement that the essence of leadership reflects in its ability to create or articulate a vision and influence followers to work towards the realization of the vision, which creates changes. In general, leadership is the process of achieving an impact in terms of the ability to convince the leader of other people, i.e. followers, to follow him/her on the path to achieving organizational goals. The art of managing through the complexity of leadership implies the involvement of followers and leaders in the process of achieving goals, but without coercion, i.e. through freely chosen participation.

The leader is someone who is ready to bear the burden of reality and present that reality to others in the organization. The ability of the leader is to understand the reality in which the organization is, analyze and process information from the environment, which is exactly what makes him/her superior to others. He/she should use that power by transferring his/her knowledge to other employees by directing their mental and physical abilities towards the right path, i.e. by directing their energy so that the organization has the biggest benefit.

The last two decades of the twentieth century represented a milestone for the adoption of the provision of sustainable development as the key ethical and political paradigm in order to solve the environmental and social problems that affected the planet Earth. The first "inauguration" of the concept of sustainable development on a global scale was held in 1987 by the World Commission on Environment and Development (Brundtland Commission), but its etymology is much older. Development is now not understood in the same way as it was in 1972 or 1987. After the multi-year evolution, it represents freedom, the expansion of the perspective and the option of choice, and it puts man in the center of the future (Gond et al., 2012; Marković Blagojević et al., 2018).

The most commonly used definition of "sustainable development" is that proposed by Lester Brown, the founder of the Worldwatch Institute. It is also listed in the "Our Common Future" report of the Brundtland Commission: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Veljković, 2012; WCED, 1987; Maksimović et al., 2018). Hence, sustainable development represents the harmonization of the three key dimensions, namely the ecological, social and economic one.

Sustainable development is an important issue for humankind, and it involves providing all citizens with the opportunity to acquire knowledge, skills, habits, values and raise

awareness, so as to participate in the decision-making that will improve their quality of life, while simultaneously not endangering future generations in meeting their needs. The concept of sustainable development is an alternative to the search for "unrestrained development". Conventional approaches saw development in the context of the modernization process, which society assumed to be technically and technologically sophisticated, urbanized, with a developed market economy (Marković Blagojević et al., 2018).

Lately, the link between leadership, sustainable leadership and sustainable development as the important elements for creating a sustainable organization has increasingly been mentioned. Accordingly, Hargreaves and Fink (2003) make the following statement on the concept of sustainable leadership: "Sustainable leadership matters, spreads and lasts. It is a shared responsibility that does not unduly deplete human or financial resources, and that cares for and avoids exerting damage on the surrounding educational and community environment". Also, they point out the seven principles of sustainable leadership: 1) Depth; 2) Endurance; 3) Breadth; 4) Justice; 5) Diversity; 6) Resourcefulness, and 7) Conservation. In his research, Baumgartner (2009) also confirms the impact of organizational culture and leadership on the creation of a sustainable organization, and points out the fact that organizations have great importance in creating sustainable communities. The level of the implementation of the concept of sustainable development primarily depends on leaders in an organization and organizational culture.

In today's business conditions, leadership is becoming an indispensable factor that the development of an organization is based on. Leaders are those who create an atmosphere in the organization in which employees will be able to learn and develop, while fostering and creating an organizational culture that respects the concept of sustainable development at the same time, i.e. the ecological, economic and social dimensions of sustainable development as a concept that the development of organizations is based on. Based on the abovementioned, the aim of the paper is to examine the role of leaders in empowering and supporting employees in the direction of implementing the concept of sustainable development in an organization.

Materials and Methods

Research on the role of leaders in empowering and providing support to employees in the direction of sustainable development was conducted in the period from March 15th, 2017 to June 30th, 2017. The study included four enterprises in Belgrade. A survey questionnaire was used as a research instrument. The research was anonymous, while a total of 300 questionnaires were distributed. There are 260 validly filled out questionnaires relevant to the research, which represents 86.66% of the respondents. The response level and the validly filled-out questionnaires are expected, and they correspond to the results recommended in the literature (Das et al., 2000; Kayank, 2003).

In addition to the basic demographic characteristics, such as gender, age, and education, the respondents rated the following statements on the five-step Likert scale with the grades ranging from 1 (strongly disagree) to 5 (strongly agree). The research started from the following findings that were the subject matter of evaluation by the respondents:

– The leader in my organization represents a significant link for the successful and sustainable development of companies.

– The leader in my organization makes the maximum contribution to the organization's sustainable operation.

– Guided by personal moral standards, the leader in my organization positively influences the behavior of the employees.

– The leader in my organization provides support and encourages the employees to present opposing opinions and views.

– The organization's employees are more committed to their work due to the empowerment and support received from the leaders.

– Through the management methods, the leader does not only address economic issues, but environmental issues, as well.

– In his/her day-to-day business activities, in addition to economic benefits, the leader also puts an emphasis on the preservation of natural resources.

– In his/her everyday work, the leader in my organization places the maximum emphasis on business in accordance with the concept of sustainable development.

– The leader plays an important role in creating an organization of high business performance.

– The leader in my organization always has a convincing vision and his/her actions are always focused on the organization's interests.

Research Results and Discussion

Out of the respondents who participated in the study, out of the total number of the respondents from all the four enterprises, 47.86% are male and 52.14% are female. Out of the total number of the respondents from all the four enterprises, there were 10.71% of the respondents of 18 to 24 years of age; 15.71% of the respondents of 25 to 30 years of age; 32.86% of the respondents of 31 to 45 years of age; 27.86% of the respondents of 46 to 60 years of age, and 12.86% of the respondents of 60 years of age and over. Out of the total number of the respondents, there were 61.43% of the respondents with secondary education; 35% of the respondents with college education and 3.57% of the respondents with a university degree. According to the status of employment in the organization for all the four enterprises, there were 99.29% employees and 0.71% managers-leaders.

