# JOURNAL OF CRIMINALISTICS AND LAW

# ŽURNAL ZA KRIMINALISTIKU I PRAVO

VOLUME 24 • 2019 • ISSN 2620-0406

NUMBER 3

UNIVERSITY OF CRIMINAL INVESTIGATION AND POLICE STUDIES

KRIMINALISTIČKO-POLICIJSKI UNIVERZITET

UDC 343.98

ISSN (Štampano izd.) 0354-8872
ISSN (Online) 2620-0406

UNIVERSITY OF CRIMINAL INVESTIGATION AND POLICE STUDIES, BELGRADE – THE REPUBLIC OF SERBIA
KRIMINALISTIČKO-POLICIJSKI UNIVERZITET, BEOGRAD – REPUBLIKA SRBIJA

# NBP

JOURNAL OF CRIMINALISTICS AND LAW

ŽURNAL ZA KRIMINALISTIKU I PRAVO

Belgrade, 2019
Beograd, 2019

**PUBLISHER**
University of Criminal Investigation and Police Studies, Cara Dušana 196, 11080 Belgrade, Serbia

# TABLE OF CONTENTS

# ORIGINAL SCIENTIFIC PAPERS

NBP JOURNAL OF CRIMINALISTICS AND LAW ŽURNAL ZA KRIMINALISTIKU I PRAVO
NBP 2019, 24(3): 3–13

Submitted: 2019-09-24
Published: 2019-11-08

UDK: 351.741
517:623.443
**doi:10.5937/nabepo24-23287**

# MATHEMATICAL MODEL OF SHORT DISTANCE PISTOL SHOOTING PERFORMANCE IN EXPERIENCED SHOOTERS OF BOTH GENDER

[1, 3]**Milivoj Dopsaj**, [1]**Stefan Marković**, [2]**Anton Umek**, [1]**Goran Prebeg**, [2]**Anton Kos**

*[1]Faculty of Sport and Physical Education, University of Belgrade, Serbia*
*[2]Faculty of Electrical Engineering, University of Ljubljana, Slovenia*
*[3]South Ural State University, Institute of Sport, Tourism and Service Chelyabinsk, Russia*

**Abstract:** The aim of this paper is to determine the mathematical model of relation of accuracy and precision when shooting from a pistol Zastava CZ 99 in relation to gender and short target distance. The research included 49 participants (Men = 27, Women = 22). The testing was carried out using precision shooting from CZ 99 pistol on a Standard ISSF 25 m precision pistol target at a 6, 10 and 15 m distance (5 rounds per distance). The level of performance was evaluated in relation to accuracy and precision in the function of target distance. For the sample of men, the shooting accuracy was 76.98, 62.70 and 50.61%, while for the sample of women it was 60.32, 51.03 and 37.29% for the shooting distance of 6, 10 and 15 m respectively. The precision level was 8.52, 7.01 and 5.59 points (i.e. circles) for men and 6.63, 5.61 and 4.24 points for women respectively. The defined dependency models accuracy-distance and precision-distance have shown that for men the efficiency of shooting in relation to accuracy is decreasing 2.91%, i.e. 0.32 circles, while for women the accuracy decreases 2.57%, i.e. 0.27 circles, for every meter of increase in distance.

**Keywords:** CZ 99, pistol shooting, police officers, accuracy, precision.

## INTRODUCTION

Olympic shooting, including the discipline of precision shooting, is a part of one of the most competitive and highly developed sports in the system of Olympic sports (Mon, Zakynthinaki, Cordente, Barriopedro, Sampedro, 2014). On the other hand, shooting a weapon is a very important and highly popular skill and it is used for sport and recreation purposes among the civilian population and professionally in military and law enforcement sector (Kayihan, Ersöz, Özkan, Koz, 2013).

In relation to military and police skills, the use of a firearm, i.e. service weapon belongs to the category of specific (motor) skills (Vučković, Dopsaj, Radovanović, Aleksandar, 2008; Silk, Savage, Larsen, Aisbett, 2018; Donner & Popovich, 2019). Both military and police personnel have a legal right to use a service weapon, but before earning such a right they have to complete the adequate training (Morrison & Vila, 1998; Kešetović, 2005). The training process is mostly organized through police specific standardized methodical process and represents one of the most important parts of police training (Morrison & Vila, 1998; Vučković, Dopsaj, Dujković, 2005; Kayihan et al., 2013; Silk et al., 2018). The proficiency for effective use of the service pistol is one of the important skills that have to be continuously perfected and maintained during a professional career. This is accomplished through the process of regular shooting training which is considered a standard in police and law enforcement agencies worldwide (Anderson & Plecas, 2000; Vučković et al., 2005; Kayihan et al., 2013; Silk et al., 2018).

Professionally important police and/or military skills, including the use of a standard service weapon, are a part of the phenomenology of research of multidimensional area which, based on previous research, consists of: physical, psychological, neurocognitive, biomechanical and technical sub-areas, and is a constant subject of scientific interest in relation to sport and police (Mason, Cowan, Bond, 1989; Anderson & Plecas, 2000; Vučković et al., 2008; Goonetilleke, Hoffman, Lau, 2009; Kayihan et al., 2013; Moon et al., 2014; Dopsaj, Prebeg, Kos, 2018; Kos, Umek, Marković, Dopsaj, 2019; Donner & Popovich, 2019). However, to date, there is no research that considers the accuracy and precision of shooting from a service pistol in relation to shooting distance. In other words, there is no data, nor model indicators, regarding changes in accuracy and precision in relation to the distance in optimal aiming conditions.

In accordance with the aforementioned deficiency of relevant data in the available scientific literature, the primary aim of this paper is to determine the mathematical model of relationship of accuracy and precision of shooting a pistol Zastava CZ 99 in standardized shooting conditions in relation to target distance and gender. In addition to defining the model characteristics of relations accuracy-distance and precision-distance, the obtained results can be used to control the efficiency and quality of the training programs and applied shooting training sessions, for the purposes of development of sport science in terms of shooting education programs, practical shooting, and in relation to forensic science and judicial medicine (Bresson & Franck, 2009; Brown, Tandy, Wulf, Young, 2013; Kos et al., 2019).

## METHODS

This research can be classified in the category of applied research. The main measurement method that was used was field testing, while in relation to the type of measurement the direct method was used. In terms of the process of obtaining new knowledge, an analytical approach was used with total induction, and the method of mathematical statistics was used for the calculation of the analysed data.

## SUBJECT SAMPLE

This research included a total of 49 participants (Men = 27, Women = 22) experienced pistol shooters (Shooting Experience = 6.2 ± 3.7 years), with the following basic characteristics: Men – Age = 34.5 ± 12.2 years, Body Height = 183.2 ± 5.6 cm, Body Mass = 85.9 ± 10.8 kg, BMI = 25.58 ± 2.73 kg•m$^{-2}$; Women – Age = 23.3 ± 4.4 years, Body Height = 167.7 ± 5.6 cm, Body Mass = 61.4 ± 8.7 kg, BMI = 21.74 ± 2.00 kg•m$^{-2}$.

## VARIABLES

All measurements were performed using Zastava CZ 99 service pistol in the "Target" closed type shooting range in Belgrade. All shootings were realized on a Standard ISSF 25 m precision pistol target from the distances of 6, 10 and 15 m using the randomized method. All shootings were performed in the standing position using precision shooting on a circular target with 5 rounds per distance. The shooting performance was recorded for each shot using specialized software SSSE Version 1 (Kos, 2018; Kos et al., 2019). The level of shooting performance was evaluated in relation to accuracy and precision.

For the purposes of evaluation of accuracy the following 3 variables were used:

1) A_6m – calculated as a ratio between the maximal hypothetic sum of points (5 x 11 = 55) and the actual sum of points realized from the distance of 6 m, expressed as a percentage value;

2) A_10m – calculated as a ratio between the maximal hypothetic sum of points (5 x 11 = 55) and the actual sum of points realized from the distance of 10 m, expressed as a percentage value;

3) A_15m – calculated as a ratio between the maximal hypothetic sum of points (5 x 11 = 55) and the actual sum of points realized from the distance of 15 m, expressed as a percentage value;

For the purpose of evaluation of precision the following 3 variables were used:

1) P_6m – calculated as a ratio between the sum of hit circles on the target and rounds fired, achieved at the distance of 6 m, expressed numerically;

2) P_10m – calculated as a ratio between the sum of hit circles on the target and rounds fired, achieved at the distance of 10 m, expressed numerically;

3) P_15m – calculated as a ratio between the sum of hit circles on the target and rounds fired, achieved at the distance of 15 m, expressed numerically;

## STATISTICS

All results were processed using basic descriptive statistics and the parameters of central tendency (Mean) and data dispersion (SD, % cV, absolute and relative SEM, and Confidence intervals) were calculated from the data. The normality of the distribution of the data was calculated using the nonparametric Kolmogorov-Smirnov test (KS-Z). Differences in relation to accuracy and precision achieved at different shooting distances were determined by the application of multivariate (MANOVA) and univariate (ANOVA) statistical analysis. The paired differences were determined using the Bonferroni test. The trend changes of dependent (accuracy and precision) in relation to independent (distance) variables were defined by the application of linear regression analysis. The level of statistical significance was defined for the probability of 95%, i.e. value p = 0.05 (Hair, Anderson, Tatham, Black, 1998).

## RESULTS

Table 1 shows the descriptive results of the examined variables in relation to gender and shooting distance. Table 2 shows all the results of MANOVA and ANOVA of the examined variables in relation to gender.

**Table 1.** *Descriptive results of the examined variables in relation to the gender of the participants*

| | | Males (N=27) | | | Females (N=22) | | |
|---|---|---|---|---|---|---|---|
| **Accuracy** | | **6 m** | **10 m** | **15 m** | **6 m** | **10 m** | **15 m** |
| Mean | | 76.98 | 62.70 | 50.61* | 60.32 | 51.03 | 37.29# |
| SD | | 17.96 | 22.47 | 27.57 | 23.55 | 24.24 | 28.35 |
| cV% | | 23.33 | 35.84 | 54.48 | 39.04 | 47.50 | 76.03 |
| Std. Error (Aps.) | | 3.46 | 4.32 | 5.31 | 5.02 | 5.19 | 6.04 |
| Std. Error (Rel.) | | 4.49 | 6.89 | 10.49 | 8.32 | 10.17 | 16.20 |
| 95% CIM | LB | 69.88 | 53.81 | 39.70 | 49.88 | 40.24 | 24.72 |
| | UB | 84.09 | 71.59 | 61.51 | 70.76 | 61.82 | 49.86 |
| Min | | 32.73 | 10.91 | 1.81 | 18.18 | 12.73 | 1.82 |
| Max | | 96.36 | 92.73 | 89.09 | 87.27 | 87.27 | 80.00 |
| **Precision** | | **6 m** | **10 m** | **15 m** | **6 m** | **10 m** | **15 m** |
| Mean | | 8.52 | 7.01 | 5.59¥ | 6.63 | 5.61 | 4.24§ |
| SD | | 1.90 | 2.44 | 2.99 | 2.59 | 2.68 | 3.01 |
| cV% | | 22.30 | 34.81 | 53.49 | 39.06 | 47.77 | 70.99 |
| Std. Error (Aps.) | | 0.36 | 0.47 | 0.58 | 0.55 | 0.57 | 0.64 |
| Std. Error (Rel.) | | 4.23 | 6.70 | 10.38 | 8.30 | 10.16 | 15.09 |
| 95% CIM | LB | 7.57 | 6.05 | 4.64 | 5.46 | 4.43 | 3.06 |
| | UB | 9.47 | 7.96 | 6.54 | 7.81 | 6.79 | 5.42 |
| Min | | 3.6 | 1.2 | 0.2 | 2.0 | 1.4 | 0.2 |
| Max | | 10.6 | 10.2 | 9.8 | 9.6 | 9.6 | 8.8 |

**95% CIM** – 95% Confidence Interval for Mean; LB – Lower Bound; UP – Upper Bound; **Accuracy:** Males 6m vs 15m, * p =0.000; Females 6m vs 15m, # p =0.012; **Precision:** Males 6m vs 15m, ¥ p =0.000; Females 6m vs 15m, § p =0.017;

Table 3 shows the model values of shooting accuracy and precision for different distances in relation to gender, synthesized based on the defined dependency models. Figures 1 and 2 show the defined models of accuracy and precision in the function of shooting distance and in relation to the gender of participants.

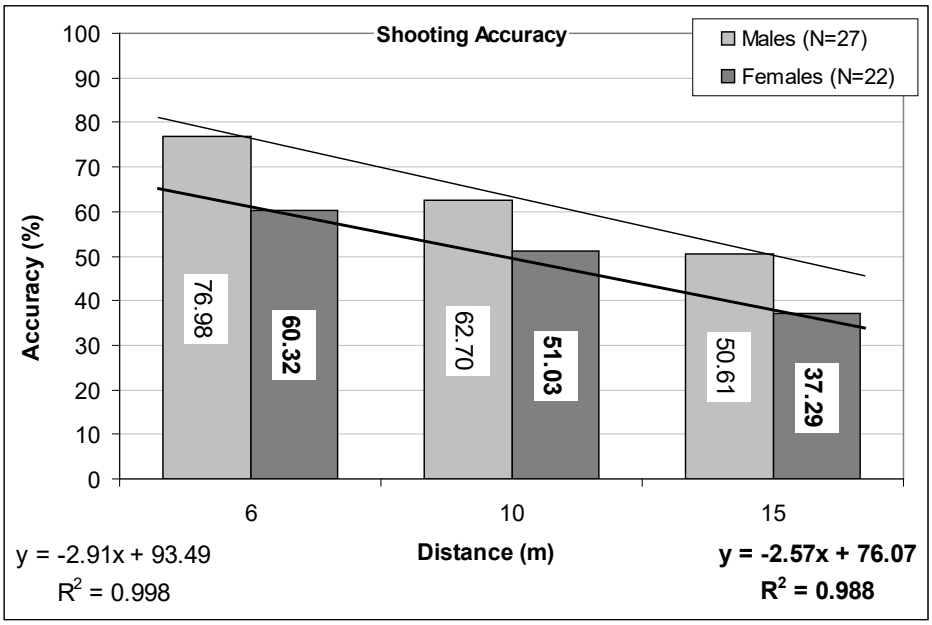


**Figure 1.** *The defined model of accuracy in the function of shooting distance in relation to the gender of the participants*

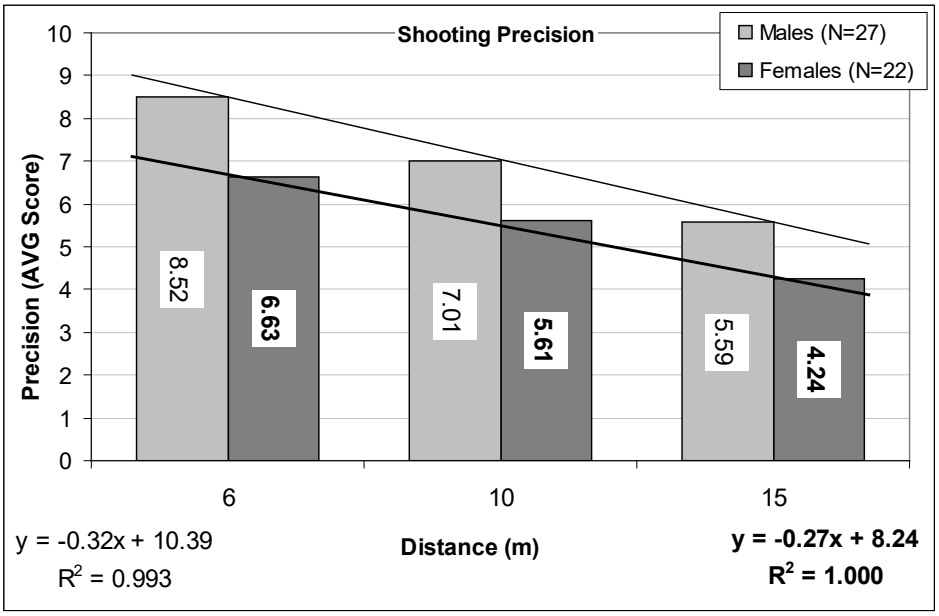


**Figure 2.** *The defined model of precision in the function of shooting distance and in relation to the gender of the participants*

**Table 2.** *The results of the MANOVA and ANOVA of the examined variables in relation to the gender of the participants*

**Multivariate Tests**

| Effect - | | | Value | F | Hypothes. df | Error df | Sig. | Partial Eta$^2$ | Observed Power |
|---|---|---|---|---|---|---|---|---|---|
| Between | Gender - Accuracy | Wilks' Lambda | .820 | 3.30 | 3.00 | 45.0 | .029 | .180 | .715 |
| | Gender - Precision | Wilks' Lambda | .911 | 6.82 | 2.00 | 140.0 | .001 | .089 | .915 |

**ANOVA – Gender Univariate Tests of Between-Subjects Effects**

| Source | Dependent Variable | Type III Sum of Squares | df | F | Sig. | Partial Eta$^2$ | Observed Power |
|---|---|---|---|---|---|---|---|
| Between Gender | m6_Accuracy | 3366.9 | 1 | 7.899 | .007 | .144 | .786 |
| | m10_ Accuracy | 1650.4 | 1 | 3.607 | .088 | .061 | .400 |
| | m15_ Accuracy | 2150.8 | 1 | 2.758 | .103 | .055 | .370 |
| | m6_Precision | 3.51 | 1 | 5.273 | .026 | .101 | .614 |
| | m10_ Precision | 2.25 | 1 | 2.140 | .150 | .044 | .299 |
| | m15_ Precision | 0.18 | 1 | 0.303 | .585 | .006 | .084 |

**ANOVA – Distance Univariate Tests of Between-Subjects Effects**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Between Distance | Accuracy_Male | 9414.8 | 2 | 8.893 | .000 | .186 | .968 |
| | Accuracy_Female | 5908.1 | 2 | 4.543 | .014 | .126 | .754 |
| | Precision_Male | 115.9 | 2 | 9.393 | .000 | .194 | .975 |
| | Precision_Female | 63.4 | 2 | 4.142 | .020 | .116 | .712 |

**Table 3.** *The results of the model values of shooting accuracy and precision from different shooting distances in relation to the gender of the participants*

| Distance (m) | Accuracy | | Precision | | Distance (m) | Accuracy | | Precision | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | *Female* | Male | *Female* | | Male | *Female* | Male | *Female* |
| **1** | 90.6 | *73.5* | 10.1 | *8.0* | **17** | 44.0 | *32.4* | 5.0 | *3.7* |
| **2** | 87.7 | *70.9* | 9.8 | *7.7* | **18** | 41.1 | *29.8* | 4.6 | *3.4* |
| **3** | 84.8 | *68.4* | 9.4 | *7.4* | **19** | 38.2 | *27.2* | 4.3 | *3.1* |
| **4** | 81.9 | *65.8* | 9.1 | *7.2* | **20** | 35.3 | *24.7* | 4.0 | *2.8* |
| **5** | 78.9 | *63.2* | 8.8 | *6.9* | **21** | 32.4 | *22.1* | 3.7 | *2.6* |
| **6** | 76.0 | *60.7* | 8.5 | *6.6* | **22** | 29.5 | *19.5* | 3.4 | *2.3* |
| **7** | 73.1 | *58.1* | 8.2 | *6.4* | **23** | 26.6 | *17.0* | 3.0 | *2.0* |
| **8** | 70.2 | *55.5* | 7.8 | *6.1* | **24** | 23.7 | *14.4* | 2.7 | *1.8* |
| **9** | 67.3 | *52.9* | 7.5 | *5.8* | **25** | 20.7 | *11.8* | 2.4 | *1.5* |
| **10** | 64.4 | *50.4* | 7.2 | *5.5* | **26** | 17.8 | *9.3* | 2.1 | *1.2* |
| **11** | 61.5 | *47.8* | 6.9 | *5.3* | **27** | 14.9 | *6.7* | 1.8 | *0.9* |
| **12** | 58.6 | *45.2* | 6.6 | *5.0* | **28** | 12.0 | *4.1* | 1.4 | *0.7* |
| **13** | 55.7 | *42.7* | 6.2 | *4.7* | **29** | 9.1 | *1.5* | 1.1 | *0.4* |
| **14** | 52.8 | *40.1* | 5.9 | *4.5* | **30** | 6.2 | | 0.8 | *0.1* |
| **15** | 49.8 | *37.5* | 5.6 | *4.2* | **31** | 3.3 | | 0.5 | |
| **16** | 46.9 | *35.0* | 5.3 | *3.9* | **32** | 0.4 | | 0.2 | |

## DISCUSSION

In relation to the demands of professional qualification, the efficiency of the use of a service weapon is one of the most important training courses in police training. It was determined that some sort of service weapon (pistol, semi-automatic or a stun gun) is used in as many as 35-50% of all cases of official engagement of the police, i.e. in ¾ of all situations in relation to the use of all available technical and tactical means of coercion used by the police in Australia (Silk et al., 2018). Based on the results of this research it can be argued that for the male sample accuracy of shooting from Zastava CZ 99 service pistol was 76.98, 62.70 and 50.61% for the distances of 6, 10 and 15 m respectively. For the female sample accuracy was at the level of 60.32, 51.03 and 37.29% of the hypothetical maximal result for the same distances respectively (Table 1).

It was determined (Table 2) that the shooting performance, i.e. accuracy and precision, is statistically significantly different at the general level for the tested distances in relation to gender (Wilks' Lambda = 0.820, p = 0.029, Wilks' Lambda = 0.911, p = 0.001, respectively). The difference between male and female participants is accounting for 18.0%, that is 8.9% of the common variance (Partial $\eta^2$ = 0.180 and 0.089), while the strength of the analysis was at the level of 71.5% and 91.5% probability (Observed Power = 0.715 and 0.915).

In relation to the difference in shooting performance in men and women in relation to accuracy at the same distance, a statistically significant difference was determined only at the 6 m distance (Table 2, m6_Accuracy, p = 0.007), while there were no statistically significant differences at the distances of 10 and 15 m (Table 2). In other words, the tested men and women shot from the standard service pistol Zastava CZ 99 on a statistically significantly different level of performance in relation to accuracy. It can be concluded that the tested men are dominant only at the shorter shooting distance of 6 m, and potentially at 10 m (p = 0.088, i.e. the difference is at the 91.2% probability), while for the 15 m distance, there are no differences (Table 2).

For the defined model of the trend of accuracy change in the function of the shooting distance, the following dependency was determined: y = - 2.91x + 93.49 for men and y = - 2.57x + 76.07 for women (Figure 1). The presented model predicted the probability of maximal shooting accuracy at the smallest theoretical distance, i.e. 1 m, which is at the level of 93.49% for the male sample and 76.07% for the female sample. Also, the model defined that with each meter of shooting distance the shooting accuracy is reduced by 2.91 and 2.57% for the male and female samples, respectively (Figure 1). Application of the model defined the theoretical limit for the utilization of the mentioned firearm with the 95% probability. For the accuracy, the maximal hypothetical distance of practical utilization of the service pistol is 32 m for men and 29 m for women (Table 3).

In relation to the shooting precision, based on the obtained results, it can be argued that for the tested sample of men it was at the level of 8.52, 7.01 and 5.59 points for the distances of 6, 10 and 15 m, respectively, while for the tested sample of women it was at the level of 6.63, 5.61 and 4.24 points, i.e. circles, for the same distances (Table 1, Figure 1).

Based on the coefficient of variation (cV%) as a measure of homogeneity of the data, it can be argued that the tested subsamples in relation to shooting performance had the characteristics of a homogeneous group for the 6 m distance, acceptable homogeneity for the distance of 10 and 15 m for the male sample, and 10 m for the female sample, while for the female sample at the 15 m distance a very low level of homogeneity (cV% = 70.99%) was determined. In other words, the given task was proportionally easy for all participants at a 6 m and 10 m shooting distance, as well as at the 15 m distance for men, while at the same distance it proved to be in the category of difficult tasks for the examined sample of women.

