

Faculty of Business Studies and Law
“Union - Nikola Tesla” University, Belgrade, Republic of Serbia

**INTERNATIONAL JOURNAL OF ECONOMICS
AND LAW**

Volume 13, No. 37
April 2023

Belgrade, Republic of Serbia, 2023

Published by:

Faculty of Business Studies and Law, Belgrade, Republic of Serbia, 3 times a year

For publisher:

Milan Radosavljević
Dean of the Faculty of Business Studies and Law,
“Union – Nikola Tesla” University, Belgrade, Republic of Serbia

Editor-in-chief:

Života Radosavljević

Deputy Editor-in-Chief

Milan Radosavljević

Chairman of Editorial Board

Olja Arsenijević

Secretariat:

Vladana Lilić

Translator, Language Editor and proofreader:

Vera Krmpot

Technical editor:

Dušan Stamenović

Front page design:

Milan Jakovljević

ISSN 2683-3409 (Online)

Editorial office and administration:

Faculty of Business Studies and Law
Jurija Gagarina 149a, Belgrade, Republic of Serbia Tel: +381 (11) 31 31 246
Website: www.economicsandlaw.org e-mail: economicsandlaw@fbsp.edu.rs

Since July 2017, the magazine is present in ERIH PLUS and HEINONLINE bases.
Pursuant to Article 14 of the Rulebook on Categorization and Ranking of Scientific Journals, the International Journal of Economics and Law is in category M23.

INTERNATIONAL EDITING COMMITTEE:

1. Aleksandra Karceva, Center for Russian-Slavic Intercultural Interaction, „University under the Interparliamentary Assembly of EurAsEc“, Saint Petersburg, Russian Federation
2. Alexios Panagopoulos, International Slavic Academy of Sciences, Education, Arts & Culture, Moscow, Russian Federation; The Neapolis University Paphos (NUP), Paphos, Republic of Cyprus
3. Anna Charina, Komi Republican Academy of State Service and Administration, Syktyvkar, Russian Federation
4. Atanas Kozarev, Faculty of Detectives and Criminology, European University, Skopje, Republic of North Macedonia
5. Branka Marković, Faculty of Ecology, Independent University of Banja Luka, Banja Luka, Bosnia and Herzegovina
6. Cvetko Smilevski, Business Academy Smilevski, Skopje, Republic of North Macedonia
7. Danijela Krsić Kostadinović, Faculty of Teacher Education, University of Belgrade, Belgrade, Republic of Serbia
8. Dejan Mihajlović, Universidad Tecnológico do Monterrey, Monterrey, Nuevo Leon, United Mexican States
9. Denis Čaleta, Institute for Corporate Security Studies, Ljubljana, Republic of Slovenia
10. Denys Lifnintsev, Economics and Management Faculty, Kyiv National Economic University named after Vadim Hetman, Kyiv, Republic of Ukraine
11. Goran Sučić, Faculty of Humanities and Social Sciences, University of Split, Split, Republic of Croatia
12. Irina Singaivska, Educational and Scientific Institute of Psychology, «KROK» University, Kyiv, Republic of Ukraine
13. Irina Somina, Institute of Economics and Management, Belgorod State Technological University named after V.G. Shukov, Belgorod, Russian Federation
14. Iztok Podbregar, Faculty of Organizational Studies, University of Maribor, Maribor, Republic of Slovenia
15. Jasmina Štarc, Faculty of Business and Management Sciences, Higher Education Centre Novo Mesto, Novo Mesto, Republic of Slovenia
16. Karl Schopf, Akademie für Wissenschaftliche Forschung und Studium, Wien, Austria
17. Karmen Erjavec, Faculty of Business and Management Sciences, Higher Education Centre Novo Mesto, Novo Mesto, Republic of Slovenia
18. Maja Anđelković, Faculty of Information Technology and Engineering, “Union - Nikola Tesla” University, Belgrade, Republic of Serbia
19. Milan Radosavljević, Faculty of Business Studies and Law, “Union - Nikola Tesla” University, Belgrade, Republic of Serbia
20. Miodrag Gordić, Faculty of Business Studies and Law, “Union - Nikola Tesla” University, Belgrade, Republic of Serbia
21. Nataliya Kireyenka, Institute for Advanced Studies and Retraining of Personnel in the Agricultural Industry, Belarusian State Agricultural Technical University, Minsk, Republic of Belarus

22. Nedeljka Rosić, Global Change Institute, The University of Queensland, Brisbane, Commonwealth of Australia
23. Nedžad Korajlić, Faculty of Criminology and Security Studies, University in Sarajevo, Sarajevo, Bosnia and Herzegovina
24. Polona Šprajc, Faculty of Organizational Sciences, University of Maribor, Slovenia
25. Rok Strašek, Faculty of Management, Primorska University, Koper, Republic of Slovenia
26. Rüdiger Stix - Sigmund Freud University, Vienna, Austria
27. Sergey Kupriyanov, Belgorod State Technological University, named after V.G. Shukov, Belgorod, Russian Federation
28. Svetolik Kostadinović, Faculty of Law, Security and Management, “Union - Nikola Tesla” University, Belgrade, Republic of Serbia
29. Tatyana Sobolieva, Economics and Management Faculty, Kyiv National Economic University named after Vadim Hetman, Kyiv, Republic of Ukraine
30. Teodora Ivanuša, Faculty of Logistics, University of Maribor, Maribor, Republic Slovenia
31. Viacheslav Soloviov, Dobrov Centre for Scientific and Technological Potential and History Studies at the National Academy of Sciences of Ukraine, Kyiv, Republic of Ukraine
32. Viktoriya Ryapuhina, Institute of Economics and Management, Belgorod State Technological University named after V.G. Shukov, Belgorod, Russian Federation
33. Yuriy Doroshenko, Institute of Economics and Management, Belgorod State Technological University named after V.G. Shukov, Belgorod, Russian Federation

EDITORIAL BOARD:

1. Aleksandra Gajdobranski, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
2. Ana Opačić, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
3. Balša Kaščelan, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
4. Božidar Forca, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
5. Božidar Otašević, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
6. Branko Tešanović, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
7. Dejan Ilić, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
8. Dragan Trivan, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
9. Dragana Barjaktarević, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
10. Dragana Radosavljević, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
11. Dušan Vasić, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
12. Edita Kastratović, Faculty of Business Economics and Entrepreneurship, Belgrade, Republic of Serbia
13. Jovan Šarac, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
14. Ljiljana Bulatović, Faculty of Media and Communications, Singidunum University, Belgrade, Republic of Serbia
15. Maja Dimić, Faculty of Information Technology and Engineering, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
16. Milan Milošević, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
17. Milan Vemić, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
18. Milica Kaličanin, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
19. Milijana Danevska, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia

20. Milijanka Ratković, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
21. Nedžad Imamović, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
22. Nevena Krasulja, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
23. Olja Arsenijević, The Institute of Republic of Serbian Culture, Priština-Leposavić, Republic of Serbia
24. Predrag Dedeić, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
25. Slobodan Šegrt, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
26. Slobodan Stojanović, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
27. Srđan Nikezić, Modern Business School, Belgrade, Republic of Serbia
28. Tijana Šoja, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
29. Vanda Božić, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
30. Violeta Babić, Faculty of Agriculture in Kruševac, University of Niš, Niš, Republic of Serbia
31. Vladan Stanković, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
32. Života Radosavljević, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia
33. Zoran Pešić, Faculty of Business Studies and Law, "Union - Nikola Tesla" University, Belgrade, Republic of Serbia

CONTENT

INTERNATIONAL EDITING COMMITTEE	3
EDITORIAL BOARD.....	5
FOREWORD.....	9
COST MANAGEMENT IN THE FUNCTION OF BUSINESS DECISION MAKING	11
Jugoslav Aničić Milenko Čeha Aničić Dušan	
THE DEVELOPMENT OF SERBIAN STATESHIP IN THE CONTEXT OF INTERNATIONAL PUBLIC LAW AND THE ROLE OF THE GREAT POWERS.....	31
Milijana Danevska Vladan Stanković	
THE ROLE AND SIGNIFICANCE OF THE MODERN THEORETICAL FRAMEWORK OF CONCENTRATION FOR THE BANKING SECTOR IN THE STRATEGIC DECISION-MAKING PROCESS	43
Maja Dimić Dejan Ilić Milica Kaličanin	
MODERN FORMS OF ENDANGERING INTERNAL SECURITY.....	55
Milan Glišović Goran Župac	

POSSIBILITIES OF MORE EFFECTIVE SPENDING OF FUNDS IN THE DEFENSE SYSTEM	75
Nedžad Imamović Branko Tešanović Vera Krmpot	
RESEARCHING THE EFFICIENCY AND FUNCTIONALITY OF BUSINESS SYSTEMS USING STATISTICAL AND DEA ANALYSES.....	91
Petar Kočović Slobodan Šegrt Radoljub Tomić Maja Anđelković	
ANNEX OF AN EMPLOYMENT CONTRACT DUE TO CHANGES IN WORKING CONDITIONS	117
Nedeljko Krajišnik	
THE WAYS OF ORGANIZING THE MOST IMPORTANT TYPES OF STATE AUTHORITY	131
Ljupka Petrevska	
BUREAUCRACY AND TECHNOCRACY IN THE WORKPLACE	145
Mirza Totić	
CONCEPTUALIZATION AND PERSPECTIVE OF CORPORATE GOVERNANCE OF STATE OWNED ENTERPRISES IN SERBIA.....	157
Dušan Vasić Milan Radosavljević Bojan Zdravković	
CONFLICT MANAGEMENT IN THE TEACHING STAFF OF A SECONDARY SCHOOL EDUCATIONAL INSTITUTION	177
Aleksandra Vesović Dragana Radosavljević Suzana Pajić	

FOREWORD

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

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

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

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

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

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

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

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

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

Editor-in-chief
Emeritus professor Života Radosavljević

UDC:

338.58

Received

Original scientific paper

Accepted:

February 5, 2023

Corresponding author:

March 27, 2023

cehamilenko@gmail.com

COST MANAGEMENT IN THE FUNCTION OF BUSINESS DECISION MAKING

Jugoslav Aničić

Faculty of Economics and Finance, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: ajugoslav@yahoo.com

Milenko Ćeha

Belgrade, Republic of Serbia, e-mail: cehamilenko@gmail.com

Aničić Dušan

Faculty of Economics and Finance, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: anicic.dusan@yahoo.com

Abstract: *Leadership strategy regarding costs is, alongside differentiation strategy, the basic strategy in the creation and protection of company competitive position in the developed market. This strategy is based on cost optimization that can be achieved by efficient cost management at all levels within a company. In the course of the dynamic changes in company's business environment, traditional calculation models have become an unreliable foundation for business decision making. Therefore, the companies opt for modern cost management system application for business risk reduction achievement, additional value increase, financial expense reduction, ie, their competitive position improvement.*

This paper indicates the significance and role of efficient cost management in modern companies providing appropriate business decision making by the company management. This paper further provides research results on calculation and cost management weak points in companies in Serbia, the influence of the most important factors on cost management efficiency, with suggestions for the improvement of the process and cost management in the function of company competitive position increase.

Keywords: *cost management, company, competitiveness, cost management factors, business decisions.*

INTRODUCTION

The main cost management goal is information generation with the aim of planning, decision-making and control in the short and long run, in order to help company management in product creation and service delivery in a manner more efficient and effective compared to the competition. The place and role of cost management should be derived primarily from its relations with the company goals, and they should also link the long-term and short-term (operational) goal realization oriented elements. This is especially emphasized in terms of business globalization process and high-technology company development that begin to re-examine accounting information quality for the needs of business decision making.

In the previous decades, costs have suffered significant changes in structure as well as their general role. The traditional concept of cost calculation is no longer able to provide high-quality information on cost movement, so they cannot determine accurately the activities where the company is not using resources in an efficient and productive way. Also, the cost price determined on the basis of the traditional methods does not provide a reliable foundation for cost management nowadays. Therefore, modern companies are forced to implement modern cost management models which provide the critical mass of information necessary for decision making with the aim of cost optimization.

Two basic strategies of competitive advantage achievement are differentiation strategy and cost leadership strategy. The cost leadership strategy goal is to build a competitive position in the market with lower expenses in relation to the competition. Regarding that costs are a factor the companies can influence to a great extent, they represent the starting point for a business result increase, ie, profit. The companies in Serbia are also forced to pay the necessary attention to cost calculation and management issues because of the country's opening and the exit into the world markets in order to be successfully competitive in the market.

This paper researches the impact of certain factors on cost management efficiency in companies in Serbia. The research includes large companies sector on the one hand, and small and medium-sized enterprises on the other hand. The aim of this paper is to identify the limits and problems in cost calculation and management implementation, determine the impact of the factors with the greatest influence on the process, and recommend the suggestions for future solutions and possible improvements in this area on the basis of the research. The importance of the research is especially significant if we keep in mind that the implementation of the complete accounting system based on the international standards has only started in Serbia since 2004. The research results can help domestic companies development and competitiveness increase significantly.

1. THE CONCEPT OF COST MANAGEMENT IN COMPANIES

A company must achieve its competitive advantages in order to achieve its business goals, both the short and long-term ones. A company gains competitive advantage through cost management in two ways: more efficient usage of internal resources and cost control or overcoming the activities that cause high expenses. Cost management contributes to the company's global competitiveness and continuous business improvement (Agrawal et al, 1998). Cost management is also defined as a philosophy, attitude (mission) and a set of techniques with the aim of creating higher value with lower expenses (Hilton, et al, 2000).

In a company, cost management is based on a proactive attitude because it is assumed that all the product and service costs are the result of the decisions made by the company management. Their decisions are often based on the information about cost dynamics and related to the assessment of how certain activities fit into the acceptable cost framework. Besides the organizational resources, cost management decision making also demands both professional competence and specific skills in management (Blocher et al, 2002). Cost management represents a reliable set of methods that can be used on the individual basis in order to support certain decision or complete management in the organization (Škrtić, 2005).

The traditional model of cost management follows and controls the costs of direct material and work per each unit of products or services, while the products of the management and production overheads are added to the direct costs through the application of the appropriate 'cost scheduling' (Pavlović, Škrtić, 1997). Traditional cost management models make no difference between different activities of production and management overheads which appear in certain groups of products. If there is a large share of the business costs that are not a part of production volume and the company offers a wide array of products of various quantities and complexity levels, the traditional model will result in an incorrect presentation of costs. Due to all above mentioned and similar situations, the traditional cost management model implementation is possible in a relatively stable business environment, ie, where the production factor is dominant, technology well-known and there is a small quantity of products with similar properties. However, since the above mentioned characteristics do not correspond to the dynamic business environment, the traditional cost management model is abandoned and made way for the modern cost management systems.

According to Groth & Kinney (1994), the purpose of the strategic cost management is the production of a continuous cycle of information on short-term and long-term activities, with the aim of value increase for the consumers and cost reduction. The benefits of strategic cost management model usage are reflected in business risk reduction, increased added value creation and a reduction in financial expenditure. The main objective of cost management is to use a set of tools for information generation with the aim of planning, decision making and control in both short and long-term in order to help the company

management in product creation and provision of services in a more efficient and effective way than the competition.

Cost management is a set of concepts, activities and instruments of influencing the cost amounts, structure and flows with the aim of the realization of the company goals. According to the aforementioned, the place and role of cost management should be derived primarily from its relationships with the company goals. A well-designed cost management system involves mutually linked elements directed mainly towards long-term (strategic) goals as well as the ones directed towards short-term (operational) goals. Thereby, the former set the framework for the latter while the latter render the former into more controllable performances, testing the sustainability and referring to the possibilities for strategic goal adjustment (Malinić et al, 2018).

The changes in business environment, more distinct to recognize in the 1980s, intensified in the 1990s and expected to spread in the future, represent the drivers and stimulators in the development of the cost management system strategic context. They include the factors such as global competition, information technology development, service sector growth and deregulation, production environment improvement, consumer orientation, total quality management, product development etc (Hansen & Mowen, 2003). Also, time is a strategically important competitiveness factor. Although the costs of complete business cycle time reduction are very high, the delay often costs a lot more (Coenenberg, A., Fisher, T., Gunther, T.).

New business conditions require, more than before, relevant and reliable information and they represent the management support in the process of business decision making. Also, new approaches and concepts in the field of cost accounting appear in the countries with the developed market economy. Business globalization and high-technology company development reassess the quality of accounting information acquired on the basis of the traditional cost accounting methods. Information support is required for company management founded on the customer demands and continuous improvement of business, which can be provided only through the application of the cost accounting concept.

The changes in business environment of a modern company are numerous and frequent, while the company internal resources are not that easily adjustable which makes competitive advantages a serious challenge requiring proactive management. Company management should be supported by information technologies and strategically oriented. The capability to acquire and use resources in such a manner that it uses the chances in the environment and avoids its threats is of central importance for the organization prosperity (Wilson & Gilligan, 2003).

Costs have suffered considerable changes in the structure, as well as in the general role in the previous decades (Malinić et al. 2018). There are two typical changes in the general role of costs. One of them is that costs cannot be considered separately, but always with income and net result, in the long run. The second change stems from the management needs of market-driven companies to compensate for costs as determinants of market presence, replacing it with the approach to adjust costs to future market opportunities,

which increases their significance and requires increasingly careful management-cost approaches to costs.

Cost management leads to the business process improvement because it promotes the idea of the continuous assistance for the organization in making the right decisions and the creation of a higher customer value with lower costs. The introduction of the cost management system requires complete commitment in the company, from the involvement of the employees at all levels of hierarchy to performance control system introduction in order to improve the activities which result in added value, reducing the ones that do not contribute (Agrawal et al, 1998).

2. TRADITIONAL AND CONTEMPORARY COST ACCOUNTING SYSTEMS IN COMPANIES

Company profit is the result of its primary and secondary activities, and income increase in relation to costs is achieved by more efficient and effective performance of the activities. Porter () singles out two main strategies for competitive advantage achievement: product differentiation and cost leadership. Differentiation strategy is based on the creation of the customer perception on product or service singularity, most frequently through quality superiority, which enables the producers' accomplishments at higher prices. The main fault of this strategy is that it requires no cost minimization in company's business, and it results in a higher inefficiency which can cause market position loss. Unlike the differentiation strategy, cost leadership puts the cost of business first. The aim of this strategy is to gain advantage in the market with the lowest costs in comparison to the competition. Considering the costs as a factor that can be largely influenced by companies, they represent the starting point for business result, ie, profit increase.

Cost monitoring, their formation, development, sistematization and analysis according to various criteria contribute to cost optimization and their reduction within necessary frameworks. Rational business, its concept and tools are the means for removing unnecessary activities in business processes leading to cost reduction as well as giving more value to the products and services for their users. Effective and efficient cost review through the appropriate prism enables the timely anticipation of future business – financial alternative movements in decision making, ie, adopting optimal directions for further business operations of the company and its development.

The characteristics of contemporary economic reality is also resource constraint, so cost management gains in importance on this basis. Information quality factor is also important because they should help management in the acquired resources efficiency improvement. Production elements combination implies the appropriate quality, quantity and time harmony provided through company management function. In terms of quantity, substitutions among certain elements are possible, that is, a share of costs of one of the elements can be replaced by the costs of other element with the aim of total cost reduction per product or service unit.

According to Malinić et al (2018), cost and effect accounting is the main part of the mainly internally oriented management accounting, directed towards investment and profit centers, cost place and function, not the entire company. The object of the calculation is its commodity, ie, value flows on a short-term basis with the full freedom of cost and effect value concepts choice it is dealing with. The main objectives are to provide information on the cost effect for balancing needs, provide short-term result per organizational units, product groups and products, as well as the information on price policy formulation and business decision making.

In the attempt to improve total investment and total effects ratio, a company tries to achieve maximum impact on input in the business process. The imperative of the business result forces management to implement various models and methods of cost management. These models provide management with the critical mass of information necessary for decision making with the aim of cost optimization, and among others, these are used in practice: traditional cost management model, ABC method, target cost model, 'Kaizen costs', value analysis, cost management model based on processes, etc.

The traditional methods are only calculation methods in their essence, which means they do not meet modern requirements of business decision making. Their characteristics is the lack of long-term approach, limited usability for decision making and insufficient respect of market requirements.

A modern organization is nowadays considered as a system of business processes where the transformation of inputs into outputs is performed and thus a value for consumers is created. The key processes that enable superior performances depend on the management capability to recognize them – better quality, lower costs, higher-quality service – as well as the profit of the organization and its competitiveness in the market (Micić, Arsić, 2010). Cost competitiveness is achieved through more efficient production elements cost management in all the segments of the reproduction process. Higher profit for the organization and the level of economic quality is achieved in this way.

Leadership strategy in costs implies that the company does business efficiently, with the costs playing the central part. Lower costs create opportunities for the formation of lower selling prices than the competition, and the creation of higher profit on that basis. Leadership strategy in costs requires organizational structure with a high level of specialization, formalization, standardization, centralization and functional unit group creation. On the other hand, differentiation strategy requires the company to be flexible, innovative and with a segmented market approach (Micić, Arsić, 2010).

A modern company does business in the conditions of harsh competition, reduced life cycle of products, necessity to focus on consumer demands, constant pressure on cost reduction and supply differentiation, as well as focus on quality improvement, product functionality and delivery speed. In this situation, companies look for means for effective management in order to achieve competitive advantage. Information quality, scope and structure necessary for this type of management depend on the cost accounting concept implemented in the company. Cost accounting traditional models have become unreliable

for cost management and business decision making, so the companies are forced to implement modern accounting models (Antić, Novičević, 2011).

Cost calculation involves various techniques and approaches in stock valuation, cost determination and monitoring according to locations, cost allocation from the auxiliary to the main cost centers, as well as binding costs to their carriers – products and services (Todorović, 2009). Traditional cost calculation concepts cannot provide quality information on cost flows, or determine accurately business activities where the company does not use the resources in an efficient and productive manner. In addition to the aforementioned, the price determined on the basis of the traditional accounting methods does not provide a reliable foundation for cost management in altered business conditions.

Costs belong to the narrowest circle of success factors and the situation in the company, financial and other organizations. Therefore, there is logic in the managers' commitment to the issues of costs and a wide range of the information in management cost accounting and their effects in all successful companies and other organizations (Malinić et al, 2018.). Costs are an expression of value in economic resource spending in order to generate and sell certain effects: the effects stand as the opposite of costs and their product. This relationship is the key issue not only in cost accounting but overall management accounting.

Traditional cost calculation techniques (although they continue to be widely used) are the topic of numerous criticisms due to their inflexibility and inability to keep up with the changes in business environment. Traditional accounting techniques at full cost, whereas general costs are 'absorbed' within production through the usage of a certain basis (for example, number of machine operation hours or direct labor), were developed in the time when direct labor, raw materials and machine operation created the most important input in the production process (Aničić, Popović, 2015).

However, as the processes in both production industry and business environment services became increasingly automated, direct labor input primary significance reduced considerably. Simultaneously, relative significance of indirect general costs in cost structure in a lot of companies showed a growth tendency. The result was that higher general cost amounts started to be allocated to fewer hours of machine operation or numbers of direct labor hours, leading to questionable cost allocation.

In order for cost accounting to be efficient, it should be tailored according to the company's unique business process nature. There is no cost accounting system superior in all possible situations. We can rather say that cost accounting economy and efficiency is determined by the company's business process nature as well as the type of information necessary to its management (Miličević, 2000).

Cost accounting supplies company management with the necessary tools for the needs of business activities planning and control, quality and business efficiency improvement as well as decision making, both routine and strategic ones. Gathering, presentation and analysis of information concerning company's costs and effects should enable the management to perform a number of tasks set before them successfully (Hammer et al, 1994).

We can expect increasing usage of managing accounting means in future, such as : budgeting, calculation system according to standard costs, responsibility accounting, contribution analysis and differential approach to the creation of relevant data for the needs of individual decision making. These tools have a much larger significance for company management than double bookkeeping and the preparation of conventional financial reports (Horngren et al, 1994).

Relying to flexibly set calculation system according to standard or standard variable costs can indicate excess behavior of certain types of costs in certain stages of the production process, in certain sections, product lines, etc. Company's market opportunities are frequently limited and the chances for eventual profit increase should be sought within the company, ie, its costs (Drury, 1992).

The information limitations of the traditional cost calculation systems are emphasized by a number of authors in their papers. Cooper & Kaplan (1988) point out that the decisions should be based on the differential or/and incremental costs (and income) the construction of which vary depending on the nature of the problem they try to solve. The traditional cost calculation systems are created mainly to provide information necessary for external financial reporting in times when production technologies used to be labor intensive above all else (Kaplan, 1988).

There is a ruthless competition with clearly defined agent positions, ie, owners and managers who negotiate the system of jurisdiction and responsibilities among themselves. In such business environment the management is necessarily obsessed with business and financial efficiency and effectiveness of company's business, so it is therefore oriented to accounting as the basic source of information in decision making. Such climate is still in its early stage in Serbia, and cost accounting is developed on the basis of the models from developed countries. However, the functions of management and ownership are not clearly separated in many small and even medium-sized enterprises, ie, the owner is frequently the manager as well. These relationships do not create a favorable climate for management accounting development or contemporary concepts of cost calculation. On the other hand, the accounting profession inertia is present, ie, it is not prepared to adopt and implement the modern concepts in cost calculation and monitoring. The concept of costs is frequently set in such a way that it is suitable to the classic accounting principles and tax regulations, not the cost accounting goals that are much wider than providing the price for stock effects balancing needs. An important shift in profession development has been made through accountants and auditors' education and certification according to the programs of the renowned world accounting institutions. It is necessary to raise professional culture in Serbia and upgrade the managers and accountants' knowledge, and they have to share mutual trust as an important prerequisite of successful company management in modern world of business.

Legal entities and entrepreneurs performing production activities in Serbia have an obligation to have class 9 in their bookkeeping – cost and effect calculation – dealing with (Petrović et al, 2015): cost assignment by cost and effect place, the links between

income and the appropriate effects, as well as business success determination by company accounting units – profit centers and business result determination for the entire company according to the sold cost effect method. Cost and effect calculation offers the data on:

1. the price of products and services that the company produces and sells;
2. stock value changes (final compared to initial);
3. amount deviations from the standard (calculated) business conditions in spending, employment and efficiency;
4. business results by company's accounting units and the company as an entity.

2.1.Methodology

The research for this paper was conducted from December 2021 to March 2022 on the sample of 48 respondents, where a half is from large companies and the other half from small and medium-sized enterprises. The division into small and medium-sized enterprises on the one hand, and large companies on the other hand has been performed according to the current Law on Accounting of the Republic of Serbia. The respondent structure in the sample consists of managers on the one hand, and the employees in accounting and finance on the other hand. All respondents have a university degree and work experience of over 3 years in accounting and finance.

The respondents evaluated the influence of the following factors on cost management efficiency in companies in Serbia: accounting personnel competence, management understanding, competition impact as well as legal and internal regulations. The response was processed statistically in SPSS program, tested by Cramer's V test, the significance of the statistic differences in the two groups of enterprises was tested by chi-squared test.

Most of the respondents from large companies (20) and most of the respondents from small and medium-sized enterprises (18) have over 10 years of work experience. Most of the respondents from large companies (15) work as managers, while most respondents from small and medium-sized enterprises (13) work in accounting and finance.

On the basis of the data in table 1, we can see that average mean value measures in the evaluation of factors Accounting personnel competence, Management understanding, Competition impact and Legal and internal accounting regulation are higher compared to the theoretical average ($AS=3$).

Factors	Theoretical min.	Theoretical max.	Empirical min	Emp. Max	AS	SD
Accounting personnel competence	1	5	3.00	5.00	3.979	0.668
Management understanding	1	5	2.00	5.00	3.979	0.934
Competition impact	1	5	2.00	5.00	3.583	0.919
Legal and internal regulations	1	5	2.00	5.00	3.458	1.031

Table 1: The average impact of factors on cost efficiency management
(Source: the author's research)

2.2. Research results and discussion

The differences in factor evaluation considering company size This paper tests the differences in factor evaluation considering the company size the respondent works in (small and medium-sized enterprises or large companies). The differences are presented in Chi-squared test ($\neq 2$), with the significant difference in values Sig. (significant difference) ≤ 0.05 . The connection strength between the variables is determined by Cramer's V indicator.

Evaluation	Company size	
	Large	Small and medium-sized enterprises
3	8	3
4	12	15
5	4	6

Table 2. The distribution of respondents' answers in Accounting personnel competence factor evaluation considering the company size (Crosstabulation)

Source: the author's research

Most of the employees in large companies (12) as well as small and medium-sized enterprises (15) evaluated the significance of accounting personnel competence factor with the average (table 2, graph 1).

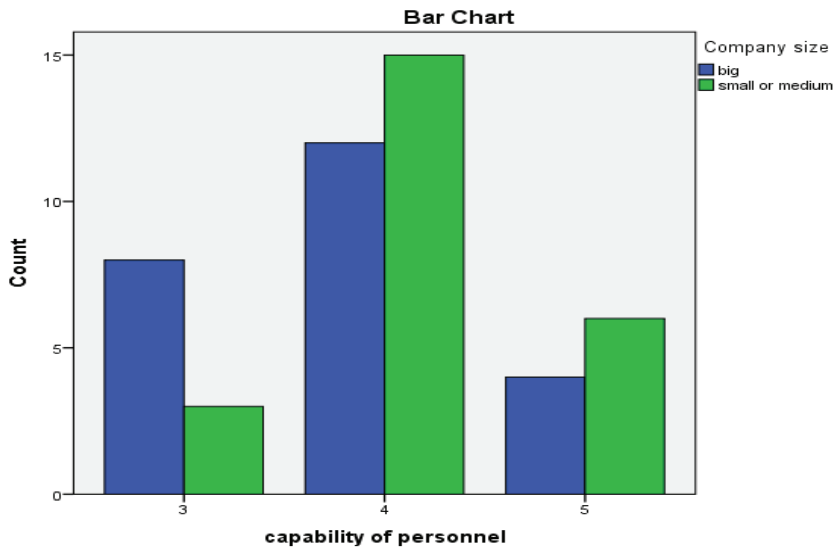


Figure 1: The distribution of the respondents' answers in accounting personnel competence factor evaluation considering the company size (Source: the author's research)

	Value	D f	Statistical significance
Pearson's X^2	3.006	2	0.222
Cramer's V	0.250		
Contingency coefficient C	0.243		

Table 3. The respondents' differences in accounting personnel competence factor evaluation considering the company size (X^2 test) Source: the author's research

There are no statistically significant differences determined ($X^2=3.006$, $p>0.05$) in the evaluation of accounting personnel competence factor concerning the company size (table 3). Cramer's indicator is $V=0.250$, which indicates low connection between the variables. Company size does not affect the differences in accounting personnel competence, considering that $Sig>0.05$ is the same for all the variables, with low connection between the variables.

Accounting personnel competence factor was given more significance in the research than the theoretical average, which indicates that small and medium-sized enterprises as well as the large companies give this factor great importance in cost management efficiency. Accountants are the carriers of accounting business and the interpretation of the results obtained, and managers are the users of these information. A delay is typical for Serbia in comparison to the developed countries in terms of complete financial reporting regulations, as well as the implementation of contemporary cost calculations in companies.

Evaluation	Company size	
	Large	Small and medium-sized
2	0	2
3	4	11
4	7	6
5	13	5

Table 4. Respondents answers distribution in the evaluation of Management understanding factor considering the company size (Crosstabulation)

Source: the author's research

Most of the employees in large companies (13) evaluate Management understanding factor significance with the highest grades, while most of the respondents in small and medium-sized enterprises (11) evaluate this factor with the medium grades (table 4, graph 2).

Graph 2. Respondents' answers distribution in the evaluation of Management understanding factor considering the company size

	Value	D f	Statistical significance
Pearson's X^2	8.899	3	0.031*
Cramer's V	0.431		
Contingency coefficient C	0.395		

Table 5. The differences in Management understanding factor evaluation considering company size (X^2 test) Source: the author's research

* $p < 0.05$

The results show that statistically significant differences have been determined ($X^2=8.899$, $p < 0.05$) in Management understanding factor evaluation considering company size (table 5). Cramer's indicator is $V=0.431$, which points to medium connection between the variables. Company size affects the differences in management understanding, since $Sig < 0.05$ in all variables, with moderate connection among the variables.

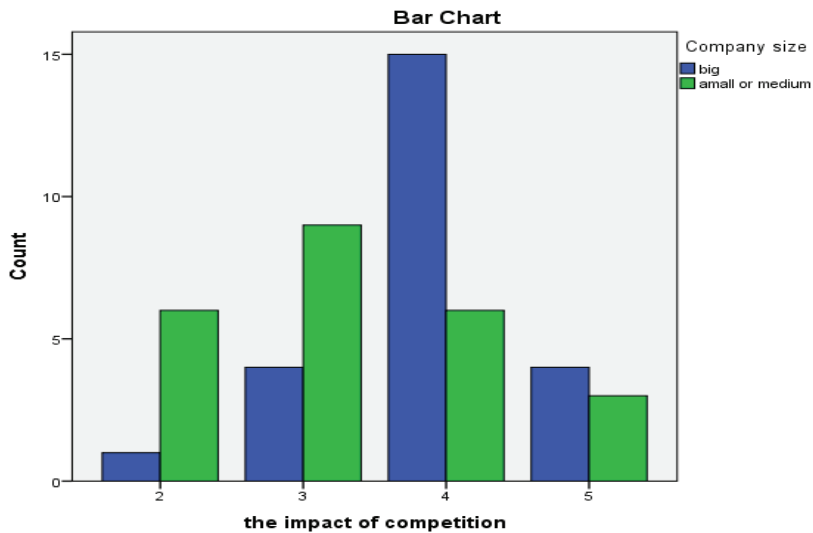
The research on management impact on cost calculation efficiency has shown that large companies attach more importance to management impact than small and medium-sized enterprises sector. Such result can be partly explained by the fact that large companies are more exposed to market influences because they do business in developed international market, while small and medium-sized enterprises are more linked to national or regional levels where global companies have less influence. Also, in some small and medium-sized enterprises ownership is still not separated from management. There is a communication gap between managers and accountants in a large number of companies since statements are frequently too extensive or incomprehensible for non-financial managers and they are still required to make strategic decisions. Therefore, management accounting must take care that only relevant information is available to strategic managers because they enable making appropriate strategic decisions.

Evaluation	Company size	
	Large	Small and medium-sized
2	1	6
3	4	9
4	15	6
5	4	3

Table 6. Respondents' answers distribution in Competition impact factor evaluation considering company size (Crosstabulation)

Source: the author's research

Most employees in large companies (15) assigned grade 4 to Competition impact factor, while most of the employees in small and medium-sized enterprises (9) rated this factor as average (table 6, graph 3).



Graph 3. Respondents' answers distribution in Competition impact factor evaluation considering company size , Source: the author's research

	Value	D f	Statistical significance
Pearson's X^2	9.495	3	0.023*
Cramer's V	0.445		
Contingency coefficient C	0.406		

Table 7. The differences in Competition impact factor evaluation considering company size (X^2 test) Source: the author's research

* $p < 0.05$

The results obtained here indicate that statistically significant differences have been established ($X^2=9.495$, $p < 0.05$) in the evaluation of Competition impact factor considering company size (table 7). Cramer's indicator is $V=0.445$, which indicates medium connection among the variables. Company size affects the differences in competition impact, since $Sig < 0.05$ in all variables, with the existence of moderate connection among the variables.

This research show that small and medium-sized enterprises sector attach less importance to competition impact in cost management efficiency than large companies sector. Small and medium-sized enterprises often define competition in a too narrow manner, including only current competitors, not taking into account that competition is a dynamic phenomenon, changing shapes and activities in time. The ability to create profit in the long run is determined by the interaction of all participants in that industry, such as the existing competition, the threat of new competition, substitutes, consumer and suppliers' power of negotiation, etc. Product price depends on supply and demand ratio, and the

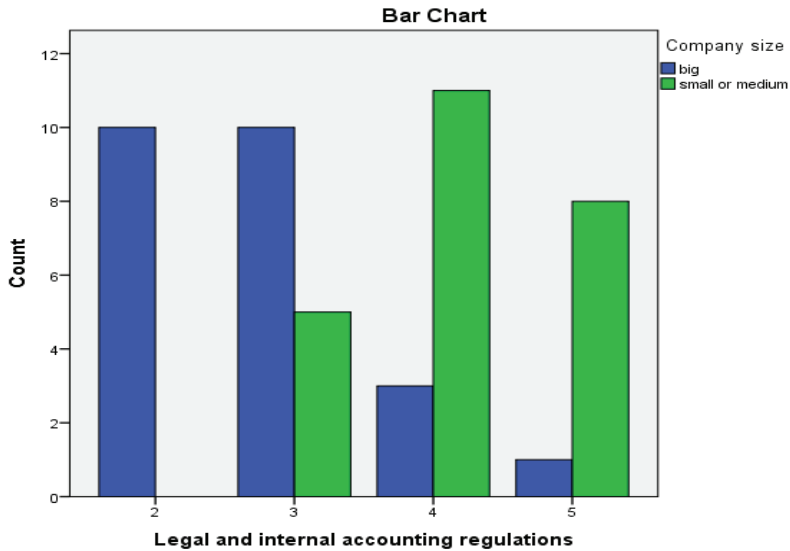
supply depends on the number of competitive companies and their strength in the market. If there is high rivalry among the existing companies, low costs of new competition entry, low industry entry barriers and if the products the company sells have substitutes, the industry is considered highly competitive and the ability to maintain profit potential is endangered. Company's profit potential is also defined by input and output market strength, ie, negotiating power of consumers and suppliers in relation to the company itself, the number of consumers and suppliers, product and service quality importance, purchase and sale scopes, etc.

Evaluation	Company size	
	Large	Small and medium-sized
2	10	0
3	10	5
4	3	11
5	1	8

Table 8. Respondents' answers distribution in Legal and internal accounting regulations factor evaluation considering company size (Crosstabulation)

Source: the author's research

Most of the employees in large companies (10) evaluate the significance of Legal and internal accounting regulations factor with grade 2 or 3, while most of the employees in small and medium-sized enterprises (11) evaluate this factor with grade 4 (table 8, graph 4).



Graph 4. Respondents' answers distribution in Legal and internal accounting regulations factor evaluation considering company size, Source: the author's research

	Value	D f	Statistical significance
Pearson's X^2	21.68	3	0.000**
Cramer's V	0.672		
Contingency coefficient C	0.558		

** $p < 0.01$

Table 9. The differences in Legal and internal accounting regulations factor evaluation considering company size (X^2 test)

Source: the author's research

The results obtained show that statistically significant differences have been established ($X^2=21.683$, $p < 0.01$) in Legal and internal accounting regulations factor evaluation considering company size (table 9). Cramer's indicator is $V=0.672$, which points to a substantial connection among the variables. Company size affects the differences in legal and internal accounting regulations a great deal, considering that $Sig < 0.01$ in all variables, with a high level of connection among the variables.

Small and medium-sized enterprises sector considers the impact of legal and internal regulations on cost management efficiency more important than the sector of large companies. Legal regulations leave a lot of space for the companies to set up cost and effect calculation within chart of accounts class 9, so that the internal regulations can contribute cost management efficiency a great deal. Small and medium-sized enterprises sector relies more on legal regulations where cost and effect calculation should provide the data for cost price calculation and balancing for the needs of financial statements preparation due to the poor accounting personnel quality compared to large companies. Certainly, the accountants in small and medium-sized enterprises will change this approach along with management in time in terms of paying more attention to modern cost calculation systems demands, meaning that their work will not be finished when legal and internal accounting form is respected. This will surely be influenced by accounting personnel education as well as foreign company appearance with their experiences and developed practice of cost management in the company.

RECCOMENDATIONS AND CONCLUSIONS

Cost management leads to more efficient internal resources usage and offsets activities causing high expenses, so it all results in company's competitive position improvement. Cost management in a company is based on proactive attitude because all product and service costs are the result of the decisions made by the company's management. Decision making on cost management requires expert competences as well as specific management knowledge and skills, and it is based on the information on cost dynamics and the possibilities of their fitting into the acceptable frameworks.

The traditional cost management models fail to meet the dynamic business environment requirements because they are based on the stable business environment in

the companies where production is the dominant factor, the technology is well-known, with a small amount of products with similar characteristics, etc. These models do not distinguish between production and administration-turnover overheads because they monitor and control the costs of direct material and direct labor per product or service unit, linking them to administration and production overheads through the appropriate 'allocation keys'. These methods cannot meet the requirements of modern business decision making in their essence because they have no long-term approach and they insufficiently respect market demands.

Dynamic changes in external environment impose a strategic way of thinking to companies. A modern company does business in harsh competition conditions, shortened product life cycle; there is also the necessity to focus on consumer demands, to focus on both cost reduction as well as on quality, functionality and speed delivery improvement. The issue of competitive advantage achievement and maintaining is complex in this situation. Due to the aforementioned traditional cost management model weaknesses, the companies are forced to turn to the implementation of modern cost management models which have been developed over the past decades.

Management accounting development is still in its early stages in Serbia due to the delay in the transition process in relation to other developing countries and the countries in transition. Our research shows a number of weaknesses and faults the companies should eliminate in a short time in order to increase their competitiveness and create opportunities for entering the developed world market. Primarily, in many small companies and even in medium-sized enterprises management and ownership are not clearly divided, ie, the owner is the manager at the same time. These relationships never create either a favorable climate for management accounting development or modern cost calculation concepts.

On the other hand, inertia is also present in the accounting profession, ie, there exists unwillingness to adopt and implement modern concepts in cost monitoring and calculation. The concept of costs is often set in a way which is suited to classic accounting principles and tax regulations, not cost accounting goals much wider than just providing the price for stock effect balancing needs.

Our research shows that small and medium-sized enterprises sector considers competition too narrowly, including only current competition, not taking into account the competition as a dynamic phenomenon, changing forms and activities over time. Factors such as threats from new competitors entering the market substitute appearance, consumers and suppliers' negotiation power, etc. Company's profit potential is also defined by input and output market strength, ie, consumer and suppliers' negotiating power in relation to the company itself, number of consumers and suppliers, the importance of product and service quality, purchase and sale scope, etc. Neglecting these factors will inevitably cause weaker competitive position in perspective, the possibility of falling out of the market included.

The research on management impact on cost calculation efficiency has established the fact that large companies attach more significance to management influence than

the sector of small and medium-sized enterprises. Large companies are more exposed to market influences because they do business in developed international market, while small and medium-sized enterprises are more frequently linked to the national or regional level, where the influence of global companies is weaker. The existence of a communication gap between managers and accountants is also noticed in terms of statements incomprehensibility for non-financial managers who are expected to make business decisions.

Accounting personnel competence factor gained a great importance in this research which indicates that small and medium-sized enterprises as well as large companies attach necessary importance to this factor in cost management efficiency. Managers are calculation and statement users, but they are made by accounting personnel. Although Serbia is late in accounting regulation implementation as well as cost management in comparison to the developed countries, the research has confirmed that accounting personnel education in this field, the arrival of foreign companies and the requirements they set lead to rapid adoption of modern cost calculation methods and the improvement in the accountants' knowledge. We can also notice the improvement in manager – accounting personnel relationship, which has a special significance in the sector of small and medium-sized enterprises where there is still a mix of ownership and management.

Legal regulations in Serbia leave a lot of space for the companies to adjust cost and to affect calculation set up to fit their needs, in order for internal regulations to contribute to cost management efficiency on a much larger scale. It is obvious that small and medium-sized enterprises sector no longer relies on legal regulations where cost and effect calculation should provide the information for price cost calculation and balancing for financial statement preparation needs. Therefore, it is necessary to change the SMEs accountants and managers' approach in terms of paying more attention to the requirements of modern cost calculation models, meaning that their work is significantly wider than price calculation and providing balancing data. Consequently, internal regulation task will be more comprehensive and specific in future, with the aim of providing managers only with relevant information which enable strategic decision making.

A significant improvement in accounting profession development is achieved by accountant and auditor education and certification according to the renowned world accounting institutions programs. Accepting the international standards, experiences and contemporary practice will considerably shorten the time necessary for Serbia to implement fully the modern methods of calculation and cost management. The arrival of global companies doing business in Serbia largely contributes to the above, through the privatization of local companies, joint ventures or other forms of business activities.

It is necessary to improve professional culture in Serbia. Furthermore, it is necessary to establish knowledge upgrade for managers and accountants who need to build mutual trust as an important prerequisite of successful company management in modern world of business. Any other approach to the complex issues of cost accounting and management by these two professions results inevitably in weaker overall performance of companies as well as a fall in the position of competitiveness in the market.

REFERENCES

1. Agrawal, S.P., Mehra, S., Siegel, P. H., (1998): Cost Management System: An Operational Overview, *Managerial Finance*, Vol. 24, No. 1, p 60.
2. Antić, Lj., Novičević, B., (2011) Contemporary cost accounting concepts synergy in the function of efficient company management: Petrović, E. (Ur.) Science and world economic crisis, pp. 399-406, the Faculty of Economy Nis, ISBN 978-86-6139-042-5 COBISS.SR –ID188481292
3. Aničić, J., Jelić, M., Djurović, J., Radojičić, S., Prokopović, Ž., (2014). Internal accounting in the function of business decision making, *Ekonomika*, year LX, I-III 2014, no.1, pp. 117-1125, ISSN 0350-137X, eISSN 2334-9190, UDK 338 (497,1), COBISS. SR –ID 26903
4. Aničić, J., Popović, S., (2015) ABC method concept, the advantages and limitations in its implementation, *Accounting*, year LIX, no. 3, pp. 68-79. ISSN 0023-2394 ISSN 1450-6114 UDC 657
5. Blocher, E.J., Chen, K. H., Lin, E.W., (2002) *Cost Management: A Strategic Emphasis*, Second Edition, Irwin & mcGraw-Hill, Boston.
6. Cooper, R., Kaplan, R., (1988) „How Cost Accounting Distorts Products Costs“ *Management Accounting*, pp. 20-27.
7. Drury, C., (1992) *Standard Costing*, The Chartered Institute of Management Accountants, Harcourt Brace Jovanovich, London, p. 17-18.
8. Groth, J., Kinney, M., R., (1994) Cost management and value creation, *Management Decision*, Vol. 32, No.4, p 52-57.
9. Hammer, L., Carter, W., Usry, M., (1994) *Cost Accounting*, South-Western, Cincinnati, Ohio, p.9.
10. Hansen, D., Mowen, M., (2003) *Cost Management: Accounting and Control*, fourth edition, Thompson South-Western, Mason, Ohio, p. 2-11.
11. Hilton, W. Ronald, Maher, W. Michael, Selto, H. Frank (2000): *Cost Management, Startegies for Business Decisions*, International Edition, Irwin & McGraw-Hill; Boston, p 1.
12. Horngren, C., Foster, G., Datar, S., (1994) *Cost Accounting: A Managerial Emphasis*, Prentice Hall, Englewood Cliffs, New Jersey, p. 882.
13. Kaplan, R., (1988), „One Cost System Isn't Enough“, *Harvard Business Review*, January-February, p. 64.
14. Malinić, D., Milićević, V., Stevanović, N., (2018) *Management accounting*, Publishing center at the Faculty of Economy in Belgrade
15. Malinić, S., Jovanović, D., (2011) Cost accounting integrated concept implementation in the supply chain – strategic approach TC and ABC, *Accounting*, nos.11-12, pp. 29-44
16. Micić, R., Arsić, Lj., (2010) (Cost management as a factor of competitive advantage in an organization), *Economic Views*.