Table 1 – *The leader's focus on empowering and providing support to employees*

	Strongly disagree	Partially disagree	Neutral	Partially agree	Strongly agree
The leader in my organization represents a significant link for the successful and sustainable development of companies.	0.0%	0.0%	7.9%	64.3%	27.9%
The leader in my organization makes the maximum contribution to the organization's sustainable operation.	0.0%	0.0%	6.4%	61.4%	32.1%
Guided by personal moral standards, the leader in my organization positively influences the behavior of the employees.	0.0%	0.0%	7.1%	40.7%	52.1%

The leader in my organization provides support and encourages the employees to present opposing opinions and views.	0.0%	0.7%	8.6%	45.0%	45.7%
The organization's employees are more committed to their work due to the empowerment and support received from the leaders.	0.0%	0.0%	6.4%	56.4%	37.1%
Through his/her management methods, the leader does not only address economic issues, but environmental issues, as well.	0.0%	0.0%	6.4%	52.1%	41.4%
In his/her day-to-day business activities, in addition to economic benefits, the leader also puts an emphasis on the preservation of natural resources.	0.0%	0.0%	13.6%	52.1%	34.3%
In his/her everyday work, the leader in my organization places the maximum emphasis on business in accordance with the concept of sustainable development.	0.0%	0.0%	9.3%	59.3%	31.4%
The leader plays an important role in creating an organization of high business performance.	0.0%	0.7%	5.7%	41.4%	52.1%
The leader in my organization always has a convincing vision and his/her actions are always focused on the organization's interests.	0.0%	0.0%	5.0%	47.1%	47.9%

Table 1 shows that when the leader's focus on the empowerment of and providing support to employees is concerned, the respondents opine that the leader in the organization represents a significant link for the successful and sustainable development of companies, which the majority, i.e. over 90% of the respondents agree upon. Concerning the fact that the leader of the organization makes the maximum contribution to the organization's sustainable operation, almost 95% of the respondents agree upon that statement. As far as the statement that guided by personal moral standards the leader in the organization positively influences the behavior of its employees is concerned, it is also agreed on by 90% of the respondents. Regarding the statement that leader in the organization provides support to and encourages its employees to present their opposing opinions and views, almost 90% of the respondents agree on that statement. With respect to the statement that the organization's employees are more committed to their work due to the empowerment and support received from their leaders, almost 95% of the respondents agree upon that statement. Regarding the statement that through his/her management methods the leader does not only address economic issues, but environmental issues as well, almost 95% of the respondents agree upon that statement. In the case of the statement that in addition to economic benefits the leader also puts an emphasis in his/her day-to-day business activities on the preservation of natural resources, over 85% of the respondents agree upon that statement. When the statement that in his/her everyday work the leader in the organization places the maximum emphasis on business in accordance with the concept of sustainable development is concerned, over 90% of the respondents agree upon that statement. With respect to the statement that the leader plays an important role in creating an organization of high business performance, almost 95% of the respondents agree upon that statement. Finally, regarding the statement that the leader in the organization always has a convincing vision and that his/her actions are always focused on the interests of the organization, 95% of the respondents, too, agree upon that statement.

Bearing in mind the fact that the obtained data was statistically different from the normal probability distribution regardless of the ranges from 3 to 5, no conditions for parametric statistical tests were met. For this reason, the data was processed by doing a non-parametric statistical test.

Table 2 – *The descriptive statistical parameters of the derived variables that explain the empowerment of and providing support to the employees and the employees' commitment to the successful sustainable development of companies*

	Average score	**Standard deviation**	**Minimum**	**Maximum**
Employee support	*4.33*	*0.359*	*3.00*	*5.00*
Employees' commitment	*4.17*	*0.415*	*3.00*	*5.00*

As can also be seen from Table 2, the compression of the variables resulted in the new determinants related to the employee support provided by the leader and the employees' commitment to the successful sustainable development of the companies surveyed in the observed economic entities in order to facilitate the interpretation and draw real conclusions. The newly-created variable referred to as the "employee support" has an average grade of 4.33, with a standard deviation of 0.359; whereas the other variable referred to as the "employees' commitment" has an average grade of 4.17, with a standard deviation of 0.415. In order to determine whether there is a causal link between the "employee support" and the "employees' commitment" in the organization, the assessment of the given variables was evaluated, so as to determine whether they met the regularity of the normal distribution and whether some parametric statistical tests, to which the standard Kolmogorov-Smirnov test for normality was applied, were possible to apply.

Table 3 – *The evaluation of the normality of the distribution of the derived parameters that explain the empowerment of and providing support to the employees and the employees' commitment to the successful sustainable development of the companies*

	Kolmogorov-Smirnov Test for Normality		
	Statistics	df	Error probability
Employee support	*0.178*	*260*	*0*
Employees' commitment	*0.161*	*260*	*0*

Table 3 allows us to see that employee support and the employees' dedication significantly differ from the normal likelihood regardless of the ranges from 3 to 5, so the conditions for parametric tests are not met, thus the data will be processed by doing a non-parametric statistical test.

Table 4 – *The non-parametric statistical test for the assessment of the dependence between the empowerment of and providing support to the employees and the employees' commitment to the successful sustainable development of the companies*

			Employee support	Employees' commitment
Kendall's tau_b	Employee support	Correlation coefficient	*1.000*	*0.411*
		Error probability		*0.000*
		Number of respondents	*260*	*260*
	Employees' commitment	Correlation coefficient	*0.411*	*1.000*
		Error probability	*0.000*	
		Number of respondents	*260*	*260*
Spearman's rho	Employee support	Correlation coefficient	*1.000*	*0.502*
		Error probability		*0.000*
		Number of respondents	*260*	*260*
	Employees' commitment	Correlation coefficient	*0.502*	*1.000*
		Error probability of error	*0.000*	
		Number of respondents	*260*	*260*

Due to the accuracy and precision of the data because of a smaller sample, Kendall's tau_b test was applied due to a smaller number of the respondents, and Spearman's rho test was applied, where the data showed significant heterogeneity.