Regarding the shooting performance in relation to precision, a statistically significant difference between men and women has been established only for the 6 m distance (Table 2, m6_Precission, p = 0.026), while for 10 and 15 m distances the difference was not significant. In other words, the tested men shot from the standard service pistol Zastava CZ 99 on a statistically significantly different level of performance compared to women only at the shortest shooting distance of 6 m, while for 10 and 15 m they did not (Table 2).

For the defined model of trend change of precision in the function of shooting distance the following function was determined: y = - 0.32x + 10.39 for men, and y = - 0.27x + 8.24 for women (Graph 2). The model determined the probability of maximal shooting precision at the smallest theoretical distance, i.e. 1 m, which is at the level of 10.39 and 8.24 circles for men and women, respectively. Also, the model defined that with each meter of shooting distance the shooting precision is reduced by 0.32 and 0.27 circles for men and women, respectively (Figure 2).

Dependency matrix of precision in relation to the shooting distance synthesized based on the model has shown that (with 95% probability) the maximal distance of precise utilization of the standard service pistol Zastava CZ 99 is 32 m for men and 30 m for women (Table 3).

One of the possible explanations for the statistically significant differences in accuracy and precision as measures of shooting performance using a standard service pistol at a 6 m shooting distance between men and women can be related to gender-based differences in upper extremity strength.

It was determined that maximal handgrip strength, as an overall indicator of hand strength, statistically significantly influences accuracy (19.3%) and precision (13.4%) in the situation of precision shooting from a standard service pistol Zastava CZ 99 at the aforementioned distance (Dopsaj et al., 2018).

As men are nearly 2 times stronger (Marković et al., 2018[b]) and have a higher level of explosiveness, i.e. rate of force development (RFD) (Marković et al., 2018[a]) and the 6 m distance is a relatively small distance from the aiming point to the target, it is most probable that persons with stronger hands, i.e. men, can use this strength advantage to compensate for the aiming and triggering errors. Also, as men and women used the same weapon, i.e. a weapon with the same weight, the weight of the pistol was a smaller relative load for men compared to women, thus making the weapon manipulation an easier physical task for men (Anderson & Plecas, 2000). However, aiming and triggering are dominant elements of positive performance at

longer shooting distances, i.e. 10 and 15 m, (Mon et al., 2014), which is the most probable reason for the fact that physical advantage in terms of higher strength and explosiveness of hand and arm in men and women is minimized in relation to differences in shooting accuracy and precision. At this point, there is no precise explanation why a statistically significant difference was not found for the examined parameters of efficiency of shooting performance between men and women in relation to longer shooting distances of 10 and 15 m. The most probable explanation is multidimensional and includes a specific combination of cognitive, physical, psychological, anatomical, morphological, biomechanical and other factors, in terms of differences and similarities that influence the similar efficiency of men and women when shooting at the 10 and 15 m distance (Mason et al., 1989; Anderson & Plecas, 2000; Goonetilleke et al., 2009; Kayihan et al., 2013; Miller & Halpern, 2014).

## CONCLUSION

Based on the results of this research it can be argued that for the tested group of men, for the task of precision shooting from the pistol Zastava CZ 99, the accuracy was 76.98, 62.70 and 50.61% for the shooting distance of 6, 10 and 15 m, respectively. The shooting accuracy of the tested group of women was 60.32, 51.03 and 37.29% of the hypothetical maximal result at the same distances, respectively. In relation to the shooting precision, it was determined that the precision level was 8.52, 7.01 and 5.59 points (i.e. circles) for the male and 6.63, 5.61 and 4.24 points for the female sample, respectively. In relation to the gender-based differences in terms of shooting performance, it was determined that men and women have statistically significantly different accuracy and precision only for the 6 m shooting distance, while for longer distances, i.e. 10 and 15 m, there are no differences.

The defined model of accuracy in the function of target distance has determined that the hypothetical probability of maximal shooting accuracy at the smallest theoretical distance, i.e. 1 m distance, was at the level of 93.49% and 76.07% for men and women, respectively. With every meter of distance from the target, the shooting efficiency is reduced by 2.91% in men and 2.57% in women. Also, it was determined that the maximal possible hypothetical distance of shooting efficiency in terms of accuracy was 32 m for men and 29 m for women in the tested sample.

For the defined model in terms of the relation of changes in shooting precision in the function of shooting distance, it was determined that the hypothetical probability of maximal shooting precision at the smallest theoretical distance, i.e. 1 m distance, was at the level of 10.39 circles for men and 8.24 circles for women. With every meter of increased distance from the target, the shooting precision is reduced by 0.32 circles in men and 0.27 circles in women. Also, it was determined that the maximal possible hypothetical distance of shooting efficiency in terms of precision was 32 m for men and 30 m for women.

## ACKNOWLEDGMENT

The paper is a part of the project "Effects of the Applied Physical Activity on Locomotor, Metabolic, Psychosocial and Educational Status of the Population of the Republic of Serbia", number III47015, funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia – Scientific Projects 2011 – 2019 Cycle.

This paper was partially financed by Slovenian Research Agency, Bilateral project SRB-SLO for the period 2018-2019 (No. R2-2046).

## REFERENCES

1. Anderson, G., & Plecas, D. (2000). Predicting shooting scores from physical performance data. *Policing: An International Journal of Police Strategies & Management*, *23*(4), 525-537. https://doi.org/10.1108/13639510010355611
2. Bresson, F., & Franck, O. (2009). Estimating the shooting distance of a 9-mm Parabellum bullet via ballistic experiment. *Forensic Science International*, *192*, e17–e20.
3. Brown, M., Tandy, R., Wulf, G., Young, J. (2013). The effect of acute exercise on pistol shooting performance on police officers. *Motor Control*, *17*, 273-282.
4. Donner, C.M., & Popovich, N. (2019). Hitting (or missing) the mark: An examination of police shooting accuracy in officer-involved shooting incidents. *Policing: An International Journal of Police Strategies & Management*, *42*(3), 474-489. https://doi.org/10.1108/PIJPSM-05-2018-0060
5. Dopsaj, M., Prebeg, G., & Kos, A. (2018). Maksimalna sila stiska šake u funkciji preciznosti i tačnosti gađanja iz službenog pištolja CZ 99: generički modeli. *Bezbednost*, *60*(2), 30-49.
6. Goonetilleke, R., Hoffman, E., & Lau, W.C. (2009). Pistol shooting accuracy as dependent on experience, eyes being opened and available viewing time. *Applied Ergonomics*, *40*, 500–508.
7. Hair, J.F., Anderson, R.E., Tatham, R., & Black, W.C. (1998). *Multi-variate data analysis with readings,* 5th ed. New York: Macmillan.
8. Kayihan, G., Ersöz, G., Özkan, A., & Koz, M. (2013). Relationship between efficiency of pistol shooting and selected physical-physiological parameters of police. *Policing: An International Journal of Police Strategies & Management*, *36*(4), 819-832. https://doi.org/10.1108/PIJPSM-03-2013-0034
9. Kešetović, Ž. (2005). *Uporedni pregled modela obuka i školovanja policije*. Beograd: Viša škola unutrašnjih poslova.
10. Kos, A., Umek, A., Marković, S., & Dopsaj, M. (2019). Sensor system for precision shooting evaluation and real-time biofeedback. *Procedia Computer Science*, *147*, 319-323.
11. Kos, A. (2018). Sensor System for Shooting Evaluation *SSSE,* Version 1 (software).

12. Marković, S., Dopsaj, M., Jovanović, S., Rusovac, T., & Cvetkovski, N. (2018[a]). Explosive isometric muscle force of different muscle groups of cadet judo athletes in function of gender. *Physical Culture (Belgrade)*, *72*(1), 57-70.
13. Marković, S., Dopsaj, M., Koprivica, V., & Kasum, G. (2018[b]). Qualitative and quantitative evaluation of the characteristics of the isometric muscle force of different muscle groups in cadet judo athletes: A gender-based multidimensional model. *Facta Universitatis. Series: Physical Education and Sport*, *16*(2), 245-260.
14. Mason, B., Cowan, L., & Bond, J. (1989). Biomechanical factors affecting accuracy in pistol shooting. *Journal of Biomechanics*, *22*(10), 1052.
15. Miller, D., & Halper, D. (2014). The new science of cognitive sex differences. *Trends in Cognitive Sciences*, *18*(1), 37-45.
16. Mon, D., Zakynthinaki, M., Cordente, C., Barriopedro, M., & Sampedro, J. (2014). Body sway and performance at competition in male pistol and rifle Olympic shooters. *Biomedical Human Kinetics*, *6*, 56-62.
17. Morrison, G.B., & Vila, B.J. (1998). Police handgun qualification: practical measure or aimless activity? *Policing: An International Journal of Police Strategies & Management*, *21*(3), 510-533. https://doi.org/10.1108/13639519810228804
18. Silk, A., Savage, R., Larsen, B., & Aisbett, B. (2018). Identifying and characterizing the physical demands for an Australian specialist policing unit. *Applied Ergonomics*, *68*, 197-203.
19. Vučković, G., Dopsaj, M., & Dujković, P. (2005). Training for handling official pistol according to international standards. *NBP – Nauka, bezbednost, policija*, *10*(3), 173-194.
20. Vučković, G., Dopsaj, M., Radovanović, R., & Aleksandar, J. (2008). Characteristics of shooting efficiency during a basic shooting training program involving police officers of both sexes. *Facta Univeristatis. Series: Physical Education and Sport*, *6*(2), 147-157.

NBP JOURNAL OF CRIMINALISTICS AND LAW ŽURNAL ZA KRIMINALISTIKU I PRAVO
NBP 2019, 24(3): 15–29

Submitted: 2019-10-30
Published: 2019-12-14

UDK: 336.225.673(497.11)
**doi:10.5937/nabepo24-23808**

# TAX CONTROL IN THE FUNCTION OF THE PROTECTION OF FISCAL INTERESTS OF THE REPUBLIC OF SERBIA

**Mirko Kulić**[1]
*University Business Academy in Novi Sad*

**Abstract:** The paper deals with measures of preventive, corrective and repressive character undertaken by tax authorities in order to protect the fiscal interests of the Republic of Serbia. The aim of the research is to show that the amount of collected public revenues to a considerable extent depends on the correctness and accuracy of the work of tax authorities in the procedures of tax control. The author points to the tax control carried out by the Tax Administration and tax control carried out by the competent authorities of local self-government units. The legislator's efforts to maintain a balance between wide powers the authorities have and the corresponding obligations of taxpayers and other controlled persons are also being pointed out. Primarily, the accent is on the right and duty of the tax inspector, when certain conditions are fulfilled, to take away goods from taxpayers and other controlled persons or temporarily prohibit the performance of their activities, as well as the set of rights available to them to protect own interests.

**Keywords:** tax control, tax inspector, taxpayer, seizure of goods, temporary ban of performing activities.

## INTRODUCTION

Tax control in the Republic of Serbia is regulated by the Law on Tax Procedure and Tax Administration (The Official Gazette of The Republic of Serbia, No. 80/02, 84/02, 23/03, 70/03, 55/04, 61/05, 85/05, 62/06, 63/06, 61/07, 20/09, 72/09, 53/10, 101/11, 2/12, 93/12, 47/13, 108/13, 68/14, 105/14, 91/15, 112/15, 15/16, 108/16, 30/18, 95/18 and 86/19). Taxes, for purposes of this law, mean all revenues collected by the Tax Administration. This also applies to the original public revenues of local self-government units that control those units in a public law relationship, including the original

1 mirko.kulic@gmail.com

public revenues adopted, as well as other acts in the administrative procedure.

The legislator defined the tax control as a procedure for checking and determining the legality and regularity of fulfilling the tax obligation, as well as the procedure for checking the accuracy, completeness and compliance with the law or other regulations of the data reported in the tax return, tax balance, accounting reports and other records of the taxpayer, performed by the Tax Administration in accordance with the law (Article 128, paragraph 1 of the Law on Tax Procedure and Tax Administration). Tax control is carried out through a tax procedure. Considering the frequency of the conduct and the importance of the lawful realization of the rights and legal interests of the parties in tax administrative matter, the provisions of the tax procedure represent one of the most important special administrative procedure (Lončar, 2016).

Tax control has three functions: 1) preventive; 2) corrective and 3) repressive. Its preventive role is shown, first and foremost, by encouraging taxpayers to abide by laws and other regulations, in order to avoid the consequences of the likely discovery of omissions (Popović, 2003). If irregularities or failures in the performance of obligations arising out of a tax relationship are found in tax control, the taxpayer is ordered to eliminate them, which is corrective function of tax control. The repressive function of tax control is reflected in taking measures to eliminate identified violations of laws and irregularities in the application of regulations.

The Tax Administration[2] and the competent authorities of local self-government units are authorised to perform tax control. In the course of tax control, the tax authority enters into a tax-juristic relationship with a taxpayer. The most important component of the tax law is the tax property relationship, which makes "its core" (Tipke, 1993: 138). This relationship contains property requirements and obligations, which can be diverse (Popović, 2010: 98). Based on the legal nature of the tax relationship, it is concluded that it is necessary that the tax authority has great powers in the procedure of tax control, all with the aim of protecting the fiscal interests of the state. The legislator strived to establish a balance between the great power the tax authority has and the corresponding obligations of taxpayers, on the one hand, and the rights of taxpayers, on the other (Popović, 2003: 43–44). This particularly refers to the relationship between the tax authority and taxpayer in tax control procedure, given the fact that the power of the tax authority in this procedure is the greatest.

The aim of the research is to show that the level of collected public revenues to a large extent depends on the activities undertaken by the tax authorities through tax control activities. During the research of this topic, we conducted an analysis of some data on the work of the Tax Administration in the field of tax control for the period from 2014 to 2017.[3]

2 According to Article 3 paragraph 2 of the Law on Ministries, Tax Administration as an administrative authority within the Ministry of Finance, in addition to the tasks of tax control, performs also professional affairs and affairs of state administration related to the registration and guidance of a unique taxpayer register; tax assessment; regular and enforced tax payment and secondary taxation; detection of tax crimes and their perpetrators; application of international agreements on the avoidance of double taxation; a unique tax information system; tax accounting, as well as other activities determined by law.

3 The paper presents data from the work of the Tax Administration, which was submitted to the author on his request in the Act number 037-02-00398 / 2018-k0160 of 10 August 2018.

## TAX CONTROL BY THE TAX ADMINISTRATION

### *Starting tax control*

Tax control is carried out on the basis of an annual or extraordinary control plan. The Annual Tax Control Plan is issued by the Director of the Tax Administration. It is based on the assessment of taxpayers and tax risk of the taxpayer. In determining this plan, the impact of tax control on the efficiency of tax collection in certain activities must be taken into account. An extraordinary tax control plan is made by the Minister in charge of finance in cases where there is a market disruption or there is evidence that the volume of illegal trade has increased. Tax control of a person who performs an unregistered activity is carried out without a control plan.

Tax control is performed by a tax inspector, who represents an official person authorized to carry out such control. Tax control can start in two ways: 1) by sending a control order, or 2) by making a call. The Tax Administration shall issue the order for filed control or tax return to the taxpayer immediately prior to commencement or through the official person of the tax authority, or to the e-mail address of the taxpayer, in the manner prescribed by law. Here we point out two weaknesses in the normative regulation of tax control. First, in Article 124 paragraph 1 of the Law on Tax Procedure and Tax Administration, the legislator used a formulation - a "field control order". However, in positive tax legislation, as it was before, tax control is not divided into office and field, but there is unique control. Secondly, we consider that it is not clear enough to regulate the initiation and conduct of tax control by delivering a call, since it is not specified what is meant by the term call in this case.

The procedure of tax control is carried out without submitting an order or call for tax control to taxpayer in case of: 1) control that is carried out on the basis of an extraordinary plan; 2) control of the recording of transactions through fiscal cash registers; 3) control over work engagement of a person; 4) control of the delivery of products to excise warehouses; and 5) control of the person performing unregistered or undeclared activity. The tax inspector is obligated to show the official identity card to the taxpayer.[4]

The Tax Administration may postpone the implementation of tax control if the taxpayer submits an oral complaint immediately upon receipt of the control order, stating the reasons for postponing the control, but within 24 hours from the receipt of the order he/she is obligated to submit a complaint in writing to the Tax Administration. According to this complaint, pursuant to Article 124 paragraph 6 of the Law on Tax Procedure and Tax Administration, the Tax Administration makes a conclusion against which the remedy is not allowed. It should be noted that the provisions of the Law on Tax Procedure and Tax Administration are inconsistent with the provision of Article 149 paragraph 1 of the Law on General Administrative Procedure (The Official Gazette of The Republic of Serbia, No. 18/16 and 95/18), according to which the complaint is decided by a decision against which an appeal can be made.

4 According to Article 162, paragraph 3 of the Law on Tax Procedure and Tax Administration, the act on the official identity of a tax inspector is made by the Minister in charge of finance.

In Article 124 paragraph 5 of the Law on Tax Procedure and Tax Administration, the legislator gave a discretionary power to the tax inspectorate that, when it assesses that an oral objection has been declared to interfere with tax control, the control procedure is initiated, and it is obligated to indicate in the record on tax control the reasons on which it made such a "decision". Although the Law states that a "decision" is made, the decision is, in fact, not passed, which is a weakness of this provision. We believe that it should be prescribed that a tax inspector in such cases issues a written act, which in the sense of Article 34 paragraph 1 of this law would be a tax act. Although this law does not stipulate that an objection may be raised as a result of such treatment of a tax inspector, we consider that the application of Article 28, paragraph 1 and Article 147, paragraph 1 of the Law on General Administrative Procedure can be objected in this case, since the commencement of tax control is a material act that meets the requirements to be administrative action referred to in Article 27 of same Act.

### *Place and time of tax control and duty of the taxpayer*

1. Depending on the subject of the control, tax control can be carried out: 1) in the business premises of the taxpayer; 2) in the official premises of the Tax Administration, or 3) elsewhere. A taxpayer is obliged, if tax control is carried out in his business premises, to provide the appropriate place for the work of the tax inspector. If there is no proper place for performing tax control, with the consent of the taxpayer, control can be carried out in his residential premises, or elsewhere determined by the Tax Administration, in accordance with the law. Upon approval of the court, the tax inspector has the right to enter the flat of the taxpayer for the purpose of control.

If tax control is not performed in the business premises of the taxpayer, the tax inspector is obliged to inspect the premises and make a note of it, which is entered in the record of the tax control.

The taxpayer and his proxy or representative must be given the opportunity to attend a review of land, premises of apartment. If these persons do not use the opportunity to attend the inspection of land, premises or apartment, and the tax inspector assesses that this disables or postpones the implementation of tax control, they will also exercise control without their presence, in the presence of two adult witnesses. The tax inspector brings these facts into the record.

2. Tax control is carried out during the working hours of the taxpayer, and exceptionally after the expiration of the working hours, if the purpose of the control so requires, or if the taxpayer agrees. The tax inspector may temporarily seal the business or warehouse space of the taxpayer after the expiration of the working time of the taxpayer. This measure remains the longest until beginning of the working time of the taxpayer on the first following working day. According to Article 126 paragraph 4 of the Law on Tax Procedure and Tax Administration, a conclusion is reached, against which the remedy is not allowed.

3. The taxpayer is obliged to participate in the determination of the facts and to give information and statements at the request of the tax inspector. He is obliged

to enable the tax inspector to inspect the state of goods (raw materials, reproduction material, semi-finished products, finished products and other goods) and equipment, as well as to enable insight into business books, records and other documents. If it is not possible to attend tax control, the taxpayer will assign a person who will fulfil these obligations on his/her behalf. Non-performance of these obligations of the taxpayer does not delay the execution of tax control.

The tax inspector may request information, i.e. insight into the documentation and from the employees of the taxpayer or other persons. He requests such a request verbally. Employees, that is, other persons, are obliged to make the data they possess, i.e. the documentation, available to the tax inspector.

### *Tax control report*

The tax inspector prepares a report on tax control. Each page of the record must be marked with a regular number and signed. The minutes shall be submitted to the taxpayer. The taxpayer shall have the right to file objections within a period of eight days from the date of receipt of the minutes on the tax control report, except for the part of the minutes in which it was established that the tax inspector ordered certain measures with an oral decision when he assessed that the collection of the tax is jeopardized.

The record of tax control shall be submitted without delay upon the completion of control, when it comes to control: 1) which is done on the basis of an extraordinary plan; 2) recording on transactions through fiscal cash registers; 3) regarding work engagement of the person; and 4) of a delivery and delivery of products to excise warehouses. The taxpayer has the right to file objections to the report on these tax controls within two days from the date of receipt of the minutes. This is an inappropriately short term, and we think it needs to be extended to eight days. If remarks are submitted in a foreign language within the prescribed time limit, they will be deemed to be submitted in due time if a translation of the remark into the Serbian language is submitted within the next two days by the authorized person.

The taxpayer may present new evidence and facts in his remarks. If, due to these new evidence and facts, the factual situation ascertained in the minutes or to amend earlier legal assessments should be changed, the tax inspector is obliged to compile an additional record of such evidence and facts or new legal assessments within five days from the date of receiving the remarks. An objection to the supplementary record cannot be made.

When a tax inspector, after submitting the record or supplementary record, finds out new knowledge or facts that influence the established factual situation, he shall compile an addendum to the minutes submitted to the taxpayer. The taxpayer has the right to file objections within a period of eight days from the date of receipt of the minute.

### *Bringing in a tax solution in the process of tax control*

1. Based on the records on the performed tax control, the supplementary record, or the supplementary record of the tax control, the Tax Administration shall issue a tax decision on determining the tax to the taxpayer who, contrary to the law, did not perform the determination of the tax liability or made it incorrect or incomplete, applied, or failed to correctly apply the regulation when determining the tax, as determined by tax control.

The decision is made within 60 days from the date of delivery of the minutes, supplementary minutes, or addition of the minutes on the tax control. The decision requires the taxpayer to pay, within 15 days from the date of delivery of the decision, the established tax liability to the prescribed public account receipts, or to eliminate other identified irregularities.

By this decision, the Tax Administration instructs the taxpayer and files a tax return in which it will eliminate the identified irregularities if the tax return is the basis for recording the amount of the tax. If the taxpayer fails to file a tax return according to the order from the decision, the Tax Administration files a tax return instead of a taxpayer.

In 2014, the Tax Administration carried out 35,416 tax controls, which resulted in 2,708 tax assessment decisions due to fact that taxpayers, in contravention of the law, did not perform the determination of the tax liability, or made it incorrect or incomplete. In 2015, 24, 941 tax controls were executed, with 3,101 tax assessment decisions. In 2016, 22,516 tax controls were executed, with 3,288 tax assessment decisions. In 2017, 18,265 tax controls were executed, with 3,097 tax assessments decisions (Tax Administration Act No. 037-02-00398/2018-K0160 of 10 August 2018).

When in the course of tax control it is determined that a person performs an unregistered or undeclared activity, the tax liability of that person is determined by a decision, using the method of assessment of the tax base by parity. The assessment of the tax base by the method of parity is carried out in one of the following ways: 1) the assessment based on the available regular business documentation on the business in a certain period shorter than the taxation period (daily, weekly or monthly) by estimating the tax base for the taxable period on the basis of the information on that part of the business operation; 2) assessment of the database and the facts of the realized turnover (daily, weekly or monthly) determined by inspection or control, based on these data and facts, the tax base is assessed for the period for which the tax is determined, or 3) by comparison with the data of others taxpayers who perform the same or similar activity in the same or similar location, under approximately equal conditions.