17. Milićević, V., (2000) Cost accounting and business decision making, the Faculty of Economy, Belgrade, p 137.
18. Pavlović, J., Škrtić, M., Microeconomics, Mikrorad, Zagreb, p. 102
19. Shank, J., Govindarajan, V., (1993) Strategic Cost Management: The New Tool for Competitive Advantage, Free Press, New York
20. Petrović, Z., Stanišić, N., Vićentijević, K., (2015) The manual for chart of accounts implementation in business companies, cooperatives and entrepreneurs, Business and information center, Belgrade
21. Todorović, N., (2009) ABC method in cost management, the Faculty of Economy in East Sarajevo Proceedings, no. 3, p.232
22. Škrtić, M., (2005) Cost management with the aim of competition increase, Proceedings – Competition and business success increase, 'M.A.K-Golden', Zagreb-Zadar, p. 108.
23. Wilson, R, Gilligan, C., (2003) Strategic Marketing Management, Second edition, Elsevier Butterworth Heinemann, Oxford

UDC:

35.087:342(497.11)

Received

Review scientific paper

October 3, 2022

Accepted:

November 24, 2022

Corresponding author:

milijana.danevska@fpssp.edu.rs

THE DEVELOPMENT OF SERBIAN STATESHIP IN THE CONTEXT OF INTERNATIONAL PUBLIC LAW AND THE ROLE OF THE GREAT POWERS

Milijana Danevska

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: milijana.danevska@fpssp.edu.rs

Vladan Stanković

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: vladan.stankovic@fpssp.edu.rs

Abstract: *Posing the question regarding the statehood of the Republic of Serbia and the role of the great powers is extremely important, in order to see possible directions of further development of the Republic of Serbia based on the study of the historical context of the various circumstances that affected the Serbian statehood as such. History points us to important factors that we should keep in mind even in the current circumstances of the new geopolitical order and the rules of international public law, which largely have their roots in history. Although the circumstances have changed, the position of Serbia in international relations was constant, the reason for this should be found in the fact remains that due to its position in the Balkans, Serbia is a very important strategic hub where the interests of the great powers of the East and West meet. The actions of those powers can be clearly seen, both directly in bilateral diplomacy, and indirectly, through the influence of their political, economic and military alliances on the development of Serbia, with a great tendency to directly influence the position of Serbia. In the course of its development, Serbia acquired various forms of political organization as well as geographical dimensions, again under the great influence of the aforementioned political axes. The ever-increasing changes in the relations of major players on the geopolitical scene affected the very position of Serbia, both on the Balkan Peninsula and on the wider political scene. In certain periods, a great influence has been noted, more precisely the dominance of the Ottoman Empire, then later the role of the Austro-Hungarian monarchy. In recent history, during the last century until today, the*

direct influence of Russia and the USA has changed in different phases, so that we can say that. Serbia, whether independent in its organization or in the composition of other joint states, has always strived to secure its independence, sometimes with less and sometimes with greater success. It is important that in those battles of great powers, the country's leadership tried to recognize its own national interests and, accordingly, position itself as a bridge, not an obstacle or a bone of contention between these powerful actors. Certainly, it was not easy and simple to achieve, especially, it seems, in today's current events. The Republic of Serbia has never faced a greater challenge to defend its statehood, territorial integrity and sovereignty, especially considering the current issue of the status of the Province of Kosovo and Metohija, the issue of which has undergone major changes even though it is based on international UN documents, among other things, Security Council Resolutions. This issue has gained in importance all the more, especially considering the unilateral proclamation of the independence of the Serbian Province and the recognition of the same entity, mainly by the countries of the so-called collective West, although not all countries, especially those within the EU, are in full agreement. Such a state of disunity of the European Union on an important issue of foreign policy not only creates and fuels new hot spots on fragile European soil with a tendency to secede without the consent of the home states, but also leads to the issue of consensual settlement of disputes of national origin, which is one of the basic principles of functioning of the European Union

Key word: *international law, right to self-determination, Serbia, Kosovo and Metohija, UNSC Resolution 1244*

YUGOSLAVIA AS A STATE (1929 – 2003)

Yugoslavia as a state (1929 - 2003) experienced several transformations both in terms of federal structure and in territorial borders, as well as in internal political organization. The Kingdom is being transformed, marking the end of the monarchical system of the state. More important transformations followed on November 29, 1945, when this creation was embodied in the Federative People's Republic of Yugoslavia, and the Constitution of 1963 clearly defined the system as socialist, thereby changing the name of the state to the Socialist Federal Republic of Yugoslavia. The country had a federal composition consisting of six Republics and two Provinces functioning as federal units of the federation. Such a composition and structure lasted until the outbreak of disorder in the early nineties, which resulted in the succession of federal units and their declaration as independent states, except for Serbia and Montenegro, which remained in the union under the name the Federal Republic of Yugoslavia, under the Constitution of 1992. Further transformation of Serbia within the joint state concerns the creation of the State Union of Serbia and Montenegro with the adoption of the Constitutional Charter in 2003. That same document predicted the possibility of secession of Montenegro, which it actually did undertake and declared its independence.

SERBIA UNTIL WORLD WAR II

The issue of Serbian statehood can also be viewed in a broader context, long before the first formal international recognition as an independent state at the Berlin Congress in 1878. Namely, the elements of Serbian diplomacy can be recognized as early as the First Serbian Uprising in 1804, the intense struggle of Serbian diplomacy at that time for the independence of the Serbian state, which followed after several decades of struggle. At that time, from the Serbian archives, one can see the addresses, which take the form of classical diplomacy, of our diplomat Prota Matej Nenadović, who was very present with his addresses and requests for protection from Turkish slavery of the Serbian population. This was followed by a longer period of the struggle of the Serbian people against the Ottoman Empire (1798 - 1838), which was successfully completed by the acquisition of Serbian autonomy by Sultan Hatiserif in 1838. As already mentioned, independence in the form of recognition as a separate state creation followed at the Berlin Congress, so that the following period (1878 - 1918) the Kingdom of Serbia would be part of the Kingdom of Serbs, Croats and Slovenes. In this period, the first consulates of the great powers were opened in Belgrade, which means a formal diplomatic presence in a state independent from the Turkish Empire. Due to the strong influence of Austria, the first consulate was actually Austrian in 1836, followed by English, Russian, French and others. In the second round, the Kingdom established consular relations with Romania, Greece, Italy, Turkey, Belgium, the Netherlands and others. The mere fact that at that time diplomatic relations took place at the consular level does not diminish the importance of the interest of these powers in their presence in Serbia and the importance that Serbia has for them. In this sense, these are the first signs of the establishment of diplomatic relations in terms of international public law and the basis for cooperation with great powers and the establishment of Serbia on the world stage.

Between the two world wars, there followed a period of stagnation in diplomatic activities, because there were no significant movements on the world geopolitical scene, until the presence of Germany in the Balkans. In that period, the interest of Germany and other great powers was particularly pronounced, especially America, which is returning to the Balkans, and especially in Serbia, as a strategically important country on this peninsula. The outbreak of the Second World War marked the exile of the Government of the Kingdom in London. America continues to maintain diplomatic relations with the Kingdom and the Government in exile, in addition to the newly formed authorities of the People's Liberation Army in Yugoslavia. This clearly indicated that the United States of America supported the Chetnik movement of Draža Mihajlovic. This was the case for most of the struggle of the People's Liberation Army against the fascists, until the visit of the American delegation to the Supreme Headquarters of the People's Liberation Army of Yugoslavia on April 16, 1943. It was the first unofficial relationship between the US authorities and the new authorities in Yugoslavia.

Several more unofficial contacts followed until the written address of US President Roosevelt to Supreme Commander Josip Broz Tito in May 1944, on the eve of the main

combat activities of the People's Liberation Army of Yugoslavia. This dark period of the development of human civilization must be investigated more deeply, especially from the aspect of international public law. It is still unclear in its entirety how the world powers allowed the escalation of relations to go to this extent, dragging most of the world into bloody war clashes. A large number of human lives were lost on the military field, but also a large number of civilian victims who were targeted by the Nazis in previously determined phases. The question arises of the responsibility and role of the main actors in this conflict, who apparently still have their followers today in some new movements that resemble some forms of fascism, where the goal is the extermination of the entire nation, and the consequences can be even more devastating than those during the Second World War. It is unclear why America, despite certain diplomatic contacts with the newly formed authorities of the People's Liberation Army of Yugoslavia, massively bombarded entire cities and regions on the territory of Serbia in April 1944, immediately before the official address of American President Roosevelt to the leader of the NOV, Josip Broz Tito. On that occasion, a large number of civilian victims died, according to some data, that number exceeded ten thousand victims, of which almost half of them died in Belgrade. While the Japanese cities of Hiroshima and Nagasaki were massively destroyed, for the first time, by the use of nuclear weapons without any need, because the war was already at an end, and Japan, as one of the important allies of the fascist regime in Germany, had already been defeated, so to speak.

Yalta and Serbia

On the beautiful coast of the Black Sea, the Allies met, led by their leaders, Stalin, Roosevelt and Churchill. Among other things, they agreed on a new division and their control in certain zones. Germany was divided into four zones, Poland, Hungary, Romania and Bulgaria were under Russian control, Greece was divided in a ratio of 70 to 30 percent in favor of the West, and the FNRJ was half and half in that division of the influence of the West and the East. That agreement was supposed to mark the end of hostilities, both between the great powers and in the countries that remained under certain control of the allies. Unfortunately, that agreement was short-lived, soon a new period of cooling of relations between the East and the West began, known as the period of the Cold War, which still has its elements today, in a different way in the form of the antagonism of the East and the West..

Serbia continues to function as part of Yugoslavia. The Paris Peace Conference (July 29 - October 15, 1946) resulted in the agreement of the allies, led by the USA on one side and the USSR on the other, that Hitler's coalition pay reparations, solve the issues of national minorities, and establish borders (Germany, Hungary, Finland, Italy, Romania and Japan). In this way, Serbia functions as a state with the provincial entities of Kosovo and Vojvodina in its composition. After this Conference, there followed a period of cooling of the relations between the main allies, and Yugoslavia found itself in this vortex of such strained relations.

The new period of relations between the two opposing blocs after the fall of the Berlin Wall takes on new contours. Actors in that period, George Bush and Gorbachev, “gentlemanly” agreed that the fall of this wall will never lead to the expansion of NATO’s influence on the territories that were under the influence of the former USSR. Time denied that agreement, so we are witnessing a drastic expansion of NATO borders, which today includes virtually all countries under the influence of the former USSR. For Russia, Ukraine and its request for NATO membership, despite its proclaimed neutrality, was a red line. After several appeals, both to NATO, i.e. the USA, and to Ukraine, as well as on the occasion of the protection of the Russian population in Ukraine, on February 24, 2022, the Russian Federation launched a special operation, which the Western partners called an aggression against a sovereign country. The self-proclaimed entities (Donetsk, Lugansk, Khersonsk and Zaporozhye Oblast) became new states by referendum and the Decision of the Russian Federation on annexation to the Russian Federation, for now only recognized by the Russian Federation and some smaller states. This combination of circumstances and development of events that threatens a wider international conflict, may very well reflect on the issue of Serbian statehood, in the context of the position of the Province of Kosovo. Given that many authors of public international law agree that the issue of self-proclaimed states must be resolved as a package, taking into account the specific circumstances of these two cases. It is understood that the circumstances of the declaration of independence are different and each entity has its own history, but one thing is common, and that is that all the mentioned areas declared independence without the consent of the mother state.

The Infrombiro period

The Informburo period faced Yugoslavia with a great challenge and cooling of relations with the USSR as well as distancing from the leadership of the USSR. All this was followed by the termination of friendly relations, boycotts, termination of military, economic and political cooperation, until the open conflict between the USSR and the FNRJ. This cooling period ends with Khrushchev’s visit to Belgrade on May 25, 1955, when relations between the two countries began to consolidate.

The development of Serbian statehood within the framework of the then SFRY acquired new characteristics, which the Republic of Serbia still cherishes today. It is a non-aligned movement, which symbolically began in Belgrade, with the first conference of this Movement and the trio of leaders Tito, Nasser, and Nehru. The non-aligned group was a great chance for small countries, which did not have the primacy of the great powers, to achieve their economic, political and other interests through interest-based connections. This movement made a big step in connecting economic, human and even political potential. That’s how the so-called appeared on the scene. the third world, the world of neutral, politically undecided, who do not belong to any bloc.

At the meeting of this movement in Brioni, the first document of this movement was adopted, and the continuity of the work of this organization was noted at the last

meeting, which was hosted by Belgrade two years ago. In spite of numerous fluctuations in the pocket itself, the reputation and influence of Yugoslavia in the world has grown significantly and thus SFRY has gained great recognition on the world stage. Although the relations with the great powers were brought into question, especially with America, and because of the suspicion of the West that Tito was leaning more towards the USSR, there is no doubt that politically and economically Yugoslavia established itself as an important partner in international relations.

THE ROLE OF THE EU AND SERBIA

Offensive weapons and global security challenges marked the period at the very beginning of the 21st century. The most important of all programs that regulate world security is the so-called START nuclear agreement between the USA and Russia. In the 1970s, the world breathed a sigh of relief when this Agreement was concluded, as a means of communication between East and West, and after the Cuban crisis in the early 1970s. Diplomacy seemed to succeed in bringing broader security under control. START stands for Strategic Arms Reduction Treaty, the essence of which is the limitation of strategic offensive weapons, in the form of long-range armed missiles, or more precisely, nuclear warheads. START II envisaged the deactivation of intercontinental ballistic missiles with multiple warheads. In Trump's time, more precisely in 2019, the US administration abandoned the program banning the use of land-based medium-range missiles, and a year later the Agreement on Open Skies, which would have controlled the reconnaissance flights of the opposite party, was terminated. In the latest address of President Putin to the Federal Assembly on the occasion of the anniversary of the special operation over Ukraine, it was announced that the Russian Federation will suspend its participation in the Strategic Arms Agreement, the part of which is still in force after Trump's withdrawal. It is still not clear whether this Treaty has been suspended or terminated, although diplomats mostly agree that it is a suspension. With this act, Russia's hands are untied, and it could be interpreted as a message, that it will not take into account all limitations regarding the use of nuclear weapons in the conflict. It seems the world has never faced a greater challenge. Even during the Cuban crisis, when America protested the installation of Russian bases in Cuba and thereby threatened America's security, and America retaliated with its bases in Turkey, the "hot line" between the two presidents resolved quite a lot of tension. With this, a catastrophe of global proportions was solved through diplomatic means. This time, diplomatic channels have been largely cut or are on a very thin line, and it will be a great diplomatic success if this whole situation is resolved at the table and not on the battlefield. Why is it important for Serbia? First of all, in this phase of the crisis, the whole world is indirectly involved, and resolving the outcome at the table would lay new foundations and trust between the former allies, and thus the Kosovo issue could have its epilogue, of course, in accordance with the principles and principles of the international public rights.

REPUBLIC OF SERBIA AND THE QUESTION OF KOSOVO

The Republic of Serbia functions even today as an independent and independent state with its two entities in its composition, with the fact that in the meantime there was a unilateral self-proclamation of Kosovo and Metohija as an independent state, which is one of the most controversial moments in the history of international public law. The declaration of independence of the axes and Metohija was made without the consent of the mother state and the entity was recognized by a large number of countries as an independent state, especially from the so-called western countries. This was preceded by the NATO bombing of FR Yugoslavia in 1999, which is a precedent in the history of international public law that a community that did not have a mandate on any basis used force without the consent of the United Nations Security Council. This condition is strictly stipulated by the Charter of the United Nations. At the same time, disproportionate force was used to destroy civilian targets, with illegal ammunition. The Federal Republic of Yugoslavia turned to the International Court of Justice in The Hague and demanded responsibility for countries participating in NATO aggression, while this body rejected this claim as unfounded and declared itself incompetent, due to the fact that Serbia was not a member of the UN at the time. It is interesting that the same country was sued by Bosnia and Herzegovina, before the same court that accepted the jurisdiction of this country's claim on the application of the Convention on the Prevention of Punishment for the Crime of Genocide and thus accepted the fact that Serbia is a member of the United Nations. The judgment in the dispute to which it refers was made only in 2007. Of course, Serbia raised objections in both cases to the Court's decisions regarding its jurisdiction, but the court stood by its claim and processed the case against Serbia with a decision on the merits. In almost the same period of time, in an identical situation, the lawsuit filed by Serbia against the NATO member countries was initially dismissed due to the declaration of the court as having no jurisdiction. This is otherwise a very interesting legal situation, which legal science has not dealt with sufficiently and which must raise the question of the competence of this highest body of the world judiciary. Another detail that is very important, and which refers to the International Court of Justice and its decisions, is the advisory opinion regarding the unilateral self-declaration of independence of Kosovo, with the view that this decision does not contradict international public law. Such an interpretation is implicitly supported by the fact that this opinion should be interpreted only for this specific case, as *sui generis*. At the same time, it is well known that international public law is a mixture of both the continental legal system and the Anglo-Saxon precedent law, which relies on previously made decisions. Perhaps the proponents of this opinion refer to violated human rights, which is absolutely not the case, because at that time and even before that, Kosovo and Metohija functioned as a kind of protectorate under the auspices of the international community with temporary UN institutions. This is no longer an argument for self-secession based on the violation of human rights, especially since there is UN Resolution 1244 which guarantees the sovereignty and territorial integrity of the

Republic of Serbia with Kosovo as part of it. The behavior of the Western Powers under the leadership of the USA for the second time in history, after the bombing on the eve of the end of the Second World War in the former Yugoslavia, as well as on the occasion of the re-bombing of the FRY in 1999, is unclear. The biggest enigma is the attitude of America and most of the EU, which are not faced with the issue of self-determination, on Serbia's persistent insistence on the recognition of Kosovo. The latest initiative in the form of the German-French proposal does not explicitly demand the recognition of Kosovo by Serbia, as stated in the text that is available to the public, and should serve as a framework for negotiations between Belgrade and Pristina. Serbia is requested to refrain from preventing Kosovo from becoming a member of international organizations.

The issue of the status of the autonomous Province of Kosovo greatly affects the territorial integrity and sovereignty of the Republic of Serbia and the role of the great powers. It seems that it comes to its strongest expression in determining the country's statehood. This is a very complex issue and deserves comprehensive attention and analysis, so in a limited space it is difficult to give a comprehensive answer to the question of how much the involvement of great powers is a relevant factor in the destruction of a country's statehood and how much these efforts to resolve disputed issues are conducted within the framework of international public law and international customs. The question is to what extent the issue of territorial integrity and sovereignty is respected and when entities can be invoked for the right to self-determination. Whether the principles and principles of international public law will be respected or whether disputed relations will be resolved within the international community on an ad hoc basis depends on several factors, which are very difficult to predict at this moment.

It is particularly noteworthy that serious tectonic changes are taking place at the moment with devastating consequences not only in European, but also in the world's security structures. All this is happening in the hot atmosphere of extremely damaged relations between the great powers, which have never been antagonistic to such an extent as before in history. The issue of Crimea, which the authors mentioned in earlier works as a possible domino effect, by the International Court of Justice, as well as the recognition of Kosovo as an independent state by the collective West, is only a confirmation of the thesis about the danger of recognizing Kosovo. On the other hand, the attitude of one part towards this issue, which has a completely opposite attitude towards the secession of Crimea, is that the secession was achieved by the will of the people in the referendum, and not by the decision of the temporary branches, as was the case with Kosovo. There is another important difference in the motives of secession, namely, that in the case of Kosovo there were alleged violations of human rights. The fact that this would not be possible with the presence of the international community, therefore there was no reason for the act of secession, especially since Prishtina had its own University and other institutions that enabled the unhindered enjoyment of the rights of minorities in Kosovo.

In the case of Crimea and other entities (Donetsk, Lugansk, Zaporozhye and Kherson regions), the alleged motives for this act are the crimes of extermination of the Russian

population, in addition to the abolition of the right to the Russian language and other cultural heritage, which were guaranteed by the Minsk Agreements.

Even in earlier works, it was pointed out that the problem of the final solution of the status of Kosovo is not only the national interest of Serbia, but also of the entire world community. "The current situation with Crimea in Ukraine, as well as in other regions of Europe with separatist movements, inevitably raises many questions from the point of view of whether these same regions have the right to self-determination based on the "Kosovo criteria" of independence and whether, consequently, the unilateral declaration of Kosovo's independence it can cause the risk of domino effects in Europe, but also around the world. This is especially important because of the consensual solution in the EU itself, which itself initiates it for such sensitive issues, and we already know that there is no consensus in Europe itself regarding the recognition of Kosovo."

One of the possible solutions for Kosovo and Metohija is the solution of the issue based on the subsidiarity of the German concept of statehood. Instead of such a proposed text for resolving the status of Kosovo and Metohija, it would surely be better to make a proposal that would be along the lines of subsidiarity, which is, after all, the basic principle of the relationship between the central authorities of Germany and its federal units, a principle on which the European Union itself rests, as a system of relations between the central authorities in Brussels and the internal law of the EU in relation to the member states. If such a relationship is applied in solving the problems of Belgrade and Pristina, those same relationships could be the basis for solving the issue of autonomy of the self-proclaimed republics on the territory of Ukraine. "The importance of the institute of subsidiarity is reflected in the possibility of the accession process to the European Union of Serbia, whereby the status of Kosovo would be treated decentralized within the Republic of Serbia". How much this approach corresponds to the interests of the great powers is a matter for each individual, but the fact remains that only by resolving this type of conflict in principle, which Europe is rich in as a minefield, can it prevent further escalations of ethnic cleansing, destruction on a huge scale with possibilities that do not exclude the world disaster.

UN Resolution 1244 is the basic determinant of further negotiations, and it is explicit about the fact that Kosovo is part of the RS. Everything else, including initiatives like the German-French proposal, has no legal basis and can be interpreted as an ultimatum for the consent of the home state in return for further progress in the negotiations on accession to the European Union, and what is even more certain as an ultimatum for economic sanctions and the withdrawal of Western capital from Serbian economy. In no context can this mean anything else, but it is nothing else but a forced way of obtaining Serbia's consent for the independence of its part, which is currently under the total control of NATO.

The recognition of Kosovo by Western countries as an independent state is also questionable due to differences in the effectiveness of the government of the entity that declared independence. The fact that it is one of the key conditions for existence and as such, Kosovo does not have its own authorities, they are temporary. As a classic form

under a protectorate, this entity can neither be a member of the UN nor the EU, all the more so since in the case of the EU, consensus is sought on this issue, and in the case of the UN, the consent of the Security Council. Thus, in the beginning, every initiative of the West to force the creation of a state is not only questionable, but compromising for the basic values and principles of this community, which is the principle of legality. Kosovo cannot be an independent state due to the fact that there is no will of the mother state to give consent. Everything that is a condition for the Serbian government in the sense of: "EU or Kosovo" is the ultimate approach and therefore legally subversive, without legal effect in every respect.

Conclusion

Serbian statehood is very rich and the dynamics of the rise and fall of the Serbian state depended to a large extent on the world constellation. At the same time, regarding the most difficult relations between East and West, Yugoslavia was the one that, together with Egypt and India, was a cohesive factor, having a leading position in the new movement that was like a buffer zone between the hot lines in the cold war. This war lasted for over forty years and the flames of this damaged relationship between East and West are felt to this day. That is precisely why, as observed in history, Serbia has always been targeted by both the East and the West, and always managed to make its own position. And not only that, it also managed to be one of the stability factors regarding such a disturbed balance. The unresolved issue of Kosovo also obliges our country to continue to do so. This issue is very difficult to resolve, therefore we must insist on resolving it on the basis of public international law. This issue cannot be resolved in another way in order to ensure stability as well as, at the same time, coexistence both in the region and in the wider world community.

REFERENCES

1. Pitanje readmisije i priznavanje Kosova u kontekstu politicke bezbednosti i zajednicke odbrane Evropske Unije, Dr Milijana Danevska, Mr Nada Debeljacki, Fakultet za diplomatiju i bezbednost, str 279, Beograd, 2014 ISBN 987 86 87545 20 5
2. Prota Mateja Nenadovic, Memoari, 2005 POLITIKA, Narodna knjiga Beograd
3. Diplomacija, Djordje Lopicic i elena Lopicic, Institut za savremenu istoriju, 2021, Beograd
4. Stanković, V., Simić, Ž. „Meka moć“ Zapada u funkciji zatiranja sećanja na genocidno stradanje srpskog naroda. U: RADOSAVLJEVIĆ, Života (ur.), TANČIĆ, Dragan (ur.), RJAPUHINA, Viktorija Nikolaevna (ur.). Zbornik radova. Beograd: Fakultet za poslovne studije i pravo: Fakultet za informacione tehnologije i inženjerstvo Univerziteta "Uninon - Nikola Tesla", 2022. Str. 299-309. ISBN 978-86-6102-069-8
5. Kreća, M. Međunarodno javno pravo, Pravni Fakultet Univerziteta u Beogradu, 2019

6. Dimitrijević, D. (2017). Sedam decenija Međunarodnog suda pravde UN. Pravni život. God. 66, knj. 602, br. 12, 2017. Udruženje pravnika Srbije. Beograd
7. Mayr, T., & Mayr-Singer, J. (2016). Keep the Wheels Spinning: The Contributions of Advisory Opinions of the International Court of Justice to the Development of International Law. *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* 76(2), 425-449.
8. Đorđević, S. Uvod u međunarodno javno pravo, Pravni fakultet univerziteta u Beogradu, 2007.
9. Šahović, M. Međunarodno pravo u međunarodnim odnosima Druga polovina XX veka, Službeni glasnik Beograd, 2008
10. Dimitrijević, V i ostali, Osnovi Međunarodnog javnog prava, Beogradski centar za ljudska prava, Beograd, 2012
11. Dašić, D. Diplomacija-savremena i ekonomska, Alters, Beograd, 2013
12. Krivokapić, B. Međunarodno javno pravo, Institut za uporedno pravo, Beograd, 2017

UDC:
Received
Accepted:
Corresponding author:

336.71:336.14
Review scientific paper
January 18, 2023
March 20, 2023
maja.dimic@fbsp.edu.rs

THE ROLE AND SIGNIFICANCE OF THE MODERN THEORETICAL FRAMEWORK OF CONCENTRATION FOR THE BANKING SECTOR IN THE STRATEGIC DECISION-MAKING PROCESS

Maja Dimić

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: maja.dimic@fbsp.edu.rs

Dejan Ilić

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: dejan.ilic@fbsp.edu.rs

Milica Kaličanin

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: milica.kalicanin@fbsp.edu.rs

Abstract: *In this paper, the authors present the modern theoretical aspects of concentration in the market with a focus on the banking sector and the impact on the process of making strategic decisions. In this context, recent empirical and theoretical researches, which are supported by findings from international scientific and professional literature, were analyzed. In addition to numerous strategic decisions, decisions on the selection of business partners and new organizational forms, as well as decisions related to the management of the new organization as a whole, have an increasingly significant impact on achieving a sustainable competitive advantage. In the paper, the authors additionally indicate the importance of analyzing the level of concentration in the financial market, especially in the banking sector. In this regard, it was stated that strategic decisions are made at the highest managerial levels, which aim to achieve and maintain competitive advantage, maximize profits and sustainable growth and development of the banking sector. Behind the concept of concentration in the banking sector, we find the explanation that it is a form of association of banks, by which they come under joint control, and a certain level of economic unity is*

created between them, which did not exist until the moment of association, because banks, legally and economically, acted as independent subjects. Partner banks participating in the merger/acquisition process must prove that the concentration will bring market benefits, that is, that there will be no unwanted market consequences in the sector.

Key words: *concentration level, competence, banking sector, strategic decision making*

INTRODUCTION

One of the first authors, who to a large extent laid the initial foundation of the concept of competitive advantage, is Michael Porter. In his earlier scientific works and publications, the aforementioned author indicated that organizations achieve a competitive advantage if they “reach a higher level of profitability than the average profitability of organizations in a certain branch of industry” (Porter, 2007; Ilić et al., 2018, pp.75). Today, Porter, as well as an increasing number of contemporary authors in the field of strategic management, point to the increasing importance of dynamic” and “distinctive” capabilities of organizations in the process of achieving competitive advantages. Due to the increasing importance of the creation and exploitation of “dynamic” and “distinctive” capabilities of organizations along with the creation and delivery of additional value for all stakeholders, over a long period of time, it caused the transformation of the concept of competitive advantage into a more modern concept, i.e. into the concept of sustainable competitive advantage (Ilić, 2015, pp. 16-23; Ilić et al., 2018, pp. 75). The term sustainable competitive advantage more adequately and precisely determines the contemporary strategic rivalry between organizations, because it takes dynamic parameters to a greater extent than was the case with the term competitive advantage. According to the above, it is important to point out that the modern business arena is really “taking on the characteristics of military conflicts in which new markets are occupied, competition is destroyed, but one’s own forces are constantly being transformed in order to be ready for new expansion, but also the defense of conquered territories and positions.” (Radosavljević, str.273; Ilić i dr., 2018, pp.76). As stated by numerous authors in the field of strategic management, but also by Ilić et al. (2018, pp.76), “in the New Economy, the struggle for market supremacy really takes on the characteristics of war conflicts in which strategy and “strategic weapons” gain more and more importance every day”.

According to the modern market and strategic trends that were previously highlighted, as well as in the context of this research, it is important to point out that the limits of concentration range from monopoly to perfect competition, that is, they range from tightly consolidated to highly fragmented industry. In the case of concentrated (consolidated) industries, there is a smaller number of companies that control a larger part of the sector’s supply. In contrast to the previously mentioned situation, non-concentrated (fragmented) industries include a larger number of relatively small firms with approximately the same or smaller share of supply in the industry. In the context of the focus of this research,

it is necessary to point out that a high level of concentration is characteristic primarily for branches that produce consumer and capital-intensive goods, while the main factors that influence the degree of concentration of supply in one branch are the following: the number of competitors operating in the market; dispersion of market share between competitors; barriers to entry and exit from the branch (Kostić, 2008, pp.90). In addition to the above, that is, in addition to the basic factors, in the scientific literature, additional factors that affect the degree of concentration of the offer are highlighted, such as: the economic potential of the market; geographic market size; technological conditions of production as well as the degree of regulation of foreign trade.

LITERATURE REVIEW

The first significant analyzes and researches on the level of concentration in the banking sector and the behavior of oligopolistic markets were carried out in the period from the thirties to the end of the forties of the twentieth century. In the mentioned period, eminent authors such as Chamberlain (1929; 1933), Sweezy (1939) and the authors Hall and Hitch (1939), in their analyses, publications and scientific works, emphasized and indicated that oligopolistic markets can actually be stable and that therefore, they can significantly affect the restriction of competition (Kraft, 2007, pp.3). In the scientific literature, according to the above, a concept based on the facts that competitors in certain economic activities can act based on the analysis of the behavior of other competitors, as well as to a certain extent have an influence on certain outcomes, appears more and more often. As for the banking sector, the concentration may have numerous market implications, the most significant of which is competition (Vuković, 2006, pp.10) based on the following approaches: *Structure-Conduct-Performance*, *SCP* and *Efficiency hypothesis* and *Contestable Markets Theory*, *CMT*.

The first, the structural approach, is based on the setting of two opposing hypotheses, that is, on the traditional *Structure-Conduct-Performance* (SCP) and *Efficiency hypothesis*. The first, or SCP hypothesis, according to numerous authors, as well as according to the author Bain (1951), was derived on the basis of industrial organizational literature and is based on the premise that the level of bank market concentration is inversely proportional to the degree of bank competition. The SCP hypothesis is based on the assumption of the existence of a causal relationship between the structure of the market (in the narrower sense of the number of banks), the concentration of economic resources, and the profitability of the company (Barjaktarović et al., 2013, pp. 39-54). The initial foundations of the SCP hypothesis are actually based on the first researches of the eminent author Munson (1939), who in his works concluded “that a smaller number of companies on the market will lead to less competitive behavior”, i.e. that it will lead to the formation of a higher price level with reduction of the level of production as in the monopolistic model”. According to Manson (1939), a market that is more concentrated is therefore less competitive, while the ratio of product prices and production costs in such a market will be higher at the expense

of lower delivered value for the consumer. The author, who has already been mentioned previously, and who continued to investigate the mentioned problem to a significant extent, is Bain (1951). Author Bain pointed out that “high concentration of market power leads to increased prices and profit margins” (Bain, 1951, pp.293-324). He empirically tested the SCP hypotheses on American industry in the period from 1936 to 1940. Using the Z-test, the mentioned author made a comparison of the level of profit of companies that operated in markets with high concentration and companies that operated in markets with a lower level of concentration. From the mentioned empirical research, Bain (1951) concluded that the profit level of companies that operated in industrial branches with a high degree of concentration is higher compared to the level of profit of companies that operated in industries with a lower degree of concentration.

Eminent authors in this field, Berger and Hannan (1998, pp. 291-299), on the example of the banking sector in the United States of America, also confirm the application of the SCP paradigm by pointing out that banks that operated in markets with a high degree of concentration significantly achieved a higher level of net margin by applying a higher rate of active interest rates. The mentioned authors also underline that the growth of competition caused by the decrease in concentration in the banking market results in the lowering of the price level of banking services, the interest margin, that is, a smaller difference between active and passive interest rates. The authors Besanko and Thakor (1992, pp. 910) also pointed out that the decrease in concentration, that is, the increase in the number of banks leads to a reduction in active and an increase in passive interest rates. The results of the research in Italy published by the authors De Bonis and Fernando (2000) and the results of the research conducted in Switzerland published by the authors Egli and Rime (1999, pp. 9) indicated the existence of a positive correlation between the concentration of market power and active interest rates.

In contrast to the first, traditional, or SCP hypothesis, the second hypothesis within the framework of the structural approach, or Efficiency hypothesis, is based on the assumptions and premises that the efficiency of the largest banks is mainly what explains the consolidation of the banking market. The efficiency hypothesis was advocated by the authors Smirlock and Maudos, while the eminent author Smirlock (1985) within the conducted research proved that the degree of concentration in the banking sector and the degree of profitability are not in direct correlation. His conclusion, twenty years later, was additionally confirmed by the authors Jansen and de Haan (2003). The results of the research published by the authors Jansen and de Haan confirmed that the level of profitability of the banking sector did not decrease due to the increase in the degree of concentration of banks in the market. The authors Demirguc-Kunt and Levine reached similar results and conclusions that were previously reached by the authors Smirlock and Jansen and de Haan. Authors Demirguc-Kunt and Levine (2000) published research results that indicated that the level of concentration of banks on the market is not directly related to their level of efficiency. In addition to the above-mentioned authors, a large number of authors in their research came to results that disproved the theory of a direct connection

between the degree of concentration and the net interest margin in the banking sector. Eminent author Demirguc-Kunt and a group of authors (2004, pp. 593-622) conducted empirical research on a sample of 1.400 banks in 72 different countries, the results of which unequivocally indicated the role and importance of various variables that have a direct or indirect influence on the change in the level of concentration in the banking sector. In addition, the authors indicate that the level of concentration of banks in the financial sector has a direct or indirect influence on various variables such as: entry barriers into the system, business diversification restrictions, quality of institutions for the protection of private property and individual performance of banks.

Contrary to the structural approach based on the development of market competitiveness based on a different market structure, in the non-structural approach, the starting point is that companies within the industry behave differently depending on the structure of the market in which they operate. According to the non-structural approach, the results and achieved performance of banks depend on various factors such as barriers to entry or exit from the financial market. The contestable theory is based on the premise that in concentrated sectors, participants can behave competitively, under the conditions that the barriers to entry, or exit from the market, are at a low level. The non-structural approach initiated the development of certain specific models of analysis of the company's competitive performance.

Based on what has been stated so far, it is important to analyze the point of view that concentration and competition are negatively correlated, that is, that a high degree of concentration leads to a smaller number and weaker degree of rivalry between competitors on a certain market. Although the initial setting is very clear at first glance, a large number of research conducted up to this point in this scientific discipline did not confirm the assumption according to which concentration and competition are negatively correlated. Namely, certain and representative authors who presented results in the mentioned domain, from numerous authors and researches, are: Jansen and de Haan (2003) contested the point of view based on the direct connection of concentration and competition; Claessens and Laeven (2003) presented the results obtained by analyzing the banking sector in fifty different countries, which do not argue or prove a direct negative connection and conditioning between concentration and competition, and the author Vuković (2006, pp.10) came to similar results in his research, who points out that the concentration of banks in a certain market it is not directly correlated with the degree of competition due to the specificity of banking business, which is largely based, in addition to financial capital, on factors such as relational capital with clients, economies of scale, the introduction of new technologies, etc.

CONNECTING CORPORATIONS – BASIC FORMS OF CONCENTRATION

Mergers and acquisitions as strategies for external growth, development, ownership and strategic transformation of the organization are gaining more and more importance

in the New Economy. Mergers and acquisitions, in addition to being aimed at achieving the aforementioned goals, in the broadest sense, are still aimed at achieving a sustainable competitive advantage. However, despite having the same or similar goals, the implementation methods themselves differ significantly. Namely, mergers, mergers or acquisitions represent the ownership and strategic transformation of an organization, that is, they represent voluntary agreements on the merger of two or more organizations into a new “business entity” (Sherman, 2010, pp.8; Ilić et al., 2018, pp.75-92). Mergers are most often implemented through the following two forms (Mašić, 2001, pp.224-228; Ilić et al., 2018, pp.75-92), namely: the merger of one organization with another, whereby the merged organization formally ceases to exist; and through a merger, which represents the formation of a completely new organization by merging two or more organizations entering the merger process. Unlike mergers, acquisitions represent an ownership and strategic transformation of an organization, whereby one organization takes over a controlling stake in another organization (Ilić et al., 2018, p.75-92). By purchasing a control package of shares, the organization acquires the right to control and decide on the future of the purchased organization. Acquisitions can be on a voluntary basis, but most often represent a hostile takeover (DePamphilis, 2013, pp. 16-17; Mašić, 2001, pp. 224-228; Ilić et al., 2018, pp. 75- 92).

In addition to mergers and acquisitions, it is important to highlight the following three forms of concentration: horizontal, vertical and combined (conglomerate). *Horizontal concentrations* represent a model of integration of entrepreneurs in which entrepreneurs who offer a certain group of the same or similar products and services within the same economic branch are connected. Analogously to the above, banking concentrations are understood as horizontal concentrations, because it is about connecting several banks that are engaged in the same activity and mostly offer the same type of services. Unlike vertical and combined, horizontal concentrations lead to the following implications and consequences: reduce the intensity of competition between market participants; after the implementation of horizontal concentration, market participants will have a larger market share, which can initiate and intensify the emergence of a dominant position, or it can lead to cooperation with other market participants in the direction of creating a joint dominant position (Bishop and Walker, 2002, pp.263).

The stability of the financial market and macroeconomic policies depends in large part on the solvency and liquidity of banks and the ability to overcome the negative effects of the crisis and to deal with the recession (Dimić and Šprajc, 2012, pp.36). In the global financial market, there are current trends of connecting commercial and investment banking with insurance companies and other financial institutions. In this way, financial conglomerates are created that, in addition to banking products, offer a “wider range” of products and services. This form of concentration is called *vertical concentration* in the literature. Vertical concentration is present when the products or services of market participants are complementary. *Combined or conglomerate concentrations* represent a model that cannot be subsumed under any of the mentioned categories, since the products, or services, of competitors are neither substitutes nor complements.

Several reasons have been accepted in the scientific literature that can lead to the appearance of an increased level of concentration in the financial market. Hawkins and Mihaljek (2001, pp.34) list the following groups of motives that, for example, encourage banks to bank consolidations: cost benefits (economy of scale, organizational activity, risk diversification, etc.), revenue benefits (conclusion of large deals), economic reasons (motives for checking the level of concentration that arise after a crisis or during an upswing in the business cycle), other motives (defense against takeovers and managerial motives for capital accumulation). In accordance with the above, it is important to review the significance of the ratio of concentration of structural changes in the market. Concentration indicators reflect changes in the level of market concentration, which are a consequence of the entry or exit of companies from the branch, as well as mergers or acquisitions of firms in the industry. Therefore, concentration indices can be considered as a starting point for conducting antimonopoly policy. Depending on the goal of the research, market concentration can be measured by a number of indicators: Concentration ratio; Herfindahl-Hirschman index; Entropy measure; Gini coefficient; Lorenz curve; the comprehensive industrial concentration index (CCI); Hannah and Kay index (HKI); U index (U); Hall-Tideman index (HTI); Rosenbluth index (RI); Multiplicative Hause index (Hm); Hause index (Ha).

THE IMPORTANCE OF ANALYZING THE LEVEL OF CONCENTRATION OF THE BANKING SECTOR IN STRATEGIC DECISION-MAKING

According to the authors Milošević et al. (2018, p.49-74), but also according to a group of authors (Rumelt et al., 1991, pp. 5-29), the paradigm of the key source of competitive advantage is changing significantly. Theoreticians as well as practitioners increasingly see the source of competitiveness as a result of organizational capabilities and not as a current position (Milošević et al. 2018, pp. 49-74). According to their view, the way and speed with which the organization makes the choice of strategic decisions determines the future of the organization, so the process of making strategic decisions in organizations becomes one of the central issues in strategic management (Eisenhardt and Zbaracki, 1992, pp. 17-37; Milošević et al. 2018, pp. 49-74). Complex global market trends, as well as accelerated development and the diminishing ability to predict future business trends with certainty, represent one of the main catalysts for the importance of analyzing the level of concentration in the financial market (Ilić et al., 2018, pp.75-92). The influence of concentration on the development of the banking sector and the financial system as a whole cannot be clearly defined, since it is impossible to exclude the influence of other important factors in the analysis. In theory, we find two different approaches when it comes to the connection between the level of concentration of the banking sector and the development of the financial system. The first approach advocates the fact that with an increase in the level of concentration, the bank will increase its market power and thus reap extra profits on the financial market. On the other hand, a certain level of monopoly

power is natural and useful in the banking sector, since a higher level of concentration implies the presence of banks that can offer a “wider range” of products and services. By accepting the general position that bank concentration must be controlled and competition protected, it is indirectly confirmed that bank concentration, despite some advantages, does not encourage sectoral development (Vuković, 2006, pp.11). Davis (2007) illustrates the dramatic growth in the size of the world’s largest banks over the past two decades: the ratio of assets of the largest 10 banks to world GDP increased from 25.7% to 36.9%, while the ratio of assets of the largest banks to the GDP of the G7 countries increased from 2.1% to 5.9% in the period from 1985 to 2005. According to Davis, the growth of the world’s largest banks outstripped the growing importance of the entire financial sector and signaled an increase in global concentration in the financial sector. Recent studies illustrate very high levels of banking system concentration in most countries: the average recorded value of the CR3 ratio in 72 countries is above 80%, while the average value of this ratio in approximately 160 countries is greater than 72%.

The level of concentration of banks affects the stability of the banking system, but also the possibility of banking crises. According to the first approach, a higher level of concentration causes an increase in risk, since it creates moral hazard problems for large banks, which behave in the market according to *the too big to fail* principle (Mishkin, 1999, pp.675-691). The management of the banks knowingly takes great risks, counting on the state to provide financial assistance, relying on the government, which does not want a systemic crisis in the country. Another approach advocates the fact that increased concentration in the banking industry reduces the probability of a banking crisis, because larger and more developed banks encourage a positive correlation between concentration and stability. In other words, as a rule, greater concentration means greater profits, which allows banks to achieve a higher level of capital in the event of a shock or crisis. Furthermore, the stability of the system is all the greater if there is a smaller number of banks on the market that are subject to supervision. Beck, Demirguc-Kunt and Levine (2003) in their empirical research, which included 80 countries, came to the conclusion that in a system with a higher degree of concentration, the probability of a crisis outbreak is lower, which would mean that a higher concentration of banks affects the stability of the banking system, although this factor decreases as the concentration level increases.

Concentration in the banking system also affects the level of concentration in other industrial sectors. Banks with high market shares can control the entry of new companies into certain industries. Large and strong banks enable new companies on the market to get funds more easily, because they expect greater benefits from them in the future, such as new and innovative technologies and business processes. On the other hand, banks can protect existing customers by either completely preventing lending to new companies or increasing interest rates for lending to new customers. In this way, banks prevent the entry of new “players” into the market, i.e. reduce market competition. Concentration in the banking industry can affect the economic development of a country. Economic growth is positively correlated with the development of the financial sector. In developing countries,

the banking sector is the leading financial institution according to the criterion of the achieved balance sheet amount and capital participation. Deidda and Fattouch (2002) analyzed the relationship between economic growth and bank concentration and came to the conclusion that in poor countries the concentration in the banking sector is negatively correlated with economic growth, which is not the case in more developed countries.

CONCLUSION

The consolidation and concentration of the financial system around the world has sparked an active academic debate regarding the impact of concentration on financial stability. The relationship between concentration and financial stability is very complex and insufficiently researched. The question arises whether and to what extent the consolidation of the banking sector affects the financial system. It is a fact that the consolidation of capital results in a strengthening of market share, which in uncontrolled economic systems impairs competitive business in the industry. This position on the market can lead to monopolistic behavior, which is reflected in unjustified price increases (and collecting extra profits), lower quality of products/services, lack of innovation, use of cheaper and worse raw materials in the production process.

Market concentration is defined as the degree to which the volume of sales in one market, or in the economy as a whole, is concentrated in a smaller number of large firms. In the market, it occurs when the supervision over a large part of the total resource is achieved by a small part of the total number of units that supervise the resource. In other words, the concentration of market participants occurs in the case of: mergers and other status changes that involve the joining of market participants in terms of the law governing the position of companies; acquisition by one or more market participants of direct or indirect control over another market participant or more market participants; joint investment by two or more market participants with the aim of creating a new market participant or acquiring joint control over an existing market participant, which operates on a long-term basis and has all the functions of an independent market participant.

Concentration is not a sufficient condition for market dominance, even when the shares of financial institutions exceed 40%, because a dominant position on the market can also be held by a participant with a smaller share. The high level of correlation between the Herfindahl-Hirschman index and concentration ratios for banks was proven in their scientific work by Bikker and Haff (2001, pp.19). Additionally, they confirmed the relationship between the concentration coefficient for the group of three leading banks and the degree of competition, indicating that cartel behavior is most prevalent in markets where small groups control a large part of the banking market share in a country.

REFERENCES

1. Bain, J.S. (1951) *Relation of profit ratio to industry concentration: American manufacturing 1936-1940*; The Quarterly Journal of Economics Vol.65, Issue 3, pp. 293-324, <https://www.jstor.org/stable/1882217>
2. Barjaktarović L., Filipović S., Dimić M. (2013), *Concentration level of the banking industry in CEE countries*, Journal Industrija, 41 (3), pp. 39-54, <https://aseestant.ceon.rs/index.php/industrija/article/view/4712>
3. Berger A.N., Hannan T. H. (1998), *The price-concentration relationship in banking*, The review of economics and statistics, 71 (2), pp. 291-299, <http://www.jstor.org/discover/10.2307/1926975?uid=3738928&uid=2&uid=4&sid=21101846957453>
4. Besanko D.A., Thakor A.V. (1992), *Banking deregulation: allocational consequences of relaxing entry barriers*, Journal of banking and finance, 16, pp. 909-932, <https://www.sciencedirect.com/science/article/abs/pii/037842669290032U>
5. Bikker J.A., Groeneveld J.M. (1998), *Competition and concentration in the EU banking industry*, http://www.dnb.nl/en/binaries/ot008_tcm47-146043.pdf
6. Bikker J.A, Haff K. (2000), *Measures of competition and concentration in the banking industry: a review of a literature*, De Nederlandsche Bank, Research Series Supervision no. 27, <https://ideas.repec.org/p/dnb/ressup/27.html>
7. Bikker J.A., Haff K. (2001), *Competition, concentration and their relationship: An empirical analysis of the banking industry*, DNB staff report no. 68, De Nederlandse Bank, <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.199.9591&rep=rep1&type=pdf>
8. Bikker J.A., Haff K. (2002), *Competition, concentration and their relationship: An empirical analysis of the banking industry*, Journal of Banking and Finance, 26 (11), pp. 2191-2214, <https://www.sciencedirect.com/science/article/abs/pii/S0378426602002054>
9. Bishop S., Walker M. (2002), *The economics of EC competition law: concepts, Application and measurement*, 2nd Edition, Sweet&Maxwell, London.
10. Claessens, S., Laeven, L. (2003), *What Drives Bank Competition? Some International Evidence*, World Bank Policy Research Working Paper, no. 3113, <https://openknowledge.worldbank.org/handle/10986/18121>
11. De Bonis R., Fernando A. (2000), *The multimarket contacts theory: an application to Italian banks*, Paper No. 387, Banca d'Italia, http://www.bancaditalia.it/pubblicazioni/econo/temidi/td00/td387_00/td387en/en_tema_387.pdf
12. Davis K. (2007), *Banking Concentration, Financial Stability and Public Policy. Reserve Bank of Australia*, RBA Annual Conference, no. 2007-16, <https://www.rba.gov.au/publications/confs/2007/davis.html>
13. Demirgüç-Kunt, A., Levine R. (2000), *Bank Concentration: Cross-Country Evidence*, World Bank Working Paper, no. 27828.

14. Demircuc-Kunt, A., L. Laeven and R. Levine (2004), *Regulations, Market Structure, Institutions, and the Cost of Financial Intermediation*, Journal of Money, Credit, and Banking, 36 (3) (Part 2), pp. 593-622, <https://www.jstor.org/stable/3838956>
15. Deltuvaite V. (2009), *Koncentracijos itakos banku sistemose finansiniam stabilumui tyrimas*. KTU, Economics & Management, 14, <https://ktu.edu/lt/mokslas/zurnalai/ekovad/14/1822%126515%122009%12156.pdf>
16. DePamphilis, M. D. (2013), *Mergers, Acquisitions and other Restructuring Activities*, AP inprint Elsevier, SA.
17. Dimić M., Šprajc P. (2018), Risk management in banking sector – Stress resistance test, International Journal for economics and law, Vol 8, No.24, pp. 33-56, <http://media3.novi.economicsandlaw.org/2017/07/Vol24/03-IJEAL-24.pdf>.
18. Egli D., Rime B. (1999), *The UBS-SBC merger and competition in the Swiss retail banking sector*, Studienzentrum Gezensee, Working paper no.00/02, http://www.szgerzensee.ch/fileadmin/Dateien_Anwender/Dokumente/working_papers/wp-0002.pdf
19. Eisenhardt, K. M., Zbaracki, M. J. (1992), *Strategic Decision Making*, Strategic Management Journal, 13, pp.17-37.
20. Fuentes I., Sastre T. (1998), *Implications of restructuring in the banking industry: The case of Spain*, BIS conference paper No.7.
21. Hawkins J., Mihaljek D. (2001), *The banking industry in the emerging market economies: competition, consolidation and systemic stability*, BIS Paper No.4, <http://www.bis.org/publ/bppdf/bisap04a.pdf>
22. Ilić, D. (2015). *Modern technologies and management concepts*, script, University Union-Nikola Tesla, FSOM, Belgrade.
23. Ilić, D., Milošević, D., & Marković, B. (2018), *Strategic alliances: a powerful weapon in the conflict with competition*, Proceedings: Contemporary problems and possible solutions of strategy and strategic management – SPSSM 2018, University Union Nikola Tesla, FSOM / FPSP, Belgrade, pp.75-92.
24. Milošević, D., Ilić, D. & Marković, B. (2018), *Entrepreneurial way of making decisions in strategic management*, Proceedings: Contemporary problems and possible solutions of strategy and strategic management – SPSSM 2018, University Union Nikola Tesla, FSOM / FPSP, Belgrade, pp. 49-74.
25. Jansen, D., de Haan. J. (2003), *Increasing concentration in European Banking: a Macro-Level Analysis*, De Nederlandsche Bank Research Memorandum WO, no. 743/0323, <https://ideas.repec.org/p/dnb/wormem/743.html>
26. Kostić M. (2008), *Measurement of industrial supply concentration*, Ekonomski horizonti, 10 (1), pp. 89-108, http://www.horizonti.ekfak.kg.ac.rs/sites/default/files/Casopis/2007/6_Milan_Kostic.pdf
27. Kraft E. (2007), *What is the concentration level in banking sector in Croatia?*, <http://www.hnb.hr/publikac/istrazivanja/i-019.pdf>
28. Mašić, B. (2001), *Strategic management*; 2nd Edition, University Braca Karic, Beograd.