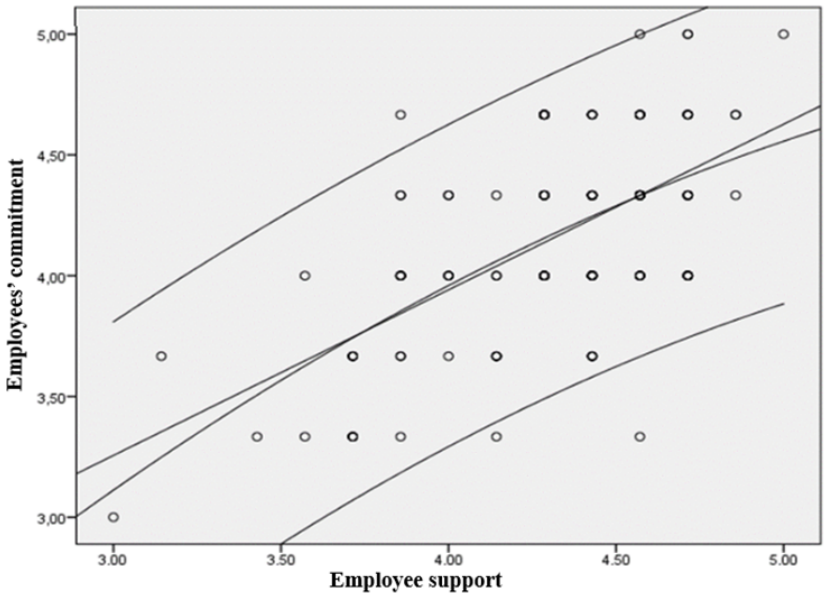

Figure 1 – *The point diagram of the dispersal of the data between the empowerment of the employees, providing support to the employees and the employees' commitment to the successful and sustainable development of the companies*

Based on the data demonstrated in Table 4, it can be concluded that both tests gave almost identical results, which confirms precision in assessing the cause-effect relationships between the empowerment of and providing support to the employees and the employees' commitment to the successful sustainable development of the companies. This can also be seen in Figure 1, showing that as the growth of the ratings of one variable increases, the positive trend of the other variable increases, as well. Based on Henry's positive inclination in the chart, it is concluded that there is a very strong and positive and statistically significant relationship between the empowerment of and providing support to the employees and the employees' commitment to the successful and sustainable development of the companies.

Conclusion

Leadership can be seen as a process in which an individual influences the other members of the group in order to achieve common goals. Leadership should not be focused on one single position or one single individual, either, but leadership should rather be connected with certain characteristics that have to be developed by all the members of the organization.

Leaders have such charisma that they can initiate activities, inspire a vision, allow others to act, create the way that an organization should go and encourage everyone to follow. It is common for all leaders to set programs and goals, require work, discipline, have the ability to persuade, emphasize the importance of interpersonal relationships, and expect a reward for their hard work.

The leader's focus on the empowerment of and providing support to employees is reflected in the fact that the leader in the organization represents a significant link for the successful and sustainable development of companies because he/she makes the maximum contribution to the sustainable business of the organization. Guided by personal moral standards, the leader in the organization positively influences employees' behavior where he/she provides support to and encourages employees to express conflicting opinions and viewpoints. Being committed to their work due to the support and empowerment received from their leaders, employees do their best, which also makes it easier for the leader to focus not only on the economy, but also on environmental issues. In his/her day-to-day operations, in addition to economic benefits, the leader also puts an emphasis on the preservation of natural resources, placing the maximum emphasis on business in line with the concept of sustainable development. Through his/her work, the leader assumes an important role in creating an organization of high business performance because he/she always has a convincing vision and his/her actions are always oriented towards the interests of the organization. The research has shown that there is a very strong and positive statistically significant relationship between the empowerment of and providing support to employees and employees' commitment to the successful and sustainable development of companies.

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SPORTS MEGA-EVENTS AND THEIR WIDER SOCIAL IMPORTANCE THROUGH PUBLIC RELATIONS ACTIVITIES

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An amazing development of sport business has been present in the past decades. This trend started in the mid-twentieth century. One of the basic reasons for this state is the marketing, media and PR conversion of major sports events into spectacles with properties of a short-term global phenomenon. Benefits of such a global expansion of sports mega-events are not purely financial, although the financial benefit is the most obvious one. The positive effect of PR of sports mega-events is generating the positive attitude of sport and sport practice. Trend of actively spending one's leisure time is derived from a general interest in sport activities today (though this is not necessarily followed by practicing sport activities). Therefore, there is an emphasized need for further development of Public Relations and Communication strategies, knowledge and understanding of the communication management of sports events. The coordinated implementation of PR activities and communication methods in sports reduces potential negative social impacts and any financial losses on the one hand, but it more commonly increases the benefits of the aforementioned elements. Analyses and research in this field are rare and therefore this paper represents initial theoretical contribution. The paper analyzes the special event-sporting spectacle as an instrument of PR communication in the broader social context.

Key Words: *special event, sports event, Public Relations, mega event*

Introduction

The last decades of the previous century and the beginning of this one have brought about revolutionary changes in how organisation and management of sporting events are perceived. There is no dilemma whatsoever that sport has become large and

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serious business. Sport today is a place of fluctuation of enormous amounts of money and interest. In the most developed countries, sport and its accompanying elements employ a large number of people and make an important factor in the overall development of those countries. Big sporting events (mega-events) are an important element in directing sport towards an international or global society. Due to its media exposure, mega-events have not only sporting, but also economic, commercial, political, sociological and other connotations and consequences. The aim of this paper is to uncover the interdependence between sports mega-events and Public Relations, as well as the potential of different communication instruments in the organization of big sporting events, in a broader social context. The authors have also pointed out the importance and role that the targeted communication has, not only in its role of long-term sport and sporting events' profitability and success, but also in its role of developing sportsmanship and healthy lifestyle.

From a marketing point of view, every sporting event is a potential sport product that has its multiple customers. Each sporting event or competition, more or less, attracts a great public interest; it is, therefore, one of the best positioned events and has the potential for creating profit by employing marketing activities [1]. A sporting event is one of the basic pillars of sport and marketing resources of any sporting society, club, competition organizer, sportsperson or coach. The sporting event mirrors the efficacy not only of a sport practice and sports preparation, but also of other roles of a sports organization and sport in general including the efficacy of management and its role in achieving the goals of a sports organization. Sports competition is a main category of any sport activity and it is considered to be the most important role of any sportsperson or sporting event. Competition is the reason for any sporting event. The development of media and individual travel possibilities has created the basis for the accelerated development of sport and sporting events, which has attracted enormous financial resources, so we can talk about sport industry in continuous expansion [2]. Marketing and public relations play an extremely important, sometimes even inevitable, role in all of the abovementioned.

Correlation between sport and public relations

Popularity of any sport, competition, sportsperson or brand represented by media at all levels (events themselves, public relations and mass media) is becoming more widely spread. This is in good part encouraged by extreme efforts in the area of public relations [3]. In that sense, we agree with Tomic thesis that sport shall become professional and commercial exercising, slowly turning into showbusiness [4]. Communication represents the third phase in the public relations process, and comes after investigation and planning. This phase, also called execution, is publicly the most obvious part of the public relations work. When it comes to the instruments of communication, professor Kirk Hallahan at Colorado State University points out that today's communication revolution has offered a whole range of communication media and instruments to the public relations experts, and that the traditional approach according to which it is enough to gain mass media publicity is no longer valid [5].