Tax liability on the basis of income generated by the unregistered or undeclared activity is determined by applying the tax rate according to which the income tax is paid to other income, without recognizing the standardized costs. Other income, for example, includes: 1) revenues from the collection and sale of secondary raw materials; 2) revenues from the collection and sale of forest fruits and medicinal herbs, i.e. sale of other goods realized by performing temporary or occasional affairs, if they are not taxed on other basis in accordance with the law, and 3) revenues from the sale of agricul-

tural and forest products and services, as well as growing and selling mushrooms, bee hives (bees) and snails. The tax rate on these revenues is 20% (Article 86 of the Law on Income Taxes of Citizens).

When in the course of tax control it is established that a person who carried out an unregistered or undeclared activity puts goods into circulation, the tax inspector takes away the goods he found during the control by the decision. The tax inspector may temporarily seize the equipment by which the taxpayer performs an unregistered or undeclared activity, which he finds in the control procedure. Temporarily seized equipment can be left for safekeeping to the person from whom it was temporarily seized until the expiration of 30 days, during which a person performing unregistered or unreported bussines activity must register or report such activity to the competent authority, if it is estimated that the costs of seizing and safekeeping would be disproportionately high in relation to the tax liability. If a person who performs an unregistered or unreported activity, within the specified time period, registers or reports the activity, pays the established tax liability and removes the other established irregularities, the seized equipment will be returned to him/her. If the person performing unregistered or unreported business activity fails to act in compliance with the orders from the Tax Administration decision, the seized equipment will be permanently seized.

If a person, to whom a decision establishing the unregistered or unreported business activity had been previously delivered, and who had acted upon this decision within the deadline, during a subsequent audit is found to be performing unregistered or unreported business activity and supplying the goods, the tax auditor will issue a decision on permanent confiscation of the goods and equipment found during the tax audit procedure.. In turn, the tax inspector permanently takes away the goods and equipment he found during the tax control procedure.

## *Taking measures to eliminate identified irregularities in the application of tax regulations*

Measures for elimination of identified irregularities in the application of tax regulations, with regard to the conduct of tax control, can be divided into those undertaken: 1) during the control itself and 2) after the performed control.

1. During tax control, the tax inspector is obliged, when certain conditions are met, to confiscate the goods from the controlled person or to temporarily prohibit him from performing his activity. The tax inspector orders the measures during the tax control with a decision.

a) During tax control, a tax inspector is obliged to confiscate goods from a controlled person when certain conditions are met. This will be done in following cases:

1) When there is a suspicion that the goods or raw materials or production materials used have been purchased without a tax calculated or in another manner contrary to the regulations, and the taxpayer has no evidence of their purchase complying with the regulations and payment of taxes, if prescribed;

2) When the goods are placed on the market by a person who is not registered, or authorized to perform this activity;

3) When the production of goods for the purpose of placing on the market, or when the sale of goods is performed, and the goods are no properly recorded in the books of account and other prescribed records;

4) When goods are transported without the required documentation (invoice, bill of lading, bill, etc.);

5) When the goods are sold outside the registered business premises or other place designated for sale by the competent authority.

In these cases, the tax inspector shall also confiscate the transport or other means by which the goods are transported or put into circulation if the value of the goods exceeds one third of the value of that asset. A transport or other means shall be confiscated even if the value of the goods is not more than third of the value of that asset, if, after manufacture, it is additionally equipped with a special space for hiding or secret transport of goods.

In the course of tax control, the tax inspector may, with the confirmation, temporarily seize the books, records, other documents or documents until the completion of the tax procedure. If the taxpayer keeps business books, records and other documentation automatic data processing devices, the tax inspector may, with the confirmation, temporarily seize the funds for automatic data processing until the completion of the tax control procedure. The tax inspector may order all above-mentioned measures by an oral decision, when assessing that tax collection has been compromised. In this case, the tax inspector is obliged, within three days from the date of the oral decision, to issue the decision in writing and submit it to the taxpayer.

In 2014, the Tax Administration adopted 154 decisions on the seizure of goods, in 2015 it passed 222 decisions, in 2016 it passed 258 decisions, while in 2017 it passed 211 decisions (Tax Administration Act No. 037-02-00398 / 2018-K0160 of 10 August 2018).

b) During the tax inspection, the tax inspector shall impose a taxpayer a ban on performing activities for a period of up to one year if he determines that:

- the activity is performed so that the goods and services are not accompanied by authentic documentation of significance for determining taxes (invoices, statements of the buyer);
- avoids the establishment and payment of taxes by not paying the daily market, in accordance with the regulations;
- avoids the establishment and payment of taxes by the engagement of persons who do not have a completed employment contract or other act of work engagement made in accordance with the regulations on employment relations, and if they are not, in accordance with the regulations, notified to the competent organization of compulsory social security;
- if the turnover from the sale of goods or the provision of services is not registered through the fiscal cash register or in another prescribed manner.

Prohibition to perform activities for a taxpayer whose irregularities have been identified during the course of tax control, shall be pronounced:

1) for a period of up to 15 days – if an irregularity is found for the first time during the control procedure of the taxpayer;

2) for a period of up to 90 days – if an irregularity is detected during the con-

trol procedure with the taxpayer for the second time;

3) for up to one year – if the irregularity is established for the third time during the control procedure with the taxpayer.

Prohibition of performing activities is pronounced for irregularities established in the period of 24 months from the first established irregularities in the procedure of tax control. Prohibition of performance of activities to the taxpayer shall be imposed on the business premises of taxpayers in which the irregularities were identified in the course of tax control. The facilities in which the activity is prohibited are visibly marked with the Tax Administration's mark.[5]

If the taxpayer carries out the sale of excise goods that are not marked in the prescribed manner, the protective measure shall be pronounced – prohibition of performing activities for a legal entity or entrepreneur for a period of three months to one year.

In 2014, the Tax Administration carried out 26,374 controls for registering traffic, with 6,760 controls during which irregularities were found, so decisions were made on the temporary ban of 3,546 facilities. In 2015, 10,932 controls were recorded for registering traffic, with 3,662 controls where irregularities where found, so decisions were made on the temporary ban on 2,548 facilities. In 2017, 6,590 controls were recorded for registering traffic, with 2, 598 controls where irregularities were found, so decisions were made on the temporary ban on 2,170 facilities (Tax Administration Act No. 037-02-00398 / 2018-K0160 of 10 August 2018).

3. If in the procedure of tax control it is established that there is a violation of regulations, or an irregularity in their application, the minutes or supplementary minutes or the addendum of the control report shall indicate that the taxpayer did not apply or has not correctly applied the regulations when determining taxes which the debtor himself performs, or if it is established that the tax debtor, in contravention of the law, did not perform the determination of the tax liability, or made it incorrect or incomplete, the tax authority shall issue a decision on the determination of the tax. This decision requires a tax obligation to eliminate the established violations of the law, or irregularities in the implementation of regulations, within the determined decision. If the taxpayer fails to comply with the decision within the time limit, then the Tax Administration shall take the following measures:

1) The prohibition on disposing of funds on the account, except for the purpose of settling tax obligations;

2) Temporary ban on performing certain tasks;

3) Temporary prohibition of alienation of things in the event of a reasonable doubt that the taxpayer will withhold or disable the settlement of the tax liability.

The mentioned measures are ordered by the Tax Administration. These measures may also be imposed by a tax inspector during the task control in case the conditions for seizing goods are fulfilled. The fact of the measure lasts until the taxpayer removes the established violations of the law, or irregularities in the application of regulations.

5 The method of marking, content and appearance of a mark indicating objects in which the activity is prohibited is determined more closely by the Minister in charge of finance.

## *Procedure with things seized in the process of tax control*

When the tax inspector orders a measure of confiscation, he is obliged to store the items by types and quantity in a place specified by the act of the minister responsible for finance.[6] The value of these items is determined by the commission in the amount of the price at which this item can be purchased on the market at the moment of confiscation, within 5 days from the date of confiscation. If the seized thing is liable to deterioration or if its preservation requires high costs, the Tax Administration sells them with a direct contract without delay.

In the event of finality of the decision to confiscate the goods or after the completion of the procedure initiated by the Tax Officer field by the Tax Police with the public prosecutor, confiscated items, apart from things that are vulnerable to spoilage and things that require high costs, are sold through public sale, or via a commercial network. Excise products excluding oil derivates, cigarette paper tubes, cigarette filters, paper for cigarettes, cigarette paper filling machines, as well as other machines for twisting cut tobacco which are destroying the commission. Prior to public sale, the Tax Administration re-establishes the value of the seized items in the event that more than one year has elapsed since the date of the takeover of the item. Public sale of seized items is carried out in accordance with the provision of the Law on Tax Procedure and Tax Administration regulating the public sale of movable property in the process of forced collection of taxes.

The Government shall regulate the proceeding with confiscated goods in the event that the confiscated goods are not sold on repeated oral auction, under the mentioned condition, within three months from the validity of the decision on confiscation of goods, or upon completion of the procedure initiated on the occasion of the criminal charge filed by the Tax Police with the public prosecutor. The buyer of the seized items cannot be a taxpayer from whom things have been seized, a person employed by the Tax Administration and related persons. The funds generated by the sale of items, after deduction of expenses are paid into the budget of the Republic. Exceptionally, the Government can seize things, apart from the things that are commissioned by the Commission, to be given without compensation to state authorities, humanitarian organizations and other beneficiaries of humanitarian aid, cultural institutions, and other justified purposes. Take away items that cannot be sold or used for health, veterinary, phytosanitary, safety or other prescribed reasons or due to major damage, are destroyed in accordance with the regulations. Transport and destruction expenses are borne by taxpayer from whom the items have been seized, and if it is unknown or unavailable, the Tax Administration shall bear the costs of transport and destruction.

6 The minister in charge of finance issues brings the act for the implementation of provisions of the Tax Law procedure and Tax Administration that regulates the procedure with the items seized in the proceedings tax controls.

## Revealing tax crimes

Tax Administration, within its jurisdiction, discovers tax offenses and their perpetrators and in relation to it undertakes the statutory measures. The execution of tasks related to the detection and reporting of tax offences and their perpetrators is performed by the Tax Police, as a special organisational unit of the Tax Administration. The Tax Police plans, organizes and executes these tasks in accordance with the law.

Task offenses are criminal offenses established by law, which as a possible consequence have the total or partial avoidance of tax payments, the making or filling in of a forged document relevant to taxation, the threat of tax collection and tax control, the illicit traffic of excise products and other unlawful actions in connection with avoiding and helping avoid taxes.

In order to detect tax crimes and their perpetrators, the Tax Police acts in the pre-trial procedure as an internal affairs authority and is authorized, in accordance with the law, to undertake all actions sought, with the exception of restrictions on movement. In accordance with the provisions of the law regulating the criminal procedure, it may summon and interrogate the suspect, including his forcible bringing in, before commencing a criminal procedure, to search apartments, business or other premises, means of transport and persons when there are grounds for suspicion that a tax criminal offence was committed, and temporarily seize objects that may serve as evidence in criminal proceedings for tax offences. The search of an apartment and other premises can be done only on the basis of a court order and in the presence of two witnesses. The Tax Police undertakes these powers independently or in cooperation with the Ministry of the Interior. With the Ministry of the Interior, the tax police also realize other forms of cooperation. The form and manner of achieving this cooperation shall be agreed by the act in more detail by the Minister in charge of finance and the Minister in charge of internal affairs. The Tax Police is obliged to cooperate with the court and the prosecutor's office in criminal proceedings.

When the Tax Inspector in the course of tax control finds out that the fact and circumstances indicate the existence of the basis for suspicion that a tax offence has been committed, he is obliged to compile a report on this and, together with the evidence obtained, immediately submit it to the competent Tax Administration head, which is obliged, within 24 hours of receipt of the report, to forward this report with evidence to the head of the Tax Police. In this case, the Tax Administration does not submit a request for the initiation of a misdemeanour procedure, nor issues a misdemeanour order, unless the Tax Police determines on the basis of the Tax Inspector's report that the facts and circumstances stated by the tax inspector in the report do not indicate the existence of grounds for suspicion that a tax offense has been committed and that there are no conditions for filing criminal charges.

If the tax inspector in the procedure of the tax control determines that the facts and circumstances indicate the existence of grounds for suspicion that a criminal offence has been committed in other areas or a misdemeanour for which the Tax Administration is not competent, the Tax Administration sub-

mits a criminal or misdemeanour report to the competent state authority.

2. On the basis of the information collected, the Tax Police compiles a criminal report, stating the evidence it has learned about during the collection of the notification and submitting it to the public prosecutor. In addition to criminal charges, documents, reports, statements, and other materials that are relevant for the successful conduct of the proceedings are submitted. If the Tax Police, after filling a criminal complaint, learns about new facts, evidence or traces of the criminal offense, it is obliged to collect the necessary information and report, as a supplement to the criminal report to the public prosecutor. In addition to criminal charges, documents, reports, statements and other materials that are relevant for the successful conduct of the proceedings are submitted.

When the Tax Police complied and filed a criminal report on the basis of a tax inspector's report, the Tax Police Inspector informs the responsible Tax Administration head in writing. If the Tax Police, on the basis of the tax inspector's report, finds that the facts and circumstances that the tax inspector stated in the report do not indicate the existence of grounds for suspicion that a tax offence has been committed and that there are no conditions for filing criminal charges, the Tax Police Inspector shall inform the responsible manager of Tax Administration for filing a request for initiating misdemeanour proceedings.

If in the pre-investigation procedure the Tax Police finds that there are no elements of a tax offense in the actions of a person, but there are other punishable offences, the Tax Police Inspector will submit an appropriate application to the competent authority. The facts and evidence of significance for the amount of tax liability established in the pre-investigation procedure is submitted by the Tax Police Inspector to the Tax Administration's organisational unit where the taxpayer is registered.

3. In 2014, the Tax Police filed a total of 1,360 criminal reports, with 1,804 persons registered. In 2015, 1,739 criminal reports were filed, which included 2,362 persons. In 2016, 1,813 criminal charges were filed against 2,350 persons. In 2017, the Tax Police filed 1,583 criminal reports, to which 2,137 persons applied (Tax Administration Act No. 037-02-00398 / 2018-K0160 of 10 August 2018).

## TAX CONTROL BY THE COMPETENT AUTHORITY UNITS OF LOCAL SELF-GOVERNMENT

Local self-government units fully control their original public revenues, that is, the original revenues generated on their territory, which belong to them (Article 60 of the Law on Financing of Local Self-Government). The units of local self-government belong to the original public revenues realized on their territory, as follows: 1) tax on property in the statistic; 2) local administrative fees; 3) local communal fees; 4) residence tax; 5) fees for the use of public goods, in accordance with the law; and 6) revenues from self-contribution (Article 6 of the Law on Financing of Local Self-Government). The competent authorities of the local self-government units in controlling

public revenues and secondary tax payments, as well as when submitting a request for initiating a misdemeanour procedure for tax misdemeanours to the competent misdemeanour court, have rights and obligations that the Tax Administration has in accordance with the Law on Tax Procedure and Tax Administration, obligations related to: 1) identification and registration of taxpayers; 2) assessment of the tax base by the method of parity and the cross-assessment method; 3) disclosure of tax crimes, and 4) other rights and obligations of the Tax Administration, which by their nature cannot belong to the units of local self-government.

The provisions of the Law on Tax Procedure and Tax Administration, which regulate the authority of the Tax Administration, the rights and obligations of taxpayers, as well as the powers of tax inspectors of the Tax Administration, apply accordingly to the powers of the local self-government units, that is, the rights and obligations of taxpayers of the original public revenue units in the local self-government, as well as the powers of tax inspectors of local self-government units, in the process of controlling the original public revenues of local self-government units to which the Law applies.

The act on the official identity of inspectors in the bodies of local self-government units in charge of controlling the original public revenues of local self-government units shall be adopted by the competent bodies of local self-government units, with the consent of the minister responsible for administrative affairs.

## CONCLUSION

The legal formulations in the positive tax legislation of the Republic of Serbia which regulate tax control provide the possibility for the protection of its fiscal interests, since they enable efficient verification of the legality and regularity of fulfilment of tax obligations, as well as the verification of accuracy, completeness and compliance with the data regulations stated in the tax return, tax balance, accounting reports and other records of taxpayers. However, certain provisions could be clarified and more precisely defined. We will point to four cases. First, in Article 124, paragraph 1 of the Law on Tax Procedure and Tax Administration, the legislator used a formulation – an "order for field control", although, as previously done, tax control is not divided into field and office control, and is required by amending the Act, this error is fixed. Secondly, we consider that the Law on Tax Procedure and Tax Administration does not clearly define the beginning and the execution of tax control on the basis of a call, so the Law needs to be amended and the issue should be more precisely regulated. Thirdly, by the provision of Article 124, paragraph 6 of the Law on Tax Procedure and Tax Administration, it is stipulated that the Tax Administration decides on an objection to an order for field control, with a decision against which a remedy is not allowed. This provision does not comply with the provision of Article 149, paragraph 1 of the Law on General Administrative Procedure, according to which the complaint is decided by a decision against which an appeal can be

made. It is necessary to revise the Law on Tax Procedure and Tax Administration in this regard and to harmonize it with the mentioned provision of the Law on General Administrative Procedure. Fourthly, in Article 124, paragraph 5 of the Law on Tax Procedure and Tax Administration, the legislator gave a discretionary authority to the tax inspector, when assessing that an oral objection to a tax audit order was declared to interfere with tax control, the controlling procedure is initiated, that in the record of tax control, he shall state the reasons on which he made such a "decision". Although the Law states that a "decision" is made, the decision is, in fact, not passed, which is a weakness of this provision. We believe that the Law should be amended and that the tax inspector in such cases be allowed to make a conclusion.

It is concluded that it is necessary that the tax authority has wide powers in the procedure of tax control, all with the aim of protecting the fiscal interests of the state. The legislator sought to strike a balance between the wide powers the tax authority has and the corresponding rights and obligations of taxpayers.

Analysing certain indicators from the work of the Tax Administration, related to tax control for the period from 2014 to 2017, it is noted that this body has executed a large number of tax controls, and that during that period, in connection with these controls, brought a large number of tax assessment decisions, then brought a considerable number of decisions on confiscation of goods and on temporary ban on performing activities. In the period under review, the Tax Police filed a total of 6,495 criminal reports, to which a total of 8,653 persons were reported, indicating that the Tax Administration has shown considerable activity in this field.

## REFERENCES

1. Law on General Administrative Procedure. *The Official Gazette of The Republic of Serbia*, No. 18/16 and 95/18.

2. Law on Tax Procedure and Tax Administration. *The Official Gazette of The Republic of Serbia*, No. 80/02, 84/02, 23/03, 70/03, 55/04, 61/05, 85/05, 62/06, 63/06, 61/07, 20/09, 72/09, 53/10, 101/11, 2/12, 93/12, 47/13, 108/13, 68/14, 105/14, 91/15, 112/15, 15/16, 108/16, 30/18, 95/18 and 86/19.

3. Law on Income Taxes of Citizens. *The Official Gazette of The Republic of Serbia*, No. 24/01, 80/02, 80/02, 135/04, 62/06, 65/06, 31/09, 44/09, 18/10, 50/11, 91/11, 7/12, 93/12, 114/12, 8/13, 47/13, 48/13, 108/13, 6/14, 57/14, 68/14, 5/15, 112/15, 5/16, 7/17, 113/17 and 7/18.

4. Law on Law on Ministries. *The Official Gazette of The Republic of Serbia*, No. 44/14, 14/15, 54/15, 96/15 and 62/17.

5. Law on Financing of Local Self-Government. *The Official Gazette of The Republic of Serbia*, No. 62/06, 47/11, 93/12, 99/13, 125/14, 95/15, 83/16, 91/16, 104/16, 96/17, 89/18 and 95/18.

6. Lončar, Z. (2016). Posebni upravni postupci. *Zbornik radova Pravnog fakulteta u Novom Sadu*, *50*(4), 1231–1249.

7. Popović, D. (2003). *Komentar Zakona o poreskom postupku i poreskoj administraciji*. Beograd: Cekon in.

8. Popović, D. (2010). *Poresko pravo*. Beograd: Pravni fakulteta Univerziteta.

*9. Tax Administration Act* No. 037-02-00398/2018-K0160 of 10 August 2018.

10. Tipke, K. (1993). *Steuerrecht*, Band I. Köln: Otto Schmidt.

NBP JOURNAL OF CRIMINALISTICS AND LAW ŽURNAL ZA KRIMINALISTIKU I PRAVO
NBP 2019, 24(3): 31–41

Submitted: 2019-09-12
Published: 2019-11-14

UDK: 539.23
620.191.5
**doi:10.5937/nabepo24-23159**

# DISCRETE RESONANT ABSORPTION IN MOLECULAR NANOFILMS

**[1]Siniša M. Vučenović[1], [2]Matilda Vojnović**

*[1]University of Banja Luka, Faculty of Sciences*
*Republic of Srpska, Bosnia and Herzegovina*
*[2]University of Novi Sad, Faculty of Medicine*

**Abstract**: We have analysed the significant different optical absorption of molecular nanofilm crystalline formations. The main reason for this behaviour is in the existence of boundaries on the film structures and we needed to investigate these properties theoretically. In this process, we have done some combinations of (where possible) analytical calculations and (in other cases) numerical calculations. We have calculated the allowed energies of exciton (quasi)particles, and their appearance in nanofilms but in particular direction - perpendicular to the surface of the film. We have analysed why surface exciton localization appears in a film, and after that we calculated dielectric permittivity and optical indices (absorption and refraction). We have established that boundary parameters greatly influence optical phenomena. This influence is resonant, i.e. frequency-related and selectable (depends on what layer is calculated). We even found some particular conditions for the appearance of one (single) absorption line.

**Keywords**: excitons, ultra-thin films, dielectric permittivity, absorption, refraction.

## INTRODUCTION

Nanostructures such as ultra-thin films, quantum wires, or quantum dots have some extraordinary properties when compared to the large (bulk) structures. Obviously this is caused by the confinement of (at least one) dimension of nanostructures. At the same time, nanostructures are usually quite hard to char-

1 Corresponding author: sinisa.vucenovic@pmf.unibl.org

acterize or to obtain, due to highly expensive equipment or demands for nanostructures without impurities or structural distortions. For those reasons, we need to enforce theoretical research to obtain reliable theoretical models with precise prediction of extremely different properties of these samples with nanometer size thickness. Today usage of nanostructures mainly refers to practical application in electronics where these structures have an important role (Wood et al., 2008).

Today we know that boundary surfaces and processes which take place are very important to change the general properties of these materials. Particularly, in some conditions there arise some very unusual phenomena (which are the consequence of effects of quantization of dimensions (Tringides, Jatochawski and Bauer, 2007)) if we compare them to the macro (dimension) samples (Davison and Steslicka, 1996). We have limited ourselves in studying of exciton sub-systems, mainly knowing that excitons play key role in optical (and optical to electrical) properties in anthracene-type crystals (known as molecular or dielectric crystals) (Agranovich and Ginzburg, 1979). We have analysed films with very small thickness of the film – up to 20 atomic layers, made of dielectric material (e.g. anthracene type), where excitons appear as a result of electrostatic interaction between electrons (inside the dielectric crystal) and electromagnetic field (outside of the crystal). Hereinafter we will show the procedure how to analyse the above mentioned optical values.

## MODEL & METHODS

We will use exciton Hamiltonian which is given in harmonic approximation (Agranovich and Ginzburg, 1979; Mirjanić, Kozmidis-Luburić, Marinković and Tošić, 1982):

$$H = \sum_{\vec{l}} \mathsf{D}_{\vec{l}} B_{\vec{l}}^{+} B_{\vec{l}} + \sum_{\vec{l},\vec{s}} X_{\vec{l}\vec{s}} B_{\vec{l}}^{+} B_{\vec{s}} \qquad (1)$$

where $B_{\vec{l}}^{+}$ represents exciton (bosonic[2]) operators of creation and $B_{\vec{l}}$ represents Bose operator of annihilation (excitons are Frenkel type – meaning that they are localized on the node of the lattice of the crystal), $\mathsf{D}_{\vec{l}}$ is energy of isolated exciton (on node), and $X_{\vec{l}\vec{s}}$ represents exciton transfer between node $\vec{l}$ to node $\vec{k}$. Our model presumes that $\mathsf{D}_{\vec{l}}$ is significantly higher than $X_{\vec{l}\vec{s}}$ (in a factor of ~$10^2$ times).