29. Porter, M. (2007), *Competitive advantage, achieving and maintaining superior business results*, Adižes, Novi Sad.
30. Radosavljević, M. (2017), *Modern business is a battle, and the market is a battlefield*, Proceedings: Contemporary problems and possible solutions of strategy and strategic management – SPSSM 2017, University Union Nikola Tesla, FSOM / FPSP, Belgrade, pp. 281-284.
31. Rumelt, R. P., Shendel, D., & Teece, D. J. (1991), *Strategic Management and Economics*, Strategic Management Journal, 12, pp. 5-29.
32. Sherman, J.A. (2010), *Mergers and Acquisitions from A to Z*, Amacom, New York.
33. Šutić R. (2009), *Role of Foreign Banks in Integration of Banking Industry*, Economic Journal, 22 (2), pp. 296-313, <https://hrcak.srce.hr/file/73922>
34. Vuković V. (2006), *Market concentration of domestic banks*, Journal Finansije, Vol. 61 (1-6), pp. 5-17

UDC:

323:351.86

Received

Review scientific paper

Accepted:

February 19, 2023

Corresponding author:

March 20, 2023

milanglisovic65@gmail.com

MODERN FORMS OF ENDANGERING INTERNAL SECURITY

Milan Glišović

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia,; e-mail: milan.glisovic@fpssp.edu.rs

Goran Župac

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia,; e-mail: goran.zupac@fpssp.edu.rs

Abstract: *Every country attaches special importance to the organization of functions that enable its optimal development and survival in international relations. One of the most important state functions is the function of security. State (national) security, most often, is understood as the ability of a state to preserve its integrity and ensure the uninterrupted functioning of all its structures and sovereignly and to efficiently resolve political, economic, social and other issues necessary to ensure the survival and progressive development of individuals, society and state.*

In accordance with the phenomena that threaten the security of the state and society, as well as the opposition to these phenomena, the external and internal components of the state security system are distinguished.

Key word: *security, external security, internal security, threat to security*

INTRODUCTION

Threats to security are understood differently in theory and practice because the concept of security itself is multidimensional and complex. Therefore, in accordance with the reflection of the concept of security, Mijalković and Popović (2015) say about security threats: «Generally, security threats are phenomena of natural, human or technical-technological origin that produce or can produce harmful consequences for reference values and interests (p.206).

Given that security is indivisible, the system of state (national) security is organized as an integral one, that is, it includes both external and internal security. At the same time, the national security system means „the form of organization and functioning of society in the implementation of measures and activities on a preventive and repressive plan, which are undertaken to preserve the sovereignty and integrity of the state, its constitutional order, the rights and freedoms of citizens, as well as all others social and international values from all forms and agents of endangerment (regardless of the place and time of execution) (Stajić, 2013) .“

1. THEORETICAL ASPECT OF INTERNAL SECURITY ENDANGERING

Reflection on any form of security threat requires a precise definition of what is meant by it. Therefore, a brief theoretical overview of the threat to security in the general sense is needed, followed by the identification of the form of internal endangering. At the same time, the fact is that modern forms of endangering the security of man, society and the state are intertwined and that the border line between the so-called external and internal forms of that endangerment is actually blurred.

1.1. Security endangering

Referring to the criminal-legal, sociological and other notions of endangering security, Savić and Stajić (2007) state: „...the term endangerment means social phenomena or behavior caused by the action of man (individual or group), nature or telmic systems over a longer period of time which of a significant scale, during which harmful consequences arise or may arise for the integrity of man, his freedom, property and health, as well as for the integrity and subjectivity of the state and its institutions, the values it protects as well as the value of the international community. Therefore, endangerment is any type of social, natural and technical danger that endangers the integrity, freedom, property or health of people, as well as the territorial integrity and sovereignty and constitutional order and rights of states, peoples, nations or social groups and individuals“(p. 68).

Mijalković (2011) also has a similar approach to endangering security, as mentioned above, which looks more broadly at certain spheres of determining endangerment, such as sociological, criminological, doctrine and theory of defense and civil protection, natural and technical sciences, up to security theory (p. 91). Mijalković and Popović (2015) operationalize in more detail their definition given in the introduction of this paper about security threats and they state: „More specifically, security threats are actions (human activities) and/or events (natural phenomena and processes and/or dysfunction of technical-technological systems) of such duration and intensity that produce or can produce harmful consequences for the reference values and interests of the individual, society, state and/or the international community (state of impaired security) (p. 206).“

Therefore, from the previous statements, when it comes to endangering security, we are talking about the occurrences of that endangering. Security threats are classified

differently by different authors. Thus, Savić and Stajić classify those phenomena into sources, forms and bearers of threats to security. Mijalković and Popović add types to the aforementioned classification of Savić and Stajić, whereby certain type has various forms.

1.2. The structure of the phenomena of security endangerment

In his book *National Security*, Mijalković (2011) says: “In principle, security threats consist of several elements, i.e. they are characterized by the following: the source of the threat, the bearer of the threat, the type and form of the threat, the object of the threat with the reference values that are attacked, the consequence and the feedback effect of the consequences on the source and bearer of endangerment” (p. 95). In accordance with the above, for the subject of this paper, theoretical positions on the sources, carriers and forms of security threats are significant (Figure 1).

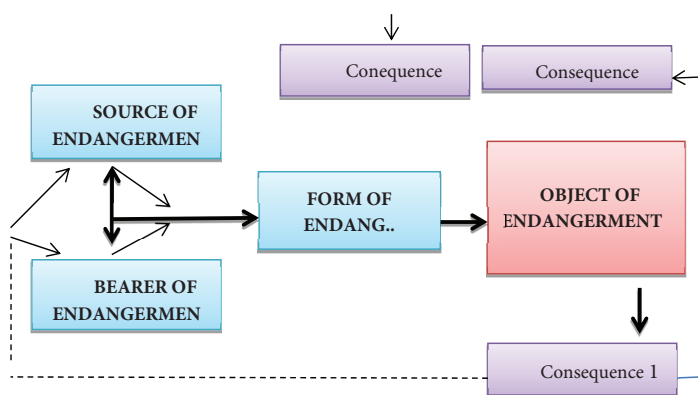


Figure 1. Idealized structure of safety endangerment

Sources of security endangerment are phenomena or processes that independently or in combination and interaction lead to the emergence and development of a threatening phenomenon. Sources of threats to security can be natural, social and technical-technological. *Natural* sources of endangerment are the climate, territory and/or geographical position of the living habitat of society and the state (in the narrower sense), i.e. the harmful effects of a degraded environment (in the broader sense, e.g., the action of acid rain, soil erosion, cosmic radiation and global warming due to damage to the ozone layer, etc.) (Mijalković, 2011, p. 95).

Destructive *human behavior* is determined by the life conditions of the bearer of threats, his conflicts with himself, with other persons and collectives. Most often, it is the result of conflicts of individual or social interests, a discrepancy between desires, needs and the possibility of satisfying them, the result of an upheaval or a way out of a crisis, a negative solution to a conflict or stressful situation, an act of recklessness or projected sick imagination or hallucination. So, human destructiveness is caused and conditioned by many *exogenous*

- *objective factors* (factors of the external world, i.e. narrow or wider social environment) as well as by *endogenous - subjective factors* (psychological traits, health and personal system of values, needs and interests). Finally, *the dysfunction of technical-technological systems* also causes or conditions many threats to protected values at all levels of security analysis. Herewith, one should certainly distinguish system dysfunction that occurred „by itself“ (by breakdown, breakdown, failure of subsystems...) in relation to dysfunction caused by the human factor (intentional or unintentional action) or natural disasters.

Almost all phenomena and processes of a human, natural or technical-technological nature, both constructive and destructive, have a *multifactorial - multicausal origin*. This means that their origin and development are almost always caused and conditioned by several different factors.

The bearer of the threat to security is the entity that, by its action or omission, realizes a threatening phenomenon. Although it resembles the concept of a delinquent, it is broader in scope and content. It denotes the following:

- *an individual*, who independently undertakes an illegal action (eg, murder) or omits an action that he is obliged to undertake (eg, a doctor does not treat a patient, a mother does not feed a baby);
- *group* (criminal or terrorist group, political movement, destructive sect, destructive mass in civil disturbances, etc.);
- *a legal person or organization* (eg, as a perpetrator of a misdemeanor, economic offense or criminal offense);
- *the state*, when the threat is carried out by the entire state administration (e.g., by dictatorship, repressive legislation, terrorizing the population, forced emigration of people, discrimination against members of national minorities) or individual state bodies (e.g., by the participation of special police and military forces in the execution of terrorist acts on the territory other countries, by non-objective trial of perpetrators of criminal acts who are being on trial abroad;
- collaborators or opponents of the authorities, by not providing criminal legal assistance to a domestic citizen who is being tried abroad, etc.);
- *an international organization and the international community*, which take certain measures against *individuals* (e.g., unfounded trial and conviction of innocent individuals for war crimes, exemption from responsibility and overly lenient punishment of war criminals, failure to provide international criminal protection to a person whose rights to justice have been violated in his country etc.), social groups (e.g., by not issuing visas for entry into the country to members of certain national groups or social strata, not providing financial or other assistance to vulnerable persons and victims of certain criminal acts) and states (e.g., political, military and economic pressures, recognizing the state status of territories under the control of separatists, interfering in the work of state bodies, implementing destructive psychological-propaganda activities, military intervention or aggression, etc.) (Мијалковић, 2011, p. 95).

The form of endangering security is a manifestation of a destructive phenomenon that differs from other, even similar phenomena (e.g., terrorism from rape, technical-technological accident, diversion and sabotage) by its features and specifics (on the basis of which it is identified and qualified - *indications, indicators*). Its manifestations can also differ from each other (eg, terrorism by murder, activation of an explosive device, „diplomatic abduction“, „letter-bomb“, etc.) (Мијалковић, 2011, p. 98) .

A type of security endangerment is a set of several different forms of security threats that have common dominant characteristics. Thus, for example, organized human trafficking, organized smuggling of migrants, narcotics and vehicles are forms of organized crime; further, organized, situational, conventional, white-collar crime and corporate crime are types of property crime; property, political, economic and environmental crime are the most common types of crime. Types of threats to security of the widest scope are: military and non-military threats; threats of natural, human or technical-technological origin; external and internal threats; challenges, risks and security threats, etc (Мијалковић, 2011, p. 99).

1.3. The classification of phenomena of security endangerment

The classification of safety threats, by various authors, is done according to numerous criteria and in different ways. In this way, Savić and Stajić (2011) separately classify the sources, and they separately classify the forms of threats to security (p. 70-93). On the other hand, Mijalković (2011) approaches the classification of security threats holistically, without separating sources from forms (p. 107-109).

Approaching forms of threats to internal and external security, Savić and Stajić (2007) do so in a classic way and they distinguish two basic groups of those forms - armed and unarmed forms (Table 1) (p. 89).

EXTERNAL FORMS		INTERNAL FORMS	
ARMED	UNARMED	ARMED	UNARMED
Armed aggression Armed intervention Armed pressures	Low-intensity conflicts caused by international terrorism and subversion	Armed rebellion Terrorism on a mass scale	Intelligence-reconnaiss. activity Sabotage Diversion Civil disturbances Destructive psychological- propaganda activity Criminal and sociopath phenomena Extremism Endangering traffic safety Fires Endangerment of the environment Technical and technological accidents

Table 1. External and internal forms of security endangerments

On the other hand, Mijalković (2011) approaches the classification of safety-threatening phenomena from a general aspect and says: „Based on dominant etiological, phenomenological and consequential characteristics, threatening phenomena can be classified into certain types (groups).

The justification of the classification is multiple and is reflected in the following: distancing threatening phenomena from each other; more effective identification and forecasting of security threats; more successful identification of cause-and-effect relationships of certain threatening phenomena; enabling the conception of strategies for countering threatening phenomena, but also greater economy, as it is possible to solve more similar security problems with one more comprehensive strategy; improvement of management in security systems and, above all, organizational and functional specialization of security subsystems and microsystems for solving specific groups of security problems, etc (p. 107). The classification of safety endangements, according to Mijalković (2011), is given in Table 2 (p. 107-109).

CLASSIFICATION CRITERIA	PHENOMENA OF SECURITY ENDARGEMENTS
Generally, etymologically	Phenomena of natural origin Phenomena of human origin Phenomena of technical-technological origin Phenomena of combined origin
Object - the target of endargement	Endangering the safety of an individual Endangering the safety of human collectives and society Endangering national security Endangering international security Endangering global security Occurrences of multiple (combined) threatening effects
The relationship between the bearer and the object of endargement	Self-threatening (auto-destructive) Threatening (destructive)
Awareness and willingness of the bearer of endargement of security	Accidental On purpose Planned Non-planned
Масовност употребе војног наоружања и МТС	Occurrences of a military character Occurrences of a non-military character
The space where endargement appears	Internal External
Scope (coverage) of the bearer and the object	Selectiv Non-selective (random)
Possibility of overcoming consequences	Repairable Partly repairable Non-repairable
Certainty of appearance	Certain Potential
Duration	Momentous Long-lasting

Goal	With open (clear) goal With hidden goal
Clarity of appearance	Open appearance Hidden appearance
Correlation between the bearer of the threat and the object - the target of the threat	Directly endangering Indirectly endangering

Table 2. Classification of safety endangerments

Both of the above-mentioned classifications, no matter how exhaustive they are, show the character of classical, i.e. experientially (historically) determined criteria and occurrences (forms) of security threats. The classification of safety threats mentioned by Mijalković (Table 2) can be criticized in terms of the vagueness and inaccuracy of the classification criteria. When it comes to ambiguity, the objection to Mijalković's classification refers to the fact that it inconsistently classifies the phenomena of endangerment into sources, carriers, types and forms, and it is not clear in Table 2 what the name of the phenomenon of endangerment refers to. On the other hand, some of the classification criteria established by Mijalković are more characteristics of certain phenomena of security threats (primarily form), rather than classification criteria.

2. MODERN FORMS OF INTERNAL ENDANGERMENT OF SECURITY

Respecting the theoretical positions on phenomena that threaten security, presented in the previous question, the fact is that it is difficult to make a very clear distinction and separation of external and internal forms that threaten the security of a country in modern international relations. This is primarily due to the fact that globalization, as a process of modern international relations, has affected the connection of all social phenomena and processes, including phenomena, i.e. sources, carriers and forms that threaten security. In accordance with the above, it seems justified to consider contemporary forms of threats to internal security by analyzing those forms in the national security strategies of individual countries.

2.1. The forms of internal security endangerment in current national security strategies

It is a fact that every modern country takes an organized and planned approach to the regulation of all state functions, among which the security function occupies one of the central places. This is because security is a basic prerequisite for the survival and development of every society and state. In determining the security function of the modern countries of the world, among other things, they adopt a national security strategy. One of the first steps in establishing a national security strategy is the analysis of the security environment and the identification of security challenges, risks and threats.

Challenges, risks and security threats in modern conditions are a pragmatic substitute for security endangerments, created primarily in Western strategies and in practice widely accepted in most countries of the world. Challenges, risks and threats are not phrases or concepts. These are three concepts of different levels of generality. Thus, Mijalković (2011), in thinking about the challenges, risks and threats to security, states: “Although it is only one of the possible classifications, which comes from the Anglo-Saxon security theory and practice, it has largely become “domesticated” in our country, suppressing other, even traditional divisions of threatening phenomena into armed and unarmed, external and internal endangerments. It is about the classification of challenges, risks and security threats. This type of typology has no practical justification if the national security system has not defined it in nomenclature and precisely by official regulation” (p. 109). In accordance with the stated views on security challenges, risks and threats and their shorter definition, Mijalković (2011) creates the following relationship with security threats: (1) challenge = source of security threats; (2) risk = transformation of a source into a form of endangerment and (3) threat = a form of threat to security (p. 110).

In accordance with the above, Table 3 shows modern forms (endangerments) of threats to internal security established in nine national security strategies and the security strategy of the European Union.

COUNTRY	THE FORM (ENDANGERMENT) OF THE INTERNAL THREAT
USA	In the national security strategy, internal forms of threats are not specifically considered, but the possibility of the influence of global risks is mentioned
Russian Federation	Radical criminal groups are cited as one of the main carriers of threats to security, while forms of threats are mostly related to foreign action (action from the outside)
European Union	Apart from organized crime, it does not specifically consider the forms of threat within the EU, but links them to the global threat to security
Slovenia	Organized crime; destruction of the natural environment; health-epidemiological endangerment and natural and other accident
Croatia	2. THREATS TO THE LIVES OF CITIZENS - Natural and man-made accidents and disasters - Violent crime 3. THREATS TO THE DEMOCRATIC POLITICAL SYSTEM - Corruption - Organized crime - Economic instability 4. THREATS TO MATERIAL GOODS - Endangerment of critical national infrastructure
Montenegro	Corruption in all forms, abuse of power, weak institutions and lack of trust; economic, social and political difficulties; Natural, ecological, technical and technological disasters, man-made incidents and epidemics of human or infectious animal diseases; actions of individuals and/or groups that are in conflict with the laws of Montenegro.
Hungary	INTERNAL CHALLENGES: organized crime; illegal (gray) economy and corruption; drug addiction; political and religious extremism and demographic changes

COUNTRY	THE FORM (ENDANGERMENT) OF THE INTERNAL THREAT
Romania	<p>INTERNAL CHALLENGES:</p> <ul style="list-style-type: none"> • there prevail economic, financial and social problems generated by prolonged transition and delayed structural reforms; increased corruption and abuse of public resources, which leads to deeper social inequalities and the spread of the gray economy; • ineffective reactions of state institutions in the acute phase have resulted in economic crime and violations of public order and citizens' safety - such phenomena imply increasingly obvious negative effects on social cohesion and solidarity, on the standard of living of citizens; • maintenance of some sources and causes certain potential social conflicts, to a greater or lesser extent, which leads to waste of energy, slowing down or cutting processes and real economic activities, as well as the peace of mind of the people; • Non-compliance with environmental protection norms in the functioning of certain industrial facilities; the probability of some environmental disasters, natural disasters and the process of environmental degradation to occur; • lower trustworthiness of citizens in state institutions, as a result of laziness and excessive bureaucracy within the administration, which also leads to weakened social and civic cohesion; • maintenance of some differences in the development of regions in the country; • deficiencies in accordance with the obligations undertaken for joining NATO; • maintaining information technology at a lower level and delaying its upgrading with the standards that require the dynamics of globalization; • irregularities in the protection of secret data; • migration of experts from different domains of high technology, a phenomenon that affects the development potential of Romanian society
Czech Republic	Natural disasters, industrial and other accidents, emergence and spread of epidemics.
Republic of Serbia	<ul style="list-style-type: none"> - <i>Separatist aspirations of certain nationalist and religious groups, extremist groups</i> - <i>Illegally unilaterally declared independence of Kosovo, represents the greatest threat to the security of the Republic of Serbia</i> - <i>Armed rebellion and disputes with the use of weapons</i> - <i>Terrorism,</i> - <i>National and religious extremism</i> - <i>Organized crime, illegal trafficking in people and narcotics and illegal migration,</i> - <i>Corruption,</i> - <i>Problems of economic development,</i> - <i>Energy security</i> - <i>Uneven economic and demographic development of the Republic of Serbia</i> - <i>Uncontrolled consumption of natural resources and endangering the environment,</i> - <i>Consequences of natural disasters and technical and technological accidents, as well as endangering the environment and citizens' health,</i> - <i>Dangers associated with the emergence and spread of infectious diseases in humans and infections in animals,</i> - <i>Drug addiction,</i> - <i>Destructive effects of certain religious sects and cults on family and society,</i> - <i>high-tech crime and endangerment of information and telecommunication systems,</i>

Table 3. Contemporary forms (endangerments) of internal threats to security

For a realistic overview and analysis of the data given in Table 3, the following should be taken into account: (1) the table contains data from the security strategies of the mentioned countries and the EU created in the period 2003 (EU) - 2015 (USA, Russian

Federation); (2) most of the mentioned countries and the EU in their strategies do not distinguish between external and internal forms (threats, risks) of security; (3) individual countries make a clear distinction between external and internal forms (threats, risks) of security and (4) most countries, even when citing a threat to internal security, associate it with global or international security risks and threats, for which a typical example is the Czech Republic.

2.2. Generalization of contemporary forms of internal security endangerment

The choice of security strategies of the countries listed in Table 3 can be considered representative for the following reasons: (1) two world powers (the USA and the Russian Federation) that had the greatest impact on international relations after the Second World War and still play a key role today were taken into account in these relations, especially from the security aspect, (2) the EU Security Strategy was taken into account, the membership of which the Republic of Serbia and all surrounding countries that have not yet become members aspire to, and (3) the countries of our environment were taken into account, and we must always compare ourselves with the environment, especially in matters of safety.

It is a fact that all the analyzed countries, first of all, approach security threats from an international perspective and in that sense they identify risks and threats, that is, forms of threats to internal security. Also, it is a fact that in modern international relations it is not possible to clearly demarcate external from internal forms of threats to security, because their intertwining has become the legality of international relations.

In spite of all the mentioned limitations and approximations, and in accordance with the analysis of the mentioned security strategies, it is possible to generalize the modern forms of internal threats to security.

First, all analyzed security strategies take into account theoretical views on the sources of security threats, grouping them into: (1) natural (earthquake, flood...), (2) social or human action, (3) technical-technological, with or without human intervention actions. To that classic triad in modern conditions are added pandemics, epidemics and diseases of a wider scale, the causes of which may be different, but they are evidently in the sphere of human health.

Second, in accordance with the security sectors or security-influencing areas, all strategies respect the theoretical positions that security threats are found in the military, political, economic, social and environmental spheres (sector, area) (Ејдус, Ф, 2012. и Вилијамс, П.Д., 2012). At the same time, to the term military sector, when it comes to internal forms of endangering security, would better suit the term - armed form.

Third, and in accordance with the above mentioned, it is evident that two classic forms of threats to internal security remain in force - armed and unarmed. At the same time, it is evident from the analysis of the aforementioned security strategies that unarmed forms of internal threats to security prevail.

Fourth, it is evident that each country, viewed individually, has certain specifics regarding internal threats to security, which, again, have different historical and other

contexts and causes. A typical example is the Republic of Serbia, whose national security strategy states that the biggest security threat is the unilateral and illegal declaration of Kosovo's independence.

Fifth, by generalizing on a special level, when it comes to forms of endangering internal security, the following groups of those forms can be distinguished: (1) organized crime, (2) economic problems, (3) energy dependence and instability, (4) political, religious, ethnic antagonisms, (5) natural accidents and disasters, (6) technical-technological accidents, (7) epidemics and diseases on a wider scale and (8) high-tech crime, also known as „cybercrime“.

2.3. The characteristics of the internal security endangerment

Professor Mijalković (2011), independently or together with Marija Popović (2015), derived a set of characteristics of security threats, which can also be applied to forms of internal security threats. Furthermore, Savić and Stajić (2007), in addition to the classification of forms of security threats, specifically and in more detail, referred to internal forms of security threats. At the same time, Professor Mijalković's work refers to the general aspect of security threats, while Savić and Stajić describe particular forms of internal security threats.

Out of certain groups of forms of internal threats to security, organized crime or social pathology, as Savić and Stajić (2007) say, natural accidents and disasters have a special place in terms of their scope, importance, impact on security, and even unpredictability (p. 95-100).

1) Social pathology or organized criminal

In the system of sciences, social pathology is the name for a scientific discipline, which deals with the sociological study of deviant behavior, that is, society's reaction to that behavior. According to one of the understandings, a typical social pathology refers to a set of different phenomena that are considered undesirable and negative from the point of view of certain generally accepted values and norms in society (crime, alcoholism, prostitution, drug addiction, various forms of group disorganization, etc.).

a) *Criminality* is, among the experts in this field, determined in several ways. From the fact that it includes any deviant behavior to the fact that the term covers only illegal behavior that is sanctioned as a criminal offense. Crime, by the way, is one of the most pressing problems in all modern countries, including ours, which is confirmed by the fact that it is constantly increasing. Because of its social danger and harmfulness, all societies strive to suppress it (either preventively or repressively) by constantly finding more adequate and effective methods and means. In these efforts, there is a noticeable tendency to move increasingly from repressive measures to the sphere of preventive measures in the sense

of preventing its occurrence. A preventive reaction is considered the optimal solution if it provides desired results. Preventive activity is the result of general social action, but also of a developed security culture. Repressive action is inevitable and is carried out by specialized internal affairs bodies, as well as prosecutors' offices, courts, inspections and other bodies. The disadvantage of repressive action is related to the fact that it occurs when the criminal act has already been committed. Repressive action is conditioned by adequate organization, technical and personnel equipment. The fact that it depends on concrete social conditions in a country, but also on the environment in which that country is located (proximity to battlefields, crisis situations, etc.) speaks of the delicacy of the crime problem and its impact on the country's internal stability. From the above we can see that many causes, reasons and conditions lead to criminality. As the most dangerous ones we herewith mention the following: war, economic crisis, shortage of goods on the market, poverty and other sociopathological phenomena, family, political conflicts and the like. Criminality is a dangerous form of endangering internal security and also because there is a causal connection between criminality and other socio-pathological phenomena (alcoholism, drug addiction, prostitution, etc.).

According to the data of the Ministry of Interior of the Republic of Serbia for 2014, some indicators of criminality are as follows:

- The report of the MUP on the state of public security from May to October this year showed that the crime rate was almost 10 percent lower than in the same period last year. However, if these data are compared with the beginning of this century, 14 years ago, when the October 5th changes took place and when the state functioned with difficulty at all levels, it can be concluded that our security is better but still not at an enviable level. Namely, in six months of this year, 45,368 criminal acts in the field of general crime took place, including murders, rapes, property crimes, serious and light injuries. This is almost half of the total number of these crimes in 2000. We further wish to mention herewith that in 2000, clans were rampant, notorious for brutal murders, drug trafficking, kidnappings and extortions. That year, the police began to work and collect data for the preparation of the so-called white book on organized crime. Data on «Surčin», «Zemun», «Keka's Novobeograd clan» and many other criminal groups were disclosed. This picture of crime in Serbia was significantly changed after the police operation «Sablja», which followed the assassination of Serbian Prime Minister Zoran Djindjic in March 2003.

- Today in Serbia, 274 criminal acts are committed per day, according to the data of the Ministry of Internal Affairs of Serbia for the period from May to October of this year. That is 37 crimes per day less than last year, and 21 crimes less than 2000. If we compare the number of crimes from 14 years ago with the six-month period of this year, now there is 6.5 percent less crime than in 2000.

- Murders, unlike 14 years ago, are not frequent today, but their number is at the level of 2013. Nevertheless, many cases of the most serious crimes that occurred this year, starting from kidnappings and brutal murders of girls, to violent attacks by minors on senior citizens, shook the public. Thanks to the round-the-clock work of the police and with

a lot of public pressure, these crimes were solved. The attempted murder of businessman Milan Beko, who was wounded with two bullets two weeks ago in front of his house in the Belgrade neighborhood of Dedinje, is still being investigated.

- It is undeniable that 14 years ago, many more vehicles were stolen in Serbia. According to MUP data, in 2000, 17.2 vehicles were stolen per day, and today it is five vehicles.

- If this trend continues, the number of thefts in Serbia will be higher than in 2000. It was also increased last year. The Ministry of Internal Affairs explained that the increase in the number of thefts is conditioned by the change in the criminal law and the fact that instead of the amount of at least 15,000 dinars, cases with damage amounting to 5,000 dinars are recorded as thefts (<http://www.pravniportal.com/stopa-kriminaliteta/> [приступљено 04.05.2016]).

6. *Drug addiction*: For thousands of years, people have resorted to a variety of opiates and stimulants for „high spirits“ and enjoyment, but their use was strictly controlled by the community and, for the most part, was used for ritual purposes. The more massive use of narcotic drugs for non-religious purposes is related to the period of rapid development of society and the development of means of transport by which they were transported to distant markets. It was only in the 1960s and 1970s that drug use reached alarming proportions, especially since its use spread mostly among the young population. Since that time, drug addiction has been considered a social problem with various negative effects on society. Drug addiction is a socio-pathological phenomenon that often causes many criminal consequences. Therefore, drug addiction cannot be viewed only as a social problem, but increasingly as a „criminogenic factor“. This is especially so in cases where the production, processing and transportation of drugs in an organized and mass form within a social community reaches such a degree and scale that they seriously endanger the given society. Namely, we have witnessed that in some South American countries the so-called „narcomafia“ has reached such proportions that it has entered many social structures of the country and is influencing all social trends. From the point of view of the topic of this paper, that is, from the point of view of the form of internal threat to security, drug addiction is significant because of the criminal behavior of not only drug addicts, but also drug producers and distributors. Namely, in relation to drugs, there are two incriminated aspects: production and trade, and - the criminal aspect of taking drugs. Drug manufacturers and dealers are, of course, very important in the sphere of criminality because their actions influence the conscious attitudes and fate of drug addicts. In cases where their number, strength and power reach such proportions that they enter the structure of the state and begin to manage it, the danger to the country's security reaches alarming proportions because it is difficult to eradicate them since they place themselves inside the system of government.

According to data from the Office for HIV and AIDS (2014), 30,000 opiate addicts live in our country, warned Dr. Jelena Janković from the Institute for Public Health of Serbia „Dr. Milan Jovanović Batut“. At yesterday's round table on addictions, she presented the

information that the largest number of addicts have their first contact with heroin at the age of 24, and they come to be treated almost ten years later. That the struggle with heroin addiction is one of life's most difficult battles is also shown by the fact that two thirds of people who come for treatment are returnees.

Lambe Đoreljijevski, head of the Drug Addiction Prevention Department of the Ministry of Interior of Serbia, warned that, contrary to the common belief that children come into first contact with drugs through dealers, more than 85 percent of teenagers got drugs from schoolmates, friends and neighbors. A 2010 Institute of Public Health study shows that a third of parents learn about their child's addiction after three years of drug use, and an additional third only after four years of drug use (<http://narkomanija-narkomanija.blogspot.rs/2014/02/u-srbiji-30000-narkomana.html>[приступ 04.05.2016]).

В) *Prostitution*: Prostitution is considered a form of deviant behavior. It has been present since the earliest periods of society's development. It has always been marked as a moral problem and a vice, whereby the social reaction was most often reduced to the moral and social rejection of women, but increasingly also of men engaged in prostitution. According to the definition, prostitution is „providing certain sexual services to other persons who may be of different or the same sex.“ Therefore, prostitution can be heterosexual prostitution of women with men or men with women and female homosexual or male homosexual prostitution. An essential element in defining prostitution is connecting every sexual relationship with money or some other form of remuneration. We are not so much interested in the forms of prostitution, prevalence and characteristics, causes and the like, as in the case of criminality, but rather the connection of prostitution with other forms of deviant behavior, i.e. their individual or overall impact on internal stability of the country and society. In this sense, the general point of view is that prostitution, in principle, does not have such a harmful social impact as crime and drug addiction have, because it is not widely represented, and because it does not have harmful consequences for society. Engaging in prostitution, as a form of deviant behavior, from the point of view of security, is significant because there is a proven connection between prostitution and other more dangerous forms of endangering the internal stability of society.

The connection between crime as the most serious threat to the stability of society and prostitution can be manifold:

- (a) a prostitute can be an instigator and accomplice of criminal activity,
- (b) a prostitute can participate in «covering» criminals,
- (c) a prostitute can be a distributor of stolen goods,
- (g) a prostitute can be a bait to entice a victim and
- (d) a prostitute can be the perpetrator of the crime herself.

Also, there is a great correlation between prostitution and drug addiction, alcoholism and gambling with various harmful effects on society. Recently, there are more and more situations where all „services“ can be obtained in one place in an organized way (in private apartments and clubs). Those places represent the meeting place of criminals and certain

deals are made there for the execution of criminal acts. Considering that criminals are recruited, encouraged and organized in this way, the harmfulness of such behavior and actions for internal security is unquestionable.

1) *Alcoholism and gambling*: Alcoholism, gambling and other forms of deviant behavior (suicides, etc.) undoubtedly have harmful consequences for every society. Given that these harmful consequences do not have the same intensity and strength as other forms of internal threats to security, we will not deal with them further. Namely, alcoholism and gambling are serious social problems, while alcoholism is also a medical problem. As forms of deviant behavior, they cause a certain social reaction that differs from country to country. Their impact on society can be the following:

- (a) direct, when it reaches such proportions that it endangers it, the ability to work is reduced and for its suppression considerable resources must be allocated and medical and other institutions must be organized and
- (b) indirect, which means that alcoholism and gambling affect the family of alcoholics or gamblers the most, the family being the basic cell of society.

In modern conditions and modern security strategies, the previously described socio-pathological phenomena - internal forms of endangering security are called organized crime, which has a broader scope and meaning than the above, and thus a more harmful impact on the security of the country. For example, Đorđe Ignjatović (1988), looking at the views of other authors, domestic and foreign, and especially American, points out the following activities of organized crime: racketeering, gambling, drug trade, usury, disposal of dangerous substances, other illegal activities (cigarette smuggling, pirated reproduction of author's works, theft, banditry, prostitution, pornography, etc.), corruption, money laundering, fake bankruptcies and insurance fraud (p. 69-87). Mićo Bošković (2003) includes the following in the activities of organized crime: terrorist activities, some types of economic crime, racketeering, money laundering, trade in white slaves, trade in human organs, trade in rare animals, production and smuggling of narcotics, organized prostitution, organized gambling, environmental crime and the like (p. 321). Zoran Stojanović (1990) lists the following as the main areas in which organized crime finds room for its activities: illegal traffic in narcotic drugs, smuggling, gambling, prostitution, illegal arms trade, kidnapping for ransom, theft of high-value items and their concealment and resale, etc (p. 63).

In the Republic of Serbia, the Strategy for Combating Organized Crime states: «Organized crime is an extremely harmful phenomenon for societies at any stage of development, and especially for those that are in the phase of transition and democratic transformation.» It penetrates into all spheres of society, destroys lives and causes great material damage, produces and encourages other types of crime, causes a feeling of fear and hopelessness, and damages the integrity and reputation of state institutions and the state as a whole. Organized crime implies the commission of criminal acts by an organized criminal group or its members. Organized criminal group means a group of three or more persons, which exists for a certain period of time and acts jointly with the aim of

committing one or more criminal offenses for which a prison sentence of four years or a heavier sentence is prescribed, for the purpose of obtaining, directly or indirectly, financial or benefits (Службени гласник РС, 23/2009, п. 3).» Manifestations of organized crime represented in the Republic of Serbia are the following: drug trade, extortion, kidnapping, blackmail, human trafficking, people smuggling, corruption, money laundering, abuse of official position, counterfeiting of money and other means of payment, prostitution, trade in weapons and explosive materials, international smuggling of vehicles, smuggling of excise goods and high-tech crime (Службени гласник РС, 23/2009, п. 4).

2) *Natural disasters and catastrophes*

Another large group of forms of internal threats to security consists of natural disasters and catastrophes. This group of forms of threats to security is particularly significant because these events cannot be fully predicted, and they involve human casualties and huge material damages. It is a fact that natural accidents and disasters cannot be strictly focused only on a certain country, viewed individually, that is, they often affect a narrower or wider region rather than a single country alone. However, the appearance of these forms of threats to security, such as floods, earthquakes, landslides and fires, no matter that they take on a regional character, are still frequent threats to the internal security of every country in our region. From the following documents of the Republic of Serbia, the previous statement can be taken as very reliable.

According to data from the annex of the *National Strategy for Protection and Rescue in Emergency Situations*, in the Republic of Serbia, in the period 1900-1940 100 natural disasters occurred every ten years, in 1960-1970. there were 650 of them, and in 1980-1990 no less than 2000, while in the ten-year period 1990-2000 the number of disasters increased to 2800 (Службени гласник РС, 86/11). The trend shows that the number of emergency and dangerous situations is increasing from year to year, so the economic costs have tripled in recent years (Национална стратегија заштите и спасавања у ванредним ситуацијама, СГ РС, 86/2011, п. 22).

The Serbian economy, due to the consequences of natural disasters, suffered significant losses in material goods; atmospheric disasters also cause losses in human lives. Estimated damages in time-dependent sectors in the Republic of Serbia are given in Table 4.

Sector/adverse weather events	Estimate of losses in sectors	
	Average annual economic losses in millions of dinars	Average annual loss of human life
Agriculture / floods	From 3.100 to 8.500	From several to hundreds
Water economy / floods	Cca 1.960	-----
Agriculture/haze, heavy precipitation, strong wind	Cca 7.316	Several to hundreds due to thunder

Agriculture / draughts, frosts	Cca 4.0000	No losses
Energy production (thermal energy)/ extremely low air temperatures	Cca 716	Several to hundreds
Road maintenance/snow, ice, icing	Cca 3.500	-----
Human losses on highways, regional and local roads caused by bad weather annually range from 105 to 131		
Commercial air traffic	From 54 to 72	-----
TOTAL	From 16.648 to 48.572	From several to 160

Table 4. Estimated damages in weather-dependent sectors (Source: National Strategy for Protection and Rescue in Emergency Situations, p. 22)

Floods are one of the frequent calamities that affect Serbia. In his research, Mila-nović et al. (2012) claims that 10,968 km² are potentially threatened by floods in Serbia, which covers 12.4% of the territory. At the same time, the largest flood areas are in the Tisa (2800 km²), Sava (2243 km²), Velika Morava (2240 km²) and Danube (2070 km²) valleys. On the other hand, in the Sava and Danube valleys, floods are predisposed by precipitation, but also by the coincidence of flood waves of their tributaries (p. 93). Flash floods are characterized by rapid onset and short duration. They occur during and after severe storms of high intensity. It is not defined what time of year flash floods occur. There were examples of them occurring in the winter period (November 2007, on the rivers: Vlasina, Nišava, Jablanica and Pusta) or in the spring period (May 2010, Trgoviste) and the summer period (June 1988, on the Vlasina River, and June 1999, on rivers: Jasenica, Kubrišnica and Topčiderska river). The year 2010 is characterized by torrential floods that caused great damage in the Republic of Serbia. The municipalities of Zaječar, Ljubovija, Loznica, Valjevo and Osečina suffered great damage from flash floods, while Trgoviste suffered heavily from the devastating flash flood of the Pčinja River and its tributaries.

Earthquakes of varying strength also stike Serbia. On average, a strong earthquake occurs in the Republic of Serbia every ten years. According to the number of registered and located earthquakes, seismic activity in 2010 was significantly more intense than in 2009. The largest number of earthquakes was located in the zones of central Serbia (Kraljevo and Kopaonik) and southern Serbia (Autonomous province of Kosovo and Metohija). A smaller number of earthquakes is located in eastern and southeastern Serbia, while the smallest number is located in the territory of the Autonomous Province of Vojvodina (*Nacionalna strategija zaštite i spasavanja u vanrednim situacijama*, CG PC, 86/2011, p. 23).

Fires of various scales are evident in Serbia every year. Of the total area of the territory of the Republic of Serbia, 29.1% is under forest, which makes our country moderately forested. Although the presence of conifers is pronounced in the area of western Serbia, the largest number of fires occurred in the area of eastern Serbia, where deciduous species are represented. In July and August 2007 alone, over 33,000 ha of forest and low vegetation

were affected by large fires. State-owned forests are managed by public companies and national parks. About 50% of forests are privately owned. In private forests, professional field work is performed by public companies that manage state forests in that area (*Strategija zaštite i spasavanja od požara*, CF PC, 21/2012).

Disturbances in nature cause *landslides*. Landslides that occur on the territory of the Republic of Serbia are in 70% of cases known and largely researched. A total of 3,137 active or potential landslides were recorded. A certain number of landslides threaten residential buildings in populated areas (about 3,727 buildings and about 7,755 inhabitants), while most landslides threaten local and main roads (*Nacionalna strategija zaštite i spasavanja u vanrednim situacijama*, CF PC, 86/2011, p. 25) .

According to the data of the Ministry of Energy, the instability of the terrain with occurrences of landslides, landslides, landslides and collapse of the banks of riverbeds, of different dimensions and activities, is represented on about 25-30% of the territory of the Republic of Serbia. The occurrences of terrain instability in the form of sliding are mostly represented in terrains built from the lake sedimentary complex (Neogene basins), then from rocks of the diabase-Rožnačka formation (Lima valley), flysch rock complex (hill area of Šumadija), from metamorphites (northeastern Serbia, the Vlasina basin, the upper course of the Ibar and the Drina basin) (*Izveštaj o stanju zemljišta u Republici Srbiji za 2011.godinu*, Agencija za zaštitu životne sredine, 2012).

According to the data of the Ministry of Environment, Mining and Spatial Planning, the representation of landslides in relation to the total territory of Serbia is 20-25%, and the representation of landslides and landslides is 5-10%. The deepest landslides were formed in the immediate vicinity of the Danube and Sava rivers (northern slopes of Fruška Gora, Duboko and Umko, Karaburma, Vinča-Ritopek-Grocka stretch, Smederevo). Landslides are most often associated with gorge valleys, that is, with broken rock mass, mainly limestone and serpentinite (Đerdap gorge, gorges of: Ibar, Nišava, Jerma, Lim, Drina and Zapadna Morava) (*Izveštaj o stanju zemljišta u Republici Srbiji za 2011.godinu*, Agencija za zaštitu životne sredine, 2012).

CONCLUSION

The endangerment of the security of states in modern international relations is an extremely complex social phenomenon that, conditionally, has two components: internal threat and external threat. However, the fact is that it is very difficult to draw a sharp line between the forms of internal and external threats to security.

In the theory and practice of security, there is no agreement regarding phenomena that threaten security, both in terms of their theoretical definition and also in terms of type, shape and other characteristics. In principle, there are two points of view on security threats. First, which determines these phenomena as sources, bearers and forms of endangerment and second, which names these occurrences as challenges, risks and security threats.

Forms of internal endangerments of security, although they cannot be strictly separated from forms of external threats, nevertheless, in a theoretical and practical sense, can be separated and analyzed as a separate group of phenomena that threaten internal security. By generalizing the form of internal threats to security, the following points can be made:

First, all analyzed security strategies take into account theoretical views on the sources of security threats, grouping them into: (1) natural (earthquake, flood...), (2) social or human action, (3) technical-technological endangerments, with or without human intervention actions. To that classic triad in modern conditions are added pandemics, epidemics and diseases of a wider scale, the causes of which may be different, but they evidently remain in the sphere of human health.

Second, in accordance with the security sectors or security-influencing areas, all strategies respect the theoretical positions that security threats are found in the military, political, economic, social and environmental spheres (sectors, areas). At the same time, to the term military sector, when it comes to internal forms of endangering security, would better suit the name - armed form.

Third, and in accordance with the above mentioned, it is evident that two classic forms of threats to internal security remain in force - armed and unarmed security endangerment. At the same time, it is evident from the analysis of the aforementioned security strategies that unarmed forms of internal threats to security prevail.

Fourth it is evident that each country, viewed individually, has certain specifics regarding internal threats to security, which, again, have different historical and other contexts and causes. A typical example is the Republic of Serbia, whose national security strategy states that the biggest security threat is the unilateral and illegal declaration of Kosovo's independence.

Fifth, by generalizing on a special level, when it comes to forms of endangering internal security, the following groups of those forms can be distinguished: (1) organized crime, (2) economic problems, (3) energy dependence and instability, (4) political, religious, ethnic antagonisms, (5) natural accidents and disasters, (6) technical-technological accidents, (7) epidemics and diseases on a wider scale and (8) high-tech crime, also known as „cybercrime“.

At the individual level, the biggest threats to internal security come from organized crime and natural disasters.

REFERENCES

1. Мијалковић, С. & Поповић, М. (2015), Увод у студије безбедности, Криминалистичко-полицијска академија, Београд.
2. Стајић, Љ. (2013), Основи система безбедности, Правни факултет, Нови Сад.
3. Савић, А. & Стајић, Љ. (2007), Основи цивилне безбједности, Факултет за пословни менаџмент, Бар.
4. Мијалковић, С. (2011), Национална безбедност, Криминалистичко-полицијска академија, Београд.

5. National Security Strategy of the USA, Washington D.C., http://www.whitehouse.gov/sistes/default/docs/2015_national_security_strategy.pdf (15.04.2015).
6. Стратегија националне безбедности Руске Федерације, Москва, 13.мај.2009. године.
7. *European Security strategy - "A secure Europe in a Better World"*, <http://ue.eu.int/pressdata/EN/reports/78367.pdf> (15.04.2016).
8. Стратегија националне безбедности Словеније, Љубљана, 2001.
9. Стратегија националне безбедности Црне Горе, Подгорица, 2006.године.
10. Стратегија националне безбедности Републике Мађарске, Будимпешта, 31.03.2004. године.
11. Стратегија националне безбедности Румуније, Букурешт, 2004.
12. Стратегија националне безбедности Републике Србије, „Службени гласник РС“, број 98/2009.
13. Нацрт стратегије националне безбедности Хрватске, Загреб, 2014.године.
14. Ејдус, Ф., Међународна безбедност, теорије, сектори и нивои, Службени гласник, Београд, 2012.
15. Увод у студије безбедности (приредио Пол Д. Вилијамс), Службени гласник, Београд, 2012.
16. <http://www.pravniportal.com/stopa-kriminaliteta/> (приступљено 04.05.2016).
17. <http://narkomanija-narkomanija.blogspot.rs/2014/02/u-srbiji-30000-narkomana.html> (приступ 04.05.2016).
18. Игњатовић, Ђ.(1998), Организовани криминалитет, други део, Полицијска академија, Београд.
19. Бошковић, М.(2003), Облици организованог криминалитета у нашем кривичном законодавству, Безбедност, број 3/2003.
20. Стојановић, З. (1990), Организоване форме криминалитета, Безбедност и друштвена самозаштита, број 5/1990.
21. Стратегија за борбу против организованог криминала, „Службени гласник РС“, број 23/2009.
22. Национална стратегија заштите и спасавања у ванредним ситуацијама, „Службени гласник Републике Србије“, број 86/2011.
23. Милановић А. и др. (2010), Поплаве у Србији у периоду 1999-2009. година – хидролошка анализа и мере заштите од поплава, Гласник српског географског друштва, свеска 90, Београд, 2010.
24. Стратегија заштите и спасавања од пожара, „Службени гласник Републике Србије“, број 21/2012.
25. Извештај о стању земљишта у Републици Србији за 2011.годину, Агенција за заштиту животне средине, Министарство енергетике, развоја и заштите животне средине, Београд, 2012.

UDC: 336.152:355.1
Original scientific paper
Received March 15, 2023
Accepted: March 29, 2023
Corresponding author: nedzad.imamovic@fbsp.edu.rs

POSSIBILITIES OF MORE EFFECTIVE SPENDING OF FUNDS IN THE DEFENSE SYSTEM

Nedžad Imamović

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: nedzad.imamovic@fbsp.edu.rs

Branko Tešanović

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: branko.tesanovic@fbsp.edu.rs

Vera Krmpot

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: vera.krmpot@fbsp.edu.rs

Abstract: *In this paper, we will present our views, partial analysis and our proposals for possible solutions for more effective spending of resources for the defense of the Republic of Serbia. We believe that this is a very important topic in the current situation, when all levels of decision-making and execution are looking at possible ways of saving, that is, of rationalizing the consumption of all resources. It is known that a large part of the resources of the defense system of each country, including ours, is related to the procurement of “something that may be needed someday.” This is precisely where the starting point lies for looking at and investigating the justification for the enormously high resources of a country’s defense system, or rather for equipping and arming with means of combat and non-combat techniques. It is a well-known fact that in the world, including our country, the consumption of defense funds increases every year, through the adoption of the budget of the Republic of Serbia and its rebalancing during one budget year. In this way, means for defense, i.e. expenses on that basis, reach extremely high values, while far more important areas of life such as education, health, social protection, science and others are neglected and relegated to the background. The latest research and data from this field show that our country, as well as Croatia, records the highest level of defense spending. Thus, for example, in the last few*

years there has been a large increase in funds for the defense system, as well as the police, while at the same time there has been a decrease in funds for education, health and social protection. The state, i.e. its bodies, face an extremely important task, to make appropriate decisions at this very sensitive moment, which, according to the current situation, will help to overcome the already evident crisis in all spheres of life and properly allocate and direct the available resources so that there are no major consequences for the economy of the country and the standard of living of citizens. It is necessary to carefully evaluate where we can spend more effectively, that is, where expenses can be reduced in order to compensate and direct the funds in the so-called "critical areas" and we know that these areas are currently energy, supply, agriculture and others.