In the 1970s and 1980s, when the International Olympic Committee allowed professional athletes to take part in the Olympic Games, sport became the professional

competition at the global level, and the development of the sports industry has since unstoppably grown because of the great interest of viewers and the media. Also, the number of sports competitions has increased.

When organizing a special event, a resonant effect is expected with the main goal to build a certain image, in the sense of attracting attention and winning the affection of the targeted public in order to start the development of a communication chain as wide and long as possible [6]. When talking about events and experiences, there are a lot of advantages:

1) relevance: a well-picked event is seen as highly relevant, since the consumer is personally involved;

2) inclusion: considering their active nature and what happens in real time, consumers believe the events are something that makes them more included;

3) implicity: the events resemble to an indirect, soft sale, i.e. sale that requires no excessive convincing.

As defined by the American Association of Advertising Agencies, integrated marketing communications is the concept of marketing communication planning, which recognizes the additional value of a comprehensive plan. Such a plan evaluates the strategic role of numerous communication disciplines. Integrated marketing communications should improve the ability of a company to reach targeted customers, with a real message, at the right place at the right time; so, the most important aspect of such actions is to develop the concept of focusing communication. Due to the fact that organisations do business in the conditions of the increased level of competitiveness and setting high standards in the whole business environment, the only way to get successful results is to precisely define the public and guide narrowly specified and concrete business activities towards each of the targeted groups. Special events are one of the best ways to communicate with most social groups, and separately speaking, big sporting events are an excellent basis for the implementation of public relations.

Moreover, public relations of sports organization represent one of the most important methods of promoting the whole organisation, its products or services. Sport has many traits of a public service and in this sense it is obligated to withstand both positive and negative reactions from the public, usually presented by the means of mass-media [7].

Sports mega-events and public relations

Although the phenomenon of an event was present a long time ago, its frequent use, firstly in business purposes followed by the use in scientific and investigative purposes, as well, is linked to the industrialization period and later, modern development of human civilisation. This period is characterized by the increase in and dominance of various services with the implication that business, cultural, entertaining, sporting, recreational and other activities and ceremonies get a special spot. However, the event has always been a natural human need, although not the primary one, but one that is of great importance for a person as a social being because it represents a union of people and relationships formed by various interactions at a specific place and at the specific time, between participants, organizers, hosts and visitors, each of them with their respective general and individual goals.

There are big differences in how an event is defined. A number of authors see events as experiences. Events consist of a large number of miscellaneous services which represent experiences. Therefore, an event can be seen as a union of individual experiences which, through synergy, offer us the level of the total experience of an event [8]. Webster's dictionary, on the other hand, defines an event as „any of the contests in a program of sports" or „any one of the parts of a sports program". The event is a unique moment in time celebrated by ceremonies and rituals in order to satisfy needs [9].

Each event influences a local and wider community. The influence may be economic, political, or promotional one, and depending on its effects it can be big or small, positive or negative one. Some events considerably change the behaviour of the environment they take place in: the percentage of criminal behaviour drops, infrastructure is developed and maintained, the sense of household behaviour in local population increases, volunteering work contributes to the success of an event and the expenses are decreased [10]. On the other hand, their effect can be diametrically opposed to the previously listed items. Sporting events are a powerful instrument of communication with the public which, like other tools, should be used only for the right reasons and with clearly determined goals; otherwise, counter effects can be produced. According to Masterman, there are „owners" and „organizers" of sporting events, as well as „depositors" which include „consumers, suppliers, partners, investors, staff and external influences" [11]. For this particular reason, organising events is of special importance in the public relations area, and, depending on the occasion, it can be an irreplaceable public relations tool.

The nature of organising small local events, medium-sized and international mega-events is the same when talking about management functions. The differences are: size, techniques, intensity, details in planning and matters of responsibility distribution [12]. A sporting event is defined as a „mega-event" when it is discontinuous, unusual, international, or, simply, big. Roberts' definition of a mega-event implies that it has an ability to transfer a promotional message to billions of people via television and other telecommunication means [13].

Mega-events are best defined as big cultural, commercial and sporting events, dramatic in character, and of mass and international importance [14]. Two central characteristics of modern mega-events are, firstly, that they have great consequence for the host, region where they are held at, or the nation in question; and secondly, that they attract big media attention. Also, it should be borne in mind that events are the fastest growing phenomenon based on business, leisure and tourism [15].

Sports mega-events have been a growing international phenomenon for a couple of last decades. This growth is a result of modern technologies for mass-communication that reach the broadest range of population. Sport, media and businesses have come together, and that changed professional sport at the turn of the 20th century; and there is also a wide range of benefits the mega-events offer to host cities, regions and countries in which they take place [16].

Roche describes mega-events as „short-term events with long-term consequences" [17]. This description clearly points to big commercial, as well as political, social and cultural motive inspiring cities and countries to apply for the host of an event such as the Olympic Games or FIFA World Cup. Getz quantifies this definition by emphasizing the fact that the number of visitors should be higher than 1 million people, expenses should be less than 500 million dollars, and the reputation of the event itself should read: „the event you just can't miss".

Global sporting events today, such as the Olympic Games or World Cup, are being aggressively promoted to both companies and fans. It is estimated that approximately 3.9 billion people, for example, watched parts of the Olympic Games in Athens in 2004 on TV. 35,000 hours were dedicated to the media, which is a 27% increase since the summer Olympic Games held in Sydney in 2000 (Hallahan, 2014). Sports mega-events such as the Olympic Games, the FIFA World Cup and the UEFA Champions League have a significant influence on the host's region, and the possibilities for utilizing public relations are enormous. The Beijing Olympic Games in 2008 registered an increase in ratings compared to the Olympic Games held in Athens – according to AGB Nielsen there were 4.7 billion viewers [18].

These events are very popular and attract large audience and TV viewers. For example, in 2004 an average of 150 million viewers watched the UEFA Champions League in Portugal per match, a 157% increase in comparison to the European Football Championship held in Belgium and the Netherlands in 2000. Approximately 500,000 spectators travelled to Portugal to watch the championship [19]. The opening ceremony of the London Olympic Games was watched by 900 million people all over the world, which set the new ratings record for a sporting event [20]. Any serious sporting event represents the affirmation of the hosting venue and simultaneously the promotion of sponsors and sports equipment, advertising, etc. Potential positive results of sports mega-events include commercial growth, such as increase in revenue, better possibilities for employment, tourism growth, and especially the improvement of the host country's image [21]. The improvement of the host country's image can be the greatest benefit of organizing sport mega-events. Economic growth, infrastructure improvement and image promotion are the holy trinity of mega-event benefits [22]. In order to exploit all the listed possibilities to the fullest extent, the use of public relations needs to be intensive and adequate.