Among various ways of solving, theoretical analysis could be implemented by the method of Green functions (Rickayzen, 1980; Mahan, 1990). Let us observe

$$G_{\vec{l}\vec{s}}(t) = \left\langle\left\langle B_{\vec{l}}(t) \middle| B_{\vec{s}}^{+}(0)\right\rangle\right\rangle,$$

where the above function is in accordance with the appropriate equation of motion:

2 Exact representation of the excitonic Hamiltonian includes Pauli operators, but it can be shown that the Bose operators in the first neighbor conditions can replace this type of operators.

$$i\hbar\frac{d}{dt}G_{\bar{l}\bar{s}}(t)=i\hbar\delta(t)\delta_{\bar{l}\bar{s}}+\mathrm{D}_{\bar{l}}G_{\bar{l}\bar{s}}(t)+\sum_{\bar{j}}X_{\bar{l}\bar{j}}G_{\bar{j}\bar{s}}(t) \tag{2}$$

To obtain Green's function in inverse space (of the wave vectors space) we have to do full Fourier transformations through time and space. After finding the poles of Green's function, we obtain the allowed energies of the excitons:

$$\hbar\omega_{\bar{k}}=\mathrm{D}+2X_x\cos\,a_xk_x+2X_y\cos\,a_yk_y+2X_z\cos\,a_zk_z, \tag{3}$$

and, when we replace terms: $-|X|\equiv X_x=X_y=X_z$ and $a\equiv a_x=a_y=a_z$, the equation (3) could be written in non-dimensional form:

$$E_{\bar{k}}\equiv\frac{\hbar\omega-\mathrm{D}}{|X|}=R_{xy}+S_z;$$
$$R_{xy}\equiv 2\cos ak_x+2\cos ak_y;\quad S_z\equiv 2\cos ak_z. \tag{4}$$

One typical result of exciton dispersion law for bulk is presented in the graph in Figure 1.

In literature the universal expression for dielectric permittivity is well known (Dzialoshinski and L. P. Pitaevski, 1959; Pelemiš, Škipina, Vučenović, Mirjanić and Šetrajčić, 2008):

$$\varepsilon(\omega)=\frac{1}{1-2\pi iF\left[G(\omega)+G(-\omega)\right]} \tag{5}$$

where $F$ represents one general term related only to internal structure. If we calculate Green's functions and then substitute in (5), we obtain dynamic permittivity of bulk:

$$\varepsilon^{-1}=1+2F\frac{\omega_{\bar{k}}}{\omega^2-\omega_{\bar{k}}^2} \tag{6}$$

How permittivity depends on frequency of external radiation is shown in Figure 2.

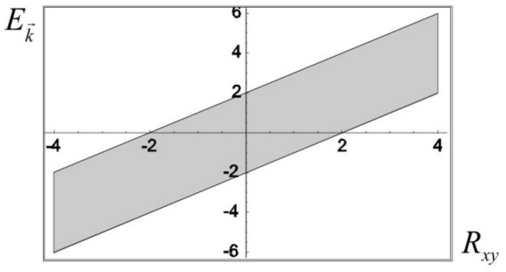


**Figure 1.** *Allowed energies of excitons in bulk*

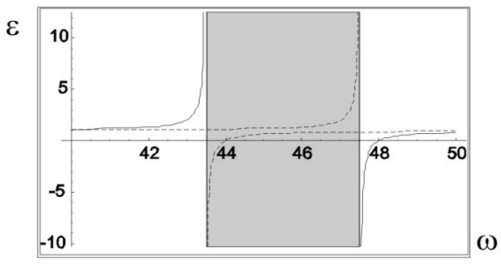


**Figure 2.** *Dielectric permittivity in bulk*

Dielectric permittivity is a complex value, i.e. that value consists of the real and imaginary parts: $\varepsilon(\omega)=\varepsilon'(\omega)+\varepsilon''(\omega)$. The terms $\varepsilon'$ and $\varepsilon''$ are related via Kramers–Kronig relations, i.e. with refraction and absorption indices.

James Maxwell showed that the dielectric permittivity is square of the refraction index: $\varepsilon(\omega)\equiv\eta^2(\omega)$, where the refraction index has a complex value: $\eta=n+i\kappa$. Then we can easily obtain: $\varepsilon'(\omega)=n^2-\kappa^2$; $\varepsilon''(\omega)=2n\kappa$.

Furthermore, we can calculate the terms for the absorption and refractive index expressed through terms $\varepsilon'$ and $\varepsilon''$ in the following form:

$$\kappa(\omega)=\sqrt{\frac{1}{2\varepsilon'(\omega)}\left\{\sqrt{1+\left[\frac{\varepsilon''(\omega)}{\varepsilon'(\omega)}\right]^2}-1\right\}};\quad n(\omega)=\sqrt{\frac{1}{2\varepsilon'(\omega)}\left\{\sqrt{1+\left[\frac{\varepsilon''(\omega)}{\varepsilon'(\omega)}\right]^2}+1\right\}}. \tag{7}$$

The above indices and their dependence from external radiation are shown in Figures 3 and 4.

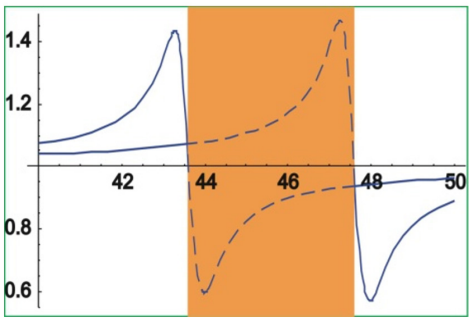


**Figure 3.** *Absorption index of bulk-crystal*

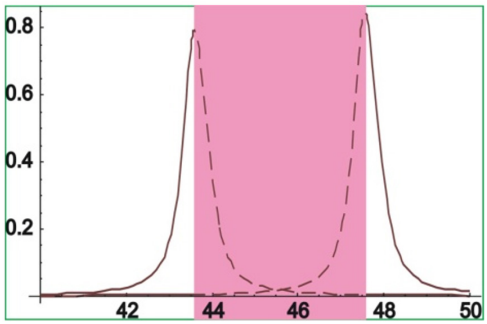


**Figure 4.** *Refraction index of bulk-crystal*

With dimensionally unlimited materials, the allowed energies could take continuous values in some particular extent of the allowed energies. This defines the dielectric response of bulk. That means that the absorption zone lays within certain interval of energies that bulk "swallows" (i.e. that zone of frequencies of external electromagnetic field is completely absorbed by the bulk).

## DIELECTRIC FILM

Film-structure presents alternately arranged layers, limited by two parallel surfaces (Cottam and Tilley, 1989; Šetrajčić et al., 2008). Theoretically we could presume that film is in *XY* (or plane) direction unlimited, while perpendicular to *XY,* (or along z-direction) a film has the final number ($N$) of planes, with film width equal to $L = Na$ ($N < 10$).

We will observe ultrathin (or nano) crystal film (Figure 5), made by controlled deposition of dielectric material (Šetrajčić et al., 2008). Exchanges of the energies between nodes and between borders (i.e. between $l_z = 0$; $l_z = N$ and $l_z = 1$; $l_z = N - 1$) are perturbed, due to the existence of border surfaces (Pelemiš et al., 2008; Šetrajčić et al., 2008; Šetrajčić, Vučenović, Mirjanić, Markoski and Šetrajčić, 2008; Šetrajčić, et al., 2005; Pelemiš et al., 2009):

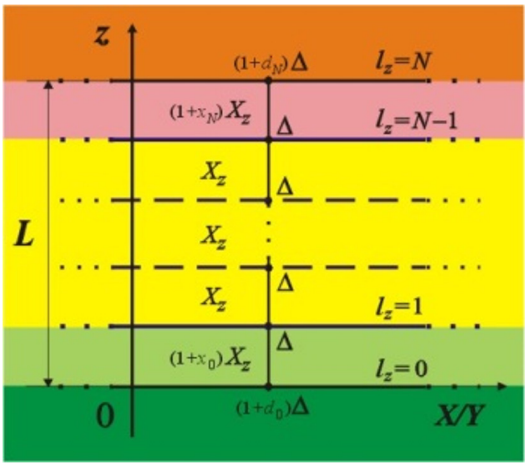


**Figure 5.** *Dielectric nanofilm model*

$$\mathsf{D}_{\vec{l}} \equiv \mathsf{D}\left[1+\left(d_0\delta_{l_z,0}+d_N\delta_{l_z,N}\right)\right];$$
$$X_{\vec{l},\vec{l}+\vec{\lambda}} \equiv X\left[1+\left(x_0\,\delta_{l_z,0}+x_N\delta_{l_z,N-1}\right)\right];$$
$$X_{\vec{l},\vec{l}-\vec{\lambda}} \equiv X\left[1+\left(x_0\delta_{l_z,1}+x_N\delta_{l_z,N}\right)\right],$$

where term $d$ shows how energy is perturbed on sites on border planes, and term $x$ shows how energy transfer between layers on boundaries is perturbed.

As in the bulk, we analyse exciton behaviour in film, by applying Green's functions with the same manner as in the bulk. However, here instead of full spatial – we must perform partly Fourier transformations[3]. The detailed procedure could be found in (Šetrajčić et al., 2008; Šetrajčić et al., 2008; Šetrajčić, et al., 2005; Pelemiš et al., 2009). One of the interesting steps in calculations is the following relation:

$$G_{l_z,s_z}\left[\rho-\frac{\mathsf{D}}{|X|}\left(d_0\delta_{l_z,0}+d_N\delta_{l_z,N}\right)\right]+G_{l_z-1,s_z}\left[1+\left(x_0\delta_{l_z,0}+x_N\delta_{l_z,N-1}\right)\right]+$$
$$+G_{l_z+1,s_z}\left[1+\left(x_0\delta_{l_z,1}+x_N\delta_{l_z,N}\right)\right]=\frac{i\hbar}{2\pi|X|}\delta_{l_z,s_z}, \tag{8}$$

where we introduce the following denotation:

$$\rho=\frac{\hbar\omega-\mathsf{D}}{|X|}+2\cos ak_x+2\cos ak_y.$$

The expression (8) is in fact system[4] of $N$+1 equations for Green's functions. We could write (8) in matrix form, and calculate the determinant of that matrix. In order to find the allowed energies of excitons in film, it is enough to find the poles of the determinant (Šetrajčić et al., 2008; Šetrajčić et al., 2008; Šetrajčić, et

3 Film is confined along z-axe. This is the reason for partial Fourier transformation.
4 This system is algebraic and not homogenuos.

al., 2005; Pelemiš et al., 2009). In such a way we avoid to calculate the exact Green's function, but we get $N$+1 solutions $\rho \equiv \rho_\nu$; $\nu = 1,2,...,N+1$.

If we chose to transfer to non-dimensional form of exciton dispersion law, we get the values of reduced energies:

$$E_\nu = \frac{\hbar\omega - \Delta}{|X|} \equiv R_{xy} - \rho_\nu ,$$

and as one can see the above relation depends on the function $R_{xy} \equiv 2(\cos k_x + \cos k_y)$.

The dispersion laws are presented in Figure 6 for symmetrical perturbed film, made of 5 layers. The allowed energy levels of excitons in film are drawn with full lines, and between dotted lines lay energy continuums for excitons in bulk. First, one can see two important facts: zero energy exciton does not exist in film, and those energies are all discrete. One fact that is more interesting is that, when film is unperturbed, the number of possible allowed exciton states (or energies) is equal to the number of film layers.

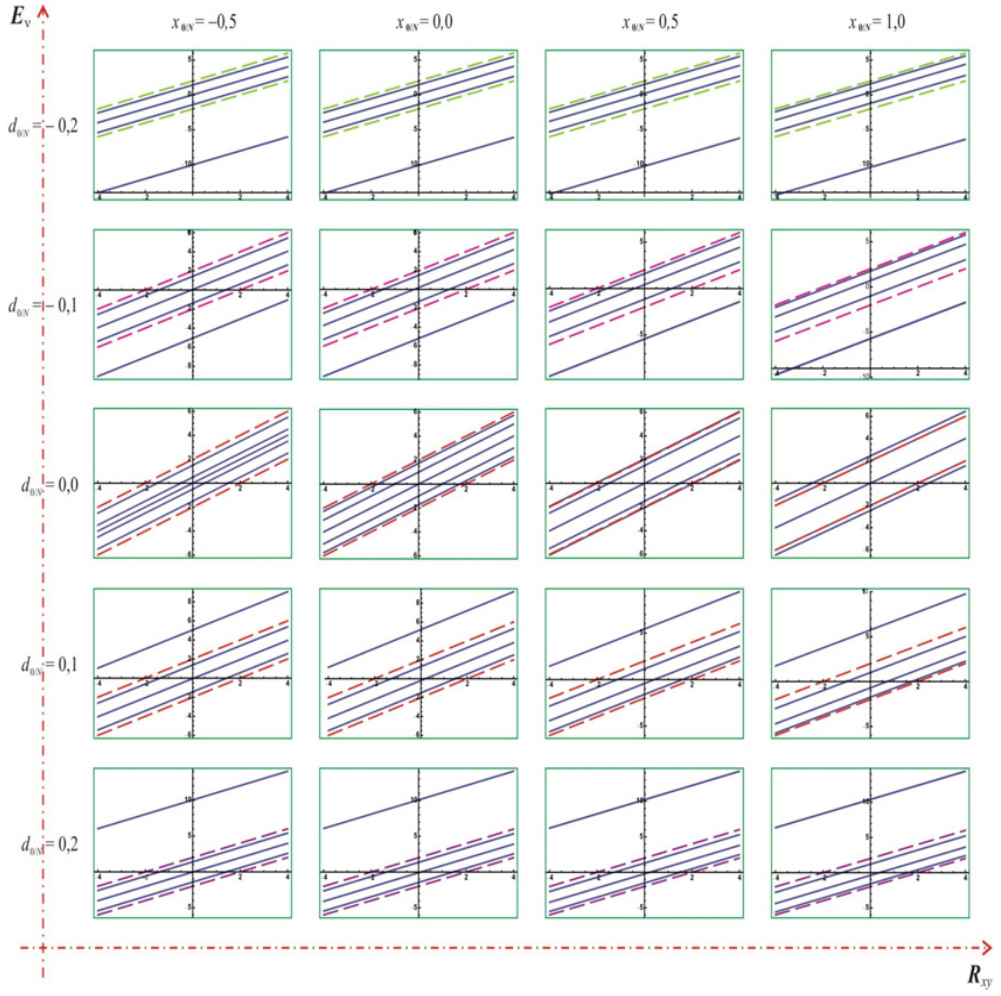


**Figure 6.** *Dispersion law of d- and x- perturbed five-layer film*

However, with perturbation acting the energy spectrum is somewhat changed. One can see that with increased $d$ – perturbation, the allowed energies spread out of the (dashed) bulk borders. That is happening in such a man-

ner that one energy level (or even two) has higher energy (Figure 6) compared with bulk. These are well known as localized or Tamm's states (Agranovich and Ginzburg, 1979). Furthermore it is evident that with increased $x$ parameter the spectrum expands. That is happening in such a manner that two energy levels (or four) go out of the bulk borders.

We have analysed one specific film structure in this paper, which we call "ideal", where the applied perturbation is symmetrical one, and with further analysis it could be showed that localized levels overlap each other. That condition could happen only for $d$-perturbation.

Spectral weights of individual Green's functions represent the probability of finding (or appearance of excitons) in the film. To calculate spectral weights, we must rewrite the system (8) in the following form:

$$\hat{D}_{N+1}\tilde{G}_{N+1} = \hat{K}_{N+1} \tag{9}$$

where $\hat{D}_{N+1}$, $\tilde{G}_{N+1}$ and $\hat{K}_{N+1}$ are system matrices, the vectors of Green's function and the vector made of Kronecker's deltas, respectively. When we operate from the left side with inverse matrix $\hat{D}^{-1}_{N+1}$ in (9), we can calculate Green's functions. In the obtained functions the numerators are actually spectral weights $g_{l_z}(\rho_\nu)$, for each exciton state $\rho_\nu$ (Pelemiš et al., 2008; Šetrajčić et al., 2008; Šetrajčić et al., 2008; Šetrajčić, et al., 2005; Pelemiš et al., 2009):

$$G_{l_z} = -\frac{i\hbar}{2\pi|X|}\sum_{\nu=1}^{N+1}\frac{g_{l_z}(\rho_\nu)}{\rho-\rho_\nu} \tag{10}$$

From the general expression (5) we can calculate dynamic permittivity of the film, knowing that Green's functions, and the permittivity consequently, depend on crystallographic planes $l_z$:

$$\frac{1}{\varepsilon_{n_z}(\omega)} = 1 - 2\pi i F\ \left[G_{n_z}(\omega) + G_{n_z}(-\omega)\right] \tag{11}$$

Including (10) into (11), we obtain:

$$\varepsilon^{-1}_{n_z}(\omega) = 1 - \frac{\hbar F}{|X|}\sum_{\nu=1}^{N+1}\sum_{s=+,-}\frac{g^{\nu}_{n_z}}{\rho_s - \rho_\nu} \tag{12}$$

where: $\rho_\pm = \frac{\mp\hbar\omega - \mathrm{D}}{|X|} + 2\cos ak_x + 2\cos ak_y$. Finally, (12) is transformed to:

$$\varepsilon_{n_z}(\omega) = \left\{1 - \frac{2\hbar F}{|X|}\sum_{\nu=1}^{N+1} g^{\nu}_{n_z}\frac{\rho_\nu - \frac{\Delta}{|X|} - 2\left(\cos \boldsymbol{k}_x + \cos \boldsymbol{k}_y\right)}{\left(\frac{\hbar\omega}{|X|}\right)^2 - \left[\rho_\nu - \frac{\Delta}{|X|} - 2\left(\cos \boldsymbol{k}_x + \cos \boldsymbol{k}_y\right)\right]^2}\right\}^{-1} \tag{13}$$

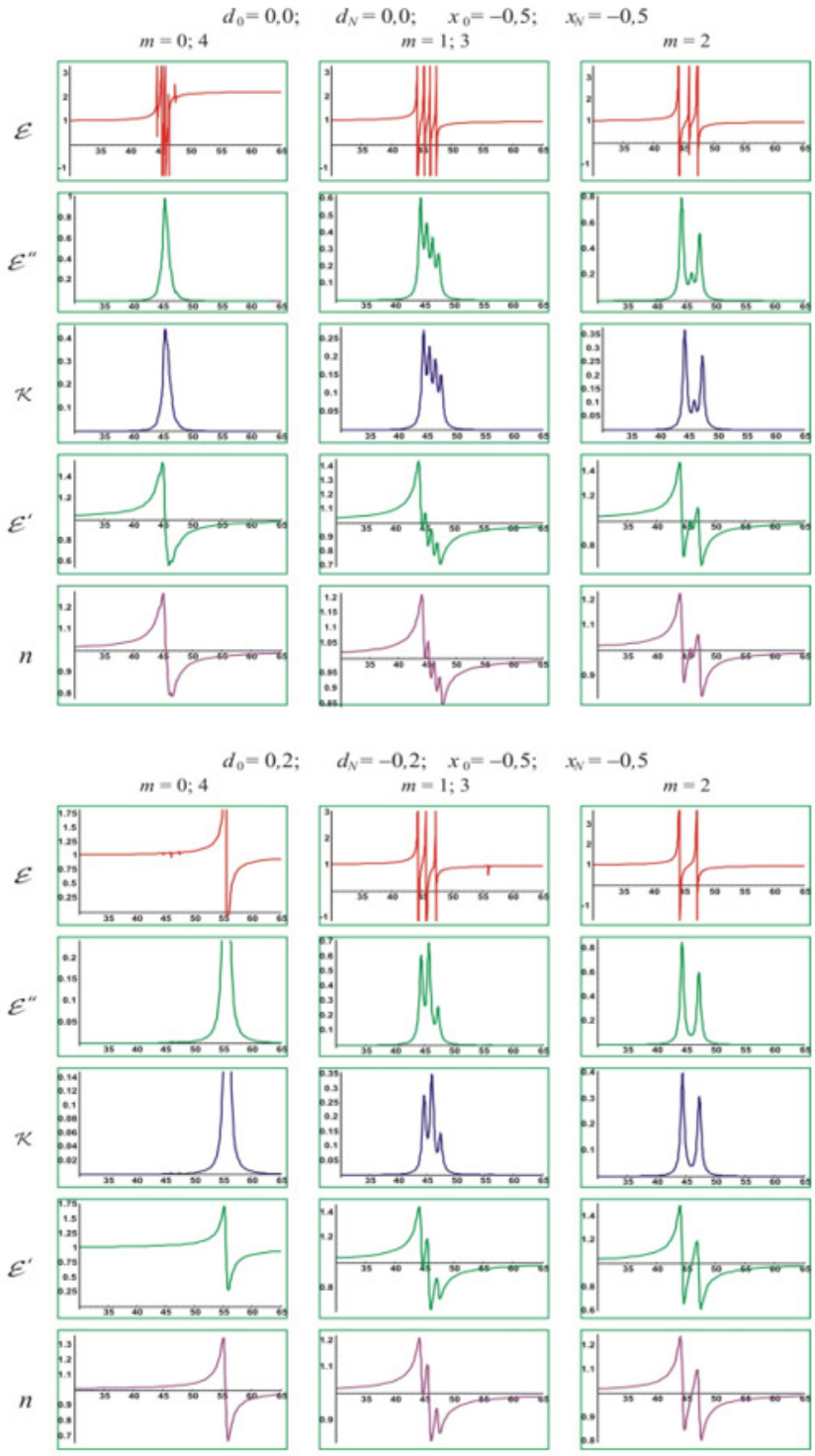


**Figure 7.** *Optical indices (permittivity, absorption and refraction) for five-layer film*

Expression (13) represents dielectric behaviour, i.e. how symmetrical molecular film reacts to the electromagnetic field. If we again link (13) with complex

permittivity $\varepsilon_{n_z}(\omega)=\varepsilon'_{n_z}(\omega)+i\varepsilon''_{n_z}(\omega)$, we can express and calculate optical indices of absorption and refraction for the film:

$$\kappa_{n_z}(\omega)=\sqrt{\frac{\varepsilon'_{n_z}(\omega)}{2}\left\{\sqrt{1+\left[\frac{\varepsilon''_{n_z}(\omega)}{\varepsilon'_{n_z}(\omega)}\right]^2}-1\right\}};\qquad n_{n_z}(\omega)=\sqrt{\frac{\varepsilon'_{n_z}(\omega)}{2}\left\{\sqrt{1+\left[\frac{\varepsilon''_{n_z}(\omega)}{\varepsilon'_{n_z}(\omega)}\right]^2}+1\right\}}. \tag{14}$$

Figure 7 shows the prediction how a 5-layered film will optically react when we put it in an electromagnetic field.

When we change parameter Δ by perturbation of $d_0$ (or $d_N$) relative permittivity is changing and this is presented in Figure 7. One can see that the number of resonant peaks (those relative frequencies where $\varepsilon(\omega_r) \to \pm\infty$) is not equal on every atomic plane. That number is function of the number or position and of the value of perturbation $d_{0/N}$. However, the dominant resonant peak is at the borders of the surface of the film ($n_z$ = 0 or 4) under increased perturbation. We could already expect this result, while spectral weights (Šetrajčić et al., 2008) are the highest ones, i.e. they show that excitons would be localized on film surfaces.

One interesting result is mirror symmetry of the first and the last row ($d_{0/N}$ = – 0,2; $d_{0/N}$ = + 0,2), or the second and the fourth ($d_{0/N}$ = – 0,1; $d_{0/N}$ = + 0,1) in Figure 7.