Key words: consumption of funds, defense system, more efficient consumption

INTRODUCTION

Defense represents one of the general social needs almost since the beginning of the existence of mankind. Always, when defense is the subject of consideration, the question arose: "How much resources are needed for the defense of a certain country?" However, that question represents a kind of puzzle for which practically no one in the world has a real solution, regardless of all the "institutional" and public discussions about the means needed for the defense of the country." Of course, we should add there a wide range of relationships and reactions both on an individual and group level when it comes to one country. Such a complex issue requires a broad social consensus at the level of each individual state, with simultaneous consideration of the results and numerous of other factors that influence the final attitude and determination of those who make decisions regarding the amount of defense funds, i.e. the defense system. Observed at the world level, the average of the funds allocated to the defense system ranges from about 6% of the gross domestic product (GDP), with the individual allocations of the states ranging from 1% to 30% of GDP and the highest percentage is allocated by the countries that are at war.

Regarding our country, we can say that the planning, allocation and consumption of funds for the needs of the defense system takes place "in accordance with the material possibilities and the security situation in the region."

1. EXPENDITURE IN OTHER DEFENSE SYSTEMS AND ITS LATEST TRENDS

Globally, spending on defense systems rose to \$1981 billion in 2020, an increase of 2.6 percent in real terms over 2019 (SIPRI, 2021). Furthermore, according to the same source (SIPRI - Stockholm International Peace Research Institute), "the five largest spenders in 2020, which together accounted for 62 percent of global military spending, were the United States, China, India, Russia and the United Kingdom."

The above mentioned increase in spending on defense systems at the world level of 2.6 percent in 2020, occurred at a time when the world gross domestic product (GDP) decreased by 4.4 percent (according to the International Monetary Fund), which is mainly the consequence of the economic implications of the Covid-19 pandemic. What resulted from that is the fact and data that spending on defense systems (observed as a percentage of GDP) at the world level reached an average level of 2.4 percent in 2020, while that average in 2019 was 2.2 percent. Therefore, it follows that this is the biggest jump in spending for defense systems (on an annual basis) since the global financial and economic crisis in 2009 (SIPRI, 2021).

As for the United States of America, as the largest spender in the world in this area, its consumption in 2020 reached the amount of about 778 billion dollars, which means an increase of 4.4 percent compared to 2019. As the world's largest spender, the US accounts for 39 percent of total global expenditure in 2020, marking "the third consecutive year of growth in US consumption after seven years of continuous decline" (SIPRI, 2021).

We conclude that spending on defense systems at the global level, as well as in most cases of individual countries, recorded significant growth in 2020 regardless of the consequences of the Covid-19 pandemic.

In order to take a closer look at the amount of funds spent by defense systems in the world, as well as the trends of these funds in the last ten years, we selected a number of countries in Central and Western Europe (Table 1), where we presented the relative amounts of funds (as a percentage of GDP). Thus, from the aforementioned tabular overview, we can see that the means of the defense system of the selected countries are constantly increasing, from year to year, and this trend is expressed mainly in the largest number of countries in the world (regardless that the data does not include all countries). It is evident that the allocation of funds for defense in Luxembourg ranges from 0.39% in 2012 to 0.63% of GDP in 2021, which again supports the fact that we previously stated, that there is a constant increase in the allocation of funds (in this case it had almost doubled in the analyzed period). Furthermore, looking at the relative amount of funds shown, we see that Luxembourg (0.39%) and Austria (0.78%) have the smallest amounts of funds (at the beginning of the analyzed period), while the highest percentage amounts are recorded by Serbia (1.97%) and Greece (2.44%). Therefore, Serbia is at the very top with its percentage of allocation of funds for the defense system. Taking into consideration the movement of the specific amounts of funds of the selected countries in the given period, we observe that the largest increase in allocations was expressed in the case of Luxembourg (from 0.39% in 2012 to 0.63% of GDP in 2021), Croatia (from 1.67% in 2012 to 2.74% in 2021) and Greece (from 2.44% in 2012 to 3.87% in 2021) which only complements the claim of a constant increase in funds allocated and spent for defense systems, or in other words for weapons and military equipment. If this analysis includes the fact that most countries do not have a lot of room for increasing "tax revenues", it inevitably directs us to the so-called "expenditure side" of the budget, which again does not leave many opportunities for more rational spending, i.e. for saving of funds.

Table 1. Comparative overview of funds for financing the defense system of selected countries (% GDP)

Country	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Central Europe										
Bulgaria	1,34%	1,46%	1,31%	1,25%	1,25%	1,23%	1,45%	3,15%	1,54%	1,59%
Croatia	1,67%	1,63%	1,82%	1,76%	1,60%	1,64%	1,55%	1,61%	1,77%	2,74%
Poland	1,80%	1,78%	1,91%	2,14%	1,94%	1,89%	2,05%	1,97%	2,30%	2,12%
Romania	1,23%	1,29%	1,35%	1,45%	1,41%	1,72%	1,81%	1,84%	2,03%	1,95%
Serbia	1,97%	1,90%	1,94%	1,83%	1,75%	1,84%	1,61%	2,21%	2,10%	2,09%
Western Europe										
Austria	0,78%	0,75%	0,75%	0,70%	0,73%	0,76%	0,74%	0,73%	0,83%	0,80%
Greece	2,44%	2,37%	2,35%	2,47%	2,58%	2,56%	2,72%	2,67%	2,81%	3,87%
Luxembourg	0,39%	0,40%	0,41%	0,45%	0,41%	0,52%	0,53%	0,57%	0,63%	0,63%

Note: author's calculation based on available data from the SIPRI database (<https://milex.sipri.org/sipri>)

2. MILITARY EXPENDITURE AND BURDEN ON NATIONAL INCOME

The army as a state institution is a significant spender of budget funds. In 1997, the country (FRY) allocated about 1.3 billion dollars for defense purposes, of which 79.1% was for the needs of the Army, or about 95 dollars per inhabitant, or about 10,000 dollars per soldier. In 2003, according to the amount allocated from the gross domestic product (GDP) per member of the defense system, with an average of 6,468 euros per soldier, the Army of SCG was "richer" only than the armies of Ukraine (1,556 euros), Bulgaria (3,950 euros), Russia (5,665 euros) and Macedonia (5,696 euros). Having this in mind we should note that one percent of Bulgaria's GDP was allocated for defense purposes, 1.67 percent of Ukraine's, two percent of Macedonia's and 2.87 percent of Russia's, while 2.95 percent was allocated for the SCG defense system. At the same time, the size of our existing defense system was 0.74 percent of the population, Macedonia 0.48, Ukraine 0.60, Bulgaria 0.73 and Russia 0.87 percent of the population (Tešanović, Imamović & Kostić, 2008). Table 2 provides data on the number of soldiers and the defense budget of Serbia.

Table 2. Overview of the defense costs of Serbia

Year	No of soldiers*	Defense budget* (mill \$)	Defense as a percentage of GDP**
2004.		782	3,3%
2005.		774	2,9%
2006.	45.180	730	2,5%
2007.	34.700	795	2,5%
2008.		844	2,5%
2010.	26.500		

* Defense strategic review (draft), July 2006.

** Data include Montenegro as well (Bela knjiga odbrane SCG, april 2005.)

When we analyze defense budget costs, ie military budgets, we have an interesting situation. According to AFP and SIPRI statistics from 2005, military budgets spend between 9.2 billion \$ in Brazil and 417.4 billion \$ in the USA (Russia 13.0; Germany 27.2; China 32.8; France 35.0; Great Britain 37.1; Japan \$46.9 billion) (Tešanović, 2014). These are huge figures, which burden the gross domestic product of national economies and their budgets: this further promulgates inflation, unemployment, budget deficit, public debt with reversible effects on economic growth and private savings (Tešanović, Imamović & Kostić, 2008).

In this context, growing unemployment and growing public debt were recorded, despite the relatively successful suppression of inflation and the reduction of the budget deficit (Tešanović, 2014).

We have already pointed out in the introductory part of this paper that the highest percentage of allocation of funds for the needs of the defense system is made by countries that are “at war”. Observed nominally, the consumption of funds for the defense system of Russia, due to the war in Ukraine, will increase drastically from April 2022 onwards. Some data indicate that the consumption is at a level higher than 20 billion rubles, that is, 300 million dollars per day (which is a definitive estimate of certain expert bodies, because it is not yet possible to obtain precise data). All the mentioned assessments are distinguished by one common statement, which is “an extremely high daily rate of consumption of the resources of the Russian defense system in wartime circumstances.” At the moment, those figures range “from \$500 million per day to \$900 million, with forecasts that spending levels could reach \$20-25 billion per day” (Cooper, 2022)

For the sake of a more detailed analysis of the consumption of the funds of the mentioned countries, we singled out a characteristic period (2014-2021), because it is considered that since 2014 there exists the so-called “quiet war” between these two countries, and in 2022 there happened an escalation of the conflict. By comparative analysis of the data from Table 2, we can conclude that the consumption of funds for Russia’s defense system (as a percentage of GDP) recorded a significant increase in the period 2014-2016. year (from 4.11% to 5.43%), while at the same time the consumption of funds on the same basis in Ukraine also recorded a significant increase (from 2.25% in 2014 to 3.15% in 2016). In the period from 2017 to 2019, there is a slight decrease in spending on the defense systems of the mentioned countries, and again in 2020, the spending of resources will record a significant increase, both in Russia and in Ukraine.

Table 2. Comparative overview of means for financing the defense systems of Russia and Ukraine (as % of GDP)

Year:	2014	2015	2016	2017	2018	2019	2020	2021
Country:								
Russia	4,11%	4,87%	5,43%	4,25%	3,69%	3,83%	4,26%	4,08%
Ukraine	2,25%	3,25%	3,15%	2,88%	3,19%	3,52%	3,81%	3,23%

Note: author's calculation based on available data from the SIPRI database¹ (<https://milex.sipri.org/sipri>)

3. EXPENDITURE OF FUNDS IN THE DEFENSE SYSTEM OF THE REPUBLIC OF SERBIA

In order to talk about the consumption of funds, it is necessary to emphasize that this process is preceded by a number of other processes, and in this paper we will refer to the planning of funds for the defense system, that is, the financing of its needs. The very process of planning the funds that will be used to finance the defense system is based on the real economic capacities of the Republic of Serbia, basic tasks and defined goals, results from security assessments, formulated strategic interests as well as resulting obligations. In that process, "long-term, medium-term and annual priorities are unequivocally specified and economic and efficient use of funds approved for defense purposes is ensured" (Ministry, 2010).

The spending of funds in the defense system is an integral part of the entire "public spending", the financing of which is carried out through the "budget of the republic and it ensures the achievement of the goals and objectives of the defense" (Tešanović, Imamović & Kostić, 2008).

Having this in mind, we come to the conclusion that the consumption of funds in the defense system is a segment of "total public spending" and that it is oriented towards the realization of the tasks of the defense system. Considering its basic purpose, the spending of funds in the defense system is characterized by the following (Tešanović, Imamović & Kostić, 2008):

- "the greater part of the material means has a special purpose, because it serves to meet the needs of the country's defense;
- a large part of the material resources is provided through a special organization, from production to the place of consumption;
- there is a possibility that part of military research is used for civilian purposes;
- the implementation of military programs implies a cooperative relationship with civilian companies, which gives momentum to the production process and

1 SIPRI - Stockholm International Peace Research Institute. SIPRI is an independent international institute that conducts research on conflict, armaments, arms control and disarmament. Founded in 1966, it provides data, analysis and recommendations, based on open sources.

- due to the importance of the defense system, meeting its needs deserves special attention.”

When it comes to the funds used to finance the defense system of the Republic of Serbia, it is necessary to emphasize that the amount of these funds is determined by the size of the gross domestic product (GDP), by allocating a certain percentage of that economic size or category for the stated purpose. The previous claim stems from the provision: “that the defense system is part of the social system and constitutes a segment of the socio-economic structure” (Kostić , Knežević, & Lepojević, 2018). It is precisely because of this fact that the need to finance the defense system from the available sources of “total social reproduction” arises.

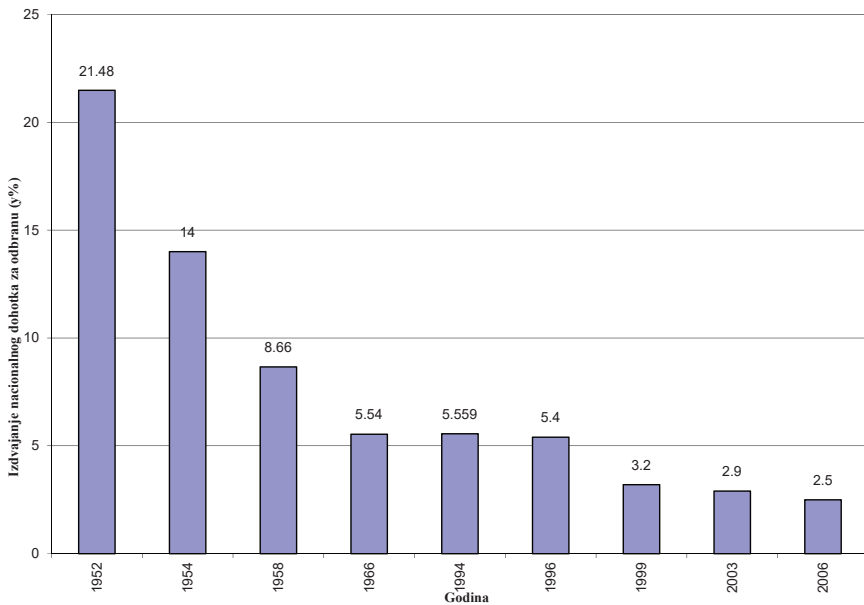
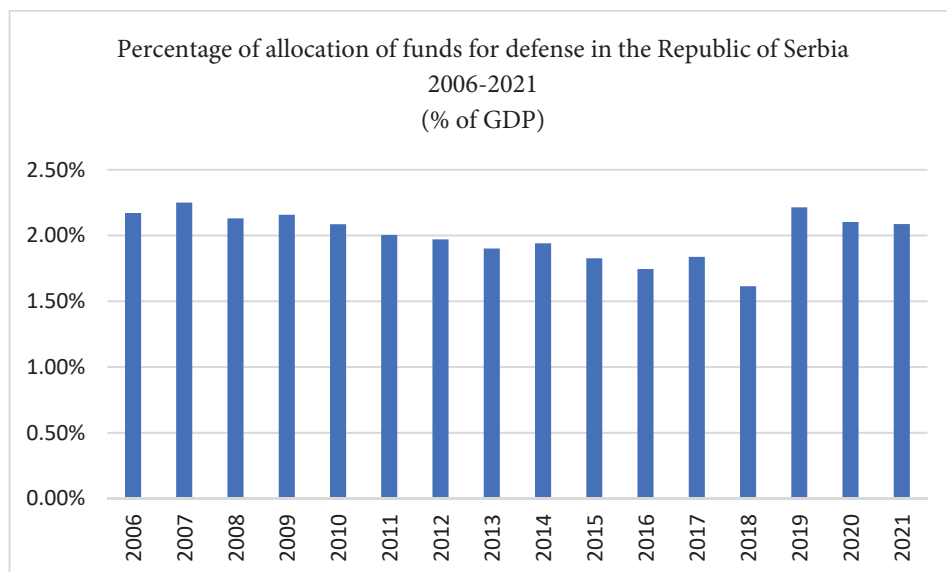


Chart 1. Allocation of funds for defense in Yugoslavia-FRY (% of GDP)



Graph 2. Allocation for defense in Serbia for the period 2006-2021 (% of GDP)
(source: <https://milex.sipri.org/sipri>)

Since the end of the Second World War, Yugoslavia has allocated significant resources for defense. In Graph 1, characteristic years are highlighted: 1952, 1954, 1958, 1966, 1994, 1996, 1999, 2003 and 2006, and based on that, it can be concluded that the percentage of funds allocated for defense was continuously reduced during the mentioned period.

We had begun the year 1998 with a deficit of 1.5 billion dinars, and 67.8% of the total budget funds were earmarked for defense financing (6,550 billion dinars). Funds for military needs amount to 4.97% of the total social product, so military expenditures per inhabitant amount to 78 dollars, which is significantly less compared to countries with approximately the same number of inhabitants: Greece - 333, Belgium - 327, Czech Republic - 125 dollars per resident (Tešanović, 2014).

Graph 2 clearly shows that the percentage allocations for defense in the Republic of Serbia have been slightly above 2% of GDP since 2006, and that percentage was maintained for a short period, so that from 2011 until 2018, the percentage was constantly below 2%, and even significantly below 2% (in 2016 and 2018). The allocation level recorded a significant increase in 2019, and it remained above 2% in 2020 and 2021.

If we compare the data from Charts 1 and 2, we will conclude that the percentage of allocations for defense recorded a constant decline in the period 1952-2006, which indicates the determination of the state to reduce defense allocations to the so-called “reasonable level”. Furthermore, from Graph 2, it is evident that the percentage of allocations for defense in our country is “retained” below the level of 2.5% of GDP, which certainly represents a positive shift in terms of spending funds for that purpose.

Herewith we should further note that the GDP of Serbia in the last ten years (end of 2021) is constantly increasing, which mainly creates opportunities for higher nominal allocations for defense, but at the same time there is a lower percentage of allocations, which again leaves room for other purposes within the state budget. By comparing the data on allocations for the defense system in our country with the data of other countries in the region, we come to the conclusion that the allocations of our country are on the same basis higher than other countries in the region (Albania, Hungary, Bulgaria and others) but at the same time lower than the allocations for the defense system in Croatia. However, it should be emphasized that such comparisons should only be made with countries with similar characteristics (number of inhabitants, numbers of the army or the defense system, gross national income and the percentage allocated to the defense system, etc.).

In order to complete this analysis, Table 3 provides a comparative overview of funds for the defense system of the Republic of Serbia, which are allocated in accordance with the Law on the Budget of the Republic of Serbia. As part of the aforementioned review, the means for equipping, which are contained within the means for the defense system, are shown. By analyzing the data from Table 3, it becomes noticeable that the funds allocated for the defense system of the Republic of Serbia in 2022 compared to 2012 have increased 2.3 times, which represents an enormous increase regardless of the length of the period. Also, comparing data on equipment funds within the budget of the defense system, we see that the allocation in 2022 (60.4 billion dinars) is 14.7 times higher than the allocation for that purpose in 2012 (4.1 billion dinars). Therefore, the data from Table 3 lead us to the conclusion that the funds for the defense system have been increasing rapidly in the last ten years, with this increase being the most convincing in the last three years of the analyzed period (2020-2022). At the same time, with the aforementioned increase comes a drastic increase in funds for equipping the defense system, whereby the increase is twice as much in 2021 as compared to 2020, only to be slightly reduced in 2022, with the emphasis that this is not the final data considering that the budget year is still going on. By analyzing the structure of funds for equipping the defense system in 2022, it was concluded that “the largest part of these funds refers to the procurement of weapons and military equipment (about 51 billion dinars)” (Banković, 2021).

Table 3. Comparative overview of funds for the defense system of the Republic of Serbia

	2010.	2011.	2012.	2020.	2021.	2022.
Defense budget (billion din.)	47,1	49,8	59	104	152,1	136
Equipment funds (billion din.)	5,5	4,7	4,1	33,7	71	60,4

Note: Compiled by the author on the basis of available data from the Law on the Budget of the Republic of Serbia for the specified years

As stated by some expert analyzes of the structure of the budget of the defense system for 2021, this “drastic increase in funds for equipping”, i.e. for weapons and military equipment, they ultimately reflect the intention of the state leadership of the Republic of Serbia to “enter into new contracts for the procurement of complex combat systems that cost hundreds of millions of euros” (Radić, 2021).

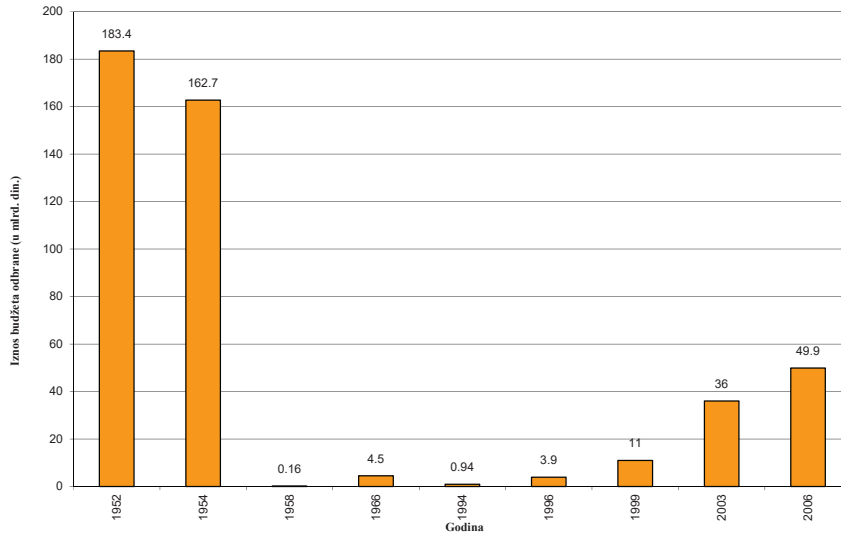
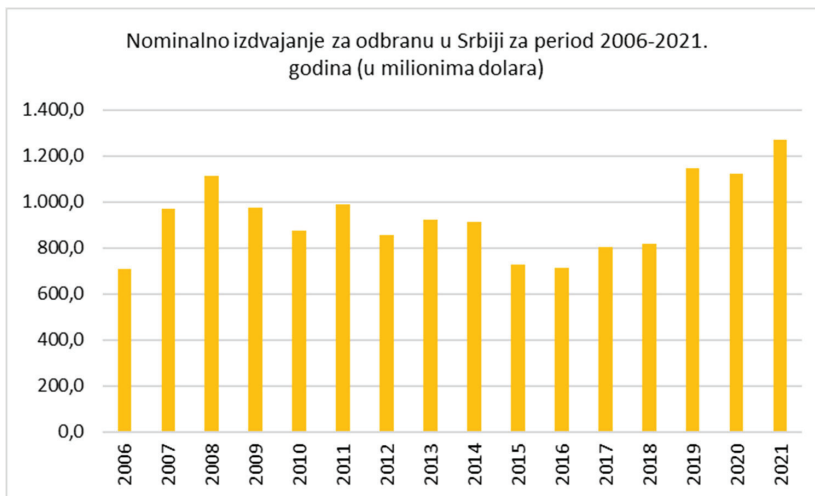


Chart 3. Nominal allocation of funds for defense in Yugoslavia-Serbia for the period 2006-2021



Graph 4. Nominal allocation for defense in Serbia for the period 2006-2021 (mill of US\$) (source: <https://milex.sipri.org/sipri>)

While Graph 3 provides data that after 2000 there was an increase in funds (in nominal amount) allocated for defense (Tešanović, Imamović & Kostić, 2008), on the basis of Graph 4, it can be concluded that the allocation of funds for defense in Serbia, in the observed period, does not have continuity in terms of height, but on the contrary shows constant variations where periods of growth alternate with periods of decline in nominal allocation. Thus, for example, from 2006 to 2008, we had a significant increase in allocations, but in 2009 and 2010, there was a noticeable drop in allocations for defense. After that, we see that in 2011 there is again a significant growth, so that the value of allocations in the period from 2012 until the end of 2018 would be in stagnation or a slight increase. In the last three years (2019-2021), there has been a sudden jump in nominal defense allocations (over one billion dollars annually), which we have already pointed out earlier in this paper.

Indeed, we must herewith emphasize that the consumption of defense system funds, specifically for our country, and for the most part for a huge number of other countries, can also have positive effects on internal reproduction, by ensuring the stable development of the state (especially in emergency situations) by creating demand for new products and the results of scientific and research work in the defense system which further provides the possibility of application in other systems such as the economy and the like.

Table 4. Comparative overview of funds for the defense systems of the countries in the region (mill of US\$)

Country	Denom.	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Albania	USD	183,2	180,0	178,1	132,4	130,9	144,4	175,9	200,1	187,4	236,4
B & H	USD	197,3	197,6	190,4	162,2	157,9	156,3	172,1	165,4	167,5	192,2
Croatia	USD	955,3	957,0	1063,5	883,2	836,7	920,8	966,4	1001,8	1013,0	1739,8
North Macedonia	USD	119,4	126,5	124,2	100,0	103,5	100,8	119,6	146,1	153,5	214,6
Serbia	USD	853,6	919,8	913,4	724,2	710,4	801,7	817,7	1143,8	1121,2	1270,8
Slovenia	USD	543,5	506,7	486,2	400,8	449,2	473,8	529,5	572,9	567,7	734,4

Note: author's calculation based on available data from the SIPRI database (<https://milex.sipri.org/sipri>)

In order to complete this analysis, we should also mention the fact that the allocations of our state in the last few years (covered by the analysis) have been reduced when it comes to areas such as education, health and social protection, while we have already stated that, in the same period, expenditures for the defense system increased many times with the tendency of further growth. This is certainly one of the indicators that the distribution of funds at the state level should be reconsidered, which would result in investments in more promising and vitally important projects.

4. POSSIBILITIES OF MORE EFFECTIVE SPENDING OF FUNDS IN THE DEFENSE SYSTEM OF THE REPUBLIC OF SERBIA

Bearing in mind the current economic situation and the increasingly certain crisis, both in the world and in our country, it is very important to seriously approach the issue of reducing public spending, “within which spending for defense purposes is a significant item” (Tešanović, Imamović & Kostić, 2008). In the above text of this paper we could see that any increase in funds allocated for the needs of the defense system has negative implications for the amount of funds allocated for “accumulation and personal consumption” because analogously to the increase in spending for defense purposes, the pace of increase in the rate and volume of investments is decreasing (Tešanović, Imamović & Kostić, 2008).

The fact that is very important for the success of a more efficient use of budget funds both for the defense system and for all other budget users is that all projects and programs foreseen in the financial plans of the users are clearly and unambiguously presented, because this is the only way to achieve the common goal, as follows: “We must create an incentive to spend funds more rationally and we must direct them to priorities.” The result of such an approach is the fundamental principle of “good budget practice and responsible management of public finances” (Fiscal Council, 2021)

In the context of a more appropriate use of resources in the defense system, it should be noted that for many years we had faced the so-called “inertia” that guided a huge number of those who decide on the consumption of funds according to the principle “when savings are made on one side, it should be transferred to another position of expenses and finance other projects” (Imamović, 2013). In this way, funds are most often spent on tasks or projects that are not that important or worth investing in from the aspect of the effectiveness of those funds, that is, from the point of view of their impact on increasing the capabilities of the defense system or some part of it. It is an important task for those who manage the defense system and who decide on the spending of funds to completely eliminate such an approach from practice.

Insisting on more effective spending of funds in the defense system does not mean “savings” in its primitive form, but a special way of managing the organization and conducting business, which gives the greatest importance to the optimization of costs in achieving organizational goals” (Imamović, 2011).

The management of the defense system of the Republic of Serbia must recognize the growing influence of the perception of assets as well as the need for efficient disposal and management of those assets. It is, in fact, nothing more than abandoning one way of thinking that reads: “Someone else finances, we spend, there is no problem” and accepting another way of thinking which states: “We achieve our goals in a cost-effective way” (Imamović, 2011)

Having in mind the experiences and results of other, mostly advanced, defense systems and their armies, we can conclude that the transition process itself in terms of spending resources and their more effective engagement is very demanding, especially

from the aspect of limitations and the constant danger of the decline of the so-called “fiscal resources.” It is necessary for the defense system to form a precise, properly planned and functionally objective strategy of transition from a typical “user of budget funds” to the absolute optimization of the use of funds as if it were a business organization that leads a continuous struggle for business success and survival on the market.

By including the previous views and claims, we arrive at the following set of possibilities for a more expedient deployment of resources in the defense system:

- a) In the process of planning funds for the needs of the defense system, stick to the set goals and priorities and express the need for funds in realistic terms;
- b) Realize spending of funds strictly according to established programs and projects, with maximum cost optimization at all levels;
- c) Effectively carry out the process of spending funds and continuously review and analyze all the effects resulting from the spending of funds with an effort to minimize possible negative effects;
- d) Constantly review and review the spending of funds both for maintenance and for the procurement of new funds and systems, because this is the segment that carries the largest part of the funds of the entire defense system;
- e) When purchasing, especially new funds, rely maximally on domestic economic and other capacities in order to promote the economic development of our country;
- f) Review the existing supply chains and wherever possible give priority to domestic companies.

CONCLUSION

Through the analyses carried out in this paper, we have enabled ourselves to see the flows of funds consumption in the defense system, where the most attention is drawn to the data on the amount of funds spent on equipping, that is, on the procurement of “weapons and military equipment”, as well as the fact that in the last few years the amount of funds for this purpose significantly increased. However, this should not be interpreted as the exclusive spending of funds for armaments, because within this, significant funds are allocated and spent for the modernization and renovation of existing combat systems that originate from the former common state (SFRJ).

A more efficient use of funds in the defense system would enable the redistribution of those funds to other programs, ie to projects important for social life, such as: infrastructure projects of public importance, health and social programs, projects and programs in the field of education, as well as research and development. Furthermore, we should point out that such an approach must in no case endanger the vital interests of the country’s defense, that is, it must not lead to a decrease in the operational and functional capabilities of the defense system.

One of the solutions that arises in the consideration of this problem is raising the level of awareness of all those who who make decisions, both on the allocation and consumption

of funds in the defense system of the Republic of Serbia. The long-standing practice of “spending funds up to the maximum percentage of realization” must be completely eliminated; this way we are opening up the possibility of redirecting funds to projects that are far more important at that moment, with the possibility of allocating funds to other budget users.

We are of the opinion that the percentage of defense allocations should be kept at the level of up to 2% of GDP, because any “slight reduction” would enable the redirection of funds to, as we have already stated, critical areas of financing such as: certain social programs, public infrastructure projects, the field of education, as well as research and development. As we have already pointed out in this paper, the GDP of Serbia in the last ten years has recorded a constant growth, which enables greater allocations of funds for defense (in nominal amounts) but also a reduction of the “burden” through the percentage of allocations, which opens up space for financing other areas in to the state. Of course, it should be noted here that the allocation of funds for the defense system in our country does not at all exceed “the consumption of funds in public enterprises necessary for the realization of the set goals.” (Tešanović, Imamović & Kostić, 2008) In addition, we must once again emphasize that, there exists “an unfounded myth about the defense system as one of the largest systems in the country, the largest consumer of funds and one of the main initiators of economic imbalance” (Tešanović, Imamović & Kostić, 2008)

REFERENCES

1. Banković, Ž. (2021). Retrieved october 17, 2022, from Živojin Banković, 2021., Vojni budžet Srbije za 2022. godinu: 1,123 milijarde evra, Tangosix.rs. : <https://tangosix.rs/2021/11/11/vojni-budzet-srbije-za-2022-godinu-1123-milijarde-evra/>
2. Cooper, J. (2022, october). Retrieved october 22, 2022, from SIPRI: https://www.sipri.org/sites/default/files/2022-10/bp_2210_russianmilex.pdf
3. Fiskalni savet. (2021). *Ocena predloga Zakona o budžetu Republike Srbije za 2022. godinu 18. novembar*. Fiskalni savet.
4. Imamović, N. (2011). (*Inovativni pristup upravljanju troškovima u sistemu odbrane Republike Srbije*), 248. Novi Sad: Privredna akademija u Novom Sadu - Fakultet za ekonomiju i inženjerski menadžment.
5. Imamović, N. (2013). *Vojno delo, vol. LXV, no. 4/zima*(Uvođenje finansijskog menadžmenta troškova u Vojsci), str. 243-256.
6. Kostić, R., Knežević, M., & Lepojević, M. (2018). Struktura rashoda za finansiranje odbrane Republike Srbije. *Oditor, Vol. IV, no.1*, str. 171-182.
7. Ministarstvo odbrane (2010). *Bela knjiga odbrane Republike Srbije*. Beograd: Medija centar „Odbrana”.
8. Radić, A. (2021). Retrieved october 17, 2022, from Balkansec.net: <https://www.balkansec.net/post/bud%C5%BEet-srbije-preko-600-miliona-evra-za-vojne-nabavke>

9. SIPRI. (2021, 4 26). Retrieved 10 22, 2022, from SIPRI: <https://www.sipri.org/media/press-release/2021/world-military-spending-rises-almost-2-trillion-2020>
10. Tešanović, B. (2000). *Ekonomika Jugoslavije u ratu*. Beograd: ŠONID.
11. Tešanović, B. (2014). *Ekonomija logistike odbrane*. Medija centar ODBRANA.
12. Tešanović, Imamović & Kostić. (2008). Doprinos analizi obezbeđenja i potrošnje budžetskih sredstava u sistemu odbrane. *Vojno delo, Vol. LX, no.4*, 111-131.

UDC:
Received
Accepted:
Corresponding author:

330.341:519.226
Original scientific paper
December 1, 2022
February 22, 2023
petar.kocovic@fiti.edu.rs

RESEARCHING THE EFFICIENCY AND FUNCTIONALITY OF BUSINESS SYSTEMS USING STATISTICAL AND DEA ANALYSES

Petar Kočović

Faculty of Information Technologies and Engineering, „Union - Nikola Tesla“
University, Belgrade, Republic of Serbia, e-mail: petar.kocovic@fiti.edu.rs

Slobodan Šegrt

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: slobodan.segrt@fsp.edu.rs

Radoljub Tomić

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: radoljub.tomic@fiti.edu.rs

Maja Andelković

Faculty of Information Technologies and Engineering, „Union - Nikola Tesla“
University, Belgrade, Republic of Serbia, e-mail: maja.andjelkovic@fiti.edu.rs

Abstract: *In this paper, the authors investigated aspects of whether DEA can shed light on relative DMU performance issues with identified, conceptually key input and output parameters and performance measures for representative DMUs of a business system. In this regard, the CCR and BCC models were applied at the level of representative examples. The CCR model is probably the most widely used in DEA analyses. It is also the most famous model based on the assumption of constant returns, which means that every feasible activity (k, i) implies the feasibility of activity (kt, it) for every positive number t . This model measures overall technical efficiency. The BCC model is used, in DEA, in the case of increasing or decreasing returns, when the change in the input variable is proportional (more or less) to the increase in output. This model measures purely technical efficiency (the efficiency*

measure is independent of business volume) by comparing the j th DMU unit only with units of similar size in a technical context.

The authors were aware that an implicit assumption in DEA is that there necessarily exists some relationship between inputs and outputs.

Companies or subsidiaries (DMUs) can show high input productivity and very successful managerial performance in organizing appropriate inputs in the relevant production processes. The situation is presented in which, when companies operate with constant returns to scale (CRS) throughout the observed period, it can be concluded that the size of the company is optimal.

Specific research, related to surveys and tests, described in this paper, deals with the efficiency of DMU groups (constituent decision-making units within business systems or supply chains). There are aspects of economies of scale, allocative inefficiency and input reengineering in production systems (as well as analysis of changes in productivity, impact of key variables on productivity, efficiency and functionality) according to the adequacy of identified production and business functions of the company.

The research results are presented in tabular and graphical form.

Keywords: business systems, DEA, DMU, CCR, BCC, CRS, VRS, SE, statistical tests, functionality, efficiency, composite indicators, production, productivity

INTRODUCTION

In the analysis of the efficiency of the company and its constitutive organizational units, DEA and complementary statistical analyzes are most often used today. Data envelopment analysis (DEA method), sometimes called frontier analysis, was first defined by Charnes, Cooper and Rhodes (1978).

The principles of efficiency and effectiveness are still the most important in measuring and analyzing economic effects with the possibility of maximizing income and/or profit with as little economic investment as possible. DEA as a non-parametric analysis of the efficiency of multiple units (DMU - decision-making unit) of a company or business system (conventionally speaking, DMU can be at the level of one company with operations in different time periods, it can also be at the level of regions, local communities or countries). Large companies and SMEs can be DMUs e.g. in bus transport, transport-logistics systems, supply chains, tourism organizations or insurance companies, where the economy of scale of service production is important. Large companies, in the economy of scale, have an advantage over SMEs, hence works such as (Ćiraković, Bojović and Milenković, 2014), with the application of DEA, indicated the necessity that SMEs in the transport sector must be reorganized and technologically redesigned. In the business of insurance companies, the authors analyzed works such as (Đurić, Z., Jakšić, M., Krstić, A., 2020), where the situation in Serbia was analyzed using DEA, and (Micajkova, 2015), where the efficiency of Macedonian insurance companies with DEA access was analyzed.

An overview of the research of other authors can be represented at the level of several representative researches and corresponding author's works.

DEA, as a technique for identifying and measuring company performance, is very important in assessing the relative efficiency of decision-making units in parent organizations (DMU - Relative efficiency of decision-making units - DMU's), prema (Radosavljević, M. et al., 2022).

The authors consider the obvious fact that there are many more unpublished studies (eg studies and analysis done internally by companies or by external consultants for the needs of certain firms). More about DEA can be found in the complementary literature (Jiyoung Lee and Gyunghyun Choi, 2019), (Lin et al., 2015), (Emrouznejad et al., 2018), (Međurečan, 2019), (Micajkova, 2015), (Đurić, Z., Jakšić, M., Krstić, A., 2020) etc.

The flexible structure of DEA, for example, facilitates its application in a wide variety of situations where insufficient information or guidance may preclude the use of parametric methods. The developed statistical tests significantly contribute to the reliability of management and production implications at the level of advanced DEA studies that have an increasing application of DEA in practice.

1. BASIC THEORETICAL RELATIONS

There are many models for analyzing the effectiveness of an entity depending on the available data, environmental conditions or specific management requirements. The basic equations start from the basic formula for calculating efficiency, which boils down to the following,

$$Efikasnost = \frac{Output(izlazniparametri)}{Input(ulazniparametri)}$$

DEA-based results must be valid and correctly interpreted. Definitely, the results must be applicable in real practice, in accordance with the relevant principles and algorithms regarding the application of DEA. The basic principles are given in (Bowlin, 1998). Within each phase of DEA analysis, some basic principles and rules that must be followed can be defined.

The results obtained by solving one of the models will be valid if the model fulfills some basic properties such as homogeneity, positivity, isotonicity, eliminability of Outliers, number of DMUs according to (Jiyoung Lee and Gyunghyun Choi, 2019) and (Savić and Martić, 2019).

The characteristic of positivity. When formulating a DEA model, input/output values are required to be greater than or equal to zero. The relative efficiency, that is, the efficiency index (based on the sum of the products of the weighting coefficients and input or output values) should be as high as possible.¹

¹ [https://slidetodoc.com/matematiki-modeli-efikasnosti-dr-gordana-savic-gocafon-bg-2/\(pristup:17.06.2022\)](https://slidetodoc.com/matematiki-modeli-efikasnosti-dr-gordana-savic-gocafon-bg-2/(pristup:17.06.2022))

Weighted factor control. Weighted factors are determined by resolving DEA models. Each weight is calculated so as to show the observed in the best light relative to the other DMUs of the observed set.

Homogeneity of DMU. Here, with the DEA concept, a relatively homogeneous set of entities is required, in connection with the convenient use of the same inputs for the production of the corresponding outputs (their values must always be positive).

Each DEA software should consist of the following modules:²

- Data management;
- Model selection;
- Troubleshooting;
- Generating reports.

According to (Cooper et al., 2000), the primary concept of DMU performance measurement is formalized in the form of a mathematical model at the level of linear programming (Međurečan, 2019). The DEA problem can be illustrated by the following mathematical expressions:

$$\max h_0 = \sum_{j=1}^n u_j Y_{jk0} \quad (1)$$

Where is,

$$\sum_{i=1}^m v_i X_{ik0} = 1 \quad (2)$$

$$\sum_{j=1}^n u_j Y_{jk0} \leq \sum_{i=1}^m v_i X_{ik0} \quad (3)$$

Where is:

- k - number of decision making units (DMU;);
- m – number of inputs (inputa;);
- n – number of outputs (output;);
- u – output weighted coefficient;
- v – input weighted coefficient.

In order to understand the essence, basic efficiency models will be presented at the level: CCR and BCC models. These models are named after the initials of their authors (CCR³, after Charnes-Cooper-Rhodes; BCC⁴, after Banker-Charnes-Cooper). The basic difference between the CCR (total technical efficiency) and BCC (pure technical efficiency) models consists in the assumed transformation of inputs into outputs.⁵

2 Ibid;

3 The model was first promoted by the authors: Charnes, Cooper and Rhodes (1978) in an article published in a journal "European Journal of Operational Research", vol. 2, br. 6, pp.429-444.

4 (Banker, Charnes and Cooper, 1984). Management Science (1984, Vol. 30/9, pp.1078-1092).

5 Bogović, T. (2014). Ocjena učinkovitosti upravljanja hrvatskim gradovima metodom omeđivanja podataka (AOMP), Varaždin, Fakultet organizacije i informatike.

CCR model. This is actually the basic model that is probably the most used in DEA analyses. It is also the best-known model based on the assumption of constant returns, which means that every feasible activity (x,y) entails the feasibility of activity (xt,yt) for every positive number t .

A virtual input and output is created for each DMU. At the start, the weighted coefficients are still unknown (:

$$\text{Virtual input} = v_1X_{1o} + \dots + v_mX_{mo} \quad \text{Virtual output} = u_1Y_{1o} + \dots + u_sY_{so}.$$

After determining the input and output, the weight coefficient is determined using linear programming to maximize the value of the ratio:

$$E = \frac{\text{virtuelniizlaz}}{\text{virtuelniulaz}} \quad (4)$$

The optimal weighted ratio varies with DMUs. Therefore, the “weighted coefficients” in DEA analysis are derived from the data, and are not known in advance. The CCR model (Constant return to scale CRS) calculates the total efficiency for each DMU, which includes the sum of pure technical efficiency and business volume efficiency. In the DEA model, the efficiency is maximized for each DMU, so that each variable of the selected indicators is assigned the weighted coefficient that best suits that variable (or the ratio of sizes, e.g. at the level of productivity by programs and employees). When the optimal (most favorable) weighted coefficients for each variable are established and assigned, virtual inputs and outputs are obtained. Now it is possible to apply equation (4).

All weighted coefficients must be non-negative ($w_i \geq 0$). There is a limitation, the maximum efficiency of the DMU cannot be greater than 1. Otherwise, there is also a concept of super efficiency (SE-Super efficiency) where the expression virtual output/virtual input can have $E > 1$. The CCR model is therefore applied for each DMU, with the aim of finding the optimum of each DMU, which can be expressed as:

$$\max h_k = \sum_{j=1}^n u_j Y_{jk} / \sum_{i=1}^m v_i X_{ik} \quad (5)$$

Where as,

$$\sum_{j=1}^n u_j Y_{jk} \leq \sum_{i=1}^m v_i X_{ik} \quad (6)$$

$$\sum_{j=1}^n u_j Y_{jk} / \sum_{i=1}^m v_i X_{ik} \leq 1 \quad (7)$$

Where as:⁶

- h_k – relative effectiveness of kth DMU
- k – number of decision making units

6 Ibid;

- m – number of inputs (X)
- n – number of outputs (Y)
- v – weighted coefficient of input (X)
- u – weighted coefficient of output (Y)
- ε – small positive value (most often it is $=10^{-6}$)⁷

For k th DMU, we search for E_{max} with the condition that the weighted sum of the output is less than the weighted sum of the input, from which it follows, $0 < h_k \leq 1$. The sums can vary:

- for $h_k = 1$, k – th DMU_k is relatively efficient;
- for $h_k < 1$, k – th DMU_k is relatively non-efficient.

The value of h_k gives an indication of how much it is necessary to relatively rationalize the consumption of resources (including the optimal use of employees) or to increase the overall business results in order to make DMU_k more efficient⁸

Efficient DMUs define the efficiency limit, which is shown as a line in the CCR model due to the assumption of constant returns.

Inefficient units are located below the efficiency frontier (convex line), and their projection onto the efficiency frontier is achieved by reducing inputs or increasing outputs.

BCC model. In DEA, this model measures purely technical efficiency (an efficiency measure that ignores the impact of business volume) by comparing the j th unit of the DMU only with units of similar volume in a technical context. The following equations apply here,

$$\max h_k = \sum_{j=1}^n u_j Y_{jk} + u_0 \tag{8}$$

$$\sum_{i=1}^m v_i X_{ik} = 1 \tag{9}$$

$$\sum_{j=1}^n u_j Y_{jk} - \sum_{i=1}^m v_i X_{ik} + u_0 \leq 0; k = 1, 2, \dots, n \tag{10}$$

While ,

$$j \geq \varepsilon, j=1, 2, \dots, n; v_i \geq \varepsilon, i=1, 2, \dots, m$$

Where as:⁹

- h_k – efficiency result of the k th unit of DMU,
- y_j – represent the j th output of the k th DMU,
- x_i - weighted coefficient of the i th input
- u_j - weighted coefficient of the j th output,
- n – number of outputs

7 Ibid;

8 Ibid;

9 Ibid;

- m – number of inputs
- u_0 - an additional variable that defines the impact of business volume (Međurečan, 2019).

BCC serves to analyze the efficiency of DMUs that achieve variable returns in relation to volume (VRS - Variable return to scale), and the efficiency borderline is then a convex curve (Đurić, Z., Jakšić, M., Krstić, A., 2020), (Međurečan, 2019).

For DMU units that define the efficiency limit, an additional variable defines the nature of the business according to the following (Međurečan, 2019):

- if $u_0 = 0$ then the BCC model is reduced to the CCR model, and the corresponding unit DMU $_k$ acts with a constant return on the volume of business;
- if $u_0 \leq 0$, DMU $_k$ operates with a non-diminishing return on business volume and
- if $u_0 \geq 0$, DMU $_k$ operates with a non-growing return on business volume.

It is noted that, by comparing the networks generated through the DEA application process, information about the actual distribution of effective DMs can be understood. Such research introduces three ways of expressing the relationship of DMUs in a network form:

- impact network (weight network);
- superiority (mreža jaza, gap network);
- domination (weighted-gap network).

In a typical DEA study, the efficiency score and benchmarking results are usually presented in table or text form. By analyzing multi-period trends in competitiveness and positional characteristics of DMUs, it is also possible to measure the sustainability of performance (application of “panel data”). Performance sustainability could become a new feature, alongside superiority and impact.

2. BASIS FOR DEFINING AND EVALUATING CRITERIA FOR ASSESSING THE EFFICIENCY AND EFFECTIVENESS OF DMU

The decision on the selection of criteria for referencing the efficiency and effectiveness of DMU is a complex concept, model and procedure, related to the domain of strategic planning. Solving a series of complex questions in the subject research framework concerns management theory, decision theory, decision support systems, expert systems, and of course, the issue of knowing the basic real system and its interaction with the environment (at the level of DMU and their connection).

Today, there are already tested mathematical-computer tools, as well as program packages and software that (collectively called models or decision support systems). The decision-making method is concerned with the type of problem and the amount of available information that describes it. In order to make a decision on the selection of criteria for the efficiency and effectiveness of DMU, it is necessary to evaluate variant solutions. The widely identified spectrum of criteria, in most cases, very often concerns their mutual conflict. Hence, as a rule, the problem is solved by the multi-criteria

decision-making method (eg FAHP). Criteria can be classified into groups such as: resource criteria, financial criteria, operational criteria (functioning criteria), criteria regarding the quality of services and security, etc. Managers, as a rule, follow the partial activities and processes of the DMU and, with the help of the mentioned criteria, get a certain picture of the functioning of the integral business system, but it is necessary to define an integration measure that unites all these criteria. Only with such a measure could a more comprehensive picture of the functioning of the system be obtained, which should serve the purpose of defining appropriate measures (corrective and preventive), plans and business-production actions.

Perhaps it is best to give our determination as authors on this matter at the outset. Efficiency, productivity, functionality and effectiveness are purely functions of representative organizational, production, economic and management parameters that concern the realization of overall quality and the realization of the performance of business systems through the realization of programs, projects, products and services. The permanent task of the company remains in force, regarding the maximization of business performance, which concerns the maximization of income, profit, satisfaction of all stakeholders and the minimization of costs and losses in functioning and business.

In this research, the main hypothesis was set,

Hg: The overall quality of the company is directly reflected through the functionality, efficiency, productivity and effectiveness of the organization.