Russia is the country that has best used the organization of sports mega events through public relations. The state has realized that sport should be used as a method for raising Russia, both locally and globally. Russian internal interests are investment in the sports industry, through investing in sports infrastructure, organizing mega events, raising the quality of competitions in the most popular sports such as football, basketball and hockey, so that Russian sport can match the top sports leagues in Europe and the United States. Also, by investing in sport, Russia invests in the development of the country in the long run. Therefore, a plan has been made for Russia to bid for the host of the world's largest sports diving. The budget for organizing the Winter Olympics in Sochi 2014 amounted to over $ 50 billion. Security costs amounted to three billion dollars. Approximately 50,000 security personnel were deployed in Sochi beside 3,000 athletes. Security services installed 1,400 cameras that were used for surveillance, the sky above Sochi was protected by combat aircraft, drones, while warships and submarines were deployed on the sea [23].

Also, in the case of the organization of the World Cup football events in Russia in 2018, we can see the social impact through public relations not only for the Russian citizens, but also for the global level. The Olympics gave public relations outstanding chance for global promotion of Russia, its cities, history, tradition, customs, language and culture. Russia has used the organization of the World Football Championship to renovate and build new modern stadiums in 11 cities. The money invested will return multiple times. Russia inherited

the wasted infrastructure from the time of the Soviet Union, and the investment and renovation and construction of new sports facilities was absolutely necessary. Russia has, from the diplomatic point of view, used the organization of the Olympic Games and the World Cup to spread its social influence, even though it is under the US and EU sanctions because the world leaders have come to support their national teams, as well as about 1.5 million foreigners who have come to Russia during the event (according to various estimates). Overall, over 1.8 million tickets were sold for the matches, according to the official website of the FIFA World Cup. It's hard to imagine such number of visits to Russia if there was no organization of the biggest sporting events.

The effects of sports mega-events, their communication and public relations

The image of sports mega-events' host is one of the final outcomes of the activities guided towards creating and establishing appropriate communication connections with individuals and targeted public. Developing a relationship with the public is of integral importance in this sense. Event communication is a management tool by which all internal and external communication is coordinated effectively and efficiently, to the highest possible extent, in order to create a favourable base for the organizer-targeted public group relationship, so as to achieve more successful business results. Corporate reputation is formed based on the experience related to a particular event. The perception of all of the groups included in planning, conducting and evaluating an event, is of special importance when it comes to winning the approval and love of people towards events, organizers, sponsors, etc. Prior to discussing the image, it is necessary to create a strong identity. This is the reason why most of sports mega-events have so far been held in the developed countries. However, a number of transitioning countries, including Middle Europe and sub-Saharan Africa, are trying to have the right to organize mega-events such as the World Cup or the Olympic Games granted to them by international sport organizations through lobbying [24]. The role of public relations in such activities is of crucial importance. The public is more or less aware of the fact that candidacy for organizing big events (not just sport events, but events in general) is often awarded through lobbying, which is one of public relations instruments.

The main benefit of a mega-event is national and international exposure. Sport fans increase the tourist income for that area during their visit. Corporate sector visitors may move their production, company or factory to host cities. Adidas opened its 4,800 stores in China prior to the Beijing Games in 2008, seeking to promote its brand that sponsored the Olympic Games in order to position itself in the market of 1.3 billion [25]. TV audience may decide to visit the host city at some point in the future due to what they have seen during the airing of a mega-event. The rights to live TV coverage of a mega-event are a good income source, sometimes bigger than any other source. The sale of TV rights makes up 47% of the budget of the International Olympic Committee. Finally, hosting a big event may improve the image of a cityto such an extent that it can become a tourist destination. Still, there are examples to the contrary [26]. An example is the riot following the NBA championship in Detroit in the nineties: the image of the city was that of cars

and buildings in flames, and not of good atmosphere related to the NBA championship. Similarly, the international reputation of Munich and Atlanta was weakened by terrorist attacks that happened during the Olympic Games in those cities [27]. It is due to these cases that public relations should have detailed crisis plans and exercised scenarios.

Wider social influence of sports mega-events

Sport has a key role in every society through its contributions to social cohesion, by overcoming prejudice, increasing positive impacts on public opinion and spreading ethical and general principles. The Sports Development Strategy in the Republic of Serbia 2014-2018 states that citizens may be participants of sport activities, but may also take part in them as passive onlookers, that is, as spectators or sport fans [28].

The development of new technologies contributes to better and faster functioning of people, but at the same time reduces physical activity and thus contributes to the worse health housing with a special emphasis on children. The main problem of most countries is the health of the nation that is seriously disturbed because the health problem is mostly related to children with more and more health problems in the form of obesity, spine curves, flat soles, impaired vision and improper holding, and the cause is the lack of physical activity.

Despite the importance of a physical activity, the percentage of people regularly doing a physical activity in our country is still low. One of the first preconditions for finding a solution for increasing citizens' mobility to engage in physical activity is discovering the cause behind their passiveness in relation to physical exercise. When comparing EUROBAR data with CESID research data, it can be seen that the lack of time is the main reason for low participation in sport activities. The results referring to the lack of time for engaging in physical activity are very similar in the European Union and Serbia. In fact, 45% of respondents in the EU state this as a primary reason, while in the Republic of Serbia this number is smaller and at a level of about 40%. 5% of respondents in the European Union state that engaging in physical activities is too expensive, while in the Republic of Serbia 2% claim they lack the finances for doing so. The unavoidable question is: What is the problem? The problem is promoting sport and the healthy lifestyle through sport participation. The authors are of the opinion that good public relations concerning sports mega-events are the key factor in the process of enlightening wider social communities. After the London Olympic Games, 28% of the British said the Games increased their participation in sport activities, and 85% confirmed the Olympic Games had achieved their goal – to inspire younger generations to do sports [29].

In Serbia, for example, every May, when the finals of the NBA League begin, all basketballs courts are taken up, which is primarily due to media coverage. The same applies with the European and World Football Championships. Children are then further motivated to engage in sport and join sports clubs.