The analysis of how perturbation factor $X$ influences permittivity was conducted earlier in (Škipina et al., 2011; Šetrajčić-Tomić, Rodić, Šetrajčić, Sajfert and Šetrajčić, 2018), where we demonstrated perturbation parameter $d$ is evidently much "stronger" where the whole energy spectrum "shifts". Here we focused only on the extreme case (where $x$ = 1,0).

Every layer in film has different number of resonant lines: this number is at least one (graph below), and it could be up to five (graph on the top). This number strongly depends on the magnitude of the perturbations parameters of the boundary surfaces (to be exact, on boundary layer) of the crystalline film. Localized states are the consequence of certain threshold boundary parameters.

The second row of graphics displays dependence on the imaginary part of relative permittivity, while the third row displays dependence of the index of absorption. It is evident that the behaviour of these two values is almost identical, because of $\kappa \approx \sqrt{\varepsilon}$. Therefore, the position of absorption peaks remains the same, but may vary in size.

When we compare permittivity with absorption, we see that the number of absorption peaks is reduced. Conclusion is that, in that case, some (dominant) frequencies were absorbed.

The real part of the reduced permittivity is shown in the fourth line and in the fifth the refractive index dependence on the reduced frequency of external electro-magnetic field. It can easily be seen that their arrangement is equal, with resonant peaks at the same frequencies, only with different sizes. This could be anticipated regarding relation $n \approx \sqrt{\varepsilon}$. In all of the displayed graphics, it can be seen that in the region where we see increment of absorption - the refractive index is decreasing. Where the absorption index is rapidly changing (toward either lower or higher values), we find the singularities in the refraction of the film. This result is in good agreement with the Kramer's theory, but we must notice that this rapid change occurs only on the "tails" of the absorption zone.

## CONCLUSION

In this paper we have analysed the differences between nano-structured film and macroscopic samples (bulk), regarding the allowed excitons energies (dispersion law) and optical properties (dielectric response). These differences are the consequences of film confinement perpendicular to film surface (or along one direction) and different boundary conditions represented through the perturbation parameters on border film surfaces and border layers. We could summarize the analysis in some conclusions remarks:

- Allowed energies of excitons in symmetrical film take discrete values. Without any perturbations (ideal film) the number of allowed energies will be exactly the same as the number of layers in film.
- With some additional interaction on the border of the film (interaction between film and substrate or the surrounding environment) excitons will have higher energies, and this results in shifting the whole spectrum toward higher energies. Other types of perturbation in energy transfer will increase their values and energy spectrum will expand, i.e. excitons will have both lower and higher energies.
- Appearance of Tamm's (or localized) states is highly possible with the increase of perturbations.
- Ultrathin films, under some characteristic perturbations, could be used as very narrow and almost discrete absorber. Energies which define such dielectric response are tuneable, i.e. directly depend on perturbations (interaction of the ultrathin film and environment) and structural characteristic of the film (layers number). This is potentially the most desirable characteristic and advantage of the film comparing with bulk.

## ACKNOWLEDGMENTS

These researches were partially supported by the Ministry for Scientific and Technological Development, Higher Education and Information Society of Government of Republic of Srpska (grant No. 19/6-020/961-21/18 and 19/6-020/961-35/18).

## REFERENCES

1. Agranovich, V.M., & Ginzburg, V.L. (1979). *Crystaloptics with Space Dispersion and Theory of Excitons*. Moscow: Nauka.
2. Cottam, M.G., & Tilley, D.R. (1989). *Introduction to Surface and Superlattice Excitations*. Cambridge: University.
3. Davison, S.G., & Steslicka, M. (1996). *Basic Theory of Surface States*. Oxford: Clarendon Press.

4. Dzialoshinski, I.E., & Pitaevski, L.P. (1959). Van der Waals Forces in an Inhomogeneous Dielectric. *ZhETF*, 36(6), 1797–1805.
5. Jaćimovski, S., & Šetrajčić, J. (2015). Review of results of theoretical approaches to phonon engineering of thermodynamic properties for different quantum structures. *NBP - Journal of Criminalistics and Law*, *19*(3), 67–82.
6. Mahan, G. (1990). *Many Particle Physics.* New York: Plenum Press.
7. Mirjanić, D.Lj., Kozmidis-Luburić, U.F., Marinković, M.M., & Tošić, B.S. (1982). Combined effect of exciton-exciton and exciton-phonon interaction on crystal's dielectric properties. *Canadian Journal of Physics*, *60*(12), 1838–1845. https://doi.org/10.1139/p82-243
8. Pelemiš, S., Škipina, B., Vučenović, S.M., Mirjanić, D.Lj., & Šetrajčić, J.P. (2008). Absorption in molecular nanofilms. *Tehnika – Novi materijali*, *17*(2), 13–19.
9. Pelemiš, S.S., Šetrajčić, J.P., Markoski, B., Delić, N.V., Vučenović, S.M., & Mirjanić, D.Lj. (2009). IR Resonant Absorption in Molecular Nanofilms. *Acta Phys. Pol.* A, 116(4), 579–584. doi: 10.12693/APhysPolA.116.579
10. Rickayzen, G. (1980). *Green's Functions and Condensed Matter*. London: Academic Press.
11. Šetrajčić, J.P., Ilić, D.I., Markoski, B., Šetrajčić, A.J., Vučenović, S.M., Mirjanić, D.Lj., Škipina, B., & Pelemiš, S. (2008). Conformation and Application of Green's Functions Method to Optical Properties of Ultrathin Molecular Films Searching. 15th Central European Workshop on Quantum Optics (CEWQO-08), Belgrade, Serbia.
12. Šetrajčić, J.P., Vučenović, S.M., Mirjanić, D.Lj., Markoski, B., & Šetrajčić, A.J. (2008). Green's Function Method in Analysis of Molecular Ultrathin and Broken Symmetry Crystalline Structures. MOLMAT-08, Toulouse, France.
13. Šetrajčić, J.P., Vučenović, S.M., Mirjanić, D.Lj., Sajfert, V.D., & Jaćimovski S.K. (2005). Exciton Dispesion Law and States of Bimolecular Thin Films. *Materials Science Forum*, 494, 49–54. https://doi.org/10.4028/www.scientific.net/MSF.494.49
14. Šetrajčić-Tomić, A.J., Rodić, D., Šetrajčić, I.J., Sajfert, V.D., & Šetrajčić J.P. (2018). Basics of Optical Engineering: Analysis of Environmental and Quantum Size Effects on the Optical Characteristics of Molecular Crystalline Nanofilms. *Photonic Nanostruct.*, 31, 115–128. https://doi.org/10.1016/j.photonics.2018.05.011
15. Škipina, B., Mirjanić, D.Lj., Vučenović, S.M., Šetrajčić, J.P., Šetrajčić, I.J., Šetrajčić-Tomić, A.J., Pelemiš, S.S., & Markoski, B. (2011). Selective IR Absorption in Molecular Nanofilms. *Optical Materials*, *33*(11), 1578–1584. https://doi.org/10.1016/j.optmat.2011.04.008
16. Tringides, M.C., Jatochawski, M., & Bauer, E. (2007). Quantum size effects in metallic nanostructures. *Physics Today*, *60*(4), 50–54. https://doi.org/10.1063/1.2731973
17. Wood, K., Hammond, P., Schmidt, D., Wrightman, S., & Andaya, B. (2008). Thin Film Delivers Drugs. *Biophotonics*, Cambridge, 12.02.2008. http://www.photonics.

NBP JOURNAL OF CRIMINALISTICS AND LAW ŽURNAL ZA KRIMINALISTIKU I PRAVO
NBP 2019, 24(3): 43–58

Submitted: 2019-08-29
Published: 2019-12-10

UDK: 343.53:336.741.1
332.76(497.11)
**doi:10.5937/nabepo24-22958**

# LEGALIZATION OF CRIMINAL PROFIT IN THE COURSE OF AGRICULTURAL PRIVATIZATION
## A VIEW FROM THE REPUBLIC OF SERBIA[1]

**[1]Aleksandar Čudan[2], [1]Zvonimir Ivanović, [2]Gyöngyi Major**

*[1]University of Criminal Investigation and Police Studies, Belgrade*
*[2]Institute for Strategic Research, Budapest*

**Abstract:** This scientific paper presents the knowledge and experiences related to the legalization of criminal profit with a view to agricultural ownership transformation in the Republic of Serbia. We define the concept, the standards aimed against money laundering and the real threats which create the possibility for this criminal offence in Serbia. The practical goal of the research is concerned with gaining further knowledge of the research topic, which would contribute to solving the current but also similar problems related to money laundering. In all countries transition privatization is a complex and painful process, and this refers to the agricultural sector particularly. This process is one of the fundamental factors of a market economy which must prevent legalization of contaminated money through legal flows. Parallel to this, organized crime expands the field of money laundering activities in the process of agricultural privatization. Starting from a previously defined problem the hypothesis this paper is based on is as follows: the risks of money laundering and new techniques for its integration are not possible to eliminate, but it is necessary to make efforts and undertake adequate measures to minimize them, particularly in the field of agriculture. The problem has become additionally complex due to the fact that at the beginning of 2016 the Privatization Agency ceased its operation according to the Law on Amendments to the Law on Privatization. The paper uses both general and specific scientific methods and procedures of logical conclusion, statistical, as well as positivist legal method. The manner of research includes the selection and application of scientific methods, the selec-

1 This paper is the result of research related to the project "Crime in Serbia and Instruments of State Response", financed and implemented by the University of Criminal Investigation and Police Studies, cycle of scientific research 2015/2019.

2 Corresponding author: aleksandar.cudan@kpu.edu.rs

tion of data and the scope of research. The specific technique used to collect data in this paper includes case studies.

**Keywords:** privatization, money laundering, agriculture, crime.

## INTRODUCTION

Agriculture is particularly important for the entire economy of the Republic of Serbia. Its significance has considerably increased following the collapse of industrial production and the first effects of bad privatization. Due to the said reasons the events surrounding agriculture are of crucial significance for the state-of-affairs of economy in Serbia. With the global economic crisis intensifying and the disturbances in the financial markets the economy of the Republic of Serbia also entered a turbulent stage of development at the beginning of the new millennium. The connection between economy, agriculture and the results of economic crime is complex and multiple. Contemporary civilization flows bring characteristic security challenges taking into consideration, that new threats are also developing on a daily basis, such as various forms of economic destruction which include money laundering.

Agriculture is no exception for the activities of criminal proceeds launderers. Unlike other branches of the economy, agriculture is the field where such activities are relatively easy to realize. In order to stop such activities, or at least reduce them, many institutions have been organized for the fight against them in almost every country in transition[3] in the world.

The most efficient means to weaken the agricultural privatization model is through economic crime. The model of privatization through selling public capital is the most susceptible one to various forms of economic crime. Market globalization and money flows, on the one hand, and modern technologies and sophisticated payment manners on the other, open new possibilities and modify traditional manners of money laundering. When a money laundering cycle is completed it confirms the profitability of a criminal activity and it can restart or continue through the reinvestment of laundered assets into a new legal business (Popov, 2013: 33). The conclusions and analysis will be directed at proving as to what extent criminal proceeds legalization has compromised the process of agricultural privatization, as well as the level of damage this specific form of economic crime has impacted Serbian agriculture.[4]

National vulnerability, in addition to the capability of the state to defend itself

3 Etymologically the root of the word transition is in Latin words *trans,* which means over and *eo, ire* – go from which we have a derived word transition. Based on the said in economic sense we can consider that transition means transition to market economy. In contemporary flows we know quite reliably that the basis of transition is the transition from non-market to a market system. The projected goal is to have more efficient economy and improve economic performance.

4 The manner in which the state and consequently the Privatization Agency of the Republic of Serbia approached this process may be best illustrated by the structure of new owners of privatized corporations. Among them are persons wanted by the police, "protected witnesses", persons whom business activities have been examined by the Agency for the Fight against Organized Crime, people involved in drug trafficking, etc. The new owners in the largest number of cases showed no interest in improving the economy and considered the employees as ballast. The largest number of them can be classified as "controversial businessmen".

against money laundering threats, is also affected by the vulnerability of certain economic sectors which can be abused for money laundering and the financing of terrorism. The evaluation of the vulnerability of a sector should never be understood in absolute terms, in other words whether or not it is more or less vulnerable when compared with other sectors.

## LEGAL FRAMEWORK AND CONCEPT OF PRIVATIZATION

The dilemmas related to reforms, transition and particularly privatization have been present in the Republic of Serbia for many years. The said process can be the cause of economic crime. Transformation of capital ownership, if it is not done in a legal and transparent manner, creates enormous and endless possibilities for economic crime within which money laundering takes a special place as the most complex form of economic destruction. As in other countries in transition privatization represented a crucial element of structural reforms and had many goals among which we would single out higher economic efficiency, more income for the central budget, the development of the domestic capital market, as well as many others. The integrity of the privatization process is particularly debatable in the countries in transition, as well as in the countries of Eastern Europe.

In these countries a large part of national wealth was privatized. Criminal behaviour in economic and financial zones becomes a pattern of behaviour which is difficult to change. This primarily includes activities such as money laundering. The effect of various forms of monetary destructions, both at the moment of sale and after suggests that more care must be taken in respecting transparent and reliable legal boundaries. The interest of the state in implementing the process of privatization is to ensure that this procedure is done in accordance with the defined rules.

Formally, privatization in Serbia has been going on for more than thirty years, but the public's attitude towards privatization has considerably changed during this period. It ranged from a necessary evil, as privatization was seen until the late 1990s, through short-term euphoria to disappointment with the results achieved. At the beginning of the new millennium it is necessary to prove once again that private – privatized ownership is more efficient than social ownership. Recently the term 'privatization' in Serbia, as a rule, is accompanied by the adjective 'raiding', in other words this qualifier is implied (NALED, 2014: 8). From all the above aforementioned, the conclusion can be made that positive results of privatization, particularly those in the sphere of agriculture, have been extremely modest, and that the negative impacts have been fully evident. Its lack of success in the sphere of agriculture is measured in a few crucial aspects: economic, social, unemployment growth, social insecurity, low wages, even the quantity of inflow of financial assets contaminated in the criminal zone. Privatization as a transition stage for the countries in transition was and still is one of the biggest opportunities for economic crime, particularly money laundering in its most complex and most current form of manifestation. Practice

has confirmed that the states prove to be bad hosts in the periods of transition. The Serbian economy from the early to mid-1990s was stranded in blocked privatization and from 2000 onward in a form of lagging privatization, while in the last two years it has been in the process of re-examination and evaluation of the said process. Naturally, this issue also remains open for the future.

After the period of domination of social and public ownership, the process of privatization in our conditions was initiated in 1989 by adopting the Federal Law on Social Capital of the SFRY.[5] The said law opened the possibility to transform a socially-owned company into a private company by issuing and selling internal shares. Thanks to this liberal and stimulating concept, the big, initial wave of privatization was launched. After 1990 the Republic of Serbia started implementing the Republican Law[6] on Conditions and Procedures of Transformation of Social Ownership into other forms of ownership.[7]

The new wave of privatization was launched in 1997 when the Law on Ownership Transformation was adopted.[8] The Law set out several models of privatization. The essential concept was still insider privatization, the basic model was to sell shares to the employees, with or without a discount, with the right of prior purchase. Foreign investors were also given the right to purchase. After political and initiated social changes in 2000 the new Law on Privatization was adopted. The models set out in this Law, according to which privatization is still carried out in Serbia, include selling capital and the transfer of capital without remuneration. In order to speed up and finalize the procedure of privatization the legal framework for this process has often been amended in recent years, and in 2014 the Law on Privatization was adopted, which provided a new model, and December 31, 2015 was set as the final term to complete privatization, which has only just been completed.

Many concepts and models of privatization exist, which vary regarding the techniques of their implementation as well as their post-privatization structure of ownership and the manner of the functioning of the company. There are four clear models: selling, reprivatisation (denationalization), transfer of shares to employees free of charge and stockholding of employees.

**Selling:** the widest accepted attitude is that selling, or market privatization is the most desirable form of ownership transformation of public property. However, it has been noted that this model can encounter considerable limitations, even abuses. Namely, we are talking about the lack of demand, and domestic resources are usually modest in comparison with foreign capital which is in a position to select among a multitude of offers. The process of selling, as a rule, is carried out very slowly. Analysts often highlight the concept of mass privatization which makes it possible for the transfer of public to private ownership to be quicker than other methods. The said concept of privatization has its weaknesses, which are created and initiated by strong influential factors such as political, tycoons and competition elites

5 Official Gazette of the SFRY, No. 84/89 and 46/90.
6 In its conceptual features the Republican Law was similar to the Federal Law, but in some postulates it was more restrictive in character.
7 Official Gazette of the RS, No. 48/91, 75/91, 48/94 and 51/94.
8 Official Gazette of the RS, No. 32/97 and 10/01.

that aim to weaken it systematically. The most efficient means to weaken the privatization model is economic crime.

**Employee shareholding** as a principle means, the transfer of shares partially free of charge to the managers or employees of the companies which are being privatized. Therefore it represents a combination of selling and giving away shares free of charge, but the benefits of such transfers are limited to the people employed in a given company. The said model has serious faults. Such a concept creates possibilities to doubt the integrity of management intentions, as well as various abuses and manipulations by the managers. In this way a number of procedures and activities on implementation of the model are questionable, as well as the efficiency of the company after the procedure is completed. The model with all its faults sets doubts into the regulation of the procedure as well as the number of elements resulting from such a procedure, even economic crime.

**Voucher privatization** as a concept and model has had impressive support from a great majority of experts and advisers in the process of privatization in all economies in transition. The idea is simple: the citizens are given special privatization money – vouchers, which they use to buy company shares. Vouchers can be given in either equal or unequal amounts, according to the age or years of service and some other characteristics. The procedure of mass voucher privatization is usually managed by independent subjects. In principle, not a single model is immune to economic crime.

**Table 1.** *Cumulative results of privatization in Serbia in the period from 2002 to 2014 (* in EUR)*

| | Number of companies | Number of employees | Selling Price* |
|---|---|---|---|
| Tenders | 81 | 61.673 | 990.462.165 |
| Tenders - agriculture | 9 | 3.289 | 39.677.218 |
| Auctions | 1,517 | 126.707 | 860.977.870 |
| Auctions - agriculture | 115 | 11.182 | 130.114.253 |
| **TOTAL** | **1,598** | **188.380** | **1.851.440.035** |
| **TOTAL–T+A AGRICULTURE** | **124** | **14.441** | **169.791.471** |
| Privatizations annulled | | | |
| Tenders | 49 | 21.644 | 631.019.674 |
| Tenders - agriculture | 4 | 1.738 | 21.080.000 |
| Auctions | 639 | 47.380 | 529.604.251 |
| Auctions - agriculture | 40 | 2.377 | 111.281.376 |
| **TOTAL** | **688** | **69.024** | **1.160.623.925** |
| **TOTAL–T+A AGRICULTURE** | **44** | **4.115** | **132.361.376** |

Source: Ministry of Agriculture, Sector for privatization and bankruptcy

In the period from 2002 to 2014 the total of 1,598 companies were sold, 81 at tenders and 1,516 at auctions. The selling price of privatized companies was EUR 1,851,440. In the same period 688 privatization agreements were cancelled, which constitutes 43.05% of the total number of companies privatized at either tenders or auctions. Of the total number of privatization agreements cancelled, the most frequently stated reasons for the cancellation include: discontinuance of business and disrespect of social programme, not paying a due instalment of the purchase price, not carrying out the investment obligations, not delivering bank guarantees for investment obligation, disposition of property contrary to the agreement provisions, and in five companies the buyers unilaterally demanded agreement cancellation.

When we talk about the agricultural sector, a total number of 44 privatization agreements were cancelled, which constitutes 35.48% of the total number of privatized agricultural companies. Considering all the above, it can be said that privatization of agriculture in Serbia was not successful, which is illustrated in Figure 1.

In the companies in which agriculture privatization agreements were cancelled there were 28.49% of all employee, and the buyers paid for these companies for a total amount of EUR 132.361.376. The new owners of agricultural companies, who invest the money of suspicious origin, in the majority of cases do not express any interest in further production, while considering the employees as a balance which in the final stage of money laundering in this sector creates a new potential source of unemployment, which is clearly shown in Table 1 and in Figure 1.

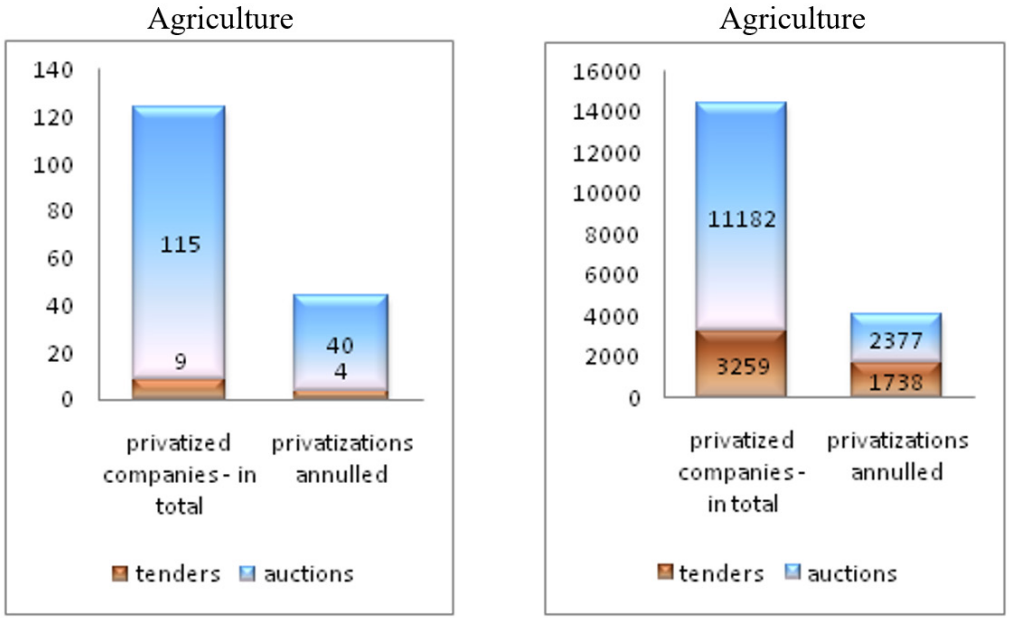


**Figure 1:** *Number of companies (privatizations annulled) and Number of employees (privatizations annulled)*

**Table 2.** *Privatization according to the new Law on Privatization 2014-2018 (* in USD)*[9]

| | Number of companies | Number of employees | Selling price* |
|---|---|---|---|
| Total number of privatized companies (PK+PI) Sales of capital (PK), Sales of property (PI). | 59 | 12.922 | 214.705.631 |
| Total (PK+PI) – privatization agreement annulled | 7 | 52 | 283.290 |
| Total number of privatized companies (PK+PI) – branch: agriculture, forestry and fishing industry | 5 | 1.888 | 122.340.359 |
| Total (PK+PI) – privatization agreement annulled – branch: agriculture, forestry and fishing industry | 0 | 0 | 0 |

Source: Ministry of Economy, Sector for privatization and bankruptcy.

In the course of privatizaaaaaation according to the new Law on Privatization in the period from 2014 to 2018 a total number of 59 companies were sold through either the sale of capital or property, out of which only five companies were in the agricultural sector. That the process of privatization in this period has entered a much calmer stage is confirmed by the fact that only seven companies cancelled the privatization agreements, which constitutes 11.86% or 52 employees. If we look at the agricultural sector in the same period, out of five privatized agricultural companies not a single agreement on privatization was cancelled (Figure 3).