In the subject sense, it was necessary to prove the functional dependence of the overall quality of the company (not only technical quality, and especially not only through purely technical efficiency - BCC) depending on the representative parameters of both input and output, while considering the correlation of quality and each of the key parameters. Everything, in a very convenient way, is presented below, at the level of the model and the results of the analysis. Great importance was given to these considerations by the statistical processing of results from the field (in accordance with the conducted surveys), where immediate answers were obtained regarding managerial, economic and functional parameters as well as parameters regarding the overall quality of business systems (at the level of QMS and TQM), according to (Šegrt, S., 2022a), (Šegrt, S., 2022b) i (Radosavljević, M. et al., 2022). All the obtained results represent a correct, modest but recognizable contribution to research at the level of complementary non-parametric and parametric analyses, i.e. at the level of combining models based on DEA principles and widely accepted statistical models in connection with applied functions (in these calculations, appropriate Excel functions were used). Subject functional dependencies and obtained results in a good and obviously possible way (with significant simplifications) reflect the algorithmic management of the calculation process and the logical order of the obtained process results, from the input to the final results and appropriate conclusions with recommendations on what and how to proceed.

Auxiliary hypotheses are set as follows,

- H1: There is a direct correlation, regarding quality, between efficiency and productivity.
- H2: There is a direct correlation, regarding quality, between efficiency and functionality.
- H3: There is a direct correlation, regarding quality, between efficiency and effectiveness.

Research into the efficiency and functionality of business systems using statistical and DEA analyses, is focused first on the identification of the most important variables (KBF - key business factors) and their functions at the level of initiating the process and during the implementation of the integrated process with all transformations (that is, at the level of input and output), in accordance with the application of DEA, and then, with the provision of a significant database at the level of recorded real indicators regarding the respective conditions and processes, the application of suitable statistical methods to directly determine the degree of their importance for each DMU, as well as at the level of the business system as a whole. Therefore, in addition to efficiency (DEA), correlations, reliability, risks and weight coefficients should be established through which gradients (or marginal values) of the contribution of each DMU can be viewed, at the level of identified efficiencies (for the considered inputs and outputs in accordance with the included parameters and functions) of interest for improving the overall efficiency of the company's organization and operations.

On the considered examples, the authors will show the high sensitivity of efficiency to changes in inputs and outputs, so that, at the level of a sufficiently large statistical sample, an error in the calculation of certain derived functional values of ratio analysis (e.g., at the level of ratio numbers in regarding profitability, liquidity, profitability of total assets - ROA, rate of return on equity capital - ROE, rate of return on total assets - ROA, return on investment - ROI, etc. At the DEA level, the ratio of capital and total capital can also be explained - leverage, cash flow and productivity, scale efficiency - SE, return to scale (CRS, VRS, DRS, IRS) etc.

There are many different, but complementary, analyzes that serve for an integral overview of the company's business parameters, for example:

1. Ratio analysis of liquidity and financial structure;
2. Ratio analysis of business activity (turnover ratio) and profitability (profitability);
3. Share market value ratio, risk and leverage.

Or there are parameters important at the level of business decision-making cases such as:

1. Pricing policy;
2. Selection of the product range;
3. Special orders, etc.

Financial business management, in itself, requires expansion of tools for data identification, monitoring and processing of business results.¹⁰

10 Kaplan,R., Norton,D. (1997). Using the Balanced Scorecard as a Strategic Management System, Harvard Business Review. pp. 75-85.

Therefore, it is clear why there are more indicators that determine the results of the business and management of the company (they directly depend on the management). Based on relevant data from the relevant financial reports, as well as on the basis of other market indicators and non-economic indicators, it is possible to clearly determine the company's performance and make decisions about where and how to proceed, and what to do to achieve realistic plans. The importance of the mentioned indicators is especially emphasized when evaluating the success of management, since they directly affect the creation of conditions for rewarding and earning employees (motivation and stimulation of all employees, including management).

ROI (Return On Investment) provides management, owners and creditors with a convenient performance evaluation tool.¹¹ So, it's about the relationship between profit and investments that generate profit, it's actually one of the most commonly used business indicators. ROI allows management to determine appropriate valuations for various capital investment opportunities.

Lenders and owners use ROI to do the following:

1. Assess the company's ability to earn an appropriate rate of return. They can benchmark a company's ROI against other companies or against industry norms in developed economies around the world. ROI provides information about the financial health of the company.
2. Provide information on management efficiency.
3. Argumentatively set plans and project future earnings.

Managers use ROI for the following:

1. Performance measurement of organizational units, individual parts of the company as investment centers, or DMU (decision-making unit; in DEA application). At the DMU level, both profit and investment basis (volume, scale) can be controlled. ROI is a fundamental tool used to evaluate both profitability and key performance.
2. Estimates of proposals for capital expenditures (capital budgeting is the process of deciding which long-term investments or projects the company will accept to finance or invest in their development)¹². Here, capital budgeting based on discounted cash flow should be taken into account.
3. It helps in setting management goals (defining the budget and setting goals more effectively). Most budgeting processes begin and end with a target ROI.

Therefore, in this paper, there will be examples that have as inputs (for each DMU) the number of employees, assets or fixed assets, capital, etc., and as outputs have the number of transactions, number of clients, revenues and profits of the company. However, since in DEA, in order to obtain objective results of efficiency (CCR, BCC), normalized values (reduced to appropriate reference values, maximums or optimums) must be observed,

11 Kaplan,R., Norton,D. (2001). Transforming the Balanced Scorecard from Performance Measurement to Strategic Management. *Accounting Horizons*. (2001), pp. 87-104.

12 Ibid;

this will most often be done instead of specific units (number of employees, number of customers, number of processed orders, number of transactions, monetary units or some other physical quantities) in DEA analyses, at the level of input and output, appear dimensionless values (or in the domain 0.00 to 1.00; or at the level of percentages, 0.00% to 100%), and in the case of derived efficiencies (CCR – total technical efficiency or BCC – pure technical efficiency) it is possible that these values will be outside the range [0,1], e.g. in the case of super efficiency they can be $E_{s,eff} > 1,0$.

Due to the nature of the problems under consideration, e.g. at the level of production, very often the relativized values of input or output will be observed, e.g. as an input instead of the number of employees and fixed assets, one derived input can be viewed as a specific asset value (Assets/Average number of employees: ratio of assets and average number of employees in the period based on the balance at the end of the month), then at the level of Assets/Capital: ratio of the total funds and capital of the company, or, at the level of the book value of the share, which is obtained as a quotient of the book value of the capital and the total number of shares of the company, etc.¹³ Productivity can be used for output (number of products per employee, number of transactions per employee, revenue per employee, profit per employee, etc.).

And in the case of derived specific indicators (or composite indicators), their normalized amount will be applied. So, if for the derived input, $X_i = \text{EUR}/\text{employee}$ is obtained, then the normalized form will be derived according to some benchmark or company capacity, e.g. such as,

$$\bar{X}_i = \frac{X_i}{X_{max}} = \frac{\frac{EUR}{br. zap.}}{\left(\frac{EUR}{br. zap.}\right)_{max}}$$

Determination of composite indicators based on DEA models is a very common case. Composite indicators are used for mutual comparison of areas, i.e. they can be applied in measuring the performance of countries as when comparing complex problems in various fields (environment, economy, society or technological progress).¹⁴ Sometimes these indicators are easier to understand than the trends of several different indicators. They have proven to be suitable for assessing the country's progress, in accordance with the direction in which its respective policies are moving. Composite indicators of course also have drawbacks, and can send a problematic (inadequate) message to the public if they are poorly constructed or misinterpreted.

Composite indicators serve as a tool to initiate discussion and improve public interest. Their relevance would have to be assessed in relation to the units (DMU) that make up the composite index. A composite index is normally formed when individual indicators

¹³ <https://www.blberza.com/pages/DocView.aspx?page=SP34> (Banjalučka berza, 2021).

¹⁴ Ibid;

are combined into a single index based on a base model (here, the DEA model). Along with these indicators, it should be possible to measure (specifically in DEA, the measurement of relative efficiency) a multidimensional model that cannot be captured by a single indicator (eg competitiveness, industrialization, sustainability, innovation, etc.).¹⁵

The analysis can also be performed with the inclusion of “Altman Z-Score”, as one of the most well-known summary indicators that can be calculated based on data from financial reports. It is actually “Altman’s indicator of financial insecurity” (Financial Distress Ratios), which is a weighted sum of several individual indicators. Based on the weighted sum, the “financial health” of the company is assessed,¹⁶ in accordance with the formula,

$$\sum_{i=1}^5 A_i X_i = 1,2X_1 + 1,4X_2 + 3,3X_3 + 0,6X_4 + 1X_5$$

- $X_1 = (\text{Total current assets} - \text{Total short-term liabilities}) / \text{Total assets}$;
- $X_2 = \text{Retained Earnings} / \text{Total Assets}$;
- $X_3 = \text{Profit from regular operations} / \text{Total funds}$;
- $X_4 = \text{Market capitalization} / \text{Total liabilities}$;
- $X_5 = \text{Total Income} / \text{Total Assets}$.

Based on this weighted sum, the company’s financial condition is assessed. A higher sum means greater financial stability of the company. Conversely, a lower sum warns of possible financial difficulties. On the basis of empirical research, it has been established that companies where this sum is greater than 3.00 are very stable (more precisely, there is no risk of bankruptcy for such companies). The size of the sum in the domain [1.81, 2.99] is the so-called “gray zone”. When the sum in question is less than 1.81, it means that the company has significant financial difficulties and is very likely going bankrupt.¹⁷ It goes without saying that this sum cannot be a negative number.

Costs can also be monitored through economy (E), as a complex economy or at the level of change in the economy coefficient. such as the ratio of elements that expresses the real level of the economic state of the concrete economic system, measured by the degree of satisfaction of the principle of economy. It represents the content of the complex and is determined by the ratio of produced and consumed values:

$$E = V / T$$

where V is the product value and T is the consumed value. Thus, E concerns the essence of the value produced and the values consumed for that production. Economic referencing can be achieved at the level of the economic coefficient (which is monitored by years of operation) and/or the economic change coefficient as the ratio of the current and previous year’s economic efficiency,

¹⁵ Ibid;

¹⁶ Ibid;

¹⁷ Ibid;

$$K_{p.e.} = E_{t.g.} / E_{p.g.}$$

in accordance with Figure 1.

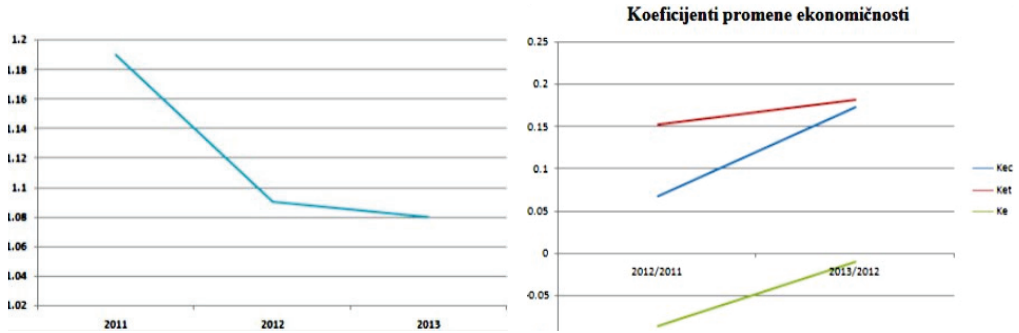


Figure 1. Coefficients of economy and changes in economy

Cost reduction contributes to increased economy. Sources of economy practically explain why some companies are more cost-effective than others.

Therefore, if a task is set with the object of researching the relationship between quality (the overall quality of the company; it can also be based on the concept of TQM) and other parameters of the company's operations (at the level of input and output), then the focus must be directed to the input related to:

- number of employees;
- quality;
- assets;
- capital (primarily intellectual capital);
- as well as to the output regarding the following:
 - productivity;
 - functionality;
 - income;
 - economy (related to cost reduction);
 - profit;
 - profitability;
 - effectiveness and
 - profitability.

To evaluate the efficiency of DMU, using DEA, it will often be quite sufficient for the following to appear at the input level: number of employees, assets and capital (intellectual capital), and for the output level to appear: productivity, income and profit (profit is the difference between income and costs).

The ability to properly manage the enterprise, with the correct market navigation, refers to the activities of the business system to be ahead of all competitors (basically

everything leads to the desired profit). Profit (but not only profit) drives the company to improve production, attract investment, expand programs, increase the number of jobs and increase production. This is how the company and the economy of the country as a whole develop.

With arithmetic profit (the difference between income and costs), the return is always considered equal while the costs are different, so the end result is shown in different ways (normal profit, average profit). From an accounting point of view, profit is calculated according to documentation, taking into account all income and expenses. If all implicit costs are subtracted from this category, the net economic income is obtained.¹⁸

Data envelopment analysis (DEA) is a deterministic method for aggregating multi-dimensional measures and subsequent analysis of efficiency. However, due to its inherent determinism, it reacts sensitively to deviations in data sets. Existing methods for identifying such exceptions have two main drawbacks. First, from a more conceptual point of view, a single definition of an outlier is lacking. Second, there are technical drawbacks to each method. For example, the user must set arbitrarily bounded values, such as the amount of efficiency values beyond which the decision-making unit is considered an outlier. This paper initially presents a definition of outliers, which explicitly takes into account the specificities of DEA. Based on this definition, an approach for identifying outliers in DEA is introduced that explicitly deals with technical deficiencies and takes them into account in the developed algorithm. The credibility of this approach is confirmed on the basis of empirical examples from performance measurement at the university level.

We will further provide a brief overview of DEA, mathematical models of efficiency and the choice of DMU (decision making unit).¹⁹

Basically, you need to understand the basics of DEA analysis and consider some relevant aspects such as: business analytics; measuring the efficiency of business systems; advanced planning and scheduling; mathematical modeling and optimization; performance analysis and measurement; analysis and efficiency measurement (DEA, SFA, DFA,...); optimization based on DEA models; determination of composite indicators; connecting the DEA method with ConJoint analysis, with game theory and with risk management methods; connecting the DEA method and Petri networks; missing data investigation, etc.

In some situations, finding the status of some variables from an input or output point of view is very difficult; these variables can be treated as both inputs and outputs and are called flexible measures. In this paper, the TOPSIS²⁰ method is used (TOPSIS - Technique for Order Preference by Similarity to An Ideal Solution, by Hwang and Yoon; 1981). Therefore, it should be seen how changing the input affects the output, that is, how the efficiency changes in such cases. Situations can be represented symbolically with the following expressions:

18 <https://sr.puntomariner.com/revenue-and-profits-of-the/>(pristup: 06.07.2022)

19 <https://slidetodoc.com/matematiki-modeli-efikasnosti-dr-gordana-savic-gocafon-bg-2/> (pristup:06.07.2022)

20 TOPSIS - Technique for Order Preference by Similarity to An Ideal Solution (by Hwang and Yoon, 1981)

$$Eff_o = \frac{Output(Y1, Y2, Y3, \mathbf{Axy})}{Input(X1, X2, X3, X4)}$$

ili,

$$Eff_i = \frac{Output(Y1, Y2, Y3)}{Input(X1, X2, X3, X4, \mathbf{Axy})}$$

It can be concluded that in such parameters with input-output position in the model, they have e.g. and quality or income from research (a well-known example from the literature). According to (Dogan et al, 2016), for example, some authors: (Beasley, 1995) take as input (Research Income, Operating Expenses, Personnel Expenses) and as output (Number of Graduate and Undergraduate Students, Number of Indexed Publications); while (Abbott and Doucouliagos, 2003), as input they take (Operating Expenses, Number of Academic Staff, Number of Administrative Staff, Fixed Assets) and as output they take (Research Quantity, Number of Graduate, Number of Undergraduate Degree, Number of Students) .

Note: VRS (Variable return to scale) efficiency score ³ CRS efficiency score.

$$SC\text{-Scale efficiency} = \frac{\text{Overall Technical Efficiency(CRS)}}{\text{Pure technical efficiency(VRS)}}$$

In an input-oriented DEA model, the goal is to minimize input for the existing level of output. In the output-oriented model, on the other hand, the goal is to maximize output at a given level of input. The solutions provided by the input- and output-oriented CCR models are interconnected.²¹

From the author's research, in accordance with the papers by (Anđelković, M., Anđelković, A., Tomić, R., 2022), (Radosavljević, M. et al., 2022), (Šegrt, S., 2022a), (Šegrt, S., 2022b) and (Šegrt, S., 2022c), it is possible to explicitly download data on the relevant parameters regarding the analysis of the efficiency of business systems using DEA (CCR - total technical efficiency), at the level of: quality, productivity, economy, functionality , purely technical efficiency and effectiveness of the company (directly at the level of supply chains).

The results of DEA and statistical analysis are presented in tabular and graphical form.

21 <https://slidetodoc.com/matematiki-modeli-efikasnosti-dr-gordana-savic-gocafon-bg-2/> (pristup: 06.07.2022)

4. EXAMPLES

Examples of DMUs to which the DEA applies are: banks, trading companies, tourism organizations, insurance companies, police stations, hospitals, tax authorities, prisons, defense bases (army, navy, air force), schools and colleges, as well as chains supply (in which data for each partner in the chain must be presented according to the same standard, that is, they must be consolidated and normalized).

Example-1

Of interest for this paper, as announced, is the connection of the DEA method with statistical methods (which will be discussed in more detail later in this paper). With a competent statistical base, there should be no missing data for the formation of functional dependencies, scales or in general a set of missing data for analysis. If there is still a need for missing data, then missingness mechanisms must be activated, with methods for handling missing data.²² To fill in the missing data, regression, single and multiple, is used (Popović, 2019).

In conventional DEA analysis, the input-output status of each particular performance measure is assumed to be known.

Mathematical modeling-restoration is very often necessary to use. One of the reasons for the easier use of such models lies in the application of the “Excel solver DEA CCR” model, which is also the basic model of DEA analysis. The unknowns are:

- h_k – relative efficiency of the kth of DMU;
- u_r – weighted coefficient for output r;
- v_i – weighted coefficient for input i.

Further examples (1 and 2) follow, where at the beginning the problems or models that are analyzed will only be defined (without additional theorizing, except for what is valid as a general basis given in the previous part of the paper).

This example is given for the comparison of the results based on the DEA model adopted and adapted by the authors (especially with regard to the research of weighting coefficients) with the model that is processed in the complementary literature.²³ For the purpose of efficiency analysis, normalized data were used (Radosavljević, M. et al., 2022).

In both cases, mostly consistent results were obtained in the DEA analysis, with the fact that 7-seven different DMUs were treated in the literature and 4-four DMUs (out of the listed 7) were treated by the authors. It is less important what those parameters were, but in order to preserve the authenticity of the model, it is stated that the input parameters were related to employees (X1-controller’s work in [h], X2-banker’s work in [h]; -here it is preferable data normalization should be performed in accordance with the total number of employees) and output parameters related to clients and transactions (Y1-number of transactions, Y2-number of clients).

22 Ibid;

23 Ibid;

For relative efficiency, according to the author's model (R2=1 was also achieved), it can be said that it deviates by a maximum of about -16% in relation to Eff from the literature (taken as correct), with the fact that with DMU1 the agreement of the results on level of deviation of -1% (more precisely $\epsilon=-0.83\%$). The main difference relates to different calculations of equivalent inputs and outputs. The authors also look for weighting coefficients in a different way, as will be more closely illustrated in the next example (Radosavljević, M. et al., 2022).

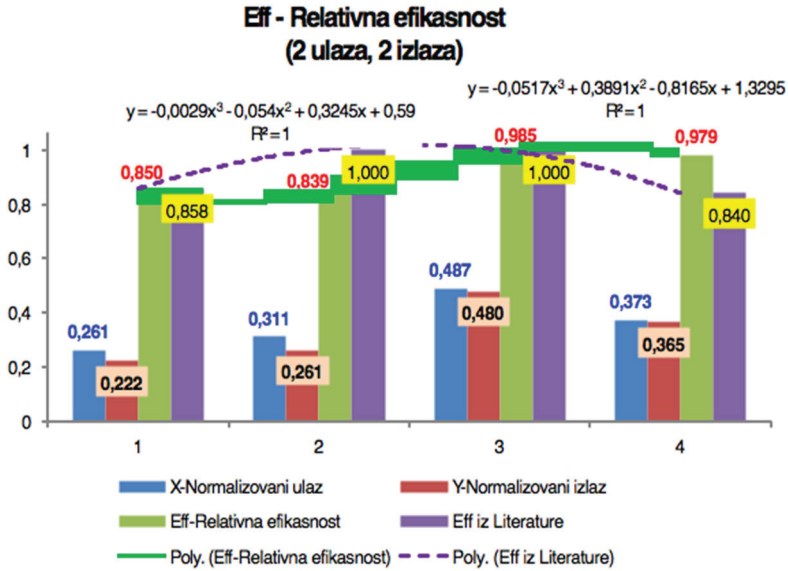


Figure 2. Relative efficiency of 2-input and 3-output DMUs (Source: Authors)

The parameters are well chosen and, according to the weighted coefficients, it can be concluded that they belong to the same category of importance. Specifically, the following values were obtained (herewith stands

$$\sum_{i=1}^4 W_i = 1): W_1=0.333795165, W_2=0.186429273, W_3=0.136258713, W_4=0.343516848.$$

In the case that W_i for input and W_o for output are considered separately, a similar result is also obtained, more precisely the ratios of the weighting coefficients. The authors checked it on different models, if instead of $\sum_{i=1}^n W_i = 1$, we use $\sum_{i=1}^m W_i = 0.5$ i $\sum_{i=m+1}^{m+n} W_i = 0.5$, approximately the same values will be obtained (Radosavljević, M. et al., 2022).

Example-2

In this example, with 3 inputs and 5 outputs, the results of DEA and statistical analysis (at the level of descriptive statistics) will be displayed. The DEA calculation was performed at the level of identification of the most significant input and output parameters (with

a clear determination of their mean values and standard deviations; - of course, in the broader report, the authors had insight into all relevant statistical values at the level of parameters and groups of parameters, as well as at the level of correlations of individual group of parameters (with research, when necessary, of appropriate regression functions) in accordance with statistical indicators according to the papers by (Šegrt, S., 2022a), (Šegrt, S., 2022b) i (Radosavljević, M. et al., 2022).

As input parameters (or variables), for each DMU (decision-making unit) the following were taken: number of employees, assets and capital of the company, and for the output, the following parameters were taken: income, profit, economy, quality and functionality (values are at the start normalized).

Table 1: Identification of key parameter values at the DMU level, with a minimum of descriptive statistics

Parameters	INPUT			OUTPUT				
DMU	X1-No of employees	X2-Assets	X3-Capital	Y1-Incomes	Y2-profit	Y3-economy	Y4-Quality	Y5-Function.
P1PK	62	0,903	0,935	0,903	0,822	0,915	0,871	0,907
P1ZK	62	0,954	0,963	0,916	0,849	0,885	0,923	0,901
P2FS	48	0,883	0,874	0,862	0,817	0,788	0,838	0,862
P2ZK	48	0,877	0,862	0,906	0,857	0,869	0,869	0,893
P3ZK	49	0,91	0,94	0,915	0,843	0,892	0,898	0,874
P4PK	61	0,903	1	0,904	0,892	0,899	0,863	0,899
P4ZK	61	0,931	0,849	0,91	0,864	0,863	0,87	0,904
Mean:	55,85714	0,90871	0,91757	0,90228	0,84914	0,873	0,876	0,89143
Variance:	49,80952	0,00071	0,00322	0,00034	0,00065	0,00171	0,00074	0,00029
Standard deviation:	7,057586	0,02671	0,05679	0,01848	0,02558	0,04141	0,02712	0,01694
Note: - only correlation values are emphasized (bold)..								
CORREL (Xi-Yj, X1)	1	0,68135	0,45014	0,43097	0,33423	0,560659	0,315983	0,83141
CORREL (Xi-Yj, X2)	0,68134	1	0,31530	0,57848	0,196152	0,341914	0,764685	0,466240
CORREL (Xi-Yj, X3)	0,45010	0,3153	1	0,33056	0,328115	0,599463	0,764685	0,220405

COR-REL (Xi-Yj, Y1)	0,43097	0,57848	0,33056	1	0,497984	0,830476	0,783481	0,650616
COR-REL (Xi-Yj, Y2)	0,33423	0,196152	0,328115	0,497984	1	0,378888	0,123431	0,443266
COR-REL (Xi-Yj, Y3)	0,560659	0,341914	0,599463	0,830476	0,378888	1	0,556705	0,713832
COR-REL (Xi-Yj, Y4)	0,315981	0,764685	0,764685	0,783481	0,123431	0,556705	1	0,334377
COR-REL (Xi-Yj, Y5)	0,83141	0,466240	0,220405	0,650616	0,443266	0,713832	0,334377	1

(Source: authors)

The relative efficiency of 7 DMUs was analyzed, and the results were presented in tabular and graphical form. Here, in connection with the reference of efficiency, for the subject models of business systems (field of transport and logistics services), weighted coefficients of different levels appeared, as shown in table 2.

Table 2: Relative efficiency with weighted coefficients of input and output parameters

Parametar	Input/Output	W_i	Note-1 (DEA), in this company model,	Note-2(CORREL), in accordance with TQM
X1-No of employees	Input	0,115160232	The recorded mean value was 55.86 with the highest standard deviation of 7.06	Weak correlation [0.00,0.40)
X2-Assets	Input	0,264311973		Good correlation (0.75,0.85)
X3-Capital	Input	0,12055038	7,057586	Good correlation (0.75,0.85)
$W_{ulaz} =$		0,5000		
Y1-Income	Output	0,009819439	Very low impact on Eff	Good correlation (0.75,0.85)
Y2-Profit	Output	0,122060212		Weak correlation [0.00,0.40)

Y3-Economy	Output	0,00909439	Very low impact on Eff (Economy. was introduced due to cost participation)	Medium correlation [0.40,0.75)
Y4-Quality (TQM)	Output	0,154292626	TQM comprises economy part as well	
Y5- Functionality	Output	0,204745122	Eff mostly depends on functionality	
$W_{izlaz} =$		0,5000	Standard deviations in % for all parameters except for X1 (12.64%), range from 2 to 6%. All positive correlations were obtained!	

(Source: authors)

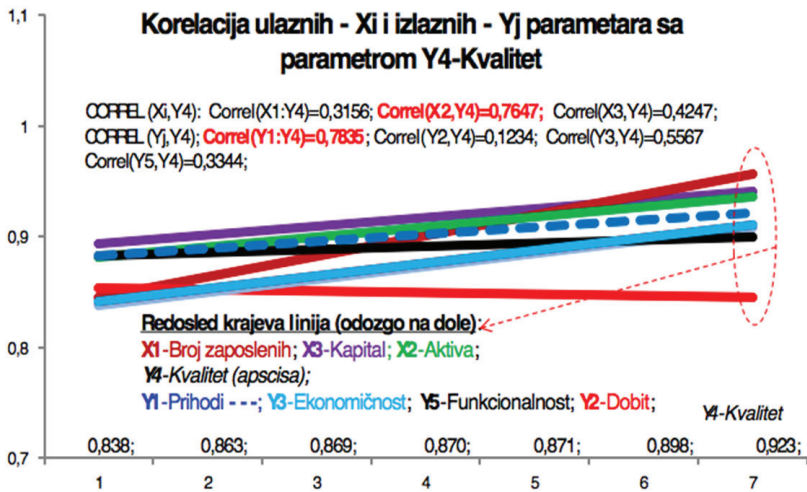


Figure 3. Correlation of input and output parameters with the parameter - Quality
Source: authors

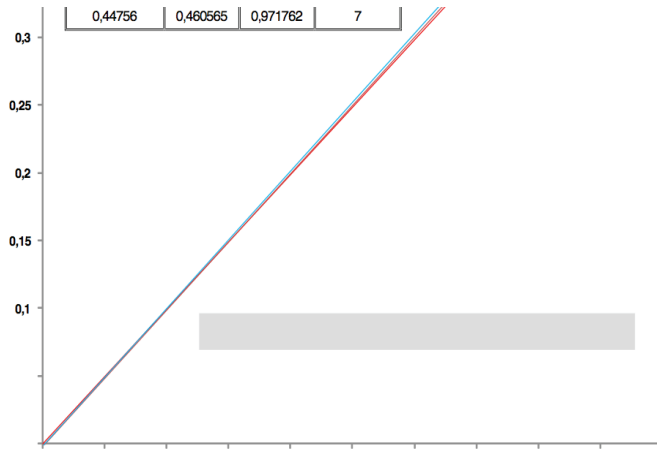


Figure 4. Efficiency of different DMUs with included weighted factors
Source: authors

If we look at a slightly more reduced case, with the same type of input parameters (number of employees, assets, capital) and slightly more modified-reduced output parameters (business income and net profit), where now as a DMU a company is taken in different years of operation, we can get results of Eff - relative efficiency as shown in fig. 5.

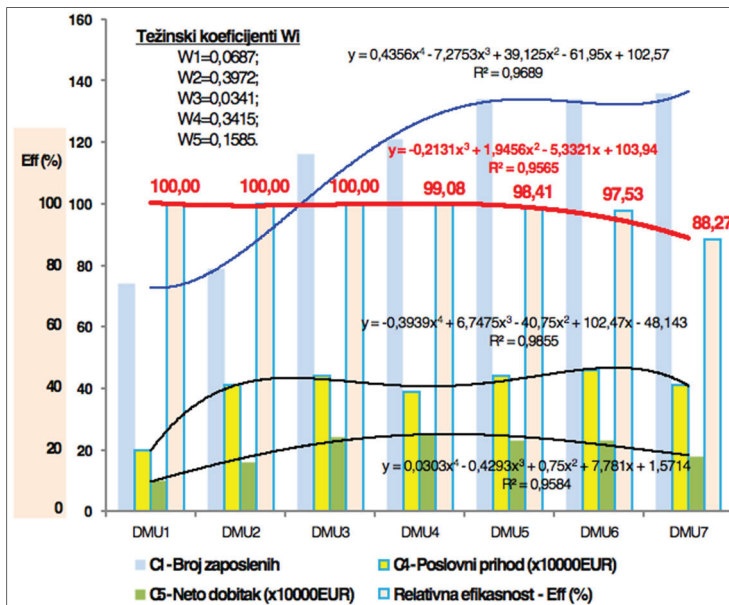


Figure 5. Relative efficiency of the business system for a period of 7 years (2015-2021)
(Source: authors)

From the subject DEA analysis, the results of which are shown in fig. 5, it can be concluded that the weighted coefficients were, on the input side, dominant for Assets ($W_2=0.3972$), and on the output side that the weighting coefficients were of the same level for income $W_2=0.3415$) and profit ($W_2=0.1585$), with the fact that here, for this type of DEA analysis, income is dominant.

The research shows that the business results were the best at the beginning of the fourth year of business, which is particularly related to the number of employees. As long as the number of employees did not significantly increase, the efficiency E_{ff} was maximum ($E_{ff}\cong 1.0$), the income and profit went on an upward line. The income fell in the 4th and 5th year of operation until the organization got a foothold (modernized and/or accepted new work standards, as well as a reward system on a new basis), with an increased volume of production and placement of goods and services (the company's income started again to grow even in the 6th year of operation until new hires started (obviously, not only for business and market reasons). Profit was very good in the period 2016-2020, at the beginning of the considered period the company had an increase in profit, and at the end of the period In 2020-2021, a drop in profits was recorded (most likely caused by problems in business due to COVID-19; the company probably also received some new people to perform tasks at the e-business level with the maximum activation of contactless work methods, for all this obviously appropriate staff training was needed as well).

Example-3

At the end of this point, as a special example, we can consider the case of detecting wrong data in DEA analyzes (DEA is a very sensitive analysis). If some data are unrealistic (poorly recorded, calculated or estimated), in connection with the recorded "input-output" state, as well as at the level of ratio analysis (ROA, ROE, ROI) they deviate from the larger set of data being analyzed, therefore DEA will show the exact place where attention should be paid or intervention must be done (examine, revise, take corrective measures and definitively eliminate the omission), see fig.⁶

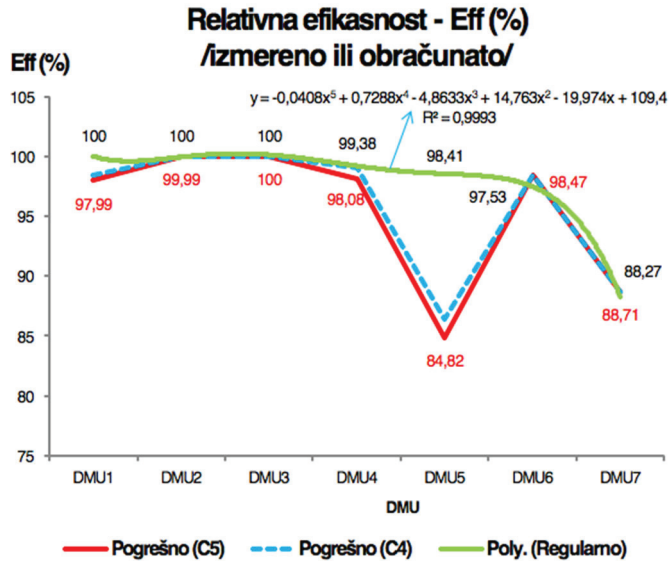


Figure 6. Identification of erroneous data(measured or calculated) through DEA
(Source: authors)

Otherwise, ratio analysis is most often used as a powerful analytical instrument for analyzing financial reports (Omerhodžić, 2007; p.152). It is a tool that provides the best information about the company's financial operations and position. Ratio analysis enables monitoring of liquidity, solvency (indebtedness), operational efficiency and profitability of a specific company. The complementarity of ratios with DEA and statistical analyzes is obvious.

The authors analyzed several examples and came to the conclusion that even very small - irregular deviations in parameters can lead to wrong determination of relative efficiency (Eff). The graphic interpretation of the efficiency results was done according to table 3.

Table 3: Relative efficiency in DEA (regular or erroneous data)

DMU	Relative efficiency - Eff (%) /measured or calculated/		
	Regular	Incorrect (C5)	Incorrect (C4)
DMU1	100,0	97,99	98,39
DMU2	100,0	99,99	99,99
DMU3	100,0	100,0	100,0
DMU4	99,38	98,08	99,08
DMU5	98,41	84,82	86,41
DMU6	97,53	98,47	98,47
DMU7	88,27	88,71	88,71

(Source: authors)

If we look more closely, you will notice that the deviations in: - C5, amounted to 1.3 to 13.8%, and in - C4, the deviations were 0.3 to 12.2%. The Eff value varied, even in cases where the deviations were of a lower level (eg, <3%). Therefore, DEA is a good methodology and model used to analyze the sensitivity of functions depending on data changes (Radosavljević, M. et al., 2022).

5. CONCLUSION

The authors presented representative examples of DEA analyzes with two inputs and many outputs, as well as with 3 inputs and 5 outputs. The intermediate variant is made with 3 inputs and 2 outputs. Of course, the analysis with one input and one output would be interesting at the level of educational examples, but the authors draw attention to the fact that this is precisely the most delicate task, i.e. "How to correctly select key inputs and outputs and evaluate the efficiency of such DMUs" or business systems (Radosavljević, M. et al., 2022).

For different types of production systems, the conventional DEA model is modified to include flexible measures. This is where the work of analysts and researchers who can (with extensions of the basic concept) use DEA analysis for statistical evaluation of hypotheses about the characteristics of production capacities, i.e. service potentials, and factors affecting productivity (definitely expressed at the level of relative efficiency) should come to the fore.

In contrast to some characterizations, in certain papers it has been shown that DEA is a complete statistical methodology, based on the characterization of DMU efficiency as a stochastic variable (Banker, 1993). The DEA model of production frontier estimation has desirable statistical properties and provides the basis for the construction of a wide range of formal statistical tests (Banker, 1993) dealing with issues such as: efficiency comparisons of groups of DMUs (correlation), the existence of economies of scale, the existence of allocative inefficiency, separability and substitutability of inputs in production systems, analysis of technical changes and changes in productivity, the influence of contextual variables on productivity and the adequacy of parametric functional forms in the evaluation of monotonic and concave functions (not only those that have maxima, but also functions that have minima, e.g. minimization of energy consumption, materials and production costs), related to the realization and placement of products and services.

On the selection of the minimum of key parameters that describe the efficiency of DMU (including their combination at the level of composite parameters), as well as on how to analyze the DEA model, in case of significant dependence, e.g. one DMU that (by its input efficiency) affects the efficiency of other DMUs etc., the authors intend to publish the following paper in the field of DEA and statistical analysis entitled "Application of a flexible DEA structure in situations where insufficient information may prevent the use of parametric statistical tests in management and production implications."

The application of a flexible DEA structure can be either at the level of a flexible measure (as an input or as an output), or when the efficiency of one DMU enters as an

input for another DMU, etc. Flexible structures are obtained when a change is made in the process algorithms or flexible variables or factors are changed. The efficiency of one DMU_i can be an input for the performance of indicators of the efficiency of another or other DMUs, which is particularly important for referencing their synergistic impact on the overall behavior of the business system.

REFERENCES

1. Anđelković, M., Anđelković, A., Tomić, R. (2022). Unapređenje totalnog kvaliteta digitalizovanih transportno-logističkih uslužnih sistema. Beograd: Univerzitet "Union - Nikola Tesla", Fakultet za informacione tehnologije i inženjerstvo.
2. Babuska, I., Banerjee, U., Osborn, J.E. (2005). Generalized Finite Element Methods: Main Ideas, Results, and Perspective. 38 .
3. Bhatti, M. A. (2000). Practical optimization problems – with Mathematica applications. Springer.
4. Carlsson, S.A. and Hedman, J. (2004). From ERP Systems to Enterprise Portals. Idea Group Inc., Hershey (PA), pp. 263-287.: In: The Enterprise Resource Planning Decade: Lessons Learned and Issues for the Future, (Ed: Adam, F.), Idea Group Inc., Hershey (PA).
5. Dašić, T., Stanić, M. (2014). Metode optimizacije (Metode globalne optimizacije). Beograd: Građevinski fakultet Univerziteta u Beogradu.
6. Deakin, E. (2001-3). Sustainable Development and Sustainable Transportation: Strategies for Economic Prosperity, Environmental Quality, and Equity. Working Paper 2001-03 UC Berkeley.
7. Đurić, Z., Jakšić, M., Krstić, A. (2020). DEA Window analysis of insurance sector efficiency in the Republic of Serbia. (E. fakultet, Ur.) Economic Themes, 58(3), 291-310. doi:DOI 10.2478/ethemes-2020-0017
8. Gajović, V. (2015). Modeliranje rizika u logističkim procesima sa primenom u transportnom osiguranju, doktorska disertacija. Beograd: Saobraćajni fakultet u Beogradu.
9. Jiyoun Lee and Gyunghyun Choi. (2019). A Dominance-Based Network Method for Ranking Efficient Decision-Making Units in Data Envelopment Analysis.
10. Korte, B., Vygen, J. (2010). Combinatorial Optimization - Theory and Algorithms, Fifth Edition. Springer.
11. Međurečan, L. (2019). Analiza vrednovanja prometnih rešenja temeljena na DEA metodi. Zagreb.
12. Micajkova, V. (2015). Efficiency of Macedonian Insurance Companies: A DEA Approach. Journal of Investment and Management, 4(2), 61-67.
13. Mihailov, D. (2016). Višekriterijumska optimizacija izbora merne strategije za procenu dugotrajne vrednosti indikatora buke u životnoj sredini. Niš: Univerzitet u Nišu, Fakultet zaštite na radu (doktorska disertacija).
14. Petković, N. (2016). Matematički modeli optimizacije poslovnih procesa - doktorska disertacija. Zaječar: Univerzitet "Džon Nezbit" u Beogradu, Fakultet za menadžment - Zaječar.

15. Pjanić, M., Marjanović, D. (2016). Strategija upravljanja rizicima u osiguravajućim kompanijama - Strategy of risk management in insurance companies. (E. f. Subotici, Ur.) 1-6.
16. Popović, M. (2019). UNAPREĐENJE ANALIZE OBAVIJANJA PODATAKA METODAMA MULTIATRIBUTIVNOG ODLUČIVANJA, doktorska disertacija. Beograd: Univerzitet u Beogradu, Fakultet organizacionih nauka .
17. Radosavljević, M. et al. (2022). Optimizacija funkcionalnosti poslovnih sistema u kontekstu dinamičkih promena i stvaranja novih tržišta. Beograd: FPSP-Beograd.
18. Radosavljević, M., Anđelković, M., Tomić, R. (2022). Istraživanje organizacionih, tehnoloških i informatičkih rešenja na nivou lanca snabdevanja sa posebnim osvrtom na osiguranje drumskih vozila i vozni parkovi, monografija. Beograd: Fakultet za informacione tehnologije i inženjerstvo.
19. Radosavljević, M., Radosavljević, D., Tomić, R. (2022). Ekonomska optimizacija transportno logističkih sistema na nivou lanaca snabdevanja - monografija. Beograd: FPSP.
20. Sarker, A.R., Newton, S.C. (2008). Optimization Modelling - A Practical Approach, Taylor & Francis Group.
21. Stanić, J. (1988). Uvod u teoriju tehnoekonomske optimizacije, IV prerađeno i dopunjeno izdanje. Beograd: Mašinski fakultet u Beogradu.
22. Strašek, R. et al. (2012). Tehnična in ekonomska optimizacija logističnega sistema. Koper: Univerza na Primorskem - Fakulteta za management.
23. Šegrt, S. (2022a). Statistička analiza podataka u vezi ankete usmerene na istraživanje TQM-a i sistema kvaliteta u lancima snabdevanja. Fakultet za poslovne studije i pravo.
24. Šegrt, S. (2022b). Statistička analiza rezultata na bazi ankete sa temom "Unapređenje funkcionalnosti savremenih poslovnih sistema". Beograd: Fakultet za poslovne studije i pravo Univerziteta "Union - Nikola Tesla".
25. Šegrt, S. (2022c). Statistička analiza rezultata na bazi ankete u vezi "Razvoja održivih transportno logističkih uslužnih sistema na nivou lanaca snabdevanja". Beograd: Fakultet za informacione tehnologije i inženjerstvo, Univerziteta "Union-Nikola Tesla".
26. Tadić, J. (2015). Modeliranje upravljanja performansama organizacije preduzeća u funkciji optimiranja ekonomskog uspeha (Doktorska disertacija). Subotica: Univerzitet u Novom Sadu, Ekonomski fakultet u Subotici.
27. Tomić, R., Mijatović, M., Dašić, P. (2016, August 2016). One view to the quality system according to the subsystem of preparation of technical assets. Annals of the Oradea University – Fascicle of Management and Technological Engineering, 89-94.
28. Tomić, R., Sedmak, A., Pecić, Lj. (2011). Contribution to analysis of critical load of the slender beams and thin plates using finite difference method. ANNUAL SESSION OF SCIENTIFIC PAPERS "IMT ORADEA - 2011", CNCSIS "Clasa B+", Oradea, (str. 5.311-5.320). Oradea.
29. Yang, X.-S. (2008). Introduction to Mathematical Optimization – From Linear Programming to Metaheuristics. University of Cambridge, United Kingdom.

UDC:

349.22

Received

Review scientific paper

Accepted:

October 13, 2022

Corresponding author:

December 10, 2022

nedeljko.krajsnik@fpp.edu.rs

ANNEX OF AN EMPLOYMENT CONTRACT DUE TO CHANGES IN WORKING CONDITIONS

Nedeljko Krajišnik

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: nedeljko.krajsnik@fpp.edu.rs

Abstract: *This paper tries to point out the specifics of one institute from the labor relations segment, namely the changed working conditions and the changes that these new conditions entail in the formal sense, that is, the change in the employment contract between the employee and the employer. It is a relatively new institute in the field of labor relations in our area, which has certain specificities, and this can lead to the termination of the employment relationship, although the termination of the employment relationship is not the intention of the employer when he raises this issue (at least in most cases it is not, but abuse of contract, of course, is). However, due to the sensitivity of workers to any violation of their rights regarding employment relationships, disagreements often arise that lead to the termination of the employment relationship. The opinion of the author of this paper is that both parties should realistically look at all the circumstances that arise in such a situation, and here we are primarily thinking of the worker. In a way, workers should with “cool-heads” look at what is offered to them as an option in the new employment relationship, and after that make a decision whether to accept the offer or not. In any case, the worker is left with the possibility to try to prove the illegality of the changed conditions at the competent court.*

Keywords: *Work contract, employment relationship, modified conditions, worker's rights, judicial protection*

INTRODUCTION

The conceptual approach of the Labor Law¹ is a contractual employment relationship, so the employment relationship derives its basis from the rules of obligation relations, with the application of the provisions of the Labor Law, as a *lex specialis* regulation. In this sense, any change during the duration of the employment relationship, that is, the employment contract, is made by amending the contract in the form of an annex to the employment contract, which is a characteristic of all contracts in the corpus of contractual relations, including in labor legislation. Annex, of course, is not our word, but an anglicization and the same means addition or upgrade. Therefore, the annexes of the employment contract represent an addition or upgrade to the basic contract, which changes or upgrades that contract.

Given that the Labor Law defined the employment relationship as a type of contractual relationship, then for its amendment or upgrade (annex) there must be agreement of the will of the contracting parties. If there is no agreement of the will, there is no contract, or more precisely, there is no change to the already concluded contract, because there is no way for the employer to force the employee to conclude a contract that he does not want. In such a situation, the question arises as to what the consequences are if one contracting party (employer) wants to conclude a different contract, i.e., change an already established contractual relationship, and the other party (employee) does not want it. When we consider the provisions of the Law on Obligations², as the basic regulation that regulates contractual relations, in such a situation, contract modification would not be possible, so the other party would have the option of unilateral termination of the contract, but only if the conditions prescribed by the general law for unilateral termination are met. contract. Given that the employer usually has no basis for invoking any of the conditions for termination of the contract, because there are usually no such circumstances that would lead to a justified termination of the contract (the employee regularly fulfills his contractual work obligations), then the provisions of the special law (*lex specialis*) are applied, in in this case the Labor Law, which in its provisions gave the possibility of unilateral termination of an already concluded contract (on work) if the other party does not accept the offer to conclude the annex to the contract, i.e. an offer to establish a modified obligation relationship.

In this paper, we will talk about those situations, that is, about the reasons that can lead to the termination of the employment contract, which by its nature is a contract for an indefinite period, and in the implementation of which, that is, the fulfillment of the

-
- 1 Labor Law ("Official Gazette of the Republic of Serbia", No. 24/05, 61/05, 54/09, 32/13, 75/14, 13/17 - decision of the Constitutional Court, 113/17 and 95/18 - authentic interpretation)
 - 2 Law on Obligations ("Official Gazette of the SFRY", No. 29/78, 39/85, 45/89 - decision of the Constitutional Court of SFRY and 57/89, "Official Gazette of the SFRY", No. 31/93, "Official Gazette of the Serbia and Montenegro", No. 01/03 - Constitutional Charter and "Official Gazette of the Republic of Serbia", No. 18/20)

contractual provisions, there were no violations of any of the contractual parties. , that is the formal-legal contract is mutually fulfilled in the manner defined by the same.

Bearing in mind the importance of work and the employment relationship, in terms of ensuring the existence of individuals and their families, it is clear how important and specific this institute is, which gives the employer the opportunity to influence the already established rights of workers, to reduce them, and even to unilaterally terminates the contractual relationship if the employee does not accept the new conditions. Of course, the amendment of the contract does not always have to refer to the offer of worse conditions for the worker than those he already has, because the offered annex may offer the worker better conditions than those he already has, but in such cases it is quite normal for the worker to accept the changes, so for the above reason, but also because these are extremely rare cases, we will not even talk about those situations in this paper.

1. GENERAL PROVISIONS ON EMPLOYMENT RELATIONSHIP AND EMPLOYMENT CONTRACT

1.1. Concept and establishment of employment relationship

The Labor Law is the basic, umbrella law, which regulates the relations between workers and employers, including basic institutes such as the employment relationship.

The Labor Law does not provide a direct definition of the employment relationship, but from its first provision (Article 1) a certain definition can be derived that does not have any special significance in practice, but can be used in the theoretical consideration of this relationship and the rights and obligations arising from it. Therefore, according to the provisions of Article 1 of the Labor Law, the employment relationship can be defined as the relationship between two parties, the employer and the employee, which is created by concluding an employment contract, and which regulates mutual rights, obligations and responsibilities regarding the work organized by the employer and performed worker, and which relations are based on general provisions defined by ratified international conventions in the field of labor, the Labor Law, the Collective Agreement, and the employer's internal acts. At the same time, international conventions and the Labor Law prescribe general conditions for establishing an employment relationship (e.g. the provisions of Articles No. 24-29 define the conditions for establishing an employment relationship), while more detailed provisions regarding rights, obligations and responsibilities are defined by lower acts (Collective contract...) and the employer's internal acts (Work Regulations...), and the concluded work contract (Article 3, paragraph 2 of the Labor Law).

Therefore, the employment relationship is created, that is, is based only when the employment contract is concluded.

It is important to note the kind of hierarchical relationship between the mentioned acts, so international conventions are entered into the domestic legislation by ratification and have primacy in relation to all other provisions from the mentioned area, so all acts

from labor relations must be in accordance with international conventions from this area, therefore the basic law, i.e. Labor law. The Labor Law stipulates that *“The collective agreement and the labor regulations and the labor contract cannot contain provisions that give the employee less rights or establish less favorable working conditions than the rights and conditions established by law.”*³ On the other hand, the legislator allows that a collective agreement and an employment contract can give the worker greater rights and prescribe more favorable conditions than those prescribed by the Labor Law (Article 8, paragraph 2 of the Labor Law). On the other hand, Article 9 of the law stipulates that if the general act (Collective Agreement) or its individual provisions establish less favorable working conditions than those prescribed by law, in that case the provisions of the law shall be applied. If, however, provisions are included in the employment contract that establish less favorable conditions for the worker than those prescribed by law or a general act, such provisions of the contract are null and void. Nullity is established before the court and that right does not expire.