The power of sport is enormous, as is that of sports mega-events. Nelson Mandela once said: *"Sport has the power to change the world. It has the power to inspire. It has the power to unite people in a way that little else does. Sport can awaken hope where there was previously only despair. Sport speaks to people in a language they can understand."* It is upon public relations to use this for higher and greater social goals.

Conclusion

Like any special event, sporting events, especially sports mega-events, can be the reason behind a serious communication activity, prepared and analysed through public relations. This paper analyses the relationship and effects that communication and public relations have with/on sporting events, as well as the basic possibilities of applying them to sports mega-events. We have also pointed out the impact and power of sporting megaloms that can skip political barriers and connect people to the nations. The data presented here referring to the biggest mega-events such as the Olympic Games and the FIFA World Cup are merely indicators of possible wider impact on all public segments, that is, of enormous sports mega-events' power in a wider social context. It would be interesting to analyse in more detail specific events which can be seen as sports mega-events in our region in terms of organizing, planning and executing public relations activities. Special events are one of the best ways to communicate with most social groups, and separately speaking, big sporting events are an excellent basis for implementation of public relations. Social aspects and wider social implications are very important, but were not discussed in depth here. Furthermore, actively spending leisure time is one of the highly important segments when it comes to promoting sports and sport communication practitioners have to bear this in mind. The purpose of organizing mega-events is not only to make profits, but also to promote sports activities and a healthy lifestyle. Also, such opportunities are used for construction of new and renovation of old sports infrastructure, which afterwards will be used by local sports clubs. Finally, this area deserves attention and, considering the given trend and rate the sport world is being developed at, it shall only expand more in the future.

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SUSTAINABLE NAVIGATION BY THE DANUBE - LAW REGULATIONS, PROBLEMS AND PROPOSALS

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The Danube navigation in the territory of the Republic of Serbia has a negative impact on the environment, mostly in the form of pollution emitted from ships. The aim of the paper is to point out the existence and need for implementation of legislation regulating the navigation of passenger and cargo ships on the Danube. It is considered that the consistent implementation of the existing regulations and compliance control will give significant results in improving the state of the river environment and its wider surroundings. The paper aims to raise the awareness of potential users about the importance and potential of sustainable navigation. Bearing in mind the international importance of the Danube Basin and implementation of the development strategy for this river within the European Union countries, it is necessary to identify and actively participate in the implementation of the sustainable navigation concept. In this sense, it is considered that the cooperation with the Danube Basin countries is necessary. Thus, in the forthcoming period, it would be important to harmonize regulations and technical requirements for vessels, control mechanisms, waste disposal options and the overall monitoring.

Key Words: *Danube River, legal regulations, sustainable navigation, pollution, cross-border cooperation*

Introduction

The Danube River, with the total length of 2,860km, is suitable for sailing from Ulm (Germany) to the Black Sea. The whole stream is navigable through the Republic of Serbia, from Bezdan to Prahov, in the length of 588km. The section between Ulm and Kelheim (Germany) is navigable only for smaller ships of up to 250 gross tonnage. The

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International Danube waterway, which extends over 2,414km between Kelheim and Sulina (Romania) is the link between the North Sea and the Black Sea, across the Rhine – Main – Danube Canal and represents the Pan – European Transport Corridor VII (Petrović, 2015).

Due to the development of the economy and the general economic importance, waterway transport has become an unavoidable trend in Europe in recent years and therefore in the Republic of Serbia, through which even three international navigable rivers flow (Radojević, 2012).

The Danube Basin, which belongs to the Republic of Serbia, has around 390 protected areas of special national and international importance (The Government of the Republic of Serbia, 2008). Along the riverbank of the Danube, some of the most beautiful European cities have been built, as well as a lot of resorts and national parks, and river traffic has significantly developed. Unfortunately, in addition to these positive effects, rapid spatial development has negative impacts on the environment manifested in the form of pollution of the same (Bakrač, 2007).

In order to gain a clearer picture of the importance of the inland navigation development (hereinafter: IND), the countries with which the Republic of Serbia is linked by the Danube river cannot be ignored, as well as the fact that the Danube is the second largest European river. The European canal and river network makes up a waterway in the total length of about 30,000km. The waterways connect industrial centers and regions. In addition to the Rhine, the Danube and the Rhine-Main-Danube canal, there is a dispersed network of small tributaries and canals connecting smaller cities with industrial centers.

River ports are mostly located in the centers of major European cities and they are suitable for intermodal transport. For the transport of goods of different characteristics the most convenient is IND because of the high flexibility in business. The main advantage of IND traffic is a lower price in comparison to other modes of transport. This is achieved by combining the speed of the river flow and the size of the ships. In addition, the advantage of this transport is its reliability, as there is no problem of congestion and bottlenecks, which occurs in other modes of transport. Nevertheless, there is the risk of incidents, which could have a negative effect on the environment (Bakrač, 2007). The risk of incidents depends largely on the load of the waterway, the state of the waterway (water depth, river speed, conditions of the atmosphere, marking…), the navigation speed, training and reliability of the crew, the technical condition of the ship, as well as the presence of navigational devices on board, etc. Most rivers and canals are navigable 24 hours a day, and this type of traffic causes the least number of accidents (Zarić – Vujičić, 2012).

Despite the advantages the IND transport has not yet been sufficiently utilized. Freight inland navigation has a 7% share of the total transport (Đurđev, 2012). One container ship can load 200t/h to 400t/h, which is a container of 6 meters every two to three minutes. If the ship works with two to three cranes, it can load or unload 20,000 to 24,000 gross tones cargo per day (Radojević, 2011). In order to show the ratio of cargo that ships can transfer, in relation to other types of traffic, it is stated that one ship can carry cargo of 93 wagons and 173 trucks. There are about 1100 boats on the Danube, which is almost 10 times less than on the Rhine (ICPDR, 2018).

Inland waterway navigation is not with a predefined risk for the environment (Bakrač, 2012). However, sailing has an impact on the environment, which is manifested through different pollution patterns. The sustainable navigation and sustainable management issue has become more and more relevant and gets problematic in consideration and resolution.