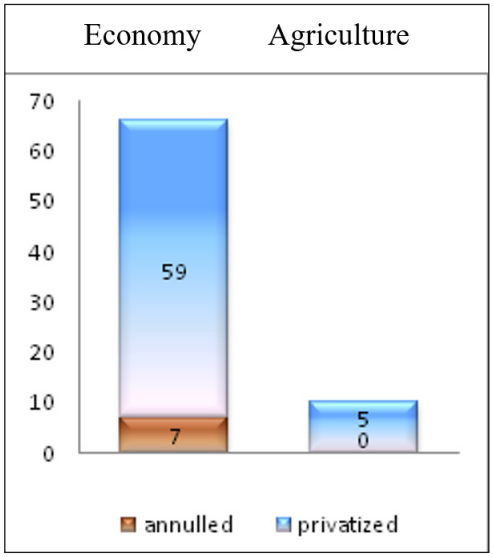


**Figure 2.** *Number of privatizations and cancelled privatizations 2014-2018*

9 Official Gazette of the RS, No. 83/14, 46/15, 112/15 and 2016 – authentic interpretation.

## RISK ASSESSMENT OF MONEY LAUNDERING THREAT TO THE PRIVATIZATION PROCESS

The prognosis of how much a sector is jeopardized by money laundering and financing terrorism is of great significance, so that this can be combated efficiently, which is of special significance for the selection and application of the corresponding fighting methods. This risk includes a potential problem or a potential opportunity. In both cases they appear in all spheres, and this is why it is necessary to analyse and find the right methods of risk management.[10] In the relevant literature we come across a great number of definitions of risk.

At the beginning of the new millennium money laundering was very much a widespread phenomenon. The scope is expressed as the value of global gross product ranging from 2 to 5 percent, or from EUR 615 to EUR 1,540 billion every year (Europol Review 2013, 2015: 33). Due to the said reasons the analysis of risk from money laundering and financing terrorism in addition to an assessment of threats and vulnerability also includes an assessment of its impact on the system, including one of the most vulnerable areas such as agricultural sector privatization. It is necessary to have in mind that criminal structures as a rule do not take account of only the profitability of their investments. On the contrary, they are inclined to invest their criminal income into activities which do not have to return on profit, considering that the goal of investment is to hide the provenance of their money.

Without any doubt, agricultural privatization has been a problem in the previous decades, primarily because of the risk it presents in terms of the final stage, which is integration of dirty money. It is very difficult to discover its criminal and illegal origin when after a series of transactions through various world financial and off-shore centres it is brought in as much needed capital into agricultural companies and agrarian societies which are already in chronic difficulties.

It is exactly these investments such as placement into the privatization of agricultural companies that are targeted by criminally contaminated money, since in this way it is quickly and easily merged into legal flows and does not give rise to much suspicion (Vujić, 2018: 49). The problem in Serbia gets additionally more complex by the fact that there is not a statistical model which would show a number of privatizations annulled in the agrarian sector due to the grounded suspicions that the criminal offence of money laundering was committed.

Risk assessment is a concept with various contents and this is why it requires, in addition to legislative foundation, numerous criteria which should be applied in practice as efficiently as possible (Cindori, 2013: 1). Starting from the aspect of the possibility to launder money in the course of agriculture privatization, the risk according to some definitions is the possibility of loss or injury, in other words the possibility to realize undesired consequences of an event or process, in this case from those involved in criminal activities in the field of economic crimes (Čudan, Nikoloska, 2018: 64).

Risk assessment is determining the quantitative and qualitative values of risk which refer to a concrete situation,

10 Linguistic term 'risk' originates from a Latin word *rishio* and originally it denoted danger to the shipmen from rocks and cliffs.

in this case privatizations and threats arising from the criminal zone. Quantitative risk assessment requires two risk components (R); size of potential loss (L); probability (p): that the loss will occur. Risk assessment consists of objective risk assessment in which assumptions and uncertainties are clearly presented and considered. Possible mistakes in measurement of these two concepts are huge. Mathematically presented they are as follows:

$$Ri = Lip\ (Li)$$
$$Rtotal = \sum Lip\ (Li)i$$

The comprehension, identification and analysis of risk from money laundering represent an important part of the application and development of systems to prevent money laundering and financing terrorism in a state. The assessment of vulnerability would cover: the comprehensiveness of the legal framework, availability of sanctions, system organization, recognizing suspicious activities, monitoring and recognizing suspicious transactions, the availability of information on clients and availability of independent information sources. Based on the collected qualitative and quantitative information, the capability of a state to defend itself from a threat is regarded as basic. As to how the national vulnerability is influenced by the vulnerability of certain processes such as the privatization of agricultural companies which can be abused for money laundering, it is now too late to talk about taking into account the fact that this process is practically completed Republic of Serbia.[11]

## TYPOLOGY OF MONEY LAUNDERING IN AGRICULTURE PRIVATIZATION PROCESS

Taking into account that the manifestation of money laundering and the financing terrorism are changing, a longer period of observation has enabled conclusions to be made on the changes of typology per economic sectors as well. The legalization of criminal profit is not only the consequence of previously committed crimes, but it also creates a favourable basis for future criminal activities and directly negatively reflects on agriculture and the economic system, and depending on the scope it can jeopardize direct development and financial stability, as well as the process of privatization in Serbia. Money laundering leads to the easier and faster penetration of crime and corruption into the agricultural sector. Considering that the largest number of predicative criminal offences refer to the field of economic crime, it is necessary to analyse the share of the said offences within the structure of total criminal offences in the territory of the Republic of Serbia, as well as the share of money laundering within the structure of criminal offences in the field of economic crime, which is illustrated in Table 4.

11 Comprehensive National risk assessment from money laundering has been made according to the methodology of the World Bank through four thematically classified sections which are included in eight modules of the World Bank. The total number of 154 representatives participated in making the risk assessment of money laundering and financing terrorism, out of which 12 representatives of the state sector and 30 representatives of the private sector (tax-payers, associations, chambers, and others).

**Table 3.** *Share of criminal offences in the field of economic crime and money laundering within the structure of total number of criminal offences in the territory of the Republic of Serbia per territory*

| Year | Total number of criminal offences | Total number of criminal offences in the field of economic crime | Money laundering Criminal Code of the Republic of Serbia, Art. 245 |
|---|---|---|---|
| 2006. | 99060 | 10470 | 19 |
| 2007. | 104118 | 10587 | 37 |
| 2008. | 106015 | 10477 | 47 |
| 2009. | 102369 | 10560 | 35 |
| 2010. | 101090 | 10445 | 96 |
| 2011. | 101309 | 9677 | 184 |
| 2012. | 97015 | 8768 | 123 |
| 2013. | 113600 | 7421 | 25 |
| 2014. | 102715 | 7836 | 27 |
| 2015. | 98545 | 8170 | 5 |
| 2016. | 93724 | 7633 | 12 |
| 2017. | 91595 | 8221 | 37 |
| 2018. | 85658 | 6199 | 82 |

Source: Ministry of Interior of the Republic of Serbia

The national framework in the field of the fight against money laundering was improved considerably upon the adoption of the new Law on Prevention of Money Laundering and Financing Terrorism, its implementation started at the beginning of 2018.[12] In these conditions predicative crimes which are classified as high-degree threats of money laundering include:

– Criminal offences in the field of corruption;

– Illegal manufacturing and trade of narcotics;

– Tax-related criminal offences.

In order to consider objectively the degree of the problems occurring due to one of the most complex forms of economic crime, Table 4 presents a number of criminal charges filed, the number of persons covered and the number of final verdicts reached in the cases referring to the criminal offence of money laundering. It is obvious that in a few recent years there has been an increase of the criminal offence of money laundering, which particularly refers to the number of persons covered, and at the end of 2018 it was 90.On the other hand, the epilogue of the criminal charges filed resulted in only seven final verdicts in 2018, which is much more when compared with the years which ended with just one final verdict. The responsibility for such a state-of-affairs is in the fact that these are complex criminal offences which require a long period of time to prove. In the Republic of Serbia there are not scientific studies or unique statistical data related to the criminal charges filed and final verdicts reached for money laundering connected with agrarian privatization process.

12 Law on prevention of money laundering and financing terrorism was adopted on December 14, 2017, and its implementation started on April 01, 2018.

**Table 4.** *Epilogue of criminal charges filed for money laundering according to Art. 245 of the Criminal Code of the Republic of Serbia*

| Year | Criminal charges filed | Persons covered | Final verdicts |
|---|---|---|---|
| 2010. | 18 | 109 | 1 |
| 2011. | 22 | 190 | 2 |
| 2012. | 12 | 113 | 2 |
| 2013. | 20 | 44 | 2 |
| 2014. | 11 | 39 | 1 |
| 2015. | 5 | 22 | 0 |
| 2016. | 12 | 27 | 1 |
| 2017. | 37 | 86 | 11 |
| 2018. | 82 | 90 | 7 |

Source: Prosecutor's Office of the Republic of Serbia, Ministry of Interior Republic of Serbia

1. Transformation and privatization of agriculture is a kind of anti-corruption reform and a new potential source of corruption activity at the same time. Although privatization is desirable in a wide spectrum of cases, creators of such policy must create such an environment which will provide for the decrease of criminal influence. Abuses which might arise in the course of the privatization of agricultural companies can be motivated by corruptive activities. The strengthening private sector at the expense of a weaker position of state-owned companies raises the level of economic crime and introduces new rules into business activities, which are not typical for modern market business. A company is a subject of trade as any other commodity and when the purchase of such a commodity is sought it is necessary to determine its price. Determining the value of a company, according to the experiences both nationally and internationally, is a huge problem, particularly within a transitional environment, since many parameters that influence the realistic assessment may be omitted. On the other hand, the accounting value is usually too high or too low, so that essentially it does not represent the true state-of-affairs, since technology and assets can be old, as well as other parameters, offering an unrealistic picture. Value assessment can cause economic crime (Novaković, Vukasović, 2014: 176). And all these elements are precisely those that create realistic possibility for corruption and corruptive activities.

The most drastic example of the taking over of arable land into the possession of an agricultural estate by those involved in criminal activities is the example of the Social Company, Mokrin from Mokrin. The General Director of Mokrin committed the criminal offence of abuse of office because in late 2004, using his official authority, he acquired illegal proceeds amounting to RSD 517,399,907.50 for the Agricultural Producers' Cooperative, Ekovit RD, which was founded just a few months earlier, with the sole aim of acquiring the arable land unlawfully. Subsequently the Department for Residential and Public Utilities Affairs, Urban Planning and Economy issued the decision to return the agricultural land to Ekovit RD, the indicted parties intentionally failed to file the complaint within 15 days upon the receipt of this Decision and failed to notify the management, by which time

the said Decision became final and legally binding, and based on which the Land Registry Service transferred the 1,099 hectares of land together with buildings without one dinar paid to the detriment of Mokrin.[13] These actions resulted in agricultural land of 1,099 hectares and 91 various buildings being taken from Mokrin before being auctioned by the Agency for Privatization.

2. The criminal offence of unlawful production and circulation of narcotics still represents a serious threat for money laundering, both because of the number of reported and prosecuted individuals and the high amount of proceeds acquired after committing this crime. This is why trade in narcotics represents one of the most frequent sources of "contaminated" money. Large quantities of illicit drugs which are offered to the narcotics market enable drug traffickers to acquire considerable proceeds and then to integrate these proceeds into legal flows in various manners, the agricultural sector being an ideal environment for such proceeds.[14] Of 38 prosecuted individuals for this crime, as many as 32 individuals (which makes over 84%) are organizers and members of organized criminal groups who acquired money by committing predicate criminal offences outside the territory of the Republic of Serbia, but they are also prosecuted for predicate crimes in the Republic of Serbia.

In October 2009 the wider public heard of a 43-year-old citizen of Serbia, D. Š., the Balkan cocaine king and one of the largest drug traffickers in Europe. In the operation dubbed Balkan Warrior, the Uruguay police and the Serbian Security Information Agency (BIA), upon the insistence of American agencies, seized more than 2 tons of the drug on board a yacht in Uruguay. After that several members of the so-called Š. group were arrested.

The list of legal entities which D. Š. used to carry out his business transactions in the Republic of Serbia is almost impossible to complete, considering that each of his ten close associates formed his own network. In this way some forty companies are directly brought into connection with the indicted, although this list is not final considering that the same legal entities participated in the purchase of companies in the economic market or at the auctions of the Privatization Agency.[15] The central companies through which the financial transactions for Serbia were carried out are registered in the USA and they include: *Delaver – Mateniko LLC, Durabilly LLC* and *Financial angels LLC,* and they appear as founders in more than 30 companies in Serbia.

At the top of the pyramid of companies bought through privatization or through the capital market were agricultural companies and huge agricultural estates, which had the right of renting huge arable lands in the territory of Vojvodina, where the majority of his criminal proceeds were invested. This is how the list included the company, Mitrosrem, one of the big agricultural companies in Vojvodina with 4,000 hectares of arable land. In addition to crop farming,

13 The director of the newly established Agricultural Producers' Cooperative "Ekovit RD" specified the legal basis and submitted the request for reclaiming property based on Articles 95 and 96 of the Law on Cooperatives, noting as a legal basis for reclaiming that "it continues to carry out business activities in the area in which it used to carry out business activities earlier".
14 For this criminal offence in the period from 2013 to 2017 the investigation was initiated against 5,313 persons, 6,215 persons were charged and 5,397 persons were convicted.
15 Recently a list has been published of a wider circle of 58 associates and cousins of Š. who are from Serbia or do business in Serbia; as the majority of them had at least one company registered, even this part of the business was linked to drug group activities.

production and the processing of corn, wheat and turnip and animal farming there were also several cattle and poultry farms, slaughter houses as well as irrigation systems.

The agricultural corporation, Mladi borac from Senta, which owns 1,600 hectares of land in Vojvodina according to the indictment, was leased from the state by a third person - a lawyer in 2009 on behalf of D. Š., and today it is managed by the Privatization Agency. In a similar manner the criminal money is connected to the agricultural estates: Erdevik and Stanišić, Banat seme from Zrenjanin, Agroseme Panonija, a sugar mill from Sremska Mitrovica and others.[16]

In the case of the purchase of companies, real estate and land by lawyers, law firms or persons without criminal background the true owners of proceeds remained hidden, particularly when the capital was coming from off-shore destinations.[17] Also, there were individuals who were given an opportunity to legalize proceeds acquired based on cooperation with previous authorities or in an unlawful manner. The lack of system-based solutions created possibilities for corruption.[18] When considering the above-mentioned criminal offences from the aspect of assessing the risk for money laundering the Corruption Perceptions Index of Transparency International is particularly respected, which was published in 2018 and in which Serbia was placed 87th.

3. What can be singled out as a characteristic of the Republic of Serbia in comparison with the countries of Western Europe is the investment of "dirty" money into the privatization of former socially-owned agricultural companies, which very often represents just a starting point of money laundering. After such a company is transferred into the ownership or under the control of criminals, illegal money is laundered through their business activities, usually through loans of new owners/founders or other forms of loans in order to maintain the illusion of business activities within the registered activity. Finally, the money is usually laundered, either through selling the companies to these legal entities or by receiving loans where either the company assets or profit reduced for the cost covered by dirty money, is used as collateral. At the beginning of the new millennium a manifesting form of money laundering has been noted, which is carried out by a large number of legal entities, among whom the majority were founded solely for this purpose. In these cases documents with untrue contents are drawn up, which serve as a basis for monetary transactions (Uprava za sprečavanje pranja novca, 2018: 25). The intention to buy company shares is often inspired by the desire and motive of potential investors to gain the shares or a control package in as the easiest manner possible.

The procedure of the privatization of the agricultural processing company, Dijamant from Zrenjanin has been in the spotlight of several investigations, particularly the criminal role of the

16 The ruling of the first instance court published by the Ministry of Justice and the spokesperson of the Special Court council on December 10, 2018.
17 In the revised 2012 Recommendations (16 recommendations) of the Financial Action Task Force on Money Laundering (FATF) new requirements were introduced to increase transparency of transborder electronic money transfers, which obligates financial institutions to include information on real ownership for all transborder electronic money transfers.
18 Pejanović, R., 2013: "Suspicios privatizations, subsidies and agricultural policy based on corruption have left and still leave far-reaching negative consequences on the development of agriculture and agricultural economy. This leads to slowing down of total economic growth in the Republic of Serbia."

management of this agricultural giant. Particular attention was drawn by the facts related to the taking over of Dijamant shares by a company from Belgrade, Društvo Sadra d.o.o. Beograd, whose owner was the wife of the former director, S. K. The wife of the said director, Lj. K., who was never employed by this factory, founded a company, Društvo Sadra d.o.o. Beograd,[19] after which she used the money of suspicious origin to buy 81,872 shares of the largest oil refinery in the Balkans, the value of which at that moment exceeded EUR 10 million. The official founder of the Belgrade company is *Adison Intertrejd Inc. Trident Trust Company Limited* from the Virgin Islands. This company was founded in March 2005, immediately before taking over of the majority share package of the oil refinery by a controversial Croatian businessman I. T.,[20] who by the decision of the Croatian County Court has been in pre-trial detention since the end of 2018, because there is reasonable suspicion that he committed several crimes in the field of economic crime.[21]

4. In case of purchase of companies, real estate and land by lawyers, law firms or persons who do not have criminal background, the true owners of capital remained hidden, especially when the capital was coming from off-shore destinations. Also, it was made possible to some individuals to legalize monetary assets acquired based on cooperation with the previous authorities or in illegal manner. The reason for such a manner of investment in the field of agriculture is initiated by the need that in case of any prosecution the investors would present the assets coming from a legitimate business. Also, due to great demand and high price of agricultural land, the money laundering actors in a later stage can re-sell the agricultural societies and thus present that the laundered money still has origin.

## CONCLUSION

This scientific paper has been written with the idea of presenting the professional public with contemporary economic events related to ownership transformation and privatization and to make it easier to understand some of the negative aspects that accompany them. Although privatization by the political elite at the beginning of the new millennium has been cited as a key factor of the economic recovery of the country and the promotion of future economic growth and development, a large portion of economic professionals think that the results of privatization are below the expected level, primarily in the field of agriculture which has not reached a satisfying level of production and competitiveness.

This is an attempt to offer an as wide as possible insight into some important negative elements of agricultural compa-

19 In the end of May S. K. was convicted to one year imprisonment or three years suspended sentence, while the second accused Dj. K., the former director of Dijamant bank was sentenced to eight months in prison or three years suspended sentence. According to the explanation of this first-instance verdict, the abuse of the two convicted persons refers to commission business activities between Dijamant bank and Centro bank by which Dijamant bank suffered a loss of RSD 1.2 million.
20 The owner of the Croatian company, Agrokor gained a majority share in Dijamant by taking over 26.96% of investment fund shares, as well as a 24.90% of ownership of Društvo Sadra d.o.o. Beograd, which was owned by Lj. K.
21 Official statement of the Ministry of Justice of the Republic of Croatia in December 2018.

ny privatization during the past decades. Since the transition is in action in a large number of countries, it is difficult to give a uniformed final assessment of the influence of criminogenic factors and the participation of contaminated money originating from various forms of economic destructions. The privatization procedure in the agricultural sector has been additionally complicated by the fact that the account of the Privatization Agency was blocked on several occasions, and after it stopped working in February 2016 there remained a legacy of 1,111 court cases initiated by dissatisfied customers. Also, since its foundation the Agency changed seven directors.[22] Each of six laws according to which privatization in Serbia was carried out were amended at least once, and the Law on Privatization of June 2001 was amended as many as six times; the Ordinance on Tender was amended eight times, and the Ordinance on the Public Auction for four times.

Privatization in all economies is a complex and painful process, particularly in agriculture System-based and structural reforms of the agricultural sector in Serbia started in 2000. Those involved in criminal activities recognized the process of ownership transformation in agriculture as extraordinary and the complex channel to integrate dirty money in a skilful manner. This means that in the Republic of Serbia this problem and its consequences are more and more often the topic of theoretical criminologists and practically they are dealt with by the criminal police. After reaching an adequate number of final and binding court verdicts, it would be possible to consider more adequately the typology of money laundering in the field of agriculture privatization.

Once the dirty money enters the economic issue it destroys it, since the goal is not the production but its infiltration into legal flows. Therefore, the policy of suppressing organized crime must be focused on undertaking particular social measures (building institutions, adopting regulations and taking control), on seizing proceeds acquired by criminal activities and on repressive actions against criminal offenders, economic crimes and violations. This is particularly important in agriculture, since food production, food safety and other aspects determine the multiple significance agriculture has in the Republic of Serbia.

The conclusion is that the problem of money laundering in the agricultural sector must be approached as a complex phenomenon in order to avoid its negative effects.

## REFERENCES

1. Cindori, S. (2013). Pranje novca: korelacija procjene rizika i sumnjivih transakcija. *Odabrani Prijevodi*, (16), 1–21. Retrieved from http://www.ijf.hr/upload/files/file/OP/16.pdf
2. D'Souza, J. (2011). *Terrorist Financing, Money Laundering, and Tax Evasion: Examining the Performance of Financial Intelligence Units*. United States of America: Taylor & Fransis Group.
3. EUROPOL SOCTA. (2015). *EU Serious and Organised Crime Threat Assessment*. Retrieved from https://www.europol.europa.eu/socta-report

22 Privatization Agency of the Republic of Serbia was founded in 2011.

4. Financial Intelligence Centre. (2019). *FIC Annual Report 2018/2019*. Retrieved from https://www.fic.gov.za/Documents/FIC%20Annual%20Report%202018-2019.pdf
5. Levy, S. M. (2019). *Federal Money Laundering Regulation: Banking, Corporate and Securities Compliance, Second Edition*. United States of America: Wolters Kluwer.
6. Madinger, J. (2011). *Money Laundering: A Guide for Criminal Investigators* (3rd ed.). https://doi.org/10.1201/b11845
7. NALED. (2014). *Privatization in Serbia*. Beograd: NALED.
8. Novaković, S., & Vukasović, D. (2014). Modaliteti finansijskog kriminala kod vlasničke transformacije kapitala u tranzicionim ekonomijama. *NBP Žurnal Za Kriminalistiku i Pravo*, (1), 173–185
9. Parkman, T. (2012). *Mastering Anti-money Laundering and Counter-terrorist Financing: A Compliance Guide for Practitioners*. Harlow, United Kingdom: Pearson Education Limited.
10. Popov, Đ. (2013). Uticaj tranzicije na stanje privrede Srbije. *Zbornik Radova Pravnog Fakulteta u Novom Sadu*, *XLVII*(1), 25–45. Retrieved from http://zbornik.pf.uns.ac.rs/zbornik-radova-pravnog-fakulteta-u-novom-sadu/zbornik-radova-pravnog-fakulteta-u-novom-sadu-2013/zbornik-1
11. Radisavljević, M. (2019). Money laundering and corruption. *Money Laundering Typologies* (pp. 27–43). Belgrade: Administration for the Prevention of Money Laudering.
12. Rouz Ejkerman, S. (2008). Ekonomija korupcije. *Međunarodni zbornik* (pp. 276–283). Beograd: Fond za otvoreno društvo.
13. Srivastava, A., Simpson, M., & Powell, R. (2018). *International Guide to Money Laundering Law and Practice* (5th ed.). United Kingdom: Bloomsbury Professional.
14. Sullivan, K. (2015). *Anti-Money Laundering in a Nutshell: Awareness and Compliance for Financial Personnel and Business Managers*. New York: Apress.
15. Uprava za sprečavanje pranja novca. (2018). *Procena rizika od pranja novca i procena rizika od finansiranja terorizma*. Beograd: Ministarstvo finansija.
16. Vidaković, D. (2019). *Typologies of terrorism financing in the Republic of Serbia*. Belgrade: Administration for the Prevention of Money Laundering.
17. Vujčić, Đ. (2018). *Risk of Abuse of the Non-Profit Sector for Financing Terrorism*. Belgrade: Administration for the Prevention of Money Laundering.
18. Čudan, A., & Nikoloska, S. (2018). Savremeni pojavni oblici ekonomskog kriminala, *Ekonomski kriminal* (pp. 234–247). Beograd: Kriminalističko-policijski univerzitet.