From the above, it is clear that lower acts must be in agreement with higher acts, that is, lower acts cannot determine a smaller scope of rights or less favorable working conditions than those prescribed by higher acts, while the opposite is allowed - that more favorable conditions can be determined by lower acts legal acts than those prescribed by higher.

Such provisions have their justification for two reasons. First, it is clear that lower acts have their basis in higher acts, so the Collective Agreement is adopted on the basis of the Labor Law, on the basis of which the employer then adopts its internal acts (Rules of Procedure), and on the basis of which the employment contract is concluded work and provisions from the Rulebook, the Collective Agreement and the law are introduced into it. The function of lower acts is to elaborate in more detail the rights and obligations prescribed by higher acts and, if necessary, prescribe a wider scope of those rights, because higher acts prescribe the minimum. Another reason for such a solution is the legislator's effort to prevent workers from being put in a disadvantageous position compared to the employer, because employers, as a rule, have the sole goal of obtaining as much profit as possible, so in order to avoid increasing their profit to the detriment of employees, by reducing of their rights, the legislator prescribes a minimum of rights and working conditions, and orders that any lower act, and finally the one passed by the employer himself, cannot prescribe lesser rights than that legal minimum.

1.2. Work contract

From the previous presentation on establishing an employment relationship, we saw that it can be established, i.e., that it can only be created by concluding an employment contract. An employment contract, like any other contract, has its basis in contractual relations, so the general provisions of the employment contract are based on the law that defines these provisions, namely the Law on Obligations.

³ Article 8, paragraph 1 of the Labor Law

The Law on Obligations defines that a contract can be concluded when there is agreement between the will of the contracting parties on the elements of the contract: *“The contract is concluded when the contracting parties have agreed on the essential components of the contract.”*⁴ This same rule also applies in relation to the employment contract, that is, when the employer, who needs to hire a worker, agrees with the worker on the basic elements of his work engagement, the formal conclusion of the employment contract can be approached.

The employment contract must contain the basic elements required by the Law on Obligations for the legal validity of the contract, namely: the written form of the contract, specifying the contracting parties, determining the subject of the contract, the basis for establishing the contract, the terms for which the contract is concluded and, finally, the signatures of the contracting parties by which they confirm their agreement to everything they entered into the contract. In relation to these mentioned basic elements of the contract, when concluding an employment contract, the employer (the person who organizes the work process) and the worker (the person who performs the work) always appear in the contract as contractual parties, then the basis for concluding the contract is the Labor Law, and the term to which it is concluded can be fixed (a fixed-term work contract) or determinable (an indefinite-term work contract). In the second case, the contract does not specify a deadline, that is, it states that the contract is concluded for an indefinite period of time, but this does not literally mean “forever”, but that the contract is concluded until a certain deadline, that is, the occurrence of the conditions on the basis of which the employee retires.

In contrast to the general conditions of the contract, which are defined by the Law on Obligations, the subject of the contract in the employment contract is the special provisions of the contract that concern the employment relationship itself. They define the rights, obligations and responsibilities of the contracting parties, first of all what type of work the worker will perform, at which workplace and under what conditions, and especially important for what monetary compensation (salary). In addition, special contractual provisions define in more detail the duration of working hours, the length and type of rest, safety measures at work, as well as all other rights and obligations that are specific to each individual employer and each individual workplace. Mandatory elements of the employment contract are prescribed in detail in the provisions of Article 33 of the Labor Law.

Therefore, when these two contracting parties reach an agreement on all the aforementioned conditions and elements, those conditions and elements are entered into the contract signed by both contracting parties, and it is considered that they have entered into a type of specific obligation relationship, i.e. employment.

When we take a closer look at all of the aforementioned general and special conditions for concluding an employment contract on the basis of which the employment relationship is based, we can see that such a contract very clearly, unambiguously and in

4 Article 26 of the Law on Obligations

detail regulates the mutual rights and obligations of the contracting parties, which would mean that it does not can be changed without the consent of both contracting parties, as the basic contract was concluded. However, this is precisely where the specificity of the institute of contract annexes is reflected due to the changed conditions.

2. REASONS FOR CHANGING THE EMPLOYMENT CONTRACT

2.1. General considerations

The Labor Law allowed an exception to the general provision of the obligation relationship on the immutability of contractual provisions without the prior consent of the contracting parties, and allows the amendment of the contract in certain areas, i.e. the subsequent consent of the other contracting party, assuming the termination of the basic contract due to non-acceptance of the proposed amendment.

Changes to the agreed working conditions are possible only if certain conditions are met:

- that these changes are the result of objective needs due to changes in the work process (so it is not about the employer's arbitrariness);
- that the changes in the contractual working conditions do not jeopardize the minimum rights provided for in the general acts that regulate the relations between the employee and the employer (law, collective agreement and general acts of the employer).

The Labor Law stipulates that changes to the contractual working conditions can be made for several reasons, all of which are listed in Article 171 of the Labor Law, and these are the following reasons:

1. "*Transfer to another suitable job, due to the needs of the process and organization of work.*" With regard to this reason for changing the employment contract, it is necessary to point out the conditions for the employer to be able to legally assign the worker during the duration of the employment relationship, which are two cumulative conditions are met: first, the assignment is made in accordance with the needs of the process or work organization, and second, that the assignment corresponds to the professional training, that is, the level of education and occupation of the worker. Therefore, in order for the offer to change the contractual working conditions to be legally valid in this case, it must not be the result of the employer's arbitrariness, but exclusively the result of the need for the process and work organization, which must be objectively determined as such. In addition, another condition that must be fulfilled cumulatively is that the offer can only refer to other suitable job. The term "*other suitable job*" means being assigned exclusively to a job that requires the same type and level of professional education as determined by the employment contract⁵;

5 Article 171, paragraph 2 of the Labor Law

2. *“Transfer to another place of work with the same employer, in accordance with Article 173 of the law.”* The aforementioned Article 173 of the law stipulates the following conditions for this type of transfer: 1) that the employer’s activity is of such a nature that the work is performed in several places, i.e. organizational parts - where the term *“place”* usually means the territory of another municipality, 2) that the distance from the place where the employee works to the place where he is assigned to work is less than 50 km, 3) that regular transportation is organized that enables timely coming to work and returning from work - under this condition, it is understood that there is organized regular public transport (in bus or railway traffic), which does not exclude the possibility that the employer himself organizes transport to another place of work (in this case, employees would not have the right on reimbursement of transportation costs) and 4) that the employer has provided reimbursement of transportation costs in the amount of the price of the transportation ticket;
3. *“Referral to work for a suitable job with another employer, in accordance with Article 174 of the law.”* The provisions of this article prescribe the conditions for this type of referral, namely: 1) an employee may be temporarily reassigned to work with another employer for a suitable job - this refers to the conditions we described in point 1. (a job that requires the same type and level of professional education as determined by the employment contract), 2) if the need for his work has temporarily ceased, leased office space or concluded a contract on business cooperation and 3) the referral of an employee can be for a period as long as the reasons for his referral last, but no longer than one year - the employee can be referred to another employer in the aforementioned cases for a period longer than one year, but with consent employee, as long as the reasons for the referral last. Referral of workers to work for another employer, with the fulfillment of prescribed conditions, can also be to another place of work. In the event of a transfer to another employer, the employee concludes a fixed-term employment contract with the new employer, and at the end of the term, he has the right to return to the former employer.

For the previous three legally prescribed reasons for changing the contract, we can conclude that the offer to change the contracted working conditions can only be legally valid if all the above conditions are met. However, assignment to another place of work can be foreseen in other cases, and that is when there is the consent of the employee, which must be given in writing.

There is another exception to the rule that the assignment of workers to another workplace is carried out through an annex to the employment contract, which is provided for in emergency cases, if it is necessary to perform a certain job without delay (e.g. an employee assigned to that workplace is absent due to illness or has died or in case of force majeure, assignment to a position that has not been filled), when the assignment is made only on the basis of a written order of the employer. This deployment can last a maximum of 45 working days in a period of 12 months.

4. *“If the employer has provided the redundant employee with the exercise of rights from Article 155, paragraph 1, point 5) of the law.”* These conditions include measures for employment: transfer to other jobs, work for another employer, retraining or additional training, part-time work but not shorter than half of full-time work and other measures. Therefore, it is a case of determining the excess of employees, when the employer offers the employee changed working conditions before possible dismissal, but only in accordance with the conditions specified by law, which in most cases is more acceptable for employees than the termination of the employment contract;
5. *“In order to change the elements for determining the basic salary, work performance, salary compensation, increased salary and other benefits of the employee contained in the employment contract in accordance with Article 33, paragraph 1, point 11) of the law.”* If we consider the mandatory elements of the contract about work related to earnings (elements for determining the basic salary, work performance, salary compensation, increased salary and other income of the employee), we can conclude that the annex to the employment contract can change: the amount of the coefficient, the amount of the basic salary, as well as the basis for salary increase (if it is desired to foresee some other basis or to increase the percentage of salary increase on one of the foreseen bases). At the same time, it is important to note that changes to the agreed working conditions, and therefore the offer, can only be made within the limits set by law. In this sense, the offer of an annex to the employment contract must not violate one of the basic principles of labor law, namely the principle of equal pay for work of equal value. The terms for the payment of wages can be changed with the annex of the employment contract, because the employment contract also contains the time of wage payment, but in this case the provision of Article 110 of the Labor Law must be complied with, which stipulates that wages are paid at least once a month.
6. *“In other cases determined by law, general act and employment contract.”* In this case, the legislator left the freedom to foresee some other cases for amending the employment contract, but on the condition that those reasons are defined by general or special acts, or even by the employment contract itself, therefore, a certain freedom of contracting is left, both in the basic contract and in the annex, but on the condition that the reasons for this are foreseen in advance, which cannot be contrary to compulsory regulations. When referring to this basis for the offer of an annex to the employment contract, special care should be taken when evaluating the legality or nullity of those provisions, because it is this general basis that is the easiest for the employer to attribute possible illegal or dishonorable intentions in relation to the employee.

2.2. Procedure for amending the employment contract - acceptance and rejection of the proposed annex

The employer submits an annex to the employment contract to the employee for signature, and along with the annex to the employment contract, the employer is obliged to provide the employee with a written notification that contains: reasons for the proposed annex to the contract, the deadline in which the employee must make a statement, which cannot be shorter than eight working days and the legal consequences that may arise from refusing to sign the annex to the contract within the deadline.⁶

If the employee accepts the offered annex, he continues working under the new conditions from the contract. These conditions do not necessarily have to be worse than those under which the worker worked under the basic employment contract, because it often happens that employers improve the working conditions or increase the rights of workers, and on that basis, in terms of the objective of this work, it is not even worth mentioning this institute, because the signing of such an annex to the employment contract is in the interest of the worker, and since the change is offered by the employer, it is certain that such a change is not to his detriment. This case is more common in the public service, where the employer is the state, and less often with employers from the private sector, but it is not impossible, and it happens. Also, the situation when the employee himself offers an annex to the contract (most often verbally, with an invitation for the employer to turn it into a written annex to the employment contract) is not the subject of this paper, because even in that case, if the employer accepts the offer, there is no dispute or damage on either side, since the employer does not have to accept such an offer from the worker if he considers it not in his interest.

At this point, we will make a digression, and point out certain specificities of this institute in the environment. Namely, in the Federation of Bosnia and Herzegovina, as an entity and part of Bosnia and Herzegovina, the legislator does not recognize the institution of the annex to the employment contract. In those cases, changes to the employment contract are made by applying the institute of Termination with the offer of an amended employment contract, in such a way that the employer cancels the concluded employment contract and at the same time offers the employee the conclusion of a (new) work contract under changed circumstances. In that case, we have a de facto termination of the employment relationship by unilateral cancellation of the employment contract by the employer, because there is no waiting for the employee's possible refusal to sign the contract for the employer to have a basis for unilateral cancellation of the employment contract. The only thing left for the worker is to sign a new contract and then contest the legality of the termination of the previous employment contract before the court. However, in the Republic of Srpska, as other part of Bosnia and Herzegovina, there is an institute of the annex to the employment contract, which is almost identically regulated as in our legislation.

6 Article 172, paragraph 1 of the Labor Law

If the employee refuses the offer to conclude the annex to the employment contract for some reason, the employer may (but does not have to) cancel the employment contract. Therefore, the refusal to sign the annex to the employment contract is prescribed as a basis for the termination of the employment contract by the employer, which means that the termination of the employment relationship does not occur automatically by refusing to sign the proposed annex to the employment contract, but it is left to the discretion of the employer.

There are situations when not signing the offered annex to the employment contract does not lead to the termination of the employment relationship, and these are the following cases:

- conversion of a fixed-term employment contract into an indefinite-term employment contract: this refers to the situation when the conditions stipulated by law for such conversion are met;⁷
- extension of the employment contract with the employee for a fixed period of time up to 24 months: in this case, there is no obligation to conclude a new employment contract, but the employment relationship can be extended by an annex to the contract up to a maximum period of 24 months specified by law;
- extension of the employment contract for an employee who uses the right to maternity, parental, adoptive and foster care leave, in accordance with the law: this decision is in accordance with Art. 94, paragraph 6 and 100, paragraph 2 of the Labor Law, which foresees the absence of employees from work and the suspension of rights from the employment relationship during that period;
- for the purpose of assigning an employee to a workplace with a higher level of educational qualification compared to the existing one, based on education, professional training and development: this enables the employee to complete an internship without terminating the existing employment contract.

3. PROTECTION OF THE WORKER'S RIGHTS IN THE COURT

If the employee accepts and signs the offered annex to the employment contract within the deadline, he reserves the right to contest the legality of that annex in the competent court. According to this legal provision, even if the employee signs the annex to the employment contract, he does not lose the right to seek protection in court and contests the legality of the contractual clauses. Also, an employee who rejects the contract annex offer within the deadline and the employer cancels his employment contract for that reason, reserves the right to contest the legality of the contract annex in court proceedings regarding the termination of the employment contract.⁸ It is considered that the employee has rejected the contract annex offer if he does not sign the offered contract annex within the specified period.

⁷ Article 37, paragraph 2 of the Labor Law

⁸ Article 172, para. 2 and 3 of the Labor Law

Jurisprudence had a different position on the issue of the right to challenge the legality of the termination of the employment contract in case of refusal to sign the employment contract, because there was a point of view that the worker must accept the offered annex to the employment contract and then challenge the legality of the provisions from the concluded annex to the employment contract before the court, and that, if he refuses to sign the annex, he loses the right to challenge the legality of the provisions and clauses from the proposed annex in court proceedings, because he did not even accept them, which is why they never entered into legal force.

However, this understanding has been abandoned and the position taken is that the acceptance or non-acceptance of the offer and the signing of the annex to the employment contract, is not a condition for judicial protection in a dispute to annul the decision on dismissal.

“Even in the case when the employee does not accept the annex (is silent), after passing the decision on dismissal, he can successfully point out the existence of conditions for the illegality of the offered annex to the employment contract, both in material and formal terms. Such a conclusion stems from the cited Article 171 of the Labor Law, in which the law used the phrase “*in accordance ... with the law*” in several places. This further means that an illegal annex, whether in the material sense or in the formal sense (violation of the procedure in submitting the offer), does not absolve the employer from responsibility for the illegality.

The Labor Law did not condition or limit the employee in the legal process (time and procedure) of presenting reasons for the illegality of the annex, regardless of the content of Article 172, paragraph 4 of the law. The purpose of this rule is to strengthen the protection of the employee, as a weaker contracting party, and not to limit rights. Therefore, the employee can claim annulment after accepting the annex, but the illegality can be highlighted both in the lawsuit and during the entire litigation process for the annulment of the decision on the termination of the employment contract. If the first point of view were to be accepted, the employee would lose any labor dispute related to the termination of the employment relationship on this basis and the effect of the rejection judgment would be equivalent to the rejection of the lawsuit (ineffective protection).

An objective and logical interpretation requires that the problem be considered in accordance with the general rules, and especially with the rules that apply to all contracts in the general regime. Namely, an employment contract is, in a broader sense, a type of civil-law contract and all the rules of contract law on the existence of general and special conditions that make a contract valid (contractual capacity, agreement of will, object, basis and form) are subsidiarily applied to it. As is known, in the contractual right to absolute nullity, in the sense of Article 109 of the Law on Obligations, the court takes care *ex officio*, it can be referred to by any interested person. The right to assert nullity is unlimited and does not expire (Article 110 of the Law on Obligations). The subject and content of the contract must be possible, permissible and determined, that is, determinable (Article 47 of the Law on Obligations). Therefore, it is not necessary to explicitly challenge every illegal

contract with a lawsuit. Each contracting party can emphasize the fact of absolute nullity at any time, in any litigation, as a preliminary issue. In this problem, this means that the employee can successfully point out the illegality of the annex, especially in conditions of increased social aspiration to protect employees (prohibition of discrimination from the Labor Law, Law on Prohibition of Discrimination, Law on Prohibition of Harassment at Work - Mobbing).

The omission of the word “*justified*”, in relation to the earlier Labor Law, does not mean a reduction of the employee’s right to judicial protection. The meaning of that provision was to emphasize the employer’s need and reasons for deploying employees (better capacity utilization, new work organization, new jobs, etc.). From the point of view of the legality of the deployment in relation to the employee, this provision is not decisive. Both before and now, an employee cannot be assigned to work whose content is against the law (either the law, the principles of public order) or good customs (morality).

If the court in the labor dispute regarding the annulment of the decision on dismissal, would not examine the legality of the annex to the contract as a previous issue, they would be in a situation where the employer’s illegal and unlawful actions would not be sanctioned, which simply goes against not only the mentioned laws but also the elementary principles of the legal order.”⁹

From the aforementioned position taken by the highest court instance, it is indisputable that the worker is provided with legal means to protect his rights in case of changes to contractual provisions, regardless of whether he accepted and signed a new annex to the employment contract and continued to work for the same employer due to changed circumstances, or he did not accept the change in the agreed conditions and refused to sign the annex to the employment contract, and because of this, his employer unilaterally canceled the previously signed employment contract.

This is very important for the protection of workers’ rights, because the employer is in a more favorable position compared to the worker, he is the one who dictates the conditions under which the work process is carried out, i.e., concludes the employment contract, and he is the one to whom the legislator has given the possibility to change the contracted conditions, but for expressly prescribed reasons. However, too often in practice we have a situation when employers (of course this does not apply to all employers, we are talking about the majority) abuse the rights that the law allows them and try to achieve their own benefit at the expense of workers. In order to avoid this, the law, as well as the courts, through the previously cited position, have allowed workers to review the conditions under which their employer changed or tried to change the conditions of the already concluded employment contract.

9 Conclusion adopted at the session of the Civil Department of the Supreme Court of Cassation on October 4, 2010

CONCLUSION

Finally, having at our disposal all the statements presented in this paper, we can draw certain conclusions in relation to the institute of changing the working conditions in the already established employment relationship between the employer and the employee.

The specificity of the employment relationship is reflected in the fact that it represents a type of contractual relationship concluded in accordance with the provisions of the Law on Obligations, with specifics prescribed by a separate law, i.e. the Labor Law as well by-laws and other subordinate acts adopted on the basis of the law. All of these put together must have their basic provisions in accordance with international conventions that have been incorporated into our legal system by ratification.

Given that the employment relationship is based on the conclusion of an employment contract, the contract itself contains general elements prescribed by general legislation, namely the Law on Obligations, and special elements arising from a separate law, namely the Labor Law.

The general law prescribes the agreed declaration of will of the contracting parties as the basis for the provision for the conclusion of the contract and prescribes the conditions under which the contracting parties can unilaterally terminate the already concluded contract. However, the special law in this case also prescribed certain deviations from this principle, due to the specificity of the employment relationship itself, and gave the possibility to one contracting party to offer the other contracting party, under certain conditions, an amendment to the already concluded employment contract. The law has put one contractual party (employer) in a more favorable position, because he has the possibility to unilaterally cancel the already concluded employment contract in case of refusal of the other contractual party (employee) to accept the change of the already agreed conditions. On the other hand, if the employee offers the employer to change the conditions in the concluded employment contract and if the employer refuses, there are no legal consequences in relation to the already concluded employment contract, because it remains in force.

It is precisely because of this type of inequality of the contracting parties, which nevertheless has its foothold in the specificity of the working relations that essentially enables the contractual agreement giving the employer more rights, the law is limited and it decisively prescribed the conditions under which one of the contracting parties can use this benefit. Therefore, only in cases prescribed by law is it possible for the employer to offer the conclusion of an annex to the employment contract, which changes the already agreed rights, obligations, and responsibilities of the contracting parties, which offer the worker can accept or reject, on which decision the further employment of the worker with the same depends employer. In the case of refusal to accept changes to the employment contract and sign the annex, the employer has the option (he does not have to use it) to unilaterally cancel the employment contract and thereby terminate the employment relationship, and if the employee accepts the offer and signs the annex to the employment contract, he continues to work for the same employer under modified conditions.

The most important thing for the protection of employees from possible arbitrariness and abuse by the employer when using this institute, is that the legislator provides judicial protection for employees in those cases, regardless of whether the employee accepted the proposed amendment and signed the annex to the employment contract, or he refused to sign it and his employment ended because of it. In the beginning, the practice of the courts was different, so in some cases they refused to provide protection and control the legality of the conditions from the offered annex to the employment contract if the worker refused to sign it, but they accepted to examine the legality of the annex only in case the worker accepted and signed it, and then filed a lawsuit to examine the legality of the conditions from the signed annex to the employment contract. However, in this way the workers were put in an unequal position, so the Supreme Court of Cassation reached a conclusion and took the position that regular courts are obliged to examine the legality of the conditions in the offered annex to the employment contract, regardless of whether the worker accepted the change and continued to work for the same employer under modified conditions, or he refused to sign the offered annex, so the employer canceled his employment contract for that reason.

REFERENCES

1. Šunderić B., Kovačević Lj. (2021), Radno pravo, Beograd, „Službeni glasnik“
2. Convention on protection at work C155, International Labor Organization, Geneva, 1981
3. Convention on the Protection of Human Rights and Fundamental Freedoms, European Council, Rome, 1950
4. Law on Obligations (“Official Gazette of the SFRY”, No. 29/78, 39/85, 45/89 - decision of the Constitutional Court of SFRY and 57/89, “Official Gazette of the SFRY”, No. 31/93, “Official Gazette of the Serbia and Montenegro”, No. 01/03 - Constitutional Charter and “Official Gazette of the Republic of Serbia”, No. 18/20)
5. Labor Law (“Official Gazette of the Republic of Serbia”, No. 24/05, 61/05, 54/09, 32/13, 75/14, 13/17 - decision of the Constitutional Court, 113/17 and 95/18 - authentic interpretation)
6. Jurisprudence and Internet sources:
https://www.echr.coe.int/Documents/Convention_SRP.pdf
https://www.vk.sud.rs/sites/default/files/attachments/Zakljucak%20-%20izmena%20ugovorenih%20uslova%20rada%20i%20pravna%20zastita_0.pdf

UDC:

321.01

Received

Review scientific paper

February 22, 2023

Accepted:

March 24, 2023

Corresponding author:

ljupka.petrevska@fbsp.edu.rs

THE WAYS OF ORGANIZING THE MOST IMPORTANT TYPES OF STATE AUTHORITY

Ljupka Petrevska

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade, Republic of Serbia, e-mail: ljupka.petrevska@fbsp.edu.rs

Abstract: *The state, in general, is an organization that governs certain territory and human resources in that area. It is usually characterized by authority, the right to make laws and a monopoly on the use of force within its borders. The state has its own legislative, executive and judicial bodies, which mutually function to maintain order and peace in the state territory and provide services to its citizens.*

The basic functions of the state include governing the territory, regulating social relations, creating laws, ensuring public safety, regulating economic activity, education, health care, managing foreign relations and protecting human rights.

A state performs these functions through the exercise of the most important types of state power, namely legislative, executive and judicial power. The legislative power means the authorities that pass laws and other legal acts, which relate to the functioning of the state and the life of citizens, while the basic function of the executive power is to manage the state apparatus, fulfill the laws and decisions made by the legislative power and manage various aspects of state administration. The judiciary exists as a kind of guarantee of respect for laws and their application in an equal way to all citizens, regardless of their position in society.

The traditional understanding of the organization of state power is based on two opposing systems, namely the system of division of power and the system of unity of power. The system of division of power originates from the idea that different powers should be exercised by different bodies independent of each other. There are three models that include a presidential system, a parliamentary system and a mixed system of government organization. These systems imply the existence of the three most important state authorities, which cooperate to a greater or lesser extent and limit each other in order to prevent abuse of power by some of them.

Contrary to the system of division of power, it is possible to organize the most important state authorities on the system of unity of power, which is characterized by the existence of

one, central body that has significantly greater powers compared to other authorities. This system is largely abandoned today.

Key words: *state, power, system, power, law.*

1. STATE AND ITS FUNCTIONS

The concept of a state has been understood differently over the centuries, which is a consequence of its development and improvement throughout history. The first to give a clear and precise definition of this term was Thomas Hobbes. Hobbes was a 17th-century English philosopher whose work shaped many aspects of modern philosophy and political theory. According to his opinion, state is the basic instrument for maintaining social peace and preventing conflicts between people.

He was the first to notice that the people have an obligation of obedience exclusively to the state, and not to a specific ruler. Thus, the state is understood as an independent entity vis-a-vis its citizens and defined as a legal entity that is the bearer of sovereignty. In this way, Hobbes made a turning point and prevented the process of identifying the state with its ruler, which is why he is referred to as a fundamental theorist who made a revolution when it comes to the concept of a state. (Skinner, 2018, 361-379.)

According to Hobbes, it is natural for people to be in constant conflict with each other, because each individual has a natural drive to fight for his own interests and to rule over others. However, in order to ensure peace and the protection of rights, people had to cede some of their freedoms and authority to the state, which would then be responsible for maintaining order and preventing chaos. In this sense, Hobbes was one of the first theorists to advocate the idea of modern state sovereignty.

There are numerous definitions of the term state. Thus, according to the Oxford Dictionary of Sociology, “the state is a special set of institutions that have the authority to make rules that govern society.” In accordance with this definition, state power lies in institutions such as the government, administration (civil service), judiciary and parliamentary assembly. On the other hand, Max Weber defined a state as “a social institution that holds a monopoly over the use of force”, it has a “monopoly” of legitimate force “within a certain territory”.(Pufendorf, 1994, 216) In this sense, a state includes both the armed forces and the police, as well as the civil service, the judiciary and local and national councils of elected representatives, such as parliament.

It is possible to notice how “the state, understood in a broader sense, is a social organization that has a monopoly on physical coercion in order to preserve the existing state-legal order and its values, as well as to preserve its position in society.” (Кулић, Кулић, 2015, 41).

From all of the above, we notice that the concept of a state is largely determined by its functions. The functions of a state include the various roles it plays in society and in the territory it governs. The functions can be divided into three basic categories:

1. Regulatory functions: these functions involve the regulation of various aspects of life, including the economy, the labor market, food safety, public health and the environment, thus ensuring the public interest and consumer protection. The state regulates the economy and ensures the stability of the economic system. Apart from this, the state creates laws that define norms of behavior in society and punish those who violate them, and also provides and enforces laws to ensure that the rights and freedoms of citizens are respected;
2. Social functions: a state has a role in providing various services and support for its citizens, including health care, education, social assistance, retirement and protection of workers' rights. This ensures social protection for the most vulnerable groups in society. These functions include all services that are of interest to the community;
3. Security functions: a state has the responsibility to ensure public order and peace and protect its citizens from external and internal threats, including crime, terrorism, war and other forms of violence. This includes police and military forces, as well as the justice system that deals with the prosecution of criminals. (Лаловић, 42(2)/2005, 38).

In addition to these basic functions, a state also has other functions as well, such as managing foreign affairs, protecting human rights and democracy, developing infrastructure and economy, protecting cultural heritage, and the like. Therefore, a state is responsible for governing its external relations, including diplomatic relations, trade and cooperation with other states. In addition, a state has the responsibility to protect the interests of its citizens in international relations.

Furthermore, a state has the responsibility to protect the human rights of its citizens, such as the right to life, freedom of expression, religious freedom, the right to a fair trial and other fundamental freedoms. A state is also obliged to fight against discrimination and other forms of human rights violations.

It is important that a state performs these functions in accordance with the law and in the interest of its citizens, in order to ensure a stable society.

2. TYPES OF STATE AUTHORITY

A state performs the aforementioned functions through legislative, executive and judicial power as the basic types of state power. The way a specific state functions depends on the way it is organized.

2.1. Legislative Authority

The legislative power or the legislature is responsible for passing laws that regulate social, economic and political activities within the state. It represents the authorities that pass laws and other legal acts, which relate to the functioning of the state and the life of citizens.

The legislature is usually organized in the form of a unicameral parliament or a bicameral parliament. In a unicameral parliament, all representatives sit in the same assembly and make laws, while in a bicameral parliament, there is a lower house (e.g. the House of Representatives) and an upper house (e.g. the Senate), and both houses must agree on the law before it is sent for signature to the president or other executive authority. Depending on the country's constitution and the accepted system of organizing the government, the legislature may have limited power in relation to other branches of government.

The main function of the legislature is to pass laws and decisions that regulate various areas of life in the state. In particular, the legislative authority performs the following tasks:

- Passing laws: the legislature has the responsibility to pass laws that regulate various areas of life, such as laws on finance, education, health, defense, culture, justice, etc.;
- Control of the executive power: the legislature has the responsibility to control the executive power and to ensure that it fulfills the laws and decisions passed by the legislature;
- Budget and financial control: the legislature has the responsibility to pass the budget and to control the financial activities of the state, including the control of money flows, corruption and the influence of interest groups;
- Representation of citizens: the legislature is responsible for representing the interests of citizens in state institutions. It facilitates dialogue between authorities and citizens, through regular consultations and public debates on laws and other issues of importance to society. (Марковић, 1995, 216-218).

2.2. Executive Authority

The executive power is one of the three basic branches of government in democratic states and is responsible for the execution of laws and decisions made by the legislative power and for managing the day-to-day affairs of a state. The main organs of the executive power are the president and the government. Depending on the way the government is organized, this includes ministers, the prime minister, the chancellor or some other similar bodies.

Therefore, the basic function of the executive branch of power is to govern the state apparatus, fulfill the laws and decisions made by the legislative branch and manage various aspects of the state administration. Specifically, the executive branch of power has the following tasks:

- Governance: the executive branch of power governs the state apparatus, including various ministries, state institutions and services. The government has the responsibility to make decisions and set policies in various areas, including the economy, education, health, security and defense;
- Fulfilling the law: the executive branch is responsible for fulfilling the laws and decisions made by the legislative branch. It ensures that laws and decisions are implemented and applied in practice;

- Implementation of policies: the executive branch is responsible for the implementation of various policies and programs, which may include creating new jobs, improving health care, improving education, etc.;
- Diplomacy: the executive branch of power has responsibility for the foreign policy relations of the state, including diplomacy, the implementation of foreign policy and the management of international relations. (Лукић, 1991, 127-129).

As we will see below, the way of organizing the executive power depends on the political system implemented in the specific country. In a presidential system, the president, as the holder of executive power, has broad executive power and is not accountable to the legislative branch of government, while in a parliamentary government, the prime minister and the ministers who make up the government are accountable to the representative body (parliament).

2.3. Judicial Authority

The judiciary is also one of the three basic branches of government in democratic states and represents an independent system of courts that have the function of achieving justice and resolving legal disputes in accordance with the law. It is responsible for making court decisions and criminal judgments in cases where the law has been violated.

Thus, the judicial authority is responsible for the application of laws and the resolution of legal disputes. The court system usually includes courts of various instances, including lower courts and the Supreme Court. The judicial system ensures that laws are applied equally to all citizens, regardless of their position in society.

The judiciary includes courts, prosecutor's offices and other judicial institutions that have the following responsibilities:

- Passing judicial decisions: the judiciary has the responsibility to make judicial decisions in cases where there has been a violation of the law. These decisions cover various fields, including civil, criminal, administrative and international law;
- Achieving justice: the judiciary aims to achieve justice and protect the rights of citizens, including persons who are exposed to discrimination and other forms of injustice;
- Respect for the law: judicial authority appears as a kind of guarantee of respect for the law and serves to protect the legal rights of all participants in the legal process;
- Protection against abuse of power: the judiciary is responsible for protection against abuse of power by the other two branches of government, the executive and legislative, as well as by any other group or person who misuses their power. (Димитријевић, Симић, 2001, 106-109).

As already mentioned above, the judicial power is organized in a system of courts, which can be lower and higher level courts. In many countries, there are also special courts for special cases, such as the constitutional court. Courts are usually independent and impartial and operate on the basis of the constitution and laws of the country.

Finally, it is important to note that these three branches of state power are connected and mutually dependent on each other, which is aimed at ensuring the stability and functioning of the state.

3. STATE AUTHORITY ORGANIZATION SYSTEMS

The way of organization of state power depends on the constitutional arrangement of the state and its political tradition and “denotes the way in which legislative, executive (i.e. executive and administrative) and judicial powers are exercised, as well as the way in which relations between them are established”. (Кулић, Кулић, 2015, 88).

In accordance with the traditional understanding of the types of state authority, there are two systems of government organization. The first is based on the “principle of division of power”, and the second is based on the “principle of unity of power”. (Кулић, Кулић, 2015, 89).

3.1. The System of Division of Power

The system of division of power is a political concept that states that power in the state is divided into three independent branches: executive, legislative and judicial branch. This concept was formulated to prevent the concentration of power in one state body and to limit the possibility of its abuse.

This system is most consistently applied in the United States Constitution as a reaction to the concentration of power in the British Parliament in the eighteenth century. Since then, the system of division of power has become a means of preventing tyranny in many democracies.

The system of division of power ensures that no branch of government is too strong and that each branch of government fulfills its legal and constitutional obligations. The executive branch is responsible for implementing laws, the legislative branch for passing laws, and the judicial branch for resolving disputes and ruling in cases of violations of the law.

The system of division of power is extremely important for the protection of democracy and the rule of law, and as we will see below, it appears in several forms.

3.1.1. *Presidential system*

The presidential system of government organization is a political system in which the executive power is in the hands of the president of the state, who is elected by voters in general elections. In this system, the president is responsible for implementing laws and government policies and has broad executive powers.

Therefore, this way of organizing the government focuses on the president of the state, that is, the head of state, who is the main executive body and who therefore has

a significant role in decision-making and management of the state and government. In addition to executive powers, the president also has significant power and influence over legislation and the governing of the country.

Some of the characteristics of the presidential system of government organization are the following (Владисављевић, 21. фебруар 2023):

- Strong role of the president: the president of the state is the main executive authority and has a significant role in decision-making and management of the state and government, and also the president has the power to veto laws, appoint governments and judges and command the army;
- Directly elected president: the president of the country is usually directly elected by the voters, which adds to the legitimacy of the president and allows citizens to choose their leader. In a presidential system, the president is often elected for a long term, for example for a period of four years, but is limited by a fixed number of terms. Since the president is directly elected by the citizens, he answers to them to the greatest extent and is a direct representative of the nation;
- Separation of executive and legislative power: the president is separate from the legislative power, which is usually represented by parliament. This is in contrast to a parliamentary system, in which the government is accountable to parliament. This principle is designed to prevent the president from overstepping his authority and to prevent any other group from dominating the governance of the country;
- System of checks and balances: A presidential system usually has a system of checks and balances that limits the power of the president and protects the rights and liberties of citizens. This primarily includes the independent judiciary and the parliamentary opposition, and there may be other bodies as well. For example, in America, Congress is authorized to establish special investigative committees that will review the work of the executive authorities, including the president himself; (Кулић, Кулић, 2015, 91).
- A more complex and a more expensive system: due to the stronger role of the president and the separation of executive and legislative power, the presidential system is usually more complex and expensive than the parliamentary system;
- Flexibility: the presidential system is designed to be more flexible than the parliamentary system as a result of the president's ability to react to critical events and to take action more quickly when necessary.

While the parliamentary system, as we will see below, clearly separates the executive power from the legislative power, the presidential system groups both powers in one person - the president. In this system, apart from executive powers, the president also has a significant role in the legislative process. This primarily refers to the right to veto laws passed by the legislative body (parliament), and that veto, although it formally has a suspensive character, is in most cases absolute. Namely, the veto can be canceled due to the overvote of the parliament. However, in practice, a qualified majority is usually required for the re-voting of the law, which is almost impossible to achieve, which is why

the veto placed by the president actually acquires an absolute character. Because of the overlapping of government functions in different bodies, the advocates of the division of power point out that the presidential system does not actually depict the separation of power in the full sense. (Димитријевић, Симић, 2001, 139).

The presidential system, although primarily originated in England, is most consistently applied today in the United States of America. This system is proof that there is no model of organizing power that fully respects the system of division of power. This is clearly reflected in the right of veto that the President of the United States has over Parliament, the powers of Parliament to control the work of the President and executive bodies, the right of the President to nominate Supreme Court judges and the right of Congress to decide on that matter, as well as the right of the Supreme Court to review the constitutionality of laws.

3.1.2. Parliamentary system

A parliamentary system of government organization is a political system in which the legislative power is dominant and where the executive power is derived from the legislative power. In this system, the parliament is the key authority, where people's representatives (parliamentarians) pass laws and approve the budget. Parliamentarians are elected in general elections and usually represent political parties fighting for control of parliament.

In a parliamentary system, the executive power is mainly in the hands of the prime minister and the cabinet, who are elected from the ranks of the parliament. The prime minister usually has the role of head of government and represents the leading political party in parliament. The role of the executive power is to enforce the laws passed by the parliament and to govern the country.

The parliamentary system of government organization is a type of democratic government in which the legislature has a greater role in governing the country. This takes place through the existence of the parliament, which represents the people and participates directly in the legislative process.

In this system, the judicial system is usually independent and has the role of checking and ensuring compliance with the law. The role of the judiciary is to interpret laws and ensure their implementation.

Some of the characteristics of the parliamentary system of government organization are the following: . (Дерен-Антољак, 29(3)/1992, 18-19).

- The legislative power has the biggest role: in the parliamentary system of government organization, the legislative power has the biggest role in the governance of the country. Members of parliament are elected in general elections and they represent the people and represent their interests. It is responsible for drafting and adopting laws. Parliament is the most important: In the parliamentary system of government organization, the parliament has the most important role. It is responsible for passing laws and overseeing the government.

- Executive power is divided between the head of state and the government: the president is usually a representative representative and is considered the stable part of the executive, while the government is considered its unstable part. In a parliamentary system of government organization, the president usually does not have much power in legislation. It usually exists to fulfill protocol and representative functions.
- Division of power and control system: as in the presidential system, there is also a principle of separation of powers in the parliamentary system of government organization. This means that the legislative, executive and judicial powers exist independently. However, the legislative authority has certain powers in relation to the holders of the executive authority and vice versa, which seeks to create limitations in order to prevent possible abuses;
- Coalition governments: in this system, parties often form coalition governments. This happens because no party usually has enough votes to govern on its own. Coalition governments can be unstable, as different parties have different positions on many issues.

The parliamentary system of organizing power is characteristic of England, where it primarily arose as a result of the struggle between the king, who initially had absolute power, and the parliamentarian, which tried to limit that power. Today, this system is certainly adapted to the prevailing circumstances, so even though the parliament has significant power, as the holder of legislative power, it is limited by the government, whose members can propose to the head of state to dissolve the parliament, in which case new elections are called. In addition, in most cases the legislative initiative comes from the government. On the other hand, it is the parliament that elects the government and the prime minister.

From the above, we can conclude that this system of government organization is characterized by certain equality between the executive and legislative powers, which cooperate but also exert certain influences on each other. (Марковић, 1995, 231.) Judicial bodies are autonomous and independent.

3.1.3. Mixed system

The mixed system, that is, the presidential-parliamentary system, represents a combination of the presidential and parliamentary system of organizing power, where there are two separate branches of government - the executive and the legislative, which act independently of each other. In this system, the president of the state has an important role in the executive power, while the parliament has the main role in the legislative power. The president of the state is elected in general elections and has the role of head of state and supreme commander of the armed forces. The president also has the power to appoint the prime minister and members of the government, as well as to propose laws and sign them after they have been passed by parliament.

Thus, a mixed system of government organization is a type of democratic government that combines elements of a presidential and parliamentary system, and some of the characteristics of a mixed system of government organization are the following:

- There is an executive branch consisting of the president and the government: in a mixed system of government organization, there is an executive branch headed by the president. The president has significant executive powers, similar to the presidential system, since as a rule he is elected in general elections, and only exceptionally is he elected by the parliament. That is why the president is independent from both the government and the parliament. On the other hand, as in the parliamentary system, a certain part of the executive powers belong to the government and its ministers who are responsible to both the parliament and the president;
- There is a parliament: as in the parliamentary system, the parliament is the holder of legislative power and is elected by the people.
- There is a principle of separation of powers and a system of control, as in both previous systems of government organization.
- Compromise: a mixed system of government organization is a compromise between a presidential and a parliamentary system and can be used in countries where neither of these two systems has shown adequate success. (Кулић, Кулић, 2015, 94-95.)

Based on the principles of the English parliamentary system of government organization, France developed a new mixed system that was first established in 1958. At the end of the 20th century, this system was adopted by certain countries that were abandoning socialism, opting for a multi-party system of government organization. Among them was the Republic of Serbia, as well as Russia, Croatia and many others. (Лукић, Коштутић, 2004, 248).

3.2. The System of Unity of Authority

The system of unity of power is a political system in which there is only one central government that has a monopoly on state management and decision-making. In this system, all power comes from one source and is centralized, meaning there are no regional or local governments that can make independent decisions.

The system of unity of power was created on the basis of the theory of the social contract formulated by Jean-Jacques Rousseau, as well as on his teaching on popular sovereignty, in accordance with which the assembly appears as the highest authority since its representatives are voted by the people in elections; the assembly thus conveys people's will. In this system the starting point is that the executive power cannot implement a policy that would differ from the one advocated by the assembly, while the courts appear as independent bodies. The system of unity of power exists today in Switzerland, while it is largely abandoned in other countries. It should be mentioned herewith that the

government in the former SFRY, as well as in the Soviet Union, was organized according to this system. (Кулић, Кулић, 2015, 96.)

3.2.1. Assembly system

Switzerland is a typical example of an assembly system of government organization. In Switzerland, there are several levels of government, and the most important bodies are the Federal Assembly, as the holder of legislative power, and the Federal Council, as the holder of executive power.

The Federal Assembly consists of two houses: the National Council and the Council of States. The National Council has 200 members who are elected in general and direct elections, while the Council of States has 46 members, two from each Swiss canton; they are elected by the canton's competent authorities. The Federal Assembly is responsible for passing laws and budgets and has the authority to elect the members of the Federal Council and its president.

The Government of Switzerland, embodied in the Federal Council, represents the executive power consisting of seven members, the so-called federal advisers, who are elected by the Federal Assembly for a period of four years. The Federal Council is a collective body, which means that decisions are made at a collective level and not that each Federal Councilor has separate responsibilities. The Federal Council is responsible for governing the country and making decisions in areas such as foreign policy, security and the economy and is considered the "collective head of state". (Лукић, Кошутић, 2004, 250).

Switzerland also has the system of direct democratic participation, which means that citizens have the right to initiate referendums and initiatives that directly affect policy and legislation. This means that the legislative power is not entirely in the hands of the Federal Assembly, but that the citizens have a significant influence on the political processes in the country.

The assembly system of government organization is considered one of the oldest and simplest forms of government organization.

3.2.2. The assembly system in the former SFRY

The former Socialist Federal Republic of Yugoslavia had the assembly system of government organization. The SFRY Assembly was the highest legislative body in the country, composed of delegates from all republics and provinces. The delegates were elected for a period of four years, and had the authority to make laws and decisions concerning politics, economy, foreign affairs, defense and other areas. The President of the Assembly was the highest official in the legislative power, and was elected from among the delegates. (Кулић, Кулић, 2015, 98.)

The executive body of the former SFRY consisted of the Presidency of the SFRY and the Federal Executive Council. The Presidency had the role of the collective head of state,

while the function of the classic executive body was the Federal Executive Council, which was responsible for the implementation of laws and policies adopted by the Assembly. Apart from this, its responsibility included economic management, infrastructure development, social policy, education and other areas. (Кулић, Кулић, 2015, 98.)

The system of government organization in the former SFRY, although assembly system in nature, was specific in that it gave republics and provinces great autonomy in making decisions in various areas, including areas such as education, culture, health and justice. However, the political situation in the country and the differences between the republics and provinces, especially in terms of national identities and economic development, led to growing tensions that culminated in the collapse of the SFRY in the 1990s.

CONCLUSION

A state performs its main functions through legislative, executive and judicial power as the basic types of state power. The way a specific state functions depends on the way it is organized. The legislature is responsible for passing laws that regulate social, economic and political activities within the state. The executive branch is responsible for the execution of laws and decisions made by the legislative branch and for managing the day-to-day affairs of the state, while the judicial branch is responsible for resolving legal disputes. The judicial system usually includes courts of various instances, including lower courts and the Supreme Court. The judicial system ensures that laws are applied equally to all citizens, regardless of their position in society.

The way of organization of state power depends on the constitutional arrangement of the state and its political tradition. In accordance with the traditional understanding of the types of state government, there are two systems of government organization. In this regard, the system of division of power is a political concept that provides that power in the state is divided into three independent branches: executive, legislative and judicial. This concept was formulated to prevent the concentration of power in one state body and to limit the possibility of its abuse. It appears in the form of a presidential system (USA), a parliamentary system (England) and a mixed system (France). On the other hand, the system of unity of power is a political system in which there is only one central government that has a monopoly on the management of the country and on decision-making. In this system, all power comes from one source and is centralized, meaning there are no regional or local governments that can make independent decisions. The assembly system of government organization is considered one of the oldest and simplest forms of government organization and is currently applied in Switzerland.

REFERENCES

1. Лаловић, Д.: „Суверена држава – темељни правнополитички пројект модерне (1)“, Политичка мисао 42(2)/2005, 33-49

2. Кулић, Ж., Кулић, М.: Увод у право, Европски Универзитет Брчко Дистрикта, Брчко 2015
3. Димитријевић, М. Симић, М.: Увод у право, Бона Фидес, Ниш 2001
4. Владисављевић, Н.: Системи са непосредно изабраним председником, наслеђе старог режима и нови устав, http://eprints.lse.ac.uk/5372/1/Sistemi_sa_neposredno_izabranim_predsednikom%2C_naslede_starog_rezima_i_novi_ustav_%28LSE-RO%29.pdf
5. Лукић, Р, Кошутић, Б.: Увод у право, Правни факултет Универзитета у Београду, Београд 2004
6. Лукић, Р: Увод у право, Научна књига, Београд 1991
7. Марковић, Р: Уставно право и политичке институције, „Службени гласник“, Београд 1995
8. Pufendorf, S. „On the Law of Nature and of Nations in Eight Books“, The Political Writings of Samuel Pufendorf (ed. Craig Carr), Oxford University Press, London 1994
9. Дерен-Антољак, Ш: „Фински модел председничке власти“, Политичка мисао 29(3)/1992, 18-37
10. Skinner, Q: From Humanism to Hobbes, Cambridge University Press, Cambridge 2018.

UDC:

351.081:330.836

Received

Review scientific paper

Accepted:

December 7, 2022

Corresponding author:

February 13, 2023

mirza.totic@fsp.edu.rs

BUREAUCRACY AND TECHNOCRACY IN THE WORKPLACE

Mirza Totic

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: mirza.totic@fsp.edu.rs

Abstract: *Work is the most important human activity performed every day in order to provide the best possible quality of life and continuous progress in all fields of society. While working, a worker uses his/her skills and knowledge necessary to simplify and facilitate the job process as much as possible. Therefore, this paper deals with the concepts of bureaucracy and technocracy, as well as with their influence on the performance of work at workplaces. It seems that the mentioned terms are inextricably linked, since a wide range of jobs implies possession of professional knowledge, abilities and skills in order to be able to carry out work tasks efficiently. A large number of theorists view the bureaucratic type of organization as the ability to achieve the highest degree of effectiveness as well as corresponding advantages. Some of the common features of bureaucracy and technocracy are the following: they ensure high effectiveness and efficiency, but also enable application of knowledge, modern methods, calculations and activities that are characteristic for performing a wide variety of jobs. In this paper the author explains who has power in the workplace, for what purposes that power is being used and by what means, but also defines the procedures and ways to achieve the obedience of others within a certain working environment.*

Keywords: *Work, labor relations, bureaucracy, technocracy, expertise.*

1. INTRODUCTION

Nowadays hundreds of millions of people around the world are employed, which only confirms the fact that work, as a social category, is a necessary factor for the survival and progress of the human species. Workplaces represent a source of financial security and a space where the worker, as a rule, feels most comfortable, because it is assumed that he/she

has chosen to do the job that suits him/her and that he/she has the affinity for this job. The main content of each workplace consists of jobs and work tasks, while accompanying factors inevitably include the working conditions determined through the organizational and technical definition of the workplace and the professional qualifications of the workers. Of course, in XXI century it is necessary for a worker to continuously work on improvement and additional education, which will primarily enable to keep the job, but also to progress in that specific workplace. Therefore, knowledge and abilities are a *conditio sine qua non* of the efficiency of performance of entrusted tasks within the workplaces to which workers are assigned by the employer's decision. The workplace is an initial organizational-technical unit consisting of one or more similar or related interconnected jobs, to which one or more workers with certain professional and other abilities can be assigned (Jovanović, 2015). The worker establishes an employment relationship precisely because he/she possesses professional qualities that are necessary for the employer. When the worker starts performing job activities between employee and employer it creates a Labor law relationship determined by mandatory and autonomous legal acts. The worker treats his/her skills and knowledge as a type of commodity offered for sale and for which a certain price is paid expressed in financial benefit for the performed work (salary). As a rule, the more difficult the worker's knowledge is available to the employers, the latter will be forced to value such work more, which means that the salaries will be higher.