Sustainable Navigation – Legislation The Development Strategy of the Danube Region

Taking into account the plans for the development of inland navigation and the amount of planned budget (Dimitrijević, 2015), it is necessary to actively engage and learn more about how to protect the environment. The European Union has adopted the development strategy for the Danube Basin countries by 2025. On 24th June 2011, the Council of the EU made a conclusion by the common comprehensive strategy (hereinafter: Strategy) approved by the Council of the European Union (the European Movement in Serbia), inviting all the actors to engage in the implementation of the Strategy. This is why the process of adoption of the Strategy has been formally completed (RS Government, 2014). The significance of the Strategy for the EU countries is also considered from a political point of view in terms of contributing to the significant improvement in the relationship between states (Martonji, 2011).

The Danube Strategy is based on the four pillars: connecting the Danube Region, protecting the environment in the Danube Region, building prosperity in the Danube Region and strengthening the Danube Region (Dimitrijević, 2015). Active participation and contribution of Serbia lies in the fact that it is one of the coordinators for the two areas of the Strategy: Science and Transport (Zarić – Vujičić, 2012).

Considering the issue of IND traffic in the past years, the emphasis is on giving increasing attention to this type of traffic. Almost every major international document or development strategy indicates the advantage and mechanisms of the river transport development, as a component of modular transport. The structure of sustainable development can be formally mathematically represented by the formula:

$$U=P*Pur*T \quad (1)$$

where the total impact (U) is directly proportional to the product of the population (P), the resource management consumption (Pur) and technology (T) (Veljković, 2012). The acquired formula can be redefined and applied to the total pollution emitted by IND vessels. Thus, new pollution from the vessel formula can be defined:

$$U=Pl*Pur*T \quad (2)$$

(Pl) represents the total reliability of the waterway by vessels, (Pur) vessel consumption (propulsion fuel, lubricants and other oils on board), the established sustainable navigation management and (T) technology and technique used on the vessel.

Sustainable development is regulated by European Union regulations, international agreements and national norms. International cooperation, harmonization of regulations and practice is the basis of the creation of sustainable navigation of the IND, (Horvat, 2014).

Considering the fact that in all the countries located on and within the waterways the essential issues for the acceptance and disposal of waste are not solved, international cooperation is necessary and purposeful. International cooperation, especially in the field of environmental protection, due to the synergistic approach to problem solving, is best carried out and implemented through various projects. Thus, the project WANDA (Waste Management for Inland Navigation on the Danube) was completed in 2012. The main objective of the project was to create solutions for the disposal of waste from vessels on the Danube River. After completion of the above mentioned, the project continued in the same direction together with the CO-WANDA project (Convention for Waste Management for Inland Navigation on the Danube), which aimed to develop an international convention to regulate waste management from vessels along the Danube River (Plovput, 2012).

During the project the Directorate Plovput equipped the inland navigation vessels with transponders from the "River Information System" (RIS), which represents the form of international cooperation. The RIS operates successfully in the territory of the Republic of Serbia and it is controlled by the Directorate Plovput, based in Belgrade. In the further development and implementation of the RIS, the plan is to improve the data that is necessary for the development of sustainable inland waterway transport.

International regulations and water protection in the European Union

In the case of international acts, there are different acts that are specific for the Danube River or the Danube countries, documents applied to the European and/or international level, as well as binding documents of the European Union countries (Horvat, 2014).

In the European Union, the European Parliament Directive (EU – Water Framework Directive of European Parliament and of the Council 2000/60/EC – Establishing a Framework for Community Action in the Field of Water Policy /ODV/) is in force (Jović, 2016). This directive specifies the objectives of water protection and measures, procedures and actions which imply it. "The Directive prevails by the regulations of the European Union in the water sector, primarily by setting goals in the field of environmental protection and by prescribing the process of water management planning that includes: monitoring, evaluation and analysis of pressures and impacts; preparation and implementation of six-year river basin management plans designed to achieve environmental objectives" (Jović, 2016, page 199). In addition to this Directive, the following are in force:

– Directive 2000/60/EC of the European Parliament and of the Council of 23rd October 2000;

– Directive 91/271/EEC (Council Directive 91/271/EEC of 21st May 1991 concerning urban wastewater treatment);

– Directive 2007/60/EC (Directive 2007/60/EC of the European Parliament and of the Council of 23rd October 2007 on the assessment and management of flood risks Text with EEA relevance);

– Directive 98/83/EC (Council Directive 98/83/EC of 3rd November 1998 on the quality of water intended for human consumption);

– Directive 2006/7/EC (Directive 2006/7/EC of the European Parliament and of the Council of 15th February 2006, concerning the management of bathing water quality and repealing Directive 76/160/EEC);

– Directive 91/676/EEC (Council Directive 91/676/EEC of 12th December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources);

– Directive 76/464/EEC (Council Directive 76/464/EEC of 4th May 1976 on pollution, caused by certain dangerous substances discharged into the aquatic environment of the Community);

– Directive 80/68/EEC (Council Directive 80/68/EEC of 17th December 1979 on the protection of groundwater against pollution caused by certain dangerous substances);

– Directive 2006/118/EC (Directive 2006/118/EC of the European Parliament and of the Council of 12th December 2006 on the protection of groundwater against pollution and deterioration);

– Directive 96/61/EC (Council Directive 96/61/EC of 24th September 1996 concerning integrated pollution prevention and control) (Jović, 2016).

In addition to legal regulations related to the sustainable development of navigation on inland waterways, the competent body of the European Union has issued the waste catalog, where the generated waste is recorded, as well as the types of waste that occur on vessels.

One of the most important documents on the sustainable development of navigation is the "Joint Statement on the Guiding Principles for the Development of Inland Navigation and Environmental Protection in the Danube River Basin" (ICPDR, 2007). The aim of this Joint Statement is to provide guidance to all those dealing with IND navigation issues and environmental sustainability. In particular, it refers to institutions and organizations involved in water management, and its work to develop plans, programs and projects in the field of ecology and navigation. The creation process of the Joint Statement has been initiated by the International Commission for the Protection of the Danube River (ICPDR), the Danube Commission (DC) and the International Commission for the Sava River Basin (ISRBC).