NBP JOURNAL OF CRIMINALISTICS AND LAW ŽURNAL ZA KRIMINALISTIKU I PRAVO
NBP 2019, 24(3): 59–72

Submitted: 2019-09-24
Published: 2019-11-12

UDK: 316.644-057.87(497.11+497.7)
334.728:351.74/.76(497.11+497.7)
**doi:10.5937/nabepo24-23302**

# PERCEPTIONS OF PRIVATE SECURITY
## A CASE STUDY OF STUDENTS FROM SERBIA AND NORTH MACEDONIA

**[1]Bojan Janković[1], [2]Vladimir M. Cvetković, [3]Aleksandar Ivanov**

*[1]University of Criminal Investigation and Police Studies, Belgrade*
*[2]University of Belgrade, Faculty of Security Studies*
*[3]University "St. Kliment Ohridski" – Skopje, Faculty of Security Studies*

**Abstract:** In the last two decades of the 21st century, the significant development of the private security industry has taken place in Serbia and North Macedonia. However, the private security industry in these two countries did not reach professional standards as in other states of the former Yugoslavia. The aim of this paper was to determine students' perception of private security and its employees. The survey data were collected using an anonymous survey of 354 students (296 from Serbia and 58 from North Macedonia). In both countries the attitudes are heterogeneous, but a relatively small number of respondents have expressed a high level of perception of private security. The research has shown that gender, as one of demographic characteristics, has its role in shaping young pexople's views on the private security, that is, the female population has more positive views about private security officers, their integrity, and the nature of the private security job. The findings offer policy-makers and private security companies the opportunity to deploy new strategies to upgrade public attitudes towards private security, especially aimed at the male population.

**Keywords:** private security, perceptions, students, Serbia, North Macedonia.

## INTRODUCTION

In recent years, the topic of private security has attracted increasing attention from the professional and scientific public for many reasons. The first reason is the increase in the volume of jobs entrusted to the private security industry, as well as

1 Corresponding author: bojan.jankovic@kpu.edu.rs

the increase in the number of employees (Steden & Sarre, 2007a, 2007b). Today, in many countries, the number of employees in the private security sector is equal to or significantly greater than the number of police officers (Nalla, Gurinskaya, & Rafailova, 2017; Nalla, Maxwell, & Mamayek, 2017; Paek, Nalla, & Lee, 2018) – security officers: police officers – the USA 3:1; Hong Kong 5:1 (Nalla et al., 2017). Another reason for the public's attention is that the security industry is struggling with the uncertainty of its status and reputation, which has been tarnished by the high turnover of low-skilled, low-paid staff, shown in the public to be prone to commit crimes and violence (Hansen Löfstrand, Loftus, & Loader, 2016).

In post-socialist countries, the transformation of socialism into a capitalist system resulted in return of nationalized property and a significant increase in private property, that is, "the rebirth of private property" that influenced the development and organization of the private security (Meško, Nalla, & Sotlar, 2005). In addition to changes in the ownership structure that occurred in all post-socialist states, there were additional aggravating circumstances development of private security in the former SFRY states: the independence of the former SFRY republics, war events, the rise of corruption and crime, the beginning of the privatization processes, a large number of unregistered weapons from the war environment, undeclared work, "laundering" of illegally acquired money, outbreaks of non-institutional debt collection and other activities of criminal groups (Meško, Tominc, & Sotlar, 2013).

In the countries of the former Yugoslavia, the creation of private security first began in Slovenia, when, in the last decade of the 20th century, the private security slowly became a "player" in the security market (Nalla, Meško, Sotlar, & Johnson, 2006). According to researchers, the highest standards in the field of the private security have been reached by Slovenia and Croatia (Nikač, Korajlić, Ahić, & Bećirović, 2013; Steden & Sarre, 2010), while Serbia and Macedonia remained "the most problematic" (Steden & Sarre, 2010). It was this statement that led the authors to investigate why these countries are "the most problematic". We have tried to determine in this paper whether this statement is correct, whether it has changed in the meantime, and whether the public in these countries views the private security as a "problem".

## LITERATURE REVIEW

The number of papers related to research of the role of private security has not been as widespread in the 20th century. By increasing the volume of work and the number of private security officers in the early 21st century (Steden & Sarre, 2007a, 2007b), there has also been an increase in the number of research in this area. Initially, research was mainly limited to the "western world", which is logical, since this phenomenon has its roots in these areas, especially in the UK and the USA (Kesić, 2008). Research from this field started in more detail in Serbia and North Macedonia at the end of the first decade of the 21st century, first in Serbia (Davidović, 2007, 2009; Kesić, 2008, 2009), while in North Macedonia such studies were encompassed by the broader research that enabled the overview of

conditions in this field throughout the former SFRY (Steden & Sarre, 2010).

Among the most extensive research on the private security, there has been the perception of citizens about the private security and its officers. This type of research covered two groups of respondents. The first group encompassed the respondents from the general population and of different ages (Moreira & Cardoso, 2015; Petrevski & Nikolovski, 2015; Steden & Nalla, 2010). The second group included younger population, the students from different faculties (Kesić, 2008; Nalla, Gurinskaya, et al., 2017; Nalla & Heraux, 2003; Nalla & Hwang, 2004; Nalla & Lim, 2003; Nalla et al., 2006a).

One of the first surveys in which the respondents were exclusively students or the younger population, was conducted in the US (Nalla & Heraux, 2003), and the findings indicated that generally most students had a positive perception of private security officers**.** Similar results were found among the students in Singapore (Nalla & Lim, 2003) and South Korea (Nalla & Hwang, 2004). In contrast to the students in these countries, the students in Slovenia (Nalla et al., 2006a), Russia (Nalla, Gurinskaya, et al., 2017) and Serbia (Kesić, 2008) have stated that they generally do not have a positive view of private security officers. Unlike the first group of states, where the private security was at a higher level, in post-socialist countries such as Slovenia, it was still a country in transition with underdeveloped private security at the time of the survey. The private security service and its officers are not accepted by the younger population in post-socialist countries as in the countries with the developed market economies (Nalla et al., 2006a).

Some studies found differences in attitudes between genders, where the female population of respondents had more positive attitudes than the male population on certain segments of the private security. These segments were: nature (Nalla & Heraux, 2003), goals (Nalla & Heraux, 2003; Nalla & Hwang, 2004) and the image of the private security business (Nalla & Hwang, 2004), the professionalism of the private security officers (Nalla, Gurinskaya, et al., 2017; Nalla & Heraux, 2003) and satisfaction with their work (Nalla, Gurinskaya, et al., 2017).

Numerous private security surveys conducted in different countries have bypassed the territory of Serbia and North Macedonia, the countries aspiring to become the members of the European Union. That is why the research aims to show what the situation in the aforementioned countries in this area is like and the perceptions of the younger population, security students, who have more comprehensive knowledge in this field, about private security and its officials.

## METHODS

To assess respondents' perceptions of the private security and its employees, a survey was developed with items from previous surveys conducted in South Korea (Nalla & Hwang, 2004), Slovenia (Nalla et al., 2006a), the Netherlands (Steden & Nalla, 2010) and Portugal (Moreira & Cardoso, 2015). The survey was anonymous with close-ended, multiple-choice questions, and Likert scale questions (1 – strongly disagree; 5 – strongly agree). Participants were

chosen randomly from a population of students from the University of Criminal Investigation and Police Studies in Belgrade, the Faculty of Security in Belgrade and the Faculty of Security in Skopje who voluntarily agreed to participate in the research. The survey data were collected from a total of 354 students, 296 from Serbia and 58 from North Macedonia. The survey was conducted during the summer semester of the 2018/2019 school year.

### *Analyses*

A multivariate regression analysis was used to test the variable 'gender' to validate our central hypothesis (Cvetković, 2019). Before moving on to the statistical test, we examined the general and specific underlying assumptions to ensure that they were appropriate. Preliminary testing checked the assumptions about normality, linearity, univariate and multivariate atypical points, homogeneity of variance-covariance matrices, and multicollinearity; more serious impairment of the assumptions was not observed (Cvetković, Öcal, & Ivanov, 2019). The internal consistency of Likert scales for the 15 items is good with a Cronbach's alpha of 0.63 (Cvetković et al., 2019). In addition, ANOVA analysis was conducted for some appropriate variables.

## RESULTS

### *Demographic characteristics*

The research was carried out during 2019 and it consisted of 354 respondents: 296 from Serbia, and 58 from North Macedonia. The sample included 49.4 % male (N=175) and 50.6 % female (N=179) respondents. The average age of respondents was 22 years of age, and the most represented category was the one between 21 and 23 years of age. 17.95 (N=63) respondents were with low income, and 82.05 (N=288) respondents were with high income. The most of respondents lives in city area 64.4 (N=228) (Table 1).To examine the central hypothesis of what gender is a predictable variable in all perceptions of private security, a multivariate regression analysis was used to identify the extent to which seven independent variables are related to three socio-economic variables: gender, age, and income (Cvetković, Roder, Öcal, Tarolli, & Dragićević, 2018). Categories in Table 2, males, young, low income people have been coded as 1; 0 have been assigned otherwise.

**Table 1.** *Demographic and socio-economic information of respondents (N=354)*

| Variable | Category | Countries | | Total | Male | Female |
|---|---|---|---|---|---|---|
| | | N. Macedonia ($N^1$) | Serbia ($N^2$) | N | | |
| Age (years) | 18-20 | 0 (0) | 22 (7.4%) | 22 (6.21%) | 10 (5.7%) | 12 (6.7%) |
| | 21-23 | 43 (74.1%) | 266 (89.9%) | 309 (87.29%) | 148 (84.6%) | 161 (89.9%) |
| | +24 | 15 (25.9%) | 8 (2.7%) | 23 (6.50%) | 17 (9.7%) | 6 (3.4%) |
| Income* | Low income | 7 (12.07%) | 56 (19.1%) | 63 (17.95%) | 28 (16.18%) | 145 (83.82%) |
| | High income | 51 (87.93%) | 237 (80.89%) | 288 (82.05%) | 35 (19.66%) | 143 (80.34%) |
| Environment | City | 49 (84.5%) | 179 (60.5%) | 228 (64.4%) | 111 (63.4%) | 64 (36.6%) |
| | Village | 9 (15.5%) | 117 (39.5%) | 126 (35.6%) | 117 (65.4%) | 62 (34.6%) |

$N^1$ = 58 (19.53 %), $N^2$ = 239 (80.47 %)
* National monthly average net salary

According to $Q^1$ (Table 3) the results show that the most important predictor is gender (β=-0.146). It explicates 14.6% variance. The remaining variables did not have significant effects. This model ($R^2$=0.031, Adj. $R^2$=.020, F=2.75, t=10.81, p=0.000) with all the mentioned independent variables explicates the 20% variance of perception that the private security officers are generally well educated. The results of the multivariate regressions of $Q^2$ show that all variables did not have significant effects ($R^2$=0.020, Adj. $R^2$=.011, F=2.75, t=2.30, p=0.073) of perception that the private security officers are generally well trained. With regard to $Q^3$ the results show that the most important predictor is gender (β=-0.102). It explicates 10.2% variance. The remaining variables did not have significant effects. Model ($R^2$=0.024, Adj. $R^2$=.015, F=2.81, t=9.76, p=0.000) with all the mentioned independent variables explicates the 15% variance of perception that the private security officers are generally well qualified. According to $Q^4$ the results show that the most important predictor is gender (β=-0.220). It explicates 22% variance followed by the age (β=-0.106, 10.6%). The income level did not have significant effects. Model ($R^2$=0.065, Adj. $R^2$=.057, F=8.07, t=8.30, p=0.000) with all the mentioned independent variables explicates the 57% variance of perception that the private security officers first react (before the police) to the induced violence at sports events. With regard to $Q^5$ the results show that the most important predictor is gender (β=-0.213). It explicates 21.3% variance. The remaining variables did not have significant effects. Model ($R^2$=0.045, Adj. $R^2$=.036, F=5.38, t=11.27, p=0.000) with all the mentioned independent variables explicates the 36% variance of perception that the private security officers, while securing sports events, perform a good examination of persons when entering a sports facility. According to $Q^6$

the results show that the most important predictor is gender (β=-0.256). It explicates 25.6% variance. The remaining variables did not have significant effects. Model ($R^2$=0.068, Adj. $R^2$=.060, F=5.38, t=11.27, p=0.000) with all the mentioned independent variables explicates the 60% variance of perception that the private security officers provide good and successful security services at sports events. In addition, according to $Q^7$ the results show that the most important predictor is gender (β=-0.239). It explicates 23.9% variance. The remaining variables did not have significant effects. Model ($R^2$=0.063, Adj. $R^2$=.055, F=7.70, t=12.02, p=0.000) with all the mentioned independent variables explicates the 55% variance of the perception that the private security officers are good at coping with emergencies. The results of the multivariate regressions of $Q^8$ show that all variables did not have significant effects ($R^2$=0.022, Adj. $R^2$=.014, F=2.75, t=2.60, p=0.063) of perception that private security officers are generally helpful. Also, the results of the multivariate regressions of $Q^9$ show that all variables did not have significant effects ($R^2$=0.016, Adj. $R^2$=.007, F=1.85, t=2.60, p=0.138) of perception that private security officers are generally helpful. According to $Q^{10}$ the results show that the most important predictor is gender (β=-0.141). It explicates 14.1% variance. The remaining variables did not have significant effects. Model ($R^2$=0.020, Adj. $R^2$=.012, F=2.35, t=10.02, p=0.000) with all the mentioned independent variables explicates the 12% variance of perception that private security officers do their job professionally (Table 3). Guided by the results obtained, we can validate our hypothesis that gender is an important variable in the context of examining perception regarding private security.

**Table 2.** *Multivariate regression analysis results in predicting perception of private security officers*[2]

| Predictor variable | Gender | | | Age | | | Income level | | |
|---|---|---|---|---|---|---|---|---|---|
| | B | SE | β | B | SE | β | B | SE | β |
| $Q^1$ | -.277 | .101 | -.146* | .258 | .206 | .067 | -.147 | .135 | -.059 |
| $Q^2$ | -.223 | .119 | -.100 | .322 | .242 | .072 | .119 | .156 | .041 |
| $Q^3$ | -.238 | .125 | -.102* | .362 | .253 | .077 | .186 | .164 | .061 |
| $Q^4$ | -.531 | .126 | -.220** | .515 | .257 | .106* | -.031 | .166 | -.010 |
| $Q^5$ | -.532 | .132 | -.213** | -.194 | .269 | -.038 | -.041 | .173 | -.013 |
| $Q^6$ | -5.44 | .111 | -.256* | .098 | .226 | .023 | .042 | .145 | .015 |
| $Q^7$ | -.487 | .107 | -.239 | .098 | .218 | .204 | .135 | .140 | .050 |
| $Q^8$ | -.239 | .112 | -.115 | .215 | .226 | .056 | .161 | .147 | .059 |
| $Q^9$ | -.246 | .110 | -.12 | -.215 | .223 | -.052 | -.033 | .145 | -012 |
| $Q^{10}$ | -.295 | .113 | -.141 | .028 | .228 | .007 | -.009 | .147 | -.003 |

*p=.05. **p ≤ .01.

2 $Q^1$ - Private security officers are well educated; $Q^2$ - Private security officers are well trained; $Q^3$ - Private security officers are well qualified; $Q^4$ - Private security officers are the first to react (before the police) to the provoked violence at sports events; $Q^5$ - Private security officers, while securing sports events, search people well at entering the sports facility; $Q^6$ - Private security officers secure sport events well and successfully; $Q^7$ - Private security officers are good at dealing with emergency situations; $Q^8$ - Private security officers are generally helpful; $Q^9$ - Private security officers kindly receive calls for help; $Q^{10}$ - Private security officers do their job professionally.

## Perception of private security officers

One-factor multivariate analysis of variance explored gender differences in the perception of the private security officers. On this occasion, 10 dependent variables ($Q^1$ – $Q^{10}$) were used and the independent variable was gender. A statistically significant difference was found between males and females regarding the combination of dependent variables F (10, 327) = 3.57, p = 0.000; Wilks' Lambda = .902. When the results of dependable variables were examined individually, it was determined that the following differences had reached statistical significance (together with Bonferroni adjusted alpha level of 0.005): $Q^1$ – F(1, 327) = 7.27, p = 0.005; $\eta p^2$ = 0.02.

**Table 3.** *Perception of private security officers*[3]

| | Serbia | | N. Macedonia | | Total | | Male | | Female | | F | Sig. | $\eta p^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $\bar{X}$ | SD | $\bar{X}$ | SD | $\bar{X}$ | SD | $\bar{X}$ | SD | $\bar{X}$ | SD | | | |
| $Q^1$ | 2.50 | .95 | 2.45 | .96 | 2.50 | .95 | 2.35 | 1.00 | 2.63 | .88 | 7.23 | .005* | .02 |
| $Q^2$ | 2.83 | 1.12 | 2.94 | 1.05 | 2.85 | 1.11 | 2.72 | 1.14 | 2.96 | 1.05 | 4.01 | .046 | .01 |
| $Q^3$ | 2.74 | 1.16 | 2.92 | 1.19 | 2.77 | 1.16 | 2.65 | 1.19 | 2.88 | 1.10 | 3.38 | .067 | .01 |
| $Q^4$ | 2.38 | 1.19 | 2.42 | 1.26 | 2.38 | 1.20 | 2.10 | 1.14 | 2.69 | 1.18 | 18.20 | .000** | .05 |
| $Q^5$ | 2.58 | 1.26 | 2.89 | 1.12 | 2.63 | 1.24 | 2.41 | 1.28 | 2.87 | 1.17 | 11.73 | .001** | .03 |
| $Q^6$ | 2.68 | 1.05 | 2.83 | 1.12 | 2.70 | 1.06 | 2.46 | 1.06 | 2.97 | .97 | 21.47 | .000** | .06 |
| $Q^7$ | 2.48 | 1.01 | 2.80 | 1.04 | 2.53 | 1.02 | 2.31 | 1.02 | 2.76 | 1.02 | 17.87 | .000** | .50 |
| $Q^8$ | 3.23 | 1.02 | 3.01 | 1.12 | 3.20 | 1.04 | 3.07 | 1.13 | 3.32 | .92 | 4.94 | .027 | .01 |
| $Q^9$ | 2.87 | 1.01 | 3.01 | 1.06 | 2.89 | 1.02 | 2.79 | 1.05 | 2.99 | .98 | 3.18 | .075 | .00 |
| $Q^{10}$ | 2.39 | 1.02 | 2.67 | 1.14 | 2.44 | 1.04 | 2.29 | 1.11 | 2.56 | .96 | 5.61 | .018 | .01 |

p = .05. **p ≤ .01.

An overview of the average values of the results revealed that in female population (M=2.63, SD=.072) there were slightly higher levels of perception about the levels of education of security officers noticed than at male population (M = 2.35, SD = .073); $Q^4$ – F(1, 327) = 18.20, p = 0.000; $\eta p^2$ = 0.05. An overview of the average values of the results revealed that there were slightly higher levels of perception that private security officers react first to the provoked violence at sports events noticed in females (M=2.69, SD=1.18) than in males (M = 2.10, SD = 1.14); $Q^5$ – F(1, 327) = 7.27, p = 0.005; $\eta p^2$ = 0.021. An overview of the average values of the results revealed that there were slightly higher levels of perception that private security officers search a person well at entering a sports

3 $Q^1$ - Private security officers are well educated; $Q^2$ - Private security officers are well trained; $Q^3$ - Private security officers are well qualified; $Q^4$ - Private security officers are the first to react (before the police) to the provoked violence at sports events; $Q^5$ - Private security officers, while securing sports events, search people well at entering the sports facility; $Q^6$ - Private security officers secure sport events well and successfully; $Q^7$ - Private security officers are good at dealing with emergency situations; $Q^8$ - Private security officers are generally helpful; $Q^9$ - Private security officers kindly receive calls for help; $Q^{10}$ - Private security officers do their job professionally.

facility noticed in females (M = 2.87, SD = 1.17) than in males (M = 2.41, SD = 1.28); $Q^6$ – F(1, 327) = 21.47, p = 0.000; $\eta p^2$ = 0.06. An overview of the average values of the results revealed that there were slightly higher levels of perception that private security officers secure sports events well and successfully noticed in female population (M=2.97, SD=.097) than in male population (M = 2.46, SD = 1.06); $Q^7$ – F(1, 327) = 7.27, p = 0.005; $\eta p^2$ = 0.021. An overview of the average results showed that a slightly higher level of perception of the level of education of private security officers was observed in females (M = 2.63, SD = .072) than in males (M = 2.35, SD = .073).

### *Perception of integrity of private security officers*

To examine the perception of integrity of private security officers, one-factor multivariate analysis of variance and 6 dependent variables were used ($Q^{11}$ – $Q^{16}$) with gender as an independent variable. A statistically significant difference was found between males and females regarding the combination of dependent variables F (6, 327) = 2.72, p = 0.013; Wilks' Lambda = .954. When the results of the dependent variables were considered separately, the following differences were found to reach statistical significance (together with Bonferroni adjusted alpha level of 0.008): $Q^{11}$ – F (1, 327) = 12.80, p = 0.000; $\eta p^2$ = 0.03. An overview of the average values of the results revealed that there were slightly higher levels of perception that the existing monitoring of private security officers' work is more effective observed in females (M = 2.81, SD = .076) than in males (M = 2.46, SD = 1.00). In other dependent variables, no statistically significant difference was found between males and females (Table 4).

**Table 4.** *Perception of integrity of private security officers*[4]

| | Serbia | | N. Macedonia | | Total | | Male | | Female | | F | Sig. | $\eta p^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $\bar{X}$ | SD | $\bar{X}$ | SD | $\bar{X}$ | SD | $\bar{X}$ | SD | $\bar{X}$ | SD | | | |
| $Q^{11}$ | 2.63 | .87 | 2.67 | 1.06 | 2.64 | .91 | 2.46 | 1.00 | 2.81 | .76 | 12.80 | .000** | .03 |
| $Q^{12}$ | 2.66 | .91 | 2.93 | 1.07 | 2.70 | .94 | 2.60 | 1.02 | 2.82 | .84 | 3.95 | .048 | .01 |
| $Q^{13}$ | 2.87 | .90 | 3.08 | 1.27 | 2.91 | .97 | 2.79 | 1.03 | 3.02 | .91 | 4.55 | .034 | .01 |
| $Q^{14}$ | 3.22 | 1.04 | 3.12 | 1.15 | 3.20 | 1.06 | 3.24 | 1.19 | 3.16 | .90 | .51 | .471 | .00 |
| $Q^{15}$ | 2.90 | 1.15 | 2.74 | 1.26 | 2.88 | 1.17 | 2.80 | 1.29 | 2.95 | 1.02 | 1.38 | .242 | .00 |
| $Q^{16}$ | 2.77 | .92 | 2.91 | 1.08 | 2.80 | .95 | 2.69 | 1.03 | 2.91 | .85 | 4.72 | .031 | .01 |

*p=.05. **p ≤ .01.

4 $Q^{11}$ - The existing monitoring of the private security officers' work is efficient; $Q^{12}$ - The existing regulations are adequate for the control of work of private security officers; $Q^{13}$ - Private security officers have numerous discretionary powers; $Q^{14}$ - Private security officers abuse their powers; $Q^{15}$ - Private security officers are responsible when they exceed their authority; $Q^{16}$ - Private security officers are generally honest.

### *Perception of the job of private security officers*

Results of one-factor multivariate analysis of variance (8 dependent variables ($Q^{17}$ – $Q^{24}$) with gender as an independent variable) show that a statistically significant difference was found between males and females regarding the combination of dependent variables F(8, 327) = 4.24, p = 0.000; Wilks' Lambda = .904. When the results of the dependent variables were considered separately, it was determined that the following differences reached statistical significance (together with Bonferroni adjusted alpha level of 0.006): $Q^{21}$ – F (1, 327) = 12.71, p = 0.000; $\eta p^2$ = 0.037. An overview of the average values of the results revealed that slightly higher levels of perception that the private security officer's job is more paid were observed in female population (M = 2.78, SD = .99) than in male population (M = 2.37, SD = 1.08); $Q^{22}$ – F(1, 327) = 10.12, p = 0.002; $\eta p^2$ = 0.03. An overview of the average values of the results determined that slightly higher levels of perception that the private security officer's job is more paid were observed in females (M = 1.72, SD = .76) than in males (M = 1.72, SD = .90); $Q^{23}$ – F (1, 327) = 7.88, p = 0.005; $\eta p^2$ = 0.023. An overview of the average values of the results determined that in females (M = 2.82, SD = 1.06) there are slightly smaller levels of perception that the primary role of a private security officer is to arrest suspects observed than in males (M = 3.15, SD = 1.17). As for other dependent variables, no statistically significant difference was found between males and females (Table 5).

**Table 5.** *Perception of the job of private security officers*[5]

| | Serbia | | N. Macedonia | | Total | | Male | | Female | | F | Sig. | $\eta p^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | X̄ | SD | X̄ | SD | X̄ | SD | X̄ | SD | X̄ | SD | | | |
| $Q^{17}$ | 4.01 | .88 | 3.78 | 1.24 | 3.96 | .95 | 4.03 | .98 | 3.90 | .92 | 1.44 | .230 | .00 |
| $Q^{18}$ | 3.90 | .97 | 3.81 | 1.19 | 3.88 | 1.01 | 3.88 | 1.05 | 3.86 | .98 | .015 | .903 | .00 |
| $Q^{19}$ | 3.45 | 1.01 | 3.41 | 1.24 | 3.45 | 1.04 | 3.48 | 1.17 | 3.40 | .93 | .507 | .477 | .00 |
| $Q^{20}$ | 3.79 | .87 | 3.64 | 1.15 | 3.77 | .92 | 3.77 | 1.01 | 3.77 | .83 | .002 | .969 | .00 |
| $Q^{21}$ | 2.67 | 1.01 | 2.15 | 1.16 | 2.58 | .92 | 2.37 | 1.08 | 2.78 | .99 | 12.71 | .000** | .037 |
| $Q^{22}$ | 1.57 | .83 | 1.67 | .98 | 1.58 | .86 | 1.42 | .76 | 1.72 | .90 | 10.12 | .002* | .030 |
| $Q^{23}$ | 3.08 | 1.08 | 2.37 | 1.12 | 2.96 | 1.12 | 3.15 | 1.17 | 2.82 | 1.06 | 7.88 | .005* | .023 |
| $Q^{24}$ | 3.61 | .90 | 3.40 | 1.29 | 3.58 | .98 | 3.64 | 1.06 | 3.51 | .89 | 1.44 | .230 | .004 |

*p=.05. **p ≤ .01.

### *Satisfaction of citizens with private security officers*

The results of one-factor multivariate analysis of variance (4 dependent variables ($Q^{25}$ – $Q^{28}$) show that there is no statistically significant difference between

5 $Q^{17}$ - A security officer's job is dangerous; $Q^{18}$ - Private security exceed are exposed to high risk of being injured during work; $Q^{19}$ - Private security job is complex; $Q^{20}$ - Private security job is stressful; $Q^{21}$ - Private security job is well paid; $Q^{22}$ - The primary role of a private security officer is to arrest the suspects; $Q^{23}$ - Private security job helps reduce losses for the company; $Q^{24}$ - Private security job helps in protection of clients.

males and females regarding the combination of dependent variables F (4, 327) = 1.95, p = 0.101; Wilks' Lambda = .978. When the results of the dependent variables were considered separately, it was determined that the following differences reached statistical significance (together with Bonferroni adjusted alpha level of 0.001) (Table 6).

**Table 6.** *Satisfaction of citizens with private security officers*[6]

| | Serbia | | N. Macedonia | | Total | | Male | | Female | | F | Sig. | ηp² |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | X̄ | SD | X̄ | SD | X̄ | SD | X̄ | SD | X̄ | SD | | | |
| Q25 | 2.75 | 1.12 | 2.62 | 1.10 | 2.73 | 1.12 | 2.61 | 1.17 | 2.85 | 1.05 | 3.99 | .047 | .011 |
| Q26 | 2.79 | .95 | 3.01 | 1.09 | 2.83 | .98 | 2.76 | 1.03 | 2.89 | .92 | 1.63 | .202 | .005 |
| Q27 | 2.71 | .94 | 2.89 | .98 | 2.74 | .95 | 2.64 | .98 | 2.84 | .90 | 3.61 | .058 | .010 |
| Q28 | 2.69 | .99 | 3.02 | .94 | 2.75 | .98 | 2.62 | .98 | 2.88 | .97 | 6.16 | .023 | .017 |

*p=.05. **p ≤ .01.

## *Private security and the police*

The results of one-factor multivariate analysis of variance (7 dependent variables (Q29 – Q35) show that there is no statistically significant difference between males and females regarding the combination of dependent variables F (7, 327) = 4.24, p = 0.000; Wilks' Lambda = .904.)

**Table 7.** *Private security and the police*[7]

| | Serbia | | N. Macedonia | | Total | | Male | | Female | | F | Sig. | ηp² |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | X̄ | SD | X̄ | SD | X̄ | SD | X̄ | SD | X̄ | SD | | | |
| Q29 | 2.27 | 1.00 | 2.31 | 1.04 | 2.28 | 1.01 | 2.17 | .076 | 2.39 | .076 | 4.37 | .037 | .01 |
| Q30 | 1.75 | 1.01 | 1.70 | 1.02 | 1.74 | 1.01 | 1.61 | .076 | 1.88 | .076 | 6.30 | .013 | .018 |
| Q31 | 2.97 | 1.31 | 3.24 | 1.34 | 3.02 | 1.01 | 3.16 | .099 | 2.88 | .099 | 4.11 | .043 | .012 |
| Q32 | 2.97 | 1.22 | 3.05 | 1.06 | 2.98 | 1.19 | 2.98 | .091 | 2.98 | .090 | .002 | .966 | .000 |
| Q33 | 2.89 | 1.21 | 2.63 | 1.13 | 2.84 | 1.20 | 2.74 | .091 | 2.95 | .090 | 2.73 | .099 | .008 |
| Q34 | 2.53 | 1.05 | 2.63 | 1.10 | 2.55 | 1.06 | 2.48 | .081 | 2.62 | .080 | 1.55 | .214 | .004 |
| Q35 | 2.33 | 1.03 | 2.32 | 1.03 | 2.33 | 1.03 | 2.25 | .078 | 2.40 | .078 | 1.85 | .174 | .005 |

*p=.05. **p ≤ .01.

6 Q25 - I feel safe when I see a private security officer nearby; Q26 - Generally, I am satisfied with the private security officer's behaviour; Q27 - Citizens are generally satisfied with the behaviour of private security officers; Q28 - Citizens generally trust private security officers when protecting their lives and property.
7 Q29 - Private security officers and police officers often work together to solve crimes; Q30 - Private security officers are difficult to distinguish from police officers; Q31 - Private security officers and police officers should work together; Q32 - Private security officers and police officers protect the social community from crime together; Q33 - In the future, many police functions will be transferred to the responsibility of private security agencies; Q34 - The security job is generally structured similarly a police job; Q35 - Private security agencies are organized as police organizations.

When the results of the dependent variables were considered separately, it was determined that the following differences did not reach statistical significance (together with Bonferroni adjusted alpha level of 0.007) (Table 7).

## DISCUSSION

The results of the research indicate that the perception of students of Serbia and North Macedonia of private security officers and their business do not differ drastically. In both countries the attitudes are heterogeneous, but a relatively small number of respondents expressed a high level of perception of private security, i.e. the opinion of the majority of respondents is at a medium or low level of perception. Compared to the previous period in Serbia, a slight increase in confidence in private security can be noted, since the survey conducted by Kesić (2008). Although only basic analyses were conducted, more than half of the respondents did not have any praise for a certain segment of private security work, and only 29 respondents (out of 266) gave a positive assessment of a particular segment of private security work. In North Macedonia, the obtained results are in line with previous studies (Vankovska, 2016) because a relatively small number of respondents expressed a high level of perception, that is, the opinion of most respondents is at a medium or low level of perception of the private security. Similar results were obtained in Slovenia, in a survey conducted in 2004 (Nalla et al., 2006a) and in a study conducted in Russia (Nalla et al., 2017). All of these countries are former socialist states where private security and market economy were still under development at the time of the survey. The mentioned research in Slovenia was conducted in 2004, when it was admitted to the EU, i.e. when it fulfilled the conditions for full membership, so that it can be concluded that the private security industry was under development at that time.

In contrast to former socialist states, in the studies conducted in countries where market economics and private security have a longer tradition, such as America (Nalla & Heraux, 2003), Singapore (Nalla & Lim, 2003), South Korea (Nalla & Hwang, 2004), the results obtained were inconsistent with the results of this research. They indicate that generally most students have a positive perception of private security and the nature of the private security business. All of the above shows that it takes time to establish confidence in the private security industry, and to enhance the level of professionalism. Most respondents rated the private security business as dangerous, complex, and stressful, and that private security officers are at high risk of injury, which is consistent with other research findings (Nalla & Heraux, 2003; Nalla & Hwang, 2004; Steden & Nalla, 2010). The research has shown that gender, as one of its demographic characteristics, plays a role in shaping young people's views on private security. Compared to the male population, females have a more positive view of private security, the integrity of private security, and the nature of private security work. With respect to the female population, similar results were obtained in the studies conducted in America (Nalla & Heraux, 2003) in relation to the nature and goals of the private security business in Russia (Nalla, Gurinskaya, et al., 2017) on the perception of private

security officers, in South Korea (Nalla & Hwang, 2004) where the female population had a more positive view of the goals of the private security business. It should be borne in mind that the number of male respondents in the study was higher than the female population.

## CONCLUSION

The results of an empirical study indicate that the public, especially the younger population, in transition societies such as Serbia and North Macedonia, do not have a high degree of positive perception of private security. Compared to earlier research, it can be perceived that the attitudes of young people in Serbia towards private security officers are more favourable than they were before, while in North Macedonia they remained at a similar level. The public should get used to the transition from a society where the police were the only ones in charge of citizens' security, while in societies with the regulated market economy, a great part of that role was taken over by the private security industry.

The research findings indicate that the female population has a better perception of the private security. These findings offer policy makers and private security companies the opportunity to deploy new strategies to upgrade public attitudes towards private security, especially aimed at the male population. Also, the results of this study indicate the importance of the role and training of private security officers in shaping citizens' confidence in them.

The authors are aware that the findings have their limitations because the research was conducted only within a narrow population of young students, and the results obtained cannot be generalized because there are no views of the wider population in the paper. It would be particularly interesting to see in the future research the views of the citizens of Serbia and North Macedonia born in the age of socialism when there were no private security companies, and whether their views differ from those of the young population.

## REFERENCES

1. Cvetković, V.M. (2019). Risk Perception of Building Fires in Belgrade. *International Journal of Disaster Risk Management*, *1*(1), 81-91. doi:10.18485/ijdrm.2019.1.1.5
2. Davidović, D. (2007). Klasifikacije and tumačenja privatnog polisinga / Classification and explanation of private policing. *Zbornik Instituta za kriminološka and sociološka istraživanja*, *26*(1-2), 389-397.
3. Davidović, D. (2009). Public-private security sector partnership in Serbia: Problems and future development. *Varstvoslovje*, *11*(2), 345-351.
4. Hansen, L.C., Loftus, B., & Loader, I. (2016). Doing 'dirty work': Stigma and esteem in the private security industry. *European Journal of Criminology*, *13*(3), 297-314. doi:10.1177/1477370815615624

5. Kesić, Z. (2008). Ispitivanje stavova studenata Kriminalističko-policijske akademije o privatnom policijskom delovanju / Survey of attitudes of students of The Academy of Criminalistic and Police Studies towards private policing. *NBP – Journal of Criminalistics and Law*, *13*(2); 171-185.
6. Kesić, Z. (2009). Specifični pojavni oblici private security u svetu / Specific forms of private security worldwide. *Bezbednost*, *51*(1-2); 193-207.
7. Meško, G., Nalla, M.K., & Sotlar, A. (2004). Youth Perception of Private Security in Slovenia: Preliminary Findings. In G. Meško, M. Pagon, & B. Dobovšek (Eds.), *Policing in Central and Eastern Europe: Dilemmas of Contemporary Criminal Justice* (pp. 745-752). Maribor: University of Maribor, Faculty of Criminal Justice.
8. Meško, G., Nalla, M.K., & Sotlar, A. (2005). Policisti in zasebni varnostniki - veliki in mali bratje. *Journal of Criminal Investigation and Criminology*, *56*(2), 147-162.
9. Meško, G., Tominc, B., & Sotlar, A. (2013). Urban security management in the capitals of the former Yugoslav republics. *European Journal of Criminology*, *10*(3), 284-296. doi:10.1177/1477370812473537
10. Moreira, S., Cardoso, C., & Nalla, M.K. (2015). Citizen confidence in private security guards in Portugal. *European Journal of Criminology*, *12*(2), 208-225. doi:10.1177/1477370815571946
11. Nalla, M.K., Gurinskaya, A., & Rafailova, D. (2017). Youth Perceptions of Private Security Guard Industry in Russia. *Journal of Applied Security Research*, *12*(4), 543-556. doi:10.1080/19361610.2017.1354277
12. Nalla, M.K., & Heraux, C.G. (2003). Assessing goals and functions of private police. *Journal of Criminal Justice*, *31*(3), 237-247. doi:10.1016/s0047-2352(03)00005-9
13. Nalla, M.K., & Hwang, (. (2004). Assessing professionalism, goals, images, and nature of private security in South Korea. *Asian Policing*, *2*(1), 104-121.
14. Nalla, M.K., & Lim, S.S. (2003). Students' perceptions of private police in Singapore. *Asian Policing*, *1*(1), 27-47.
15. Nalla, M.K., Maxwell, S.R., & Mamayek, C.M. (2017). Legitimacy of Private Police in Developed, Emerging, and Transitional Economies. *European Journal of Crime, Criminal Law and Criminal Justice*, *25*(1), 76-100. doi:10.1163/15718174-25012107
16. Nalla, M.K., Meško, G., Sotlar, A., & Johnson, J.D. (2006). Professionalism, Goals and the Nature of Private Police in Slovenia. *Varstvoslovje*, *8*(3-4), 309-322.
17. Nikač, Ž., Korajlić, N., Ahić, J., & Bećirović, M. (2013). Pravna regultiva private security na prostorima nekadašnje SFRY sa osvrtom na poslednje promene u Srbiji / Regulatory private security in the former Yugoslavia, with emphasis on the recent changes in Serbia. *Kriminalističke teme*, (3-4), 7-52.
18. Paek, S.Y., Nalla, M.K., & Lee, J. (2018). Perception of police legitimacy among private security officers. *Security Journal*, *32*(3), 287-305. doi:10.1057/s41284-018-00163-5

19. Petrevski, B., & Nikolovski, M. (2015). The role of the subjects of the private security subsistem in the Republic of Macedonia in providing security in urban areas. *Zbornik radova: Naučna konferencija Dani kriminalističkih nauka* (pp. 7-15). Sarajevo: Fakultet za kriminalistiku, kriminologiju and sigurnosne studije.
20. Steden, R.V., & Sarre, R. (2007). The Growth of Private Security: Trends in the European Union. *Security Journal*, *20*(4), 222-235. doi:10.1057/palgrave.sj.8350052
21. Steden, R.V., & Sarre, R. (2007). The Growth of Privatized Policing: Some Cross-national Data and Comparisons. *International Journal of Comparative and Applied Criminal Justice*, *31*(1), 51-71. doi:10.1080/01924036.2007.9678760
22. Steden, R.V., & Nalla, M.K. (2010). Citizen satisfaction with private security guards in the Netherlands: Perceptions of an ambiguous occupation. *European Journal of Criminology*, *7*(3), 214-234. doi:10.1177/1477370809359264
23. Steden, R.V., & Sarre, R. (2010). Private policing in the former Yugoslavia: A menace to society? *Varstvoslovje*, *12*(4), 424-439.
24. Vankovska, B. (2016). *Privatniot bezbednosen sektor vo Republika Makedonija: Megu potrebite and javnata (ne)doverba / Private security sector in the Republic of Macedonia: Between needs and public (un)trust*. Skopje: Komora na Republika Makedonija za privatno obezbeduvanje.

NBP JOURNAL OF CRIMINALISTICS AND LAW ŽURNAL ZA KRIMINALISTIKU I PRAVO
NBP 2019, 24(3): 73–86

Submitted: 2019-10-04
Published: 2019-12-18

UDK: 341.7/.8
341.462.1
**doi:10.5937/nabepo24-23490**

# INTERNATIONAL-LEGAL REGULATION AS A DETERMINANT FOR MEASURES AND PROCEDURES OF THE COMPENTENT STATE AUTHORITIES TOWARDS DIPLOMATIC-CONSULAR REPRESENTATIVES

**Nemanja Marinković**[1]
*University of Criminal Investigation and Police Studies, Belgrade*

**Abstract**: In this paper, the rights and obligations of states under the 1961 Vienna Convention on Diplomatic Relations and diplomatic immunity are commented on, as well as that the state must respect them and provide additional protection and assurance to diplomats and their missions; the following heading discusses whether diplomats abuse their privileged position, including examples of how the most frequent abuses are committed, and that diplomats have a duty to obey the laws of the receiving state; and finally, dominantly, we discuss how the whole state can respond to the Convention and the laws through the diverse practice of the competent authorities, along with the examples.

The methodological approach in this paper is based on the analysis of the content of international-legal documents, and the analysis of the content of scientific material (textbooks, monographs, studies, PhD and master's theses, books of proceedings, journals, exercise books).

**Keywords**: diplomatic-consular right, diplomatic immunity, national safety, measures and procedures of state authorities.

## INTRODUCTION

The privileges of a diplomatic representative have not been the subject of explicit legal regulation for a long time (Kreća, 2010: 278). The inviolability of diplomatic agents is one of the old principles and rules of courtesy in relations between states. Even though one could not say that such practices have been strictly applied throughout diplomatic history, as there have been instances of deprivation of liberty of foreign representatives and even of their killings in

1 nemanja.marinkovic@kpu.edu.rs

the event of war (Shiddo, 1977: 151), still, generally speaking one may say that the practice has been respected, especially because a compromise has been found in the application of the reciprocity principle. Diplomatic representatives' personal privileges and immunities, including immunities and privileges of diplomatic representatives, have been transformed from the old principles and courtesy under the Vienna Convention on Diplomatic Relations into the legal obligation of the receiving state (Kreća, 2010: 275-279).

Numerous attacks on diplomatic representatives have imposed the need to make supplementary regulations to protect diplomatic representatives as effectively as possible (Shiddo, 1977: 154).[2] Therefore, it can be concluded by the consent of general practice and theory that immunities are necessary for the purpose of the smooth running of international relations, whose smooth running is also of importance for states, peoples, citizens (Tepavac, 1981). The diplomats are provided full political, legal and criminal-legal protection (Zečević, 1985: 222).

The basic presuppositions being the subject matter of this paper are as follows:

– The diplomatic immunity as an international legal principle is a determinant, so regular measures cannot be implemented. The international legal norms imply an obligation for the receiving state and its authorities to respect, first and foremost, the immunities and privileges of the persons entitled to them and additionally to provide them with enhanced protection.

– Despite the obligation for persons enjoying privileges and immunities to abide by the laws and regulations of the receiving state, there are delicts committed by the diplomats, however, in proportion to the relatively small number of delicts perpetrated by the diplomats relative to the total number of delicts;

– Due to the diplomatic immunity, the measures and procedures of the competent state authorities towards diplomatic and consular missions are very limited and different from the regular ones.

– The aim of the paper is to give insight into the measures and procedure of the competent state authorities that can still be applied to diplomatic-consular representatives, and which do not represent a violation of the diplomatic immunity.

## THE DIPLOMATIC IMMUNITIES

We will discuss here what represents the diplomatic immunity. "State jurisdiction means that the courts of each country should be able to convict all offenses committed in their territory. Diplomatic immunity is a well-regulated exception to this general legal principle of territorial jurisdiction" (Ben-Asher, 2000:5), and so the measures that are usually applied to other citizens in the state in this case cannot be applied in the same manner (Shiddo, 1977: 85). However, there is a manner how to approach such and similar cases, which will be explained later, because dimplomatic immunity should

2 Convention on the Prevention and Punishment of Crimes against Persons Enjoying International Protection, including Diplomatic Representatives (1973) (Đorđević *et al.* 2000: 369-375)

not be understod as legal irresponsability or a total exemption from responsability.

Diplomatic immunities and privileges representing the protection set out in the provisions of the Vienna Convention on Diplomatic Relations in Art. 22-40, are the norms which the receiving state is to respect, which results from the general duty to respect the international legal obligations undertaken. In relation to the usual measures of the receiving state, diplomatic immunities and privileges constitute an exemption and, in principle, also cover, in respect of the types of diplomatic representatives, not only the exemption of persons with diplomatic capacity, i.e, in relation to the usual measures of the receiving state, other members of the staff of the diplomatic mission (with the importance of the position affecting the extent of the immunity), which may be divided into:

– privileges and immunities of diplomatic mission; privileges and immunities of diplomatic representatives and of family members of the diplomatic representative, privileges and immunities of administrative and technical staff and of their families, privileges and immunities of service personnel and of their families, and private servants.[3]

– The legal basis of diplomatic representatives' immunities and privileges can be seen in three theories: extraterritorial theory, representation theory and functional theory, and the applicable law in diplomatic representatives' privileges and immunities recognizes the combined influence of representation theory and functional theory (Krećа, 2010: 279, 280). In contemporary theory, the prevailing view is that the diplomatic immunity of a diplomat[4] should be absolute and apply to all acts without exception, which is shown in diplomatic history, since in the past these provisions were in the domestic legislation of many countries (Shiddo, 1977: 91).

We can compare the relationship between the two most important immunities, personal inviolability and diplomatic immunity from criminal jurisdiction. These immunities grant full protection to diplomatic representatives (Värk, 2003: 110).

The difference between the two immunities is the following: personal inviolability is a physical privilege (no diplomat can be arrested, detained, etc.), and diplomatic immunity from criminal jurisdiction is immunity from prosecution of the receiving state (procedural obstacle, meaning that whenever immunity is granted by the court, the court must suspend all proceedings against the diplomat) (Värk, 2003: 111-113), while criminal liability remains. "However, once the diplomatic status ends, that effect of losing the immunity would be to remove the procedural ban and allow the judicial authorities to prosecute the former diplomat" (Värk, 2003: 113). Diplomatic

3 For more specific immunities and privileges, see: (Tepavac, 1981; Đorđević *et al.* 2000: 100-131; Veljić, 2004: 173-189); and the Vienna Convention on Diplomatic Relations (VCDR), articles 22-40.
4 The basic difference between the immunity of diplomatic agents and consular agents is that in terms of personal inviolability, a diplomatic representative cannot be arrested, detained, while a consular representative can only be imprisoned or detained in the event of a serious crime, on the basis of a decision of a competent judicial authority, and with respect to criminal immunity against a diplomatic agent, the receiving state may not initiate criminal proceedings, both with regard to an act or omission in the exercise of official duty, or to acts and omissions outside the territory of the receiving state, while criminal proceedings may be instituted against the consular agent in respect of acts taken outside his office, whereas the jurisdiction of the receiving state for the acts of the consular representative exercised in the exercise of consular functions is limited by consular immunity (Krećа, 2010: 275-277, 292).

immunity does not exempt a diplomatic agent from the legal system of the transmitting state. In addition, privileges and immunities are valid from the moment when the foreign representative crosses the border of the home country until they leave it (Vajović, 2006: 301).

Considering that