The term bureaucracy is used most often when someone wants to express a certain form of resentment. It doesn't matter which workplaces we are talking about (local government, health institutions, institutions of legislative, executive or judicial power...) it is always in a negative context. For many, terms like bureaucrat, bureaucratic and bureaucracy imply disparagement and criticism, not only of individuals and their actions, but also of institutions. Nevertheless, bureaucracy can be viewed from another angle, as a way of ruling or communicating, and if we want to find out what it actually means, we must analyze motives for the formation of bureaucratic organization. It was formed so that it could function as a system of individuals or groups whose *spiritus movens* is the realization of profit (characteristic of the capitalist economy). On the other hand, technostructure represents the expert, managerial and consequently more powerful part of a certain bureaucratic organization. It is very closely related to workplaces in the sense of personnel who are engaged in performing certain tasks. Practice undoubtedly shows that any significant movement or reorganization of personnel, especially in the administration, becomes a potential threat for members of the technostructure. Reorganization also means danger that individual members (workers) might be transferred to other jobs, demoted, forced to retire or fired. However, the expansion of the organization makes technostructure more powerful, because then it has the ability to impose its own will on society. The way in which it achieves this is very simple, considering that its goals are declared to be of the greatest importance. Galbraith believes that these are goals that go beyond the market framework and that technostructure uses as a tool to achieve its goals (Galbraith, 1979).

2. THE BEGINNINGS OF THEORETICAL DEFINITION OF BUREAUCRACY

The term bureaucracy or “rule of the desk” was first used by the French physiocrat Vincent de Gornay in 1745 (Petrović, 2006). This term originally intended to include all officials, secretaries, inspectors and quartermasters appointed to improve the existence of services of public interest in a certain way. Gornay’s bureaucracy as a term, but also as a completely new way of ruling by certain structures in Europe at the time, was very quickly accepted. Much later, in 1821 the German publicist Johann Gires, while dealing more deeply with the issues of this phenomenon, proposed the thesis that in order to ensure mutual respect between rulers and subjects, it is necessary to connect the elements of democracy and monarchy. If such connection is not established, it creates conditions for bureaucracy to appear, seen as the civil institution that most resembles the army, given that it is based on the principles of hierarchical authority, discipline, advancement, group respect and centralization. John Stuart Mill also paid a high degree of attention to bureaucracy, precisely because of its ability to perform work tasks, considering it a form of government and the exact opposite of democracy. He advocated the implementation of general control over professional managers. According to his ideas, control should be carried out by representative and relevant elected bodies. He claimed that since the first use of the term bureaucracy, three basic characteristics of the latter can be defined as the form of hierarchically structured system of administration, abuse of power by officials, as well as a new type of rule.

While talking about the abuse of power and bureaucracy, we are mainly referring to administrative bodies established to fulfill the interests of the rulers who act primarily in their own interest. On the other hand, the term government is used to denote other representatives of classic forms of bureaucracy. Later, during the XX century, the negative connotation of the term is being lost, because it begins to be seen as ability of professional managers and essential characteristic of leadership in modern systems. Even then it was completely clear that all forms of government are always exercised by the minority, which is why the governments are divided into feudal, where the same members perform different functions (economic, judicial, administrative, military...) and bureaucratic, where the functions of government are strictly separate and become exclusively the activity of individual groups within the ruling class. One of these groups is bureaucracy, or the selected group of paid public servants (workers). The obligation to continue and improve the analysis of his predecessors (Mill, Fayol, Michels) was taken by Max Weber, who set up the bureaucratic theory of organization. He believed that every force manifests itself and functions as administration, and every form of administration requires power (Morgante, 1984). He was successful in recognizing the evolution of bureaucratic organization in Germany and argued that new developments in the latter suggested a new form of administration (Styhre, 2007). In fact, he accepted the traditional concept of organization as an inevitability excluding its economic dimension. For Weber, bureaucracy represents management by office means (position), and not by means of people, it is an

ideal organizational model, but not ideal in the sense of perfect, but ideal for theoretical analysis (Wren & Voich, 1994, 53). Classical, as well as contemporary literature, agrees that Max Weber's contribution to defining bureaucracy exceeds all the studies of his predecessors combined. In this way, professor Mihailo Đurić devoted a studious analysis to the properties of Weber's bureaucracy through theory and practice. Đurić well noted that according to Weber's claims, the specific way of functioning of modern bureaucracy is reflected in the following:

- 1) There is a principle of competence of individual authorities for the performance of official duties. Jurisdictions are clearly established by general rules, laws or administrative acts. We are talking about regular activities necessary for achieving the goals of bureaucratic structures, which are precisely differentiated as official activities. For the performance of these duties is necessary the existence of a commanding authority, which is distributed and made available to certain authorities in the form of coercive means within strictly limited rules. The mentioned means can be physical, sacral (Vujaklija, 1972), related to church affairs or some other. In order for these duties to be performed regularly and permanently in the spirit of the appropriate rules, Weber emphasized that planning care must be taken, so that persons (workers) with prescribed professional qualifications must be appointed to appropriate positions.
- 2) The second principle refers to the hierarchy of positions and transitional instances (competent authority). It is a strictly established system of subordinate and superior authorities where higher authorities have the right of supervision, and in which individuals can complain to a higher instance about actions of a lower authority. The principle of organization on a hierarchical basis is present in all bureaucratic structures: in state and church communities, in organization of large political parties or in large private companies. If the principle of competence is fully implemented, at least in public services, this does not mean that hierarchical subordination gives possibility to a higher authority to simply take over tasks of a lower authority. The rule is that only the competent authority can perform certain tasks, and no other.
- 3) Bureaucratic business management is based on original written acts or documents. According to Weber, hired or authorized officials (workers) who work in a certain service and use different types of appropriate material resources and written acts and documents make up a certain "bureau". In practice, it is called the "office" (Đurić, 1964), which Weber noted well when formally distinguished between office and, for example, a domestic private household. He also distinguished business relations from private ones, as well as private property from company property.
- 4) For the performance of official, clerical jobs and state functions, which are considered specialized duties, there is a necessity for workers who have gone through regular and thorough education process. This is precisely dimension of specific and modern performance of work duties, which modern officials (managers) in private economic enterprises, on the one hand, and engaged state officials, on the other, should possess as much as possible.

- 5) Trained representatives of bureaucratic services, both in the private and in the state sector, are the best guarantee for quality performance of entrusted work tasks. If the official is fully engaged and dedicated to job duties in accordance with his/her abilities, then the work is of high quality and developed. Limited working time of workers (officials) in the service is not the factor that could significantly affect quality of the performed work tasks or activities. The best argument for this claim lies in observation of development of bureaucracy in relation to jobs that require quality performance, where it is stated that jobs are normal phenomena that have contributed to good results in both public and private services.
- 6) Engaged and authorized officials (workers) perform official activities on the basis of general rules that are more or less constant and comprehensive and that can be learned. Their knowledge is a special skill and dexterity that they must have in order to carry out the entrusted work tasks in a high-quality manner.

3. CRITICISMS OF WEBER'S THEORY OF BUREAUCRACY

Weber believed that services are established and organized on the principle of hierarchy, where duties are clearly defined and filled on the basis of a free contractual relationship. Candidates for certain positions are selected on the basis of technical qualifications verified by exams or diplomas. Officials (public servants) are paid in money and have the right to a pension. Public service is the only, or at least basic, occupation as well as a career, because there is a system of advancement according to the length of service or according to the success achieved at work. Weber advocated that bureaucracy represents rationalization applied to the organization of human activities and that it relies on rational-legal authority based on impersonal rules which are legally established (Theuvsen 2004: 1). The elements set by Weber were used to establish work discipline, both in very serious state services and in private entities.

Although he was accepted as ideologist of a new form of management in organizations that are now defined as bureaucratic, Weber became target of many critics. His intention to create a new form of bureaucratic organization meant achieving maximum results, which would give it the characteristics of an ideal organization. He claimed that the wealth of bureaucracy lies precisely in its technical superiority and the fact that within a bureaucratic organization precision, speed, unity of action, continuity, discretion, cohesion, clear subordination, reduction of conflicts, objective and personal costs are carried out in a better way than all forms of collegiality or honorary functions (Weber, 1961). Also, he believed that the growing demands for culture were determined, although to varying degrees, by the growing wealth of the most influential strata in the state, while increasing bureaucratization was a function of the increasing possession of goods used for consumption. This affects the standard of living and creates an increasingly subjective necessity for organized, collective, inter-local, and therefore bureaucratic services for the most diverse needs, which were previously unknown, or were met locally or by private economy (Weber, 1947).

Peter Blau, a well-known American sociologist, did not differ much with Weber's views, because he believed that Weber's approach could be accepted when it is established that social structure is functioning quite well, that is, when it is in full effect (Blau, 1956). On the other hand, in terms of establishing a balance in functioning of bureaucratic organizations, Blau puts forward the thesis that it is important to succeed in intention to avoid falsely presenting of stability of organization and to correctly present all changes (social, economic, sociological) that affect its functioning (Blau 1960: 545). Also, he claimed that in his researches, Weber left a space for which did not have enough convincing facts, when attention should be paid to the consequences arising from inadequate functioning of the work organization or some of its parts.

Criticisms of Weber's claims were the most numerous in United States of America, and certainly one of the most significant remarks referred to the fact that he was only interested in pure, formal bureaucratic organization. However, a deeper analysis of Weber's work shows that he rightly gave importance to informal relationships and unofficial practices. On the other hand, Bernard Chester argued that it is impossible to imagine the functioning of formal organizations without informal organization (Chester, 1938). As Marshall Goldman points out, Weber's thoughts are to some extent a consequence of the limited development of production forces and an expression of certain production needs, whereby bureaucratic organization plays a positive role in a certain sense, because it contributed to rationalization of production (Goldman 1988: 455). Undoubtedly, the harshest criticisms of Weber's assumptions came from Robert Merton, who claimed that the features that characterize Weber's bureaucratic organization (established forms of behavior, discipline, hierarchy and formal services) are actually the main and greatest sources of weakness of the theory itself. However, Merton still defended himself in expressing his harsh views, claiming that in complex organizations and relationships, mentioned elements might correspond to their function and fulfill certain goals, but same elements, viewed from other aspects act dysfunctionally and negatively on the achievement of organization's goals (Merton 1973: 154).

From the aspect of socialist organization of society, the danger of bureaucratism lies in the fact that the latter, like a disease, weakens the entire organism of the socialist social system, while at the same time strengthens anti-socialist forces and tendencies. Bureaucratism inevitably breaks all ties between the leading political forces and working class, and increasingly sharpens internal social contradictions. As far as the bureaucracy and its understanding of the emergence of socialism are concerned, it led to heated polemics between Marx and Hegel. Hegel basically defines bureaucracy formally, considering that it represents the real interest of society. To him belongs the first systematic attempt to clearly define the place and role of bureaucracy in political society (Hegel, 1989). Marx believed that bureaucracy is the corporation of the state and its spirit, it is the state formalism of civil society and turns the formal state attitude into a categorical imperative. Bureaucracy is a closed circle from which there is no escape, and its hierarchy is a hierarchy of knowledge. In fact, it is an imaginary state in addition to a real state, that's why for bureaucrats everything has a double meaning - real and bureaucratic (Marks, 1972).

4. TECHNOCRACY AS A CONSEQUENCE OF BUREAUCRACY

The word technocracy derives from the Greek words *techno* - skill, knowledge and *kratein* - to rule. Thus, technocracy implies technical rule or the rule of knowledge. It is considered an American invention, and it was brought to Europe in order to Americanize European countries. This term was first used in 1919 by William Henry Smith, an American engineer, and was widely present in the 1970s when technocracy seemed to be a viable future form of government (Lindstam, 2014). However, its creator is considered to be the French socialist-utopian St. Simon, who advocated that the nation should be led by some kind of academy, that the parliament should be presided over by a mathematician and that the exercise of power should be free. Since bureaucratic circles always aim to achieve some form of government, this idea had its supporters. Combining the teachings of St. Simon, his followers and Henri Fayol, American President Wilson gathered intelligent people (ethnologists, physicists, lawyers...) as creators of peace in the world, not politicians and diplomats for whom he claimed to be greedy careerists (Petrović, 2006).

If the role of bureaucracy and technocracy is analyzed based on the given opinions, and if we talk about governance, then there is a certain difference between them. The first rule (bureaucracy) cannot do without the second, and the second (technocracy) can do without the first. However, it should be borne in mind that they are directed at each other, as well as that they are very tightly connected. Bureaucracy, in the sense of group of administrative and executive apparatus, officials in the state administration and its institutions that perform public affairs, especially in their high hierarchy, is an integral part of bureaucracy in a broader political sense. Bureaucracy cannot have complete power or control over social and economic relations if they are established and maintained based on the influence of members of the technostructure. This means that the political bureaucracy cannot, with the help of administrative and executive functionaries who are in fact an integral part of it, realize and achieve its rule without solidarity with the technocracy. Thus, society as a whole became a training ground where technocratic management of the economy and management of the state apparatus almost came together. Technocratic management is essentially a manifestation of the collective management of capital by bureaucrats who do not own the latter, because it is the property of a bureaucratic organization. That is why technocracy is not considered an ideology, but a practical management intelligence based on interests. It should be noted that complexity of modern production conditions organizational management functions that favor the emergence and development of technocracy. This social layer does not have property and is not the bearer of a certain method of production, so it has no class elements, which is why it can simultaneously intertwine with the ruling class, the middle classes and educated part of the working class (Pantelić-Vujanović & Čukanović-Karavidić, 2014, 245).

Technocracy actually appeared as a consequence of scientific and technical revolution and is an instrument of bureaucracy. The difference between them is more quantitative than qualitative, considering that technocracy only matured on Weber's bureaucratic

model. Technocracy essentially represents the possibility or opportunity for science, as the bearer of rationality, to take all power into its own hands. And power is the ability of an individual or group to impose their interests on others and to achieve their goals and satisfy their own interests. Thus, technocracy implies the rule of experts and as a model wants to make politics more rational and efficient, taking into account that growth of scientific knowledge and technological inventions is faster than process of political decision-making and the fact that politicians cannot understand all such complex issues (Fischer 2008: 4). The members of the technostructure aim to protect their interests, that is, their own existence, and technostructure resists any external intervention or influence.

Contemporary literature distinguishes two basic types of technocracy, which classical literature in a certain sense did not manage. Certainly, rapid economic development and increasing volume of needs for professional workforce of all profiles and occupations contributed to this. The first type of technocracy is technoplutocracy, which is defined as the rule of knowledge supported by the rule of rich people, which includes the management elite - managers in large companies and other personnel who perform certain management functions in financial organizations and institutions. It is the characteristic of technoplutocracy that it first experienced its maturation thanks to the rapid development of the capitalist economy and the flourishing of a large number of production and service capacities. American and European companies were leaders in this area, and in the interest of conquering and expanding the market through mergers and consolidation of capital, they created large joint-stock companies. This dynamic flow of financial material did not oblige their owners to manage, so instead of occupying managerial positions, they transferred that competence to managers. Managers perform tasks for the account and on behalf of shareholders-owners of the capital, but at the same time they also earn their own money. The main directions in which representatives of technoplutocracy act on the state and its rulers are the financing of political parties and creation of public opinion through the use of mass media. This phenomenon is called information totalitarianism, for which Gunther says that media devices take away our ability to speak and turn us into minors and serfs (Gunther, 1956).

Another type of technocracy is known as technobureaucracy. This category of technocrats includes managers who do their jobs in public administrations. Maybe it is not possible to call them managers in the true sense of the word, but many authors still call them like that. Technobureaucratic ideology values technical expertise and technical experts, efficiency, economic development and resulting mass consumption. It believes in planning and rational management (Fatile & Olojede & Adejuwon, 2015: 150). This only reinforced Weber's view that bureaucracy is based on knowledge. He once said that bureaucratic administration represents rule by the power of knowledge. In addition, technocracy by performing tasks in the public interest, encounters confidential sources of documents whose opening, and therefore interpretation, requires solid and sometimes expert legal knowledge. This is manifested in mastery of knowledge, professional qualities and abilities. Namely, it is in the interest of the state apparatus that regulations and other

legal norms related to its smooth functioning are properly and timely applied in order to ensure the rule of law and respect for basic democratic principles.

5. CONCLUSION

The workplace represents a space where workers perform entrusted work tasks and realize a wide range of rights from the employment relationship that are guaranteed by mandatory and autonomous legal acts (constitution, law, collective labor agreements, labor contracts...). It is in the employer's best interest to employ worker for a specific position. These workers, according to his/her professional qualities, will most efficiently fulfill the set work goals, because the work performed in this way will fulfill its basic purpose - productivity. Workers acquire their knowledge, abilities and skills most often through schooling, when they are being prepared for the future jobs they will perform. A large number of authors believe that bureaucracy is a form of government that is effectively implemented by formally engaged workers (civil servants and corporate managers). Normally, they perform their functions professionally and in a legal manner, applying the professional knowledge they possess. Therefore, bureaucrat is a person who performs certain state tasks based on the knowledge and powers that belong to him/her. People are very often unfair when they accuse bureaucrats of all the failings of the entire state system. Namely, mistakes are not in the people who directly perform certain functions, because they are equally victims of the new way of life as all other representatives of society. The system is bad, as it should benefit people.

Bureaucracy could not be known in its pure form until recently because it is intertwined with other forms of government. In essence, all forms of government are the same, only methods by which the power is exercised differ, as well as the spaces where its executors operate. Ancient Egyptian pharaohs and ancient Chinese emperors built huge bureaucratic structures, and so did other rulers. Medieval feudalism was an attempt to organize rule over large areas without bureaucracy and its accompanying methods, but that attempt ended in failure. There is no doubt that bureaucratic system is fundamentally illiberal and undemocratic. However, bureaucracy and bureaucrats are being wrongly accused, while the number of bureaucrats is increasing day by day, which is a signal that the origin of the system's non-functioning must be sought elsewhere. Bureaucracy and bureaucratic methods are as old as civilization itself, they existed in the apparatuses of every state government, which only confirms constancy of its duration and characteristic of the inevitable companion of jobs. There is no doubt that its structure will continue to expand and improve, because possession of professional knowledge to perform a wide range of jobs in the modern era necessarily requires continuous work of employees on their own improvement. As a result, such circumstances also benefit the technostructure, because it is based on people who, with their authority, knowledge, work and life experience, are in position to manage economic entities and regulate the position of workers around the world.

REFERENCE

1. Bernard, C. (1938). *The function of the executive*, Harvard University Press, Cambridge, England.
2. Blau, P. (1960). A Theory of Social Integration, *The American Journal of Sociology*, The University of Chicago Press, Chicago, vol. 65, no. 6, pp. 545 – 556.
3. Blau, P. (1956). *Bireaucracy in modern Society*, Random House, New York.
4. Đurić, M. (1964). *Sociologija Maxa Webera*, Sociološka hrestomatija, Matica Hrvatska, Zagreb.
5. Fatile, O., Olojede, I., Adejuwon, D. (2015). Techno-Bureaucratic Governance and Public Service Delivery: Indonesia and Nigeria in Perspectives, *Africa's Public Service Delivery & Performance Review*, Cape Town, vol. 3, no. 3, pp. 149 - 176.
6. Fischer, R. (2008). European governance still technocratic? New modes of governance for food safety regulation in the European Union, *European online Integration Papers*, European Community Studies Association Austria (ECSA-A), Vienna, pp. 01 - 26.
7. Galbraith J. K. (1979). *Ekonomika i društveni ciljevi*, Otokara Keršovani, Rijeka.
8. Goldman, M. (1988). The Development of Environmental Policies in the United States and the Soviet Union, *Pace Environmental Law Review*, vol. 5, iss. 2, New York, pp. 455 – 462.
9. Gunther A. (1956). *Die Antiquiretheith des Menschen*, C.H. Beck, Munich.
10. Hegel, F. (1989). *Osnovne crte filozofije prava*, Veselin Masleša, Sarajevo.
11. Henderson, M., Parsons, T. (1964). *Max Weber: The Theory of Social and Economic Organization*, Collier - MacMillan, London.
12. Jovanović, P. (2015). Radno pravo – sedmo izmenjeno i dopunjeno izdanje, Pravni fakultet u Novom Sadu, Novi Sad.
13. Lindstam, E. (2014). *Support for Technocratic Decision-Making in the OECD Countries: Attitudes toward Apolitical Politics*, Universitat de Barcelona, Treball Fi de Grau.
14. Marks, K. (1972). *Kritika Hegelove filozofije državnog prava*, Nolit, Beograd.
15. Merton, R. (1973). Theory of Rational Option Pricing, *Bell Journal of Economics and Management Science*, RAND Corporation, vol. 4, iss. 1, Santa Monica, pp. 141 – 183.
16. Morgante, C. (1984). *Max Weber e la burocrazia: Evoluzione del modello idealtipico weberiano alla luce della più recente letteratura*, Carocci editore, Roma.
17. Pantelić-Vujanić, S., Čukanović-Karavidić, M. (2014). *Sociologija*, Univerzitet za poslovni inženjering i menadžment, Banja Luka.
18. Petrović, M. (2006). *Nauka o upravljanju kao pretpostavka upravne politike*, Pravni fakultet Univerziteta u Nišu, Centar za publikacije, Niš.
19. Styhre, A. (2007). *The innovative bureaucracy: Bureaucracy in an age of fluidity*, Routledge, New York.
20. Theuvsen, L. (2004). On Good and Bad Bureaucracies: Designing Effective Quality Management Systems in the Agrofood Sector, *European Association of Agricultural Economists*, Zeist, Netherlands, pp. 01 – 11.

21. Vujaklija, M. (1972). *Rečnik stranih reči i izraza*, Prosveta, Beograd.
22. Weber, M. (1961). *Economia e società*, Comunità, Milano.
23. Weber, M. (1947). *The theory of social and economic organization*, Oxford University Press, New York.
24. Wren, D., Voich, D. (1994). *Menadžment, proces, struktura i ponašanje*, Poslovni sistem "Grmeč" AD – Privredni pregled", Beograd.

UDC: 005.5:658.1(497.11)
Received Review scientific paper
Accepted: March 23, 2023
Corresponding author: March 30, 2023
dusan.vasic@fpssp.edu.rs

CONCEPTUALIZATION AND PERSPECTIVE OF CORPORATE GOVERNANCE OF STATE OWNED ENTERPRISES IN SERBIA

Dušan Vasić

University of Donja Gorica, UDG, Humanistic Studies, Podgorica, Montenegro, e-mail:
dusan.vasic@udg.edu.me

Milan Radosavljević

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: milan.radosavljevic@fpssp.edu.rs

Bojan Zdravković

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: bojan.zdravkovic@fpssp.edu.rs

Abstract: *Governance of companies in the Republic of Serbia in which the state is the majority or predominant owner for many years represents a big problem and an even bigger challenge for all economic policy makers and power holders. Due to the unwanted social consequences and their political reflection, radical cuts in this area were avoided, despite periods of great crisis and significant losses among some of the largest state-owned enterprises. The major financial crisis in the world in 2008 and the onset of the corona virus pandemic in 2019 certainly contributed to the delay and hesitation. However, the foundations of a new policy in this area were already laid in 2020, and the Strategy of State Ownership and State Sector Governance was adopted in 2021. At the same time, the Action Plan for the implementation of the Strategies in the period from 2021 to 2023 was adopted, so that in December 2022 the Draft Law on the Management of Business Companies owned by the Republic of Serbia finally saw the light of day. Undoubtedly, the corporatization of state enterprises and the improvement of their operations, and above all management in this sector, are included in the very top of national priorities. Regardless of the fact that the law has not yet entered the procedure, the first radical move was made on April 6, 2023. The largest public company in*

Serbia, Elektroprivreda Srbije, was transformed into a joint stock company. In this paper, we shall consider some of the most important issues, problems and possible solutions, raised by the above-mentioned documents, which are important for the organization, implementation and improvement of corporate governance in the public sector in the Republic of Serbia. It is otherwise a very complex and sensitive matter, both in a practical and theoretical sense, which requires comprehensive research and complex answer, and the following text should be understood as an invitation and incentive to the academic and professional public to pay more attention to them.

Key words: *corporate governance, public companies, role of the state as owner, transformation of legal status, strategy of state ownership and governance.*

INTRODUCTION

The moment of truth has come for the state sector of the economy. From January 1, 2024, all economic entities in which the Republic of Serbia is the owner will enter the corporatization procedure. This means that their legal form will be radically changed and adapted to the general regulations on capital companies. In the future, economic entities in which the state is the owner will be organized only as joint stock companies or companies with limited liability. At the time of writing this paper, the largest state-owned enterprise, Elektroprivreda Srbije, has been transformed into a joint-stock company. This was possible in view of the undertaken international obligations, as well as the fact that in the regulations that are being prepared, it is foreseen that the management of this business conglomerate must be in accordance with the regulations of the European Union.

Valid Law on Public Enterprises [“Official Gazette of RS”, no. 15/2016 and 88/2019], as well as the series of regulations that preceded it, prescribes the manner and forms through which the state incorporates incorporates funds, capital and resources, in order to organize and perform tasks of general interest in a certain part of the territory (municipality, city, province) or at the level of the Republic. At the same time, it is allowed to register forms of its entrepreneurship in order to achieve general interests as: (1) public company, (2) limited liability company founded by a public company, (3) joint stock company whose sole owner is a public company, (4) a capital company whose sole owner is the Republic, i.e. an autonomous province, city or municipality, (5) a subsidiary company founded by one of the joint stock companies from the previous point, (6) other capital company and an entrepreneur entrusted with the performance of activities of general interest.¹

After the transformation of the “state sector”, the public company, as a type of business entity, will no longer exist. Along with the change in the legal form of state-owned enterprises, a change in the way of management in these economic entities is also planned. They will be obliged to apply the principles, mechanisms and instruments of corporate governance in the state sector, which are based on the OECD principles, and according

1 See Article 3 of the Law on Public Enterprises.

to which the Strategy of State Ownership and Management of State Enterprises was formed. True, some basic solutions have long been incorporated into the Law on Public Enterprises, the implementation of which could lead to the development of corporate governance in the public sector.

Nevertheless, their application and further elaboration was missing. In addition, regulations have not been adopted in a number of areas that would all together create a favorable environment for the development of corporate governance. What's more, it could be said that there is still a legal gap in terms of the comprehensive regulation of the system of corporate management of state property and capital. Without improving the way of governance, without transitioning to a corporate philosophy and without changing numerous laws that regulate issues of property, finance, audit, control and regular review of the policy of state ownership, changes in the form of organization of state economic entities alone will not yield results.

1. FACTORS AFFECTING CORPORATE GOVERNANCE

A unified and generally accepted definition of corporate governance does not exist, nor is it possible. Definitions depend on the nature of property relations, the overall development of the economy, the legal, business and cultural traditions of a particular society, the institutions that adopt them and the theoreticians that shape them. In all this diversity, the only thing that is not disputed is the understanding of corporate governance as a system of relationships established between numerous participants and interest holders in and around a corporation.

The corporate governance system is influenced by numerous internal and external factors. In theory, the main external factors that shape the economic environment are mainly stated as follows: (1) Efficient capital markets; (2) Regulatory measures; (3) Legislative tradition; (4) Accounting and control standards and (5) Social and cultural values. As for the interest holders in the corporation who use instruments of influence on managers and whom they must take into account when making decisions, the following groups are generally distinguished: (1) Investors, that is, owners of shares, (2) Supervisory Board; (3) Customers; (4) Suppliers; (5) Trade unions; (6) Media; (7) Regulatory bodies; (8) Analysts and (9) Creditors [Laker D.F. and Tayan B. (2021:9)]. These factors and determinants are shown graphically in Figure 1.

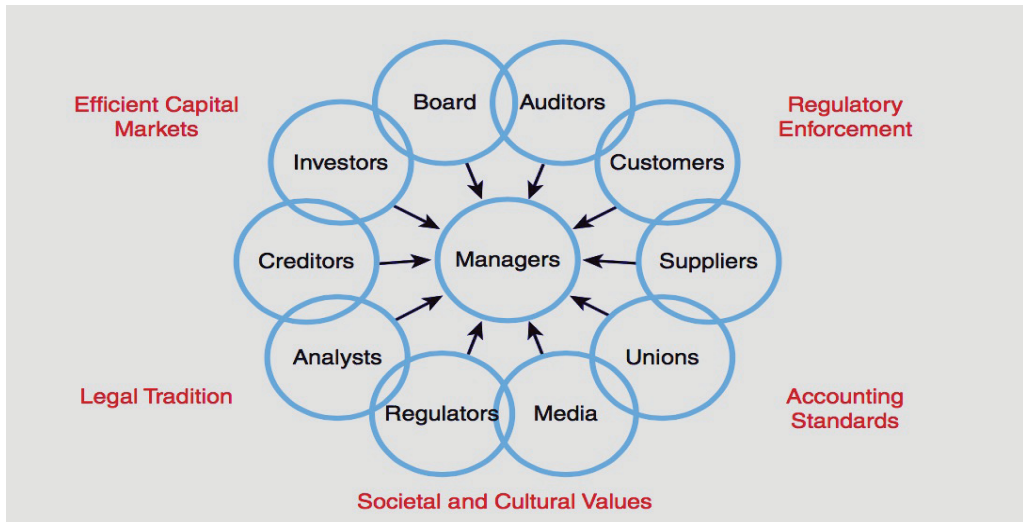


Figure 1: Selected determinants and participants in the corporate governance system, [Laker D.F. i Tauan B. (2021:9)];

Due to the uneven development of countries and companies, the system of corporate governance did not develop at the same pace and in the same way. Manojlo Babić [Babić, V (2008: 67)], referring to Draker, points out that: “the corporate governance system has gone through three characteristic development phases”, but there are also a number of other categorizations and classifications of its development phases, which start from different factors. Regarding the mechanisms through which corporate governance is achieved, Mihajlo Perić points out that most authors believe that there are two basic groups, internal and external mechanisms [Perić, M (2018: 17)]. These mechanisms were explained in detail by Milenko Dželetović [Dželetović, M (2020: 42-82)]. In this regard, and after financial abuses in the USA, Larcker and Brain view corporate governance as “a set of control mechanisms that certain corporations adopt to prevent or deter management from activities aimed at achieving their own interests, to the detriment of owners and other stakeholders” [Larcker, D. F. & Taylor. B, (2021:8)]. Manojlo Babić states that “there are two basic models of corporate management, open and closed” [Babić, M. i dr. (2008:107)]. Milton Friedman explains corporate governance as a kind of “conducting business in accordance with the wishes of owners and shareholders, taking into account the basic rules that establish the social environment through laws and local customs” [Friedman, M. (2002:46)]. Shleifer and Vishny see corporate governance as “the way in which financial providers provide corporations with a return on their investment.” [Shleifer, A., Vishny R. W. (1997:737)].

The numerous factors that all these authors talk about, the different degree of influence of interested parties and excessive ambitions objectively lead to a conflict of interests. Primarily these conflicts take place between the owner and the manager.

The aim of corporate management is to continuously overcome, amortize and resolve these differences, in order to improve operations and increase profits. Principles, mechanisms and rules for resolving disputed issues gradually began to take shape in the form of a code of corporate governance. Many countries have regulated the principles and organization of corporate governance in appropriate laws. At the same time, specific models of corporate governance were formed, depending on the nature of ownership relations and the way of their protection.

The OECD² went the farthest in developing and elaborating the principles of good corporate governance on the international level. Its Guidelines for Good Corporate Governance include four groups of values. The first is **impartiality**, understood as the necessity of equal treatment and respect for all shareholders, as well as compensation in case of violation of their rights. The second is the **obligation**, in terms of recognizing the rights of interest holders, which are established by law, as well as improving their cooperation in order to achieve the main goals. The third is **transparency**, which requires full, truthful and timely publication of information on all important issues concerning the company's operations. The fourth is the **responsibility** of both the managers towards the shareholders and the board of directors for the supervision and control of the manager's work, and then the responsibility of the board of directors towards the capital owners [Korporativno upravljanje, Manual (2011:11-12)].

2. PRINCIPLES OF CORPORATE GOVERNANCE IN THE PUBLIC SECTOR

Governance of the state-owned enterprises represents a major challenge for the economy of many countries. Despite this, it escaped the attention of the professional, business and academic public until the middle of the first decade of the 21st century. In particular, there was a lack of any international benchmarks, which would help governments to assess the performance and improve the state management of these enterprises.

The first relevant guidelines for this area of management were prepared by the OECD in 2005 and they were received with great attention. In our country, they were translated and published only in 2008. These OECD Guidelines on corporate governance in state-owned enterprises "filled a very significant gap and aroused the general interest of various key stakeholders" [OECD Guidelines (2008:5)].

In 2015, the OECD adopted an updated text of the Guidelines [OECD Guidelines on Corporate Governance of State Owned Enterprises (2015)]; (unfortunately, it has not yet been translated and published in our country), which resulted from ten years of experience in good management of state-owned enterprises, the professionalization of the function of state ownership and the achievements of corporate management in state-owned enterprises.

2 Organization for Economic Cooperation and Development

2.1. The importance of state-owned enterprises and the necessity of improving their governance

In some OECD member countries, state-owned enterprises still comprise a significant portion of gross domestic product, employment and market capitalization. Moreover, state-owned enterprises often predominate in utility and infrastructure industries, which are also called activities of special social interest. These are primarily energy, transport and telecommunications, whose operations are of great importance for broad segments of the population and other parts of the business sector.

Research shows that the influence of state-owned enterprises is growing globally. For example, the share of state-owned enterprises among the “**Fortune Global 500**” increased from 9%, in 2005, to 23% in 2014, especially thanks to the growth of Chinese state-owned enterprises [State Owned Enterprises (2015:6). In the list “**Fortune Global 500**” published in 2022, the total number of Chinese companies reached 136, while the number of companies from the US dropped to 124. These two countries together own 48 percent of all companies on the Global 500 list. On top of that, among the 136 Chinese companies, as many as 96 companies (or 71 percent) represent gigantic state-owned enterprises from the primary activity [CSIC: Fortune Favors State-Owned, October 7, 2022]³

The increasingly complex international circumstances, crises and wars that are being waged in the not-so-distant environment indicate that state-owned enterprises and other public enterprises (at the federal, provincial, city and municipal level) that serve the general interest are still necessary and should be preserved, modernized and their work should be improved. This requires a radical improvement of the corporate management of economic entities that are owned by the state.

In the sphere of governance of state-owned enterprises, the main challenge is to find a balance between the authority of the state to actively exercise its ownership function (primarily to nominate and elect the board of directors) and the risk of imposing excessive and inappropriate political interference in the operation and management of such companies. An equally important challenge is to ensure market equality in all areas in which private companies can compete with state-owned enterprises, so that the state, through its regulatory or supervisory function, does not prevent competition.

2.2 The specificity of corporate governance in state enterprises

The specifics of corporate governance in the public sector arise from the economic nature itself and the distinctive business identity of public and other companies with predominant state ownership. In Serbia, it is expressed in several ways. One group of specifics arises from the fact that these companies at the local, municipal and city level are mostly organized as single-member companies and at a higher level (federal and provincial)

3 <https://www.csis.org/blogs/trustee-china-hand/fortune-favors-state-owned-three-years-chinese-dominance-global-500-list> (2023.03.19);

as joint-stock companies as well. The second main specificity is that their founders are exclusively state bodies, regardless of the level of government that founded them. The third specificity derives from the peculiarity of the work they they engage in, because they perform activities of general interest or special importance. The fourth specificity is that on the local level it is possible for state enterprises to transfer a part of their activities to the private sector through a public-private partnership (most often this is the case in the field of public transport).

Perhaps the greatest specificity is reflected in the fact that the state simultaneously appears as an owner, entrepreneur, shareholder, employer, profit earner and market participant, and at the same time as a creator of legislative frameworks, a regulator of the work of other participants and a controller of compliance with legality. The directors of state-owned enterprises in those circumstances were in a dilemma, how to define the business goals of state-owned enterprises, how to establish effective management control and who will implement it, how to ensure a certain transparency of operations but also protect business interests, how to organize and compose the management and control bodies, etc.

2.3. OECD Rules for corporate governance in the public sector

The general principles of corporate governance of the OECD from 2004 did not provide answers to the problems that arise within the business of public companies, and in connection with the way of governance. Faced with this, the OECD started to develop a special set of rules for corporate governance in the public sector.

The first “package” of Guidelines was published in 2005 and it contained instructions for the following:

- 1) Ensuring an effective legal and regulatory framework for state-owned enterprises;
- 2) Positioning the state in the role of owner;
- 3) Establishment of fair treatment for all shareholders;
- 4) Regulation of relations with interested parties;
- 5) Achieving transparency and openness in business;
- 6) Defining the duties of board members in state enterprises.

In the second, much broader and more complete version of the Guidelines, published in 2015, the principles relate to the following:

- 1) Explanation of the necessity of state ownership;
- 2) Explaining the role of the state as owner;
- 3) Adjusting the position of the state enterprise on the market;
- 4) Fair treatment of shareholders and long-term investors of the state enterprise;
- 5) Relations with shareholders and responsible business;
- 6) Publication of reports and transparency of business;
- 7) Responsibility of supervisory boards of state-owned enterprises.

2.4. SCC Code and corporate governance in public companies

The Serbian Chamber of Commerce was the first institution in Serbia to publish the general Code of Corporate Governance in 2012 [“Sl. Gazette of the RS» no. 99/2012)], as a document intended for all business entities. Before that, there were only narrower codes of certain public joint-stock companies.

The code consists of three parts. The third part is relevant for us, entitled “*Additional principles and recommendations for capital companies in which the state is a member*”. This part is dedicated to the specific problems faced by economic companies in which the state is the owner. The drafting of the Code was based on the belief that governance of state-owned companies is basically not much different from the management of privately owned companies. The same economic laws apply in both cases. This is especially true for state-owned companies that are listed on an organized capital market, as well as to companies with mixed capital - state and private.

Due to its multiple role, the state is in a position to influence the market conditions of business and to place the companies in which it is a member in a privileged position compared to companies that are exclusively owned by the private sector. State enterprises are often protected from two basic threats that are essential for management policy, i.e. these enterprises in practice do not go bankrupt, nor are they really threatened by the danger of takeover, which significantly reduces the responsibility of their governing bodies and management.

State-owned enterprises sustain significant political influence, and often choose to follow the short-term political goals of the party in power. When it is known that instead of making a profit, they have to pay more attention to employment, price control, encouraging regional development and the like, then their responsibility weakens and the motivation of management boards and managers decreases.

Often, the bad economic results of companies in which the state is the owner are the result of fundamental problems in the management of these companies: non-transparent operations (as a rule, reporting is directed to the body of the state that supervises the specific company, which is often itself involved in its operational and strategic management), non-professional management boards, etc. On the other hand, good corporate governance allows the state to better protect its assets, increase the value of state-owned enterprises and make them more attractive to strategic partners and investors. When a state-owned enterprise operates successfully, it increases the state budget and contributes to the common good.

3. THE NECESSITY OF ACCELERATED CORPORATIZATION OF THE STATE SECTOR AND IMPROVEMENT OF CORPORATE GOVERNANCE

So far, the most significant step forward in terms of clarifying the structure of state-owned enterprises and introducing corporate governance in them was made in 2021.

In April of that year, the Government of Serbia adopted the Strategy⁴ (“Official Gazette of the RS”, no. 36/21), which should bring significant innovations and improvements in this area by 2027. This is the first time that a document of a conceptual character has been adopted in Serbia, which in a single place and in a comprehensive way presents a rounded strategic vision of ownership management, defines the goals of financial and public policies, proclaims the principles of corporate management and elaborates the rules of control and supervision in accordance with international standards and the best practice.

Two months later, the Action Plan for the operational implementation of the planned strategy in the first stage, that is, in the period from 2021 to the end of 2023⁵, was adopted (“Official Gazette of RS”, no. 68/21).

3.1. The strategy of state ownership and governance of state enterprises until 2027

The concept, elaborated in the form of the State Ownership and Corporate Governance Strategy, contains instructions and provides guidelines regarding the following:

- goals of ownership governance,
- principles of corporate governance and
- practices of supervision over economic entities in accordance with international standards

The strategy also encompasses the establishment of a centralized management system for state-owned enterprises with the **Ministry of Economy** performing this centralized ownership function on behalf of the state. It will not do so only in cases where adopted international acts have determined otherwise (which refers to the field of energy).

Bearing in mind that this Ministry will be in charge of developing and establishing the ownership policy that will define the justification and purpose of state ownership, the goals of that ownership, the role of the state in the corporate management of companies in which the state is a member, as well as the way in which the state will implement its ownership politics, there is no doubt that the duties and responsibilities of the Ministry will expand significantly.

In order to implement the unified policy of state ownership, the Ministry of Economy has been tasked to perform the following, in cooperation with line ministries and competent authorities: (1) prepare an analysis of all “state” economic entities (financial, property legal, corporate, etc.); (2) carry out the classification of economic entities (by activity and by importance for the state); (3) establish a unique record of business entities owned by the Republic; (4) analyze the existing legal framework and list acts that need to be adopted, amended, repealed, repealed, etc.; and (5) draft the acts for regulating the system of all PSRS and their subsidiaries.

4 Full title: Strategy of state ownership and management of economic entities owned by the Republic of Serbia for the period from 2021 to 2027;

5 Full title: Action Plan for the Implementation of the Strategy of State Ownership and Management of Economic Entities Owned by the Republic of Serbia for the period from 2021 to 2027, in the period 2021-2023.

The transformation defined by the Strategy will cover all state enterprises, including their subsidiaries (in which they own more than 50% of the capital), but also those companies in which the state is a minority owner. When the central register of all state-owned companies is created, it will be decided later what regime will be applied to companies in which the state is a minority owner.

The goal of the Strategy is to carry out the reform of state companies through sustainable and efficient management of business entities, to increase the benefits of state ownership for society and citizens as a whole, and to protect the general interests of the state.

The Government Strategy contains an overview and analysis of the current situation in three areas:

- the legal framework of business entities owned by the RS;
- proprietary governance;
- corporate governance.

3.2. The number and structure of companies owned by the Republic of Serbia

The necessity of introducing precise records and a clear classification of companies in which the state is the owner is emphasized by the very fact of data inconsistencies. Namely, in the Strategy, adopted in April 2021, it is said that preliminary data indicate that the Republic of Serbia has 270 active economic entities in its portfolio. Their structure is given in Table 1, along with a graphic representation.

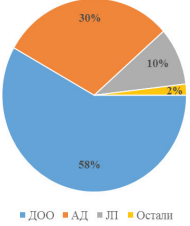
Structure of companies owned by the RS	
<ul style="list-style-type: none"> - limited liability companies (DOO): 157; - joint stock companies (AD): 82; - public enterprises (JP) 26; - others: 5 	 <p>A pie chart illustrating the structure of companies owned by the RS. The chart is divided into four segments: a large blue segment representing 58% (DOO), an orange segment representing 30% (AD), a grey segment representing 10% (JP), and a small yellow segment representing 2% (Others). A legend below the chart identifies the segments: blue for ДОО, orange for АД, grey for ЈП, and yellow for Остали.</p>

Table 1: Structure of companies owned by RS (Strategy 2021-2027:10)

However, according to the Announcement of the Agency for Business Registers of Serbia, published two months later, 545 public companies operated in Serbia in the previous year, with a total of 114,451 employees (<https://www.danas.rs/vesti/ekonomija/u-srbiji-prosle-godine-poslovalo-545-javnih-preduzeca-sa-vise-od-114-000-zaposlenih/>). Of these, 29 were large public enterprises (with 73,495 employees), 97 medium-sized enterprises (with 21,558 employees), 251 small enterprises (with 17,458 employees) and 168 micro enterprises (with 1,940 employees).

3.1. Basic shortcomings of the corporate governance system in the public sector

Corporate governance in public companies, similar to the private sector, can be said to represent “a set of rules by which the internal organization of a public company functions, the selection of directors and members of the management body, supervision of the founder as owner, a system of planning, reporting and measuring the achieved results of public companies in order to make their work transparent” [Vukolić Z (2019:71)]. For many years, it has been repeated here as a general assessment that corporate governance in public companies is in the initial stages of development. The institutional framework is in place, but the process itself is in the beginning. The need to strengthen the market orientation of the Serbian economy, the gradual harmonization with the European Union regulations, as well as the implementation of what was agreed with the IMF – all this has been a step towards redefining the status and organization of the state sector, as well as the way of management in this area. This process was significantly accelerated in 2023, and was preceded by a deep dive into the essence and causes of the basic problems in this area.

The creators of the State Sector Reform Strategy have very critically assessed the current state of affairs in the sphere of corporate governance. They concluded that on the normative level, the biggest problem is the uneven legal framework for numerous state-owned economic entities and the lack of compicance between many laws, primarily the Law on Public Enterprises and the Law on Business Companies. Universal rules regarding the organization and management of companies in which the state has ownership rights, as well as regarding strategic planning, do not exist, so the differences are large, goals and plans are generally set and vaguely articulated, and they do not contain guidelines for the implementation of plans. Provisions concerning the operation of state-owned holding companies are scattered in a series of regulations, and there is inconsistency between them. If it is taken into account that the important roles of the state on the economic plan (as a company owner, as a policy maker, as a regulator and as a controller) are neither precisely nor clearly defined, nor are they to be found in a single place, then the question remains of how business entities can shape their goals. The uneven legal framework creates confusion in business, and the different solutions, mechanisms and practices of corporate management do not allow an analytical and comparative view of the essence of the problems in these companies.

Precisely from the point of view of the functioning of corporate governance, it is almost impossible to explain large fluctuations in the operations of public companies and in general companies in which the state has ownership. Thus, it follows from the APR data from 2021 that in 2020 the total net profit of public companies was 29.6 billion dinars, and that in 2019 they had a loss of 3.6 billion dinars. Moreover, in 2020 they reported a positive result from financing of 7.6 billion and it is 2.3 times higher compared to 2019, while as a result of other activities they reported a loss of 15 billion dinars, which is 34.6 percent less than in 2019. The question remains who actually contributed to it and to what

extent: the state as owner, directors as managers or accountants as experts for beautifying the balance sheet.

A study by the Faculty of Economics from Belgrade also rated the level of corporate governance in Serbia as very low. ("Level of corporate governance in JP founded by RS, 2016:7-10). The main reasons are the following:

- unclear definition of business goals, which is why in practice the emphasis is not always on achieving business results, but often on maintaining social peace, excessive employment, non-payment of debts, etc.;
- absence of mechanisms for effective control of managers, their removal or promotion in accordance with the results of employment, because they are appointed by those who should control them, and political factors often have more influence than public demands or general interest;
- insufficient transparency of business, given that the reports are incomplete, uneven or deficient, to be evaluated by those who often participate in management or adopt measures that change the position and conditions of business, as well as the weaknesses of internal control and internal audit;
- insufficient expertise of supervisory boards, because insufficient attention is paid to competence, education and required experience, which are necessary for professional behavior, as well as for independent behavior, outside of political influences;
- absence of mechanisms for stimulating reward and evaluation of both the contribution of the manager and the engagement and contribution of the members of the executive board.

4. THE TRANSFORMATION OF THE STATE OWNERSHIP STRATEGY INTO THE NEW LAW

4.1. Review of certain provisions of the Draft Law on the Governance of Companies Owned by the Republic of Serbia

Bearing in mind the importance that the Strategy on State Ownership and governance attaches to the development of corporate governance, it is not surprising that the draft of the first law in that new reform wave is dedicated to governance. It follows from the very title of this act (mentioned above) that the redefinition and implementation of a new way of **corporate governance** is the key to all other changes. Hence, in the first paragraph of Article 1, it is proclaimed that the law regulates "*the method of ownership management and improvement of corporate management*". At the same time, after this sentence, following the comma, it says "*as well as other issues related to the **legal position of capital companies***".

From this wording, one can recognize the intention to improve the corporate governance system and simultaneously create an initial formal basis for converting public

companies into capital companies, without waiting for changes to other regulations. At the same time, this approach makes it possible to avoid possible “distruction” of employees in current public enterprises in the Republic, given their fear of privatization. To be honest, corporate governance is not a matter of status, nor is the legal position of the company resolved through the way of governance, but the wording allows both tracks for the implementation of changes to be open. The fact that out of a total of 48 members, only 16 are directly involved in corporate management speaks of this two-dimensional approach. For that purpose, the “Draft Law on Management” advocates certain normative innovations, without waiting for the relevant economic legislation to be reformed.

When the question arises as to who according to this Draft Law can perform activities of general interest, one gets the impression that there is a certain vagueness here. According to the currently valid regulations, activities of general interest, apart from public companies, can be performed by private companies, then companies with mixed capital, business entities or even entrepreneurs to whom this right has been transferred. However, from the “Draft Law on Management...” it is not clear who will be able to perform activities of general interest after the transformation of the republic’s public enterprises into capital companies. In Article 2, paragraph 2, it is said that a capital company **can** (author’s note) perform activities of general interest (which are determined as such by a special law). However, this does not mean that it **must** perform that activity. But if it doesn’t have to, it is not clear who else could perform that special activity of general interest and on what basis.

A certain terminological inconsistency is also noticeable. For example, “Strategy of State Ownership...” and “Action Plan for its Implementation...”, both in the title and in the text of the document use the term “*business entities owned by the Republic of Serbia*” (abbreviated PSRS). However, the “Draft Law on Governance...” uses the term “*business companies owned by the Republic of Serbia*” in the title, while in the text part it uses the term “**business companies in which the state has ownership**” (majority, minority or controlling, author’s remark). Undoubtedly, the circle of “business companies in which the state has ownership” is wider than the circle of “business companies that are owned by the Republic of Serbia”. Likewise, the term “*business entities*” is broader than the term “*business companies*”, because business entities can be not only business companies, but also various other entities. Is this a matter of inaccuracy, of some insufficiently articulated change, or of some third matter? It also remains unclear whether the “republic” capital company will in the future be able to entrust the performance of services or parts of services and jobs of general interest to other economic entities and to which, whether to private legal entities, as well as entrepreneurs, which is otherwise possible now according to the Law on Public companies and the Law on Business Companies.

The intention of the creators of the law was to **centralize ownership governance**. However, Article 4 does not establish a single central authority, but provides that “*centralized ownership management is carried out through the Ministry of Economy*” (underlined by the authors). The fact that it is carried out “through” the Ministry means that it is

not direct, but it looks like mediation and coordination with other ministries and state bodies. Moreover, when it comes to capital companies that deal with the production and supply of electricity, i.e. natural gas, they will have “their own” special central authority of ownership management. It will be the Ministry responsible for electricity and gas affairs⁶.

Article 3, paragraph 3 of this Draft, stipulates that **the provisions of the law shall not be applied to** “republic” capital companies (which are current public companies, author’s note), which carry out the activity of production, weapons and military equipment; which operate as banks; which operate as insurance companies and other financial organizations; non-profit organizations; institutes that are organized as commercial companies; then to those economic companies owned by the RS over which the privatization procedure was initiated, i.e. over which bankruptcy was initiated. It is realistic to assume that the number of state economic entities that will be subject to the provisions of this law will certainly be reduced, at least by ten percent.

The draft Law envisages that the Government **passes an Act on the criteria for choosing the legal form of the capital company into which the public enterprise will be converted.**⁷ At the same time, a period of one year, from the date of entry into force of the law, is prescribed, in which the Government, at the proposal of the ministry, will implement the change of form of public companies into a joint-stock company or a limited liability company.⁸ In the meantime, while the Law has not yet entered the procedure, on April 6, 2023, the Government adopted the *Decision on changing the legal form of Elektrop-tivreda Serbia from a public company to a non-public joint-stock company*. The government had an indisputable, multiple legal basis for such a thing, because it is the founder of this state-owned enterprise and the only competent one for its status changes. All the more so since the Draft Decision was previously adopted by the EPS Supervisory Board and submitted to the Government. However, it remains unclear on the basis of which criteria this change was made, given that the *Act on the criteria for choosing the legal form of the capital company into which the public company will be converted* has not yet been adopted, nor was it possible, because the law has not even entered the parliamentary procedure yet. After the transformation of EPS, there are still 25 public companies owned by the RS that are awaiting corporatization.

A prerequisite for the creation of a unified framework of ownership and management for all PSRS and for the centralization of responsibility and competence of the state in terms of ownership is the **classification of those companies and the compilation of their list**. That is why the “*Draft Law on Governance...*” in Article 12, paragraph 1, provides that the Government, on the proposal of the Ministry of Economy, determines “*a list of capital companies and minority capital companies, which will be used to classify them*”.

6 This exception is provided for in Article 39 of the Draft Law on the Governance of Companies Owned by the Republic of Serbia;

7 Article 40, paragraph 4, of the Draft Law on the Governance of Business Companies Owned by the Republic of Serbia;

8 Article 44, paragraph 1, of the Draft Law on the Governance of Business Companies Owned by the Republic of Serbia

The wording is obviously quite clumsy because establishing the list does not mean that their classification will be carried out, only their enumeration, and the enumerated companies are then classified according to certain criteria (author's remark). Paragraph 2 of the same article points to this, and it states that "**classification is made on the basis of goals of governance...**" (underlined by the authors). Article 11 lists five goals.⁹ However, this is where the doubt about the basis for classification begins. Namely, in contrast to the Draft Law, "Business Governance Strategy...", as a document that was the starting point for drafting the Draft Law, on p. 25 obliges the Ministry to "*classify the PSRS in its portfolio according to clearly defined criteria, which will primarily be aimed at preserving the national interest*" (underlined by the authors). The "Action Plan for the Implementation of the Strategy..." stipulated that by the end of 2021, the Ministry of Economy would "*create and establish criteria for the classification of PSRS*", and by the end of 2022, "*to adopt an act that will carry out the classification of PSRS and compile a list of classified PSRS*". The act on classification criteria cannot be found on the website of the Ministry of Economy, nor the list of PSRS already classified according to (those) criteria, so it remains unknown whether they were adopted and applied.¹⁰ It is possible that those five objectives from Article 11 of the Draft Law represent those criteria for classification. But out of a total of five, only the first could be directly linked to the preservation of the national interest, and the third only indirectly. Does this mean that the other criteria will not be applied at all as a basis for classification?

According to the currently valid regulations, the director of a public company has the status of a public official, given that he is appointed by a state authority. This entails the obligation to report to the Agency for the Prevention of Conflicts of Interest on their assets, income and employment. However, considering that the Draft Law foresees a different way of electing the director (through a competition, where the selection decision is made by the Supervisory Board or the Assembly of the company), **the director would lose his status as an official**. With that, his obligation to submit a report to Agenia about his assets and income would cease. This will certainly reduce the possibility of controlling the assets of the director, determining the existence of a conflict of interest, possible unjust enrichment, etc. It would probably be more appropriate if at least the Law on the Prevention of Corruption includes the obligation of future directors of state-owned capital companies to submit reports to the Agency, just like public officials.

9 (1) preservation of national and strategic interests, (2) preservation of markets and consumer protection, (3) reduction of social stratification of society, (4) sustainable management of state property and sustainable use of natural resources of the Republic of Serbia, and (5) improvement of economic, industrial and social goals;

10 The only available list is the *List of public companies and capital companies that perform activities of general interest and to which the Law on Public Companies from 2017 applies* (34 in total), with the indication of three more companies whose activities are monitored by the Department for Control and Supervision of the Work of Public Companies . ([https://privreda.gov.rs/sites/default/files/inline-fileU Republici Srbiji kao i u mnogim državama u svetus/Spisak-JP-I-DK-Za-Sajt-Avgust-2017.pdf](https://privreda.gov.rs/sites/default/files/inline-fileU%20Republici%20Srbiji%20kao%20i%20mnogim%20drzavama%20u%20svetus/Spisak-JP-I-DK-Za-Sajt-Avgust-2017.pdf), (accessed 19.03.2023);

Article 23 of the draft stipulates that in a certain situation, a **temporary director** can be appointed to head the company, for a period of one year. According to the current regulations, the acting director could also be appointed for only one year, but in practice it happened that this situation lasted much longer. Thus, the head of JP Putevi Srbije has been the same person in the status of acting director for ten years. Therefore, it is not excluded that some future acting directors will stay in that position much longer than the temporary period prescribed by law. Especially since no punitive measures are foreseen for this extension. This problem could be eliminated by introducing the wording that the general director must be elected within one year at the latest, as well as that the second position must not last longer than one year.

CONCLUSION

State enterprises play a significant role in the economic life, but also in the overall development of almost every country. Their participation in GDP is on average around 20 percent, but in some countries it reaches up to 40 percent. They are dominant even in highly developed countries with a market economy. This is also the case in the Republic of Serbia. However, the way these companies are managed, their legal status, business efficiency and profitability are not at a satisfactory level here. Solving these problems is now included in the very top of national priorities. Corporate governance in the public sector and the transformation of public companies into capital companies received an additional acceleration in 2023 with the sudden transformation of JP Elektroprivreda Srbije into a joint stock company.

Quality corporate governance rests on certain principles, which are considered to be an international standard and which are derived from the experiences of the so-called best practices in the business world. So far, the OECD has adopted two “packages” of Guidelines for the improvement of corporate governance of state-owned enterprises (the first in 2005, and the second in 2015). They contain principles, values and instructions, on the basis of which the Strategy of State Ownership and Governance of Business Companies was formed in the Republic of Serbia, the *Action Plan for the implementation of the Strategy was adopted* and the *Draft Law on the Management of State-owned Business Companies* was drafted. Those documents initiated the process of essential transformation of state enterprises and the comprehensive development of corporate management in them.

In Serbia, there is no central register of state-owned enterprises, nor criteria for their classification, so it is difficult to state the true situation. Such companies exist at the municipal, city, provincial and republic levels. According to preliminary data, the Republic of Serbia currently has 270 active economic entities in its portfolio. Of these, 157 are organized in the form of limited liability companies, 82 as joint stock companies, 26 as public companies, while the remaining 5 have some specific forms. However, it is estimated that the number of state-owned businesses at all levels of social organization is almost twice as large, i.e. over 500.

Opting for accession to the European Union and harmonizing regulations and practices with modern economies in the world, the Republic of Serbia strategically opted for deep reform and changes, primarily for the purpose of transitioning to a corporate organization of the state sector and introducing the principles of market operations in the public sector. This requires a clear determination of the ownership rights and obligations of the state, the definition of management goals appropriate to strategic goals and national needs, and an increase in the efficiency, profitability and social benefits of first-rate entities in which the state has ownership.

Governance as a whole, and corporate governance in particular, has so far been neglected in almost all enterprises with state ownership, regardless of whether it is a majority or minority share. What is more, the operations of these companies are still far from the public eye, their supervision is incomplete, the personnel policy is insufficiently transparent, with many failures, which most often come to light when the losses of these companies are discussed.

In order to eliminate all that, the operationalization of the new concept was started. The Government of Serbia adopted the Strategy of Public Ownership and Corporate Governance for the period 2021-2027, and then the Action Plan for its implementation in the first three years. The Serbian Chamber of Commerce has adopted its Code of Corporate Business, and a number of companies, following these and international solutions, have already adopted their own code.

Research and analysis that preceded the new concept of economic reform, which penetrates into the essential issues of organizing and managing the public sector, showed that public companies must be transformed into capital companies, and corporate management must be raised to the level of top managerial skills. The idea is to regulate the structure and form of these companies in a unique way, to establish a central register for such companies, to carry out their classification, to ensure regular reporting, control and supervision. In short, everything that characterizes successful business practices and has become the standard of modern business in developed countries will be applied to the state sector in Serbia.

The Ministry of Economy, with the cooperation of some other ministries and administrative bodies, will become the main representative of the state as the owner in all these companies. This will require a fundamental transformation and adjustment not only of this ministry, but also of other government bodies, business institutions, associations and business entities, as well as their habituation to enable the respect of interests and the inclusion of a number of other interested parties (stakeholders) through corporate management, and in the later perspective of private shareholders (shareholders) in companies that are under the management of the state, etc.

In a word, the state sector of Serbia is getting ready to open its iron doors to the public, to expose itself to competition and to step into the world of corporate management, which until now has been for it rather foreign and far away. The evolution of the role of the state is reflected in the fact that it will move from the position of irresponsible

manager to the position of responsible owner. And as an owner, he will primarily have to focus on long-term development goals, instead of following short-term populist or social impulses. She will entrust the achievement of development goals to managers capable of meeting her expectations. Such a result will be achieved only by management that is not politicized, but professionalized, that has enough knowledge and ability to manage the company, to raise its performance, and that is well rewarded and stimulated for successful work. Perhaps Drucker most believed in the exceptional abilities of managers and their contribution to social development. Researching the history of management, he concluded that in less than 150 years, management «transformed the social and economic structure of the developed countries of the world.» It led to the improvement of the world economy and the establishment of new rules for countries that will participate equally in that economy» [Druker, P.F.(2003:11)].

The first document for the implementation of the new reform concept of the governance of public enterprises, which should gain the force of law, has already entered public discussion in the form of a draft. Generally speaking, it offered respective and recognized solutions and the business world will certainly welcome them. Of course, there are certain weaknesses, doubts and controversies, and we looked at them, indicating what should be changed or improved. However, the text of the future Law on the Governance of Business Companies in the Republic of Serbia is not a key issue, neither for science nor for practice. The key issue is whether it will be fully implemented and whether the state will persist in implementing that concept.

REFERENCES

1. *Akcionni plan za sprovođenje Strategije državnog vlasništva i upravljanja privrednim subjektima koji su u vlasništvu Republike Srbije za period od 2021. do 2027. godine, u periodu od 2021. do 2023. godine* ("Sl. glasnik RS", br. 68 od 7. jula 2021);
2. Babić Manojlo i dr. (2008): *Korporativno upravljanje - principi i mehanizmi*, Revicon doo, Sarajevo 2008, Zbornik radova, pp. 523
3. Brili, Majers, Markus, (2009): *Osnovi korporativnih finansija*, Mate doo, Beograd;
4. *Corporate Governance of State-Owned Enterprises: Can They Rise to the Chalange?* (2021), *Law in Transition Journal* 2021, EBRD, London;
5. Draker, F. Piter (2006), *Moj pogled na menadžment*, Izbor iz dela o menadžmentu, Adizes, Novi Sad, Drugo izdanje 2006, pp. 280;
6. Dželetović Milenko (2020): *Uvod u korporativno upravljanje i finansijsku funkciju poslovanja*; Univerzitet u Beogradu – Inovacioni centar Fakulteta bezbednosti, Akademska misao, Beograd, 2020;
7. Fridman Milton (2002): *Capitalism and Freedom*, University of Chicago Press, Chicago, XV Edition; (https://ctheory.sitehost. iu.edu/resources /fall2020/ Friedman_Capitalism_and_Freedom.pdf)
8. *Kodeks korporativnog upravljanja Privredne komore Srbije* (2012), ("Sl. glasnik RS" br. 99/2012);

9. Korporativno upravljanje, Priručnik (2009): Međunarodna finansijska organizacija, USA, štampano u Podgorici, 2009;
10. Mihajlović Milan (2016): Odnosi između menadžmenta preduzeća i korporativnog upravljanja, Časopis Oditor, Vol.II, br.,1, str 4.-10; Centar za ekonomska i finansijska istraživanja, Beograd 2016;
11. Larcker David, Brian Tayan (2021): Corporate Governance Matters - A Closer Look at Organizational Choices and Their Consequences Third Edition, Pearson education, New Jersey,USA, 2021;
12. OECD Principles of Corporate Governance 2 ed.(2004); OECD Pariz, Jan. 200
13. OECD (2005) *Smernice za korporativno upravljanje u državnim preduzećima*, "Revicon d.o.o.", Sarajevo 2008, izdanje na bosanskom/hrvatskom/srpskom jeziku;
14. OECD (2020), *Implementing the OECD Guidelines on Corporate Governance of State-Owned Enterprises: Review of Recent Developments*, Paris, <https://doi.org/10.1787/4caa0c3b-en> (March 1, 2023);
15. OECD (2015) *Guidelines on Corporate Governance of State Owned Enterprises*; Paris, Organization for Economic Co-operation and Development 2015 edition;
16. Obradović Zoran (2013): Uticaj vlasništva na kvalitet upravljanja, Univerzitet Singidunum, Beograd 2013, pp.194;
17. Perić Miroslav (2018): Upravljanje promenama u finansijskim korporacijama u funkciji unapređenja korporativnog upravljanja; doktorska disertacija, Univerzitet union, Beogradska bankarska akademija, Fakultet za bankarstvo, osiguranje i finansije;
18. Radenković, Dragana, Jocić Vesna, (2013): Korporativno upravljanje, Ekonomski fakultet Niš, 2013;
19. Rajković Ljiljana, Bukvić Rajko (2017): Korporativno upravljanje kao deo poslovne strategije kompanije, Institut za ekonomiku poljoprivrede, Beograd 2017;
20. *Reassessing the Role of State-Owned Enterprises in Central, Eastern, and Southeastern Europe* (2019), IMF, International Monetary Fond, European Department, Publication 11/19, Washington 2019;
21. *Report of the Committee on the Financial Aspects of Corporate Governance* (01,12.1992), www.worldbank.org/html/fpd/privatesector/cg/docs/Cadbury,(March 1, 2023);
22. Shleifer A., Vishny R.W. (1997): Survey of Corporate Governance. Journal of Finance, AFA, Harvard, USA, VOL LII, br. 2, June 1997; str. 737-783; (<https://scholar.harvard.edu/files/shleifer/files/surveycorp.gov.pdf>);
23. *State Owned Enterprises - Catalysts for public value creation*, editor PwC, Price,Water, Coopers (2015), www.psrc.pwc.com;
24. *State-Owned Enterprises in the EU*, institutional paper 031, july 2016, European Commision, Luxembourg; Publications Office of the European Union, 2016;
25. Strategija državnog vlasništva i upravljanja privrednim subjektima koji su u vlasništvu Republike Srbije za period od 2021 do 2027.god. ("Sl. glasnik Republike Srbije", br.36/21);

26. Tipurić Darko (2008): Korporativno upravljanje, Sinergija nakladništvo, Zagreb, 2008;
27. Vukolić Zoran (2019), Korporativno upravljanje u javnim preduzećima, Časopis „Revizor“, Beograd 2019, vol 22, br. 85, str-71-87;
28. *Zakon o javnim preduzećima* (“Sl. glasnik RS”, br. 15/2016 i 88/2019);

UDC:

005.96:373.5

Received

Original scientific paper

Accepted:

March 16, 2023

Corresponding author:

March 27, 2023

dragana.radosavljevic@fppsp.edu.rs

CONFLICT MANAGEMENT IN THE TEACHING STAFF OF A SECONDARY SCHOOL EDUCATIONAL INSTITUTION

Aleksandra Vesović

School of Graphics and Media, PhD student at Faculty of Business Studies and Law,
„Union - Nikola Tesla“ University, Belgrade, Republic of Serbia, e-mail: aleksandra.
vesovic5@gmail.com

Dragana Radosavljević

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: dragana.radosavljevic@fppsp.edu.rs

Suzana Pajić

Faculty of Business Studies and Law, „Union - Nikola Tesla“ University, Belgrade,
Republic of Serbia, e-mail: suzana.pajic@fppsp.edu.rs

Abstract: *Conflicts in everyday life are considered to be bad, they should be neutralized, solved or avoided. Management science and organizational theory say that conflicts are not unwanted. On the contrary, they are desirable to the extent that they bring about positive changes. They are not manipulated, but managed. How it is implemented in practice depends on the national culture, the characteristics of the organization and its culture, the personality structure of individuals and their relationships in the group, that is, the organization.*

In successful and stable organizations, there are always conflicts, at different organizational levels, and they can be uncontrolled, spontaneous or deliberately created, with the aim of preventing the organization from becoming static. The minimum level of conflicts makes the organization alive and creative. In organizations that are in the process of organizational changes, the level of conflicts is higher and they must be controlled, in order not to cause negative effects of changes, but to be useful for future performance.

Education in Serbia for the last 20 years or more has been facing problems of modernization due to: new educational standards, state graduation, application of IT, methods of financing, etc., which leads to contradictions. These contradictions arise between: new

requirements for the quality of education and traditional ways and methods of teaching, the need for new ways of management in educational institutions and the unwillingness of the existing staff for changes, the need of modern society for rapid changes in educational institutions and the psychological unpreparedness of the pedagogical community for innovation . Resolving these contradictions often takes the form of conflict.

Educational activity as a specific activity implies a difference in the interests of students, teachers, management staff, administration and parents. So, there are different interests that are a prerequisite for the appearance of conflicts. Is it possible to manage conflicts in an educational institution?

As much as teachers know their school, i.e. their colleagues, the aim of the paper is to point out the need to know the problems of conflicts, management and finding solutions for them. In order to achieve this, it is necessary to have knowledge about the forms and nature of the conflict. The paper gives an account of the experimental research on the state of conflicts among the teaching staff, practical classes, in the high school of Graphics and Media, Belgrade . The results show a higher percentage of avoiding, or withdrawing from, conflicts. The reason for this is that individuals do not insist on fulfilling their interests at the expense of others, as well as a developed awareness of conflict behavior in specific institutions, such as educational ones. The age of the teaching staff also contributes to this. Teachers of practical classes are highly professionally prepared, which is evidenced by a favorable socio-psychological climate.

Key words: *conflicts, management, educational institutions*

1. INTRODUCTION

The process of pedagogical interaction is often characterized by a lack of mutual understanding and the appearance of conflicts between participants: students, teachers and parents. For pedagogy, the study of conflicts is of particular importance. The teacher should create a favorable atmosphere in the group, because an unfavorable climate makes it difficult and sometimes impossible to have a satisfactory life in an educational institution. Human relations are created by people themselves. By their actions, they can damage the optimal atmosphere for life and work. But teachers have the power to change that and establish a climate that favors personal development and the equal existence of the entire teaching staff.

In order to effectively solve the problems that have arisen, each member of the collective should acquire the necessary level of theoretical knowledge and practical skills of behavior in conflict situations, as well as knowledge about the causes and methods of conflict resolution. Conflict exists even where there is cooperation and agreement. The main issue is not to return to a state without conflict, but to learn to live with conflict, to be aware of its stimulating effect when it develops within certain limits and to be aware of its destructive nature when the limits are crossed. Today's theoreticians and practitioners

of management and human relations management are of the opinion that in the most effective organizations with the best interpersonal relations, conflicts are not only possible but also desirable. It is only necessary to manage them.

2. THEORETICAL FOUNDATIONS OF THE PROBLEM OF CONFLICT MANAGEMENT IN THE TEACHING STAFF

2.1. Studying the problem of conflict management in the teaching staff

A conflict is a conflict between social actors in order to achieve opposing interests, positions, values and attitudes, one side against the other.

Historical and pedagogical analysis of the problem of conflict management makes it possible to single out the phases, main contradictions and trends in the development of the conflict, assess the state of affairs in modern conditions and predict changes in the future.

«Conflictology is the science of patterns origin, development and completion conflicts, as well as management them» (Александрова Е.В., 1993, p. 346). Pedagogical _ conflictology is theoretical and applied direction , whose is main the purpose study nature and causes pedagogical conflicts , development method for their practically regulation and resolution « (Александрова, Л.М., 1997, pp. 3-4).

Within the framework of conflictological issues, the attention of scientists is focused on the study of conflicts in groups of students, the conflictological competence of teachers, pedagogical intervention in conflicts and ways to prevent and solve them . The preparation of future teachers for resolving conflicts in the pedagogical process is studied.

The question of the function of conflicts , in the literature, is considered in the framework of two paradigms: perceptions of conflict k acts as creative factor and the idea of conflict as a destructive phenomenon. Volkov believes that in some cases they can positively affect both the individual and the group, developing and improving them. But there can also be a negative influence conflict (Волков Б.С., Волкова Н.В., 2006, p. 384). The realization of the potential positive possibilities of conflicts is successful if they are recognized as purposeful, fruitful and as a normal state of social relations .

2.2. Types and characteristics of conflicts in the teaching staff

A person comes into conflict with other members of the group to which he belongs when he finds himself in a situation that is significant and important for him and when he does not see the possibility to change something. He usually tries not to complicate relationships and remains reserved.

Conflicts can be internal, i.e. intrapersonal, and they arise in the process of confronting different tendencies in the personality itself. They are characteristic of conscientious and responsible people.

Interpersonal conflicts arise between individuals and a group or between groups. They are a response to overwork or lack of work (Гришина Н.В., 2000, p. 64). Interpersonal

conflicts in 75% to 80% of cases arose as a conflict of material interests of individual subjects, which manifests itself as a mismatch of character, personal attitudes and moral values. Reacting to the situation, everyone acts in accordance with their character, attitudes, and different people behave differently in the same situations.

The conflict between an individual and a group arises due to a discrepancy between individual and group norms of behavior, i.e. the attitude of the individual differs from the attitude of the group. Often the group manager can cause these conflicts due to unpopular decisions. Given that organizations consist of formal and informal groups, conflicts may arise between them generated by differences in interests.

According to the length of time, conflicts can be divided into short-term and long-term. They are the short-term result of misunderstandings and mistakes that are quickly recognized. In the long term, they are associated with deep moral psychological traumas and objective difficulties.

According to nature, conflicts can be objective and subjective. Objective ones are related to real problems, shortcomings, violations of rules that arise in the process of functioning and development of the organization. Subjective ones arise due to discrepancies between personal assessments of certain events and relationships between people.

According to the consequences, conflicts can be constructive and destructive. Constructive ones suggest the possibility of rational transformations, as a result of which the very object of the conflict is eliminated. With the right approach, they can bring benefits to the organization. If the conflict has no real basis, nor does it create opportunities for the improvement of internal organizational processes, then it is destructive. It destroys the entire system of relations between people and introduces disorganization.

Quick conflicts are characterized by extreme manifestations of the negative attitude of the conflicting parties and are emotionally colored. Long-term conflicts arise in cases of stable, deep and hard-to-reconcile contradictions (Волков Б.С., Волкова Н.В., 2006, p. 384).

The specificity of pedagogical work is reflected in the fact that the teacher's work is carried out individually. Working with students in a one-on-one class, the teacher is usually in a state of increased neuropsychological load, because he has to actively regulate his own behavior and the behavior of the students in different situations.

The teacher is used to assessing and evaluating. It is difficult for him to agree with the conclusions that the unfavorable development of the pedagogical situation is conditioned by his personal and professional weaknesses and shortcomings. Many teachers also have a certain degree of personal anxiety, which is why they tend to exaggerate, dramatize events and engage in unnecessary psychological defense.

The demographic structure of teaching staff in secondary schools is in favor of women. More than 65% of teaching staff are women (<https://data.stat.gov.rs/Home/Result/11030201?languageCode=sr-Latn>). Conflicts are more common in gender homogeneous teams, which affect the business sphere of employee relations and turn into business conflicts that do not contribute to the normal development of individuals and the efficiency of the educational process. The causes of conflict are diverse. The beginning of the conflict, mostly, was caused by one reason, and another gave it a prolonged character.

2.3. Difficulties in managing conflicts in the teaching staff

Each interest group, and therefore the school, has its own business structure. It consists of business interactions that occur during the performance of duties by teachers and school administrators. These interactions in the vertical section (between principal and deputy, between principal and teacher) are predominantly managerial in nature, and in the horizontal section (between teachers) they are professional and pedagogical and to a lesser extent managerial (only when teachers participate in management). Those in management structures avoid the negative, that is, conflicts, and many will approve of their superior's position even though they know it is wrong. Anti-conflict culture is proving to be unsustainable.

The school also has its own socio-psychological structure made up of connections of a psychological nature. It is about the invisible emotional threads of sympathy and antipathy, respect, disrespect and other forms of spiritual connections between people. In this structure, the members are not equal. Some enjoy more sympathy and respect, while others have little or are isolated and neglected by colleagues and managers. A collective is well managed when its business and socio-psychological structure match.

Conflict management is possible if the necessary conditions are met, which include:

- Objective understanding of conflict, as reality;
- Recognition of the possibility of active influence on the conflict and its transformation into a factor of self-regulation and self-correction ;
- Availability of material and spiritual resources, as well as legal basis for management;
- The ability of actors to harmonize their views and interests.

The issue of conflict management in the teaching staff stems from the understanding of conflict as an integral part of the social process, as a source and driving force of people's creative activity, but also as a determinant of development problems. Conflict management in the teaching staff is a targeted influence on the conflict process, which ensures the resolution of socially significant problems. It includes anticipating conflicts, preventing some and simultaneously stimulating others, ending and suppressing conflicts.

3. EXPERIMENTAL WORK ON THE IDENTIFICATION OF METHODS FOR CONFLICT MANAGEMENT IN THE TEACHING STAFF

3.1. Research on the state of conflict in the teaching staff of the School of Graphics and Media

The total number of teachers in the High School of Graphics and Media, Belgrade, is 98. Of that number, 38 are practical teachers. In the research survey of a voluntary character, 28 teachers of practical classes answered: 17 teachers (aged 25 to 59) and 11 trainee teachers (aged 23 to 35). The Thomas conflict measurement method was applied

Kilmann Conflict mode instrument (TKI) (Thomas LK Kilman HR , available at www.cpp.com), which is the best known and most applied method for more than 40 years. It enables the determination of typical ways of an individual's reaction to conflict situations.

The typology of conflict behavior is based on two styles of behavior. Cooperativeness or cooperation is associated with a person's attention to the interests of other conflict participants and competition characterized by an emphasis on protecting one's own interests. It can also be called assertiveness, which is characterized by self-protective behavior. These two dimensions identify the following ways of conflict management: **1. competition (rivalry)** is the least effective way of behaving in conflicts, through which the desire to satisfy only one's own interests at the expense of others is expressed; **2. cooperation** occurs when conflict participants come to alternative solutions that fully satisfy the interests of both parties; **3. Compromise** is a type of agreement between conflicting parties and is reached through mutual concessions; **4. avoidance** is withdrawal from the conflict, due to the lack of desire to cooperate and achieve one's own goals; **5. adaptation (adaptation)** is a cooperative way of solving conflicts, oriented towards the interests of others.

Determining the style or type of behavior in a conflict situation is done using a questionnaire of 60 questions, grouped into 30 pairs. In order to determine which type the subject is inclined to, after carefully reading each of the double statements, he is invited to choose the one that is closest to him. The data obtained as a result of the study are correlated with the key. The number of points an individual achieves on each scale gives an idea of his tendencies towards displaying appropriate forms of behavior in conflict situations.

The test for assessing the level of personality conflict, i.e. in an individual, allows to determine both in individual cases and the overall level of conflict in the collective. The questionnaire consists of 14 questions, where it is proposed to choose the most appropriate answer for the respondent's personality. The resulting data is correlated with the key. The number of points an individual has achieved on the scale gives an idea of the level of conflict of a given person. Levels of conflict development: 14-23 low level of conflict, 24-32 average level and 33-43 high level.

The test for assessing the psychological climate in the teaching staff makes it possible to determine the level of the socio-psychological climate in the collective. The level of group formation can be diagnosed and the dynamics of its development monitored. Respondents were given a questionnaire with 13 questions asking them to rate the climate in their team on a scale from -3 to +3. The assessments indicate: -3 – the property is always manifested in the team; 2 – the property appears in most cases; -1 – the property is often manifested; 0 – both properties are manifested to the same extent. The processing includes two phases: Phase 1 – it is necessary to add up the absolute values, first the positive (+) and then the negative (-) ratings given by each participant in the survey. The smaller value is then subtracted from the larger value. The result is a number with a positive or negative sign. This is how each team member's responses are processed. Phase 2 - all the numbers obtained after processing the answers of each participant must be added and divided by the number of respondents. Then he compares the obtained figure with the

key of the method: + 22 and above – this is a high degree of favorable socio -psychological climate; from 8 to 22 - average degree of socio -psychological climate, from 0 to 8 - low degree of favorability, from 0 to -8 - initial unfavorable socio - psychological climate, from -8 to -10 medium unfavorable and from -10 and below - strong unfavorable.

3.2. Results of experimental work on the example of the Graphic and Media School

Table 1. Determining the style of behavior in a conflict situation according to TKI (first group of respondents)

Number of respondents	Number of points on the behavior scale				
	Competition	Cooperation	Compromise	Avoidance	Adaptation
1.	12	6	2	4	6
2.	3	4	11	4	8
3.	0	5	8	11	6
4.	4	6	8	10	2
5.	0	3	5	7	5
6.	2	10	8	7	3
7.	7	6	5	8	4
8.	1	9	8	6	6
9.	2	2	10	9	7
10.	4	8	6	8	4
11.	3	5	7	9	6
12.	2	2	0	0	2
13.	1	3	8	10	8
14.	0	8	7	10	5
15.	0	6	8	10	6
16.	1	3	2	11	10
17.	2	2	7	5	2
	Σ=44 or 10%	Σ=88 or 19%	Σ=110 or 24%	Σ=125 or 27%	Σ=90 or 20%

Source: authors

Table 1 shows that the most common style of behavior in a conflict situation in high school, in the first group of teachers, is the avoidance style, 27%. In second place is compromise style, 24%, in third place is adaptation 20%, in fourth place is cooperation 19% and in the last, fifth place is competition 10%.

Table 2. Determining the style of behavior in a conflict situation according to TKI (second group of respondents, trainee teachers)

Number of respondents	Number of points on the behavior scale				
	Competition	Cooperation	Compromise	Avoidance	Adaptation
1.	6	7	4	5	8
2.	4	8	10	4	4
3.	3	7	7	4	9
4.	0	6	11	5	8
5.	2	4	7	9	8
6.	0	3	10	9	8
7.	6	6	6	9	3
8.	1	8	10	8	3
9.	0	8	8	10	4
10.	3	5	7	9	6
11.	4	2	5	11	8
	Σ=29 or 9%	Σ=64 or 20%	Σ=85 or 26%	Σ=83 or 25%	Σ=69 or 20%

Source: authors

Table 2 shows that the most common style of behavior in a conflict situation in the high school of Graphics and Media, in the second group of trainee teachers, is the style of compromise, 26%. In second place is the avoidance style, 25%, third place is shared by adaptation 20% and cooperation, and in fourth place is competition 9%.

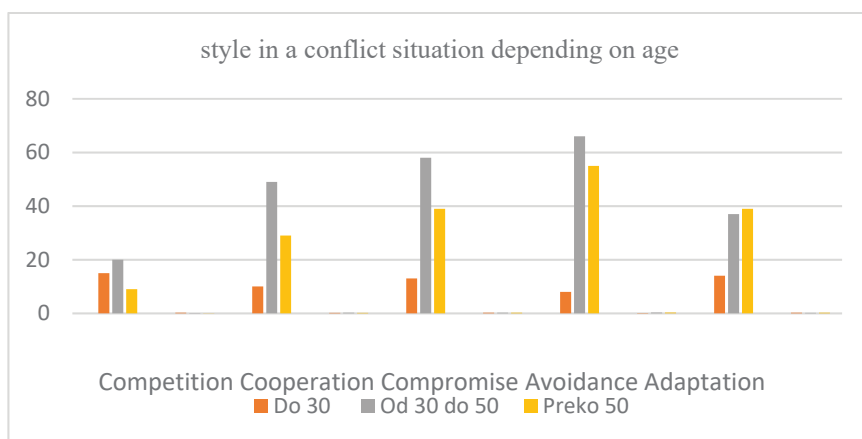
Based on quantitative data, it can be argued that such as compromise, avoidance, accommodation and cooperation are distributed in approximately equal proportions. This can be used to judge the high level of professional preparation of the teacher in terms of behavior in a conflict situation, as well as the high level of adaptation of each team member to joint activities.

Table 3. Determining the style of behavior in a conflict situation depending on age

Age	Number of points on the behavior scale and percentage									
	Competition		Cooperation		Compromise		Avoidance		Adaptation	
Until the 30	15	26%	10	16%	13	22%	8	13%	14	23%
From 30 to 50	20	9%	49	21%	58	25%	66	29%	37	16%
Over 50	9	5%	29	17%	39	23%	55	32%	39	23%

Source: authors

A comparative analysis of behavior styles in a conflict situation depending on age is also presented with a histogram.



Histogram 1. Styles of behavior in a conflict situation depending on age
Source: authors

The conclusions drawn are as follows: up to 30 years of age competition prevails, from 30 to 50 years avoidance prevails, as well as after 50 years. According to this, it can be judged that before the age of 30, the idea of pedagogical activity and communication methods was not fully formed, among teachers, and probably not even with students. St. Aaron and a range of from 30 to 50 years, and after 50 years, characterizes fact Yes are fundamental contradictions _ conflict and teachers not them recognize like it is real and permanent. Also, it can be assumed that most teachers in the school have low self-esteem and insufficiently developed social intelligence, which can lead to increased internal conflicts.

Table 4. Summary table for determining the level of conflict in an individual

Level of conflict	Secondary school teaching staff
Low	35%
Average	53%
Tall	12%

Source: authors

After processing the results, the degree of conflict between the teaching staff at the High School of Graphics and Media was determined. Thus, 12% of teachers have a high level of conflict, 53% of teachers have an average level of conflict, and 35% of teachers have a low level of conflict. In this pedagogical collective, the level of conflict is at an average level.

Table 5. Results of the study of the socio-psychological climate in the teaching staff

Number of respondents	Sociological climate	Psychological climate
1.	-8	+24
2.	-22	+14
3.	+3	+17
4.	+3	+30
5.	+6	+27
6.	+3	+23
7.	+8	+12
8.	-8	+32
9.	-3	+35
10.	-5	+12
11.	-15	+28
12.	-2	
13.	-21	
14.	+12	
15.	-20	
16.	+3	
17.	-15	
	$\Sigma=81, -81/17= -4.7$	$\Sigma=254, 254/11=23$

Source: authors

Analyzing results psychological climate in the classroom frame medium schools discover the vein initial a unfavorable a sociopath climate (avg _ is - 4,7). Therefore, this group can hardly be called a full collective . Analysis of the results studies psyche o loške climate it was established Yes this one educational frame has tall degree favorable psychological climate (avg is + 23).

The research showed that the predominant styles of behavior in conflict situations in the teaching staff of the Graphic and Media School are avoidance and compromise, which is explained by the higher professional preparation and theoretical awareness of teachers about behavior in conflict situations, as well as the peculiarities of professional communication. The choice of behavior styles in a conflict situation is also determined by the age characteristics of the members of the teaching staff. The higher the age, the greater the desire to avoid conflict. Rivalry style comes last. Therefore, it can be assessed that teachers try not to engage in direct confrontation and that they do not seek to satisfy their interests at the expense of others.

The level of a favorable socio-psychological climate in the teaching staff grows from the professional preparation of teachers in this matter. One can judge the high level of professional preparation of the teachers of the practical classes of the School of Graphics and Media in terms of behavior in a conflict situation, as well as the high level of adaptability of each team member to joint activities.

4. CONCLUSION

It has been established that conflict is often based on contradiction that is subject to certain patterns. Social pedagogues should not be afraid of conflicts, but they should understand the nature of the conflicts' occurrence, and use specific influence mechanisms to successfully resolve them.

Understanding the causes of conflict and using mechanisms for their management is possible only if future teachers possess the knowledge and skills of relevant personal qualities, knowledge and skills. The style of behavior in a specific conflict is determined by the extent to which the teacher wants to satisfy personal interests, acting passively or actively, and the interests of the other party, acting jointly or individually.

The main way of conflict-free pedagogical communication is the formation of a high level of pedagogical professionalism, mastering the art of getting out of conflict situations without losing one's dignity. The results of special studies of socio-psychological consequences of conflicts in groups convince us not only of their negative nature, but also of their constructiveness.

The teacher should organize the work in such a way that the participants themselves become the main actors in resolving the conflict, through the awareness of contradictions as the subject of the conflict, through the inner work of individuals and the reflection in their mind of their own behavior.

REFERENCES

- 1) Cvijanović J., (2004), Organizacione promene, Ekonomski institut, Beograd
- 2) <https://data.stat.gov.rs/Home/Result/11030201?languageCode=sr-Latn>, [Pristup 15.03.2023.]
- 3) Karnegi D., (2021), Kako rešavati konfliktne na profesionalnom i privatnom planu, Edicija, Beograd
- 4) Malešević D., (2020), Veština rešavanja konflikata na poslu, Provens, Beograd
- 5) Radosavljević D., Jevtić S., Radosavljević M., (2021), Ljudski resursi – upravljanje konfliktima i stresom, skripta, FPSP, Beograd
- 6) Thomas L.K. Kilman H.R., Thomas-Kilman conflict mode instrument, CPP, Inc. www.cpp.com
- 7) Vidović S., Radovanović M., (2004), Spremnost u sukobe (recepti za bolje bavljenje sobom, drugima, međusobnim odnosima i konfliktima), Nemačka organizacija za tehničku saradnju, Beograd
- 8) Александрова Е. В., (1993), Социально-трудовые конфликты: пути разрешения, -- М.: Луч, 1993. - 346с. Социально-трудовые конфликты: пути разрешения / Е. В. Александрова. - Москва : ПМБ РАУ
- 9) Александрова Л.М., (1997), Развитие эмоциональной экспрессивности у учителей // Сб. тез. 2-й ежегодн. всероссийск. конф. «Практическая психология в школе

(цели и средства)», Сентябрь 1996. - СПб.: ГП «ИМАТОН», С. 3-4., <https://lib.rosdiplom.ru/library/prosmotr.aspx?id=125713>, [Pristup 15.03.2023.]

- 10) Волков Б.С., Волкова Н.В., (2006), Конфликтология: Учебное пособие для студентов высших учебных заведений, изд. 2-е испр. И доп. - М.: Академический Проект; Альма Матер,
- 11) Волков Б.С., Волкова Н.В., (2006), Конфликтология, изд. 2-е испр. И доп. - М.: Академический Проект; Альма Матер, 384 с.
- 12) Гришина Н.В., (2000), Психология конфликта - СПб., 64с

ATTACHMENT

TEST : ASSESSMENT OF THE WAY TO RESPOND TO CONFLICT

Instructions: The questionnaire presented to you consists of two statements , and b. After reading each statement carefully, choose the one that is more in line with the way you usually behave.

1a	Sometimes I let others take responsibility for solving a controversial issue
1b	Instead of discussing what we disagree on, I try to draw attention to what we both agree on
2a	I am trying to find a compromise solution
2b	I try to solve the matter taking into account all the interests of the other person and my own
3a	I usually try to get by
3b	Sometimes I sacrifice my interests for the interests of the other person
4a	I am trying to find a compromise solution
4b	I try not to hurt the other person's feelings
5a	When solving a controversial situation, I always try to find support from the other
5b	I try my best to avoid useless tension
6a	I try to avoid trouble for myself
6b	I'm trying to find my way
7a	I try to postpone the resolution of the disputed issue in order to finally resolve it over time
7b	I believe that it is possible to give up on something in order to achieve something else
8a	I'm usually persistent in trying to get my way
8b	First, I try to determine what interests are involved
9a	I don't think it's always necessary to worry about some kind of disagreement that has arisen
9 b	I try to get there in my own way
10a	I am determined to get my way
10b	I am trying to find a compromise solution
11a	First of all, I try to clearly define what interests are at stake
11b	I try to calm the other person down and mostly maintain our relationship
12a	I often avoid taking a stand that might cause controversy
12b	I give the other a chance to stick to his opinion in something, even though he doesn't move forward
13a	I suggest a middle solution

13b	I insist that everything be done my way
14a	I communicate my point of view to the other person and ask about his views
14b	I try to show the other person the logic and merit of my views
15a	I try to calm the other person down and save our relationship
15b	I try to do whatever it takes to avoid tension
16a	I try not to hurt the other person's feelings
16b	I usually try to convince the other person of the validity of my position
17a	I'm usually persistent in trying to get my way
17b	I try my best to avoid useless tension
18a	If it makes the other person happier, I'll give them a chance to insist on their way
18b	I will give the other a chance to stick to his opinion even if he meets me halfway
19a	Before now, I'm trying to determine what are the interests and disputes of everyone involved
19b	I try to put controversial issues aside so that I can finally solve them in the end
20a	I try to overcome our differences right away
21a	When negotiating, I try to be considerate of the other
21b	I always tend to discuss the problem directly
22a	I'm trying to find a position that's in the middle
22b	I defend my position
23a	As a rule, I deal with satisfying the wishes of each of us
23b	Sometimes I leave it to others to take responsibility for solving a controversial issue
24a	If the other person's position seems very important to me, I try to accommodate them
24b	I try to convince the other to compromise
25a	I am trying to convince the other person that I am right
25b	When negotiating, I try to pay attention to the other's arguments
26a	I usually offer the middle position
27a	I often try to avoid disputes
27b	If it makes the other person happy, I'll give them a chance to express themselves
28a	I usually try to get my way
28b	In solving the situation, I usually ask for support from the other
29a	I suggest a middle position
29b	I don't think it's always worth worrying about disagreements
30a	I try to spare the other's feelings
30b	In an argument, I always take a stand so that we can succeed together

Questionnaire key: Rivalry: 3a, 6b, 9b, 10a, 13b, 14b, 16b, 17a, 22b, 25a, 28a ; Cooperation: 1b, 5a, 8b, 11a, 14a, 19a, 20a, 21b, 23a, 26b, 28b, 30b ; Compromise: 2a, 4a, 7b, 10b, 13a, 18b, 20b, 22a, 24b, 26a, 29a ; Avoidance: 1a, 5b, 7a, 12a, 15b, 17b, 19b, 21a, 23b, 27a, 29b ; Adaptation . 1b, 3b, 4b, 11b, 15a, 16a, 18a, 24a, 25b, 27b, 20a

Processing of results - Each answer is worth 1 point. The obtained quantitative assessments are compared with each other in order to identify the most desirable form of social behavior in situations of conflict, the tendencies of its relations in difficult situations.

TEST : ASSESSMENT OF THE LEVEL OF PERSONALITY CONFLICT

Instructions: Read the question carefully and choose one of the suggested answers

1.	Is it typical for you to strive for dominance, that is, to subjugate others to your will?						
a	Not		b	How when		c	Yes
2.	Are there people at work who fear you and maybe even hate you?						
a	Yes		b	Hard to answer		c	Not
3.	Who are you anymore?						
a	A pacifist		b	Principled		c	Enterprising
4.	How often do you have to make critical judgments?						
a	Often		b	Periodically		c	Rarely
5.	What would be most typical for you if you were at the head of a new team?						
a	He would draw up the team's work program for the coming year and convince the team of its expediency		b	He would study who is who and make contact with the leadership		c	More often would be se consulted with to people
6.	In case of failure, which condition is typical for you?						
a	Pessimism		b	Bad mood		c	Self-resentment
7.	Is it typical of you to strive to maintain and respect team traditions?						
a	Yes		b	Most likely		c	Not
8.	Do you consider yourself one of those who would rather tell the bitter truth than remain silent?						
a	Not		b	Most likely		c	Yes
9.	Of those personal qualities you struggle with, you are most often trying to free yourself:						
a	Irritability		b	Empathy		c	Bigotry according to criticism of others
10.	Who are you anymore?						
a	Independent		b	Leader		c	Idea generator
11.	What kind of person are you?						
a	Extravagant		b	An optimist		c	persistent
12.	What do you most often have to work against?						

	a	Injustice	b	Bureaucracy	c	selfishness
13.	What is most typical for you?					
	a	I underestimate my abilities	b	I objectively assess my abilities	c	I overestimate mine abilities
14.	What causes you to clash with people most often?					
	a	Excessive initiative	b	Too much criticality	c	Excessive zeal

Key:

14-17 – very low level ; 18-20 – low ; 21-23 – below average ; 24-26 – slightly below average ; 27-29 – medium ; 30-32 – slightly above average ; 33-35 – above average ; 36-38 – tall ; 39-42 – very tall

TEST: ASSESSMENT OF THE PSYCHOLOGICAL CLIMATE IN THE TEACHING STAFF

Instruction: evaluate how the above characteristics are manifested in your team. First, read the suggested text and then choose the statement that you think is true.

		3	2	1	0	-1	-2	-3		
1.	A bright, cheerful tone of mood prevails		2						1.	Depressive behavior prevails
2.	Good will in relationships, mutual sympathy			1					2.	Conflict in relationships, antipathy
3.	There is mutual understanding in the relations between groups within the team				0				3.	The groups are in conflict with each other
4.	Team members like to spend time together, to participate in joint activities					-1			4.	They show indifference towards closer communication, express a negative attitude towards joint activities
5.	Successes or failures of colleagues cause empathy, sincere participation of all team members				0				5.	Successes or failures leave colleagues indifferent or cause envy or gloating
6.	Respecting each other's opinions					-1		-3	6.	Everyone considers their opinion the main one, intolerant of the opinion of their colleagues
7.	The achievements and successes of the team are perceived as their own					-1		-3	7.	The achievements and failures of the team do not resonate with the team members
8.	In difficult moments, there is an emotional unity behind it "one for all, all for one".	3							8.	In difficult times, the "limp" team gets into arguments, confusion, mutual accusations

9.	A sense of pride in the team, if the leaders notice it	3							9.	Praise and encouragement of the team are treated with indifference here
10.	The team is active and full of energy	3							10.	Thus, it is active and passive
11.	They are sympathetic and kind to new team members, helping them get used to the team	2							11.	Newcomers feel like strangers, they are often hostile
12.	Joint work fascinates everyone, the desire for joint work is great	2							12.	The team cannot raise for a common cause, everyone thinks about their own interests
13.	In the team, there is a fair attitude towards all members, they cheer for the weak, they defend them	2							13.	The team is noticeably divided into the "privileged" and despises the weaker