One of the most important international conventions is the "Convention on the Navigation System on the Danube from 1948", the so-called Belgrade Convention (Danube Commission, 1948). The Belgrade Convention signed in Belgrade on August 18th 1948 is an international legal instrument regulating navigation on the Danube River. The Convention allows free navigation on the Danube, in accordance with the interests and sovereign rights of the contracting parties to the convention, aiming at strengthening the economic and cultural relations between them and with other nations. According to the Convention, 11 member states (Germany, Slovakia, Austria, Croatia, Hungary, Bulgaria, Moldova, Romania, Russia and Ukraine) are obliged to maintain their part of the Danube in a navigable condition for river vessels and at the appropriate parts for maritime navigation. The members have undertaken to carry out the works necessary for maintaining and improving the conditions of navigation, as well as not to hinder or impede navigation on the Danube waterways. "Convention on Cooperation on the Protection and Sustainable Use of the Danube River" (Jović, 2016) was signed in Sofia on June 29th 1994. The main objective of the Danube River Protection Convention (DRPC) is to ensure that sur-

face and ground waters in the Danube River Basin are managed and used sustainably and fairly, which includes:

– the preservation, improvement and rational use of surface and ground water;

– preventive measures to control the risk of accidents involving floods, ice or dangerous substances;

– measures to reduce pollution entry that comes from the basin of the Danube River to the Black Sea

One should not skip the "Convention on the collection, disposal and acceptance of waste generated during navigation on the Rhine and inland waterways" (Jović, 2016). The Convention is prescribed for the Rhine River, as well as for other waterways in Germany, where it is adhered. The "polluter pays" principle is governed by this Convention in such a way that the fee is paid when fuel is charged through universal tax on regulated parts. The "polluter pays" principle and "precautionary" principle represent basic measures for the protection of the Danube and its Basin, in order to establish the sustainable exploitation of the Danube River.

"The European Agreement on the Transport of Dangerous Goods by Inland Waterways – AND", which contributes to meaningful sustainable development of dangerous goods and prevention of stains arising from accidents during the transport of the mentioned cargo (Trifković, 2013). Special attention is paid to the legislation on the transport of dangerous goods. In 1954 the United Nations Economic and Social Council – ECOSOC founded the Committee of Experts on the transport of dangerous goods by various modes of transport. The Committee's task was to define standard rules for safe transport of dangerous goods on whose basis the member states will harmonize their own national regulations. This is how the "Recommendation of the Safe Transport of Dangerous Goods" was created (the so-called "Orange Book") (Trifković, 2013).

The transport of dangerous goods in the international traffic is regulated by the following documents:

ADR (Accord européen relatif au transport international des marchandises dangereuses par route);

RID (International Carriage of Dangerous Goods by Rail);

ICAO-TI (International Civil Aviation Organisation-Technical Instructions);

IMDG Code (International Maritime Dangerous Goods).

The International Maritime Organization (IMO) is further defined by the regulations on the protection of life at sea (International Convention for the Safety of Life at Sea – SOLAS), which has prescribed rules on the transport of the dangerous goods in the chapter VII. This chapter contains the following parts:

A (Transport of dangerous packed goods, IMDG Code);

A1 (Transport of solid dangerous goods in ship warehouses);

B (Construction and equipping of ships and transport of dangerous chemicals in liquid state, IBC Code);

C (Construction and equipping of ships for the transport of liquefied gases, IGC Code);

D (Transport of Nuclear Fuel and Radioactive Waste, INF Code) (Trifković, 2017).

In addition, our country has followed the valid regulations in the field of sustainable navigation development, primarily to comply with the EU legislation. That is how " rules on preventing pollution and inland water caused by navigation" is prescribed (The Government of the Republic of Serbia, 2017).

This regulation prescribes the obligations and measures taken by the commander of the vessel in order to prevent pollution, handling oily and greasy substances, waste oils and fuel residues, measures related to collection, sorting and marking the municipal waste and other special waste, requirements that have to be met by ships, floating objects and receiving stations in order to prevent pollution, the way of cleaning the load compartment, i.e. the tanks, the way of discharging the cargo residues and the requirements for the residue vessels, the wastewater treatment on the passenger ship, the border and control values at the outlet of the wastewater treatment plant on the passenger ship, the types of technical resources required to respond to spills, the way in which the authorities in charge of responding to pollution caused by navigation and mandatory elements of technical and operational plans to prevent pollution, that is reducing and mitigating the consequences of the generated pollution (The Government of the Republic of Serbia, 2017, Article 1).

Problems and suggestions for improving the situation

Analyzing the situation on the Danube waterway through our country particularly if we look at the conclusions that were adopted in 1999 by the "UN ECE Inland Transport Committee, Trans/SC.3/150", (Economic Commission for Europe (ECE), 2007), we can identify the key problems of establishing sustainable navigation:

– There are no specialized vessels for collecting solid and liquid waste from the vessels.

– The ports do not have regulated waste management from ships, or do not possess a certificate or developed procedures, as well as technical capabilities.

– There are no services for collecting waste materials from the vessels.

– Planned and synchronized waste collection occurs only in accidents and incidents (Presburger – Ulniković, 2011).

If we compare the conclusions made by the experts engaged in making a decision to establish the sustainable development along the Danube River waterway by the UN ECE, and the real situation of our part of the waterway, one can see the scope of the results achieved during the accession negotiations period.

The experts have made the following conclusions:

– All pollutants should be collected on board.

– When entering the ship, they should be delivered to further processing to receiving stations on land.

– Receiving stations should be equipped with the necessary equipment for collecting and further processing the waste, and to be at the required distance from each other.

– In order to minimize environmental impact, all shipping companies should use the latest technologies on ships to minimize the detrimental effect on the environment.

– Each country should adapt its ports to be the most suitable for the landing and disposal of waste.

– The "polluter pays" principle should be applied, instead of direct payment, so that ship owners do not save the waste, which directly encourage them to discharge their waste into water courses (Economic Commission for Europe (ECE), 2007).

Conclusion

Sustainable navigation, as defined in this paper, would greatly popularize this type of transport. This would have a positive effect on the overall economic situation in our country. Vessels (boats), despite numerous advantages over the other modes of transport, especially the freight traffic (cargo), are serious contaminants on the Danube River. Unless sustainable navigation is established, the situation on the Danube River, as well as on our other rivers, could further aggravate.

The situation could be controlled and improved by implementation of good governance measures, properly prescribed procedures and application of vessels procedures. One of the first steps is to establish an eco-station along the waterway and to equip the port with the equipment for establishing sustainable navigation.

The overall conclusion is that the Republic of Serbia has much more room for infrastructure and other investments in the establishment of sustainable navigation on its part of the Danube River waterway.

It is believed that there is the risk of pollution of the Danube River. The assessment of this risk should be carried out by scientific methods, which would determine the overall state of the river environment and its wider surroundings.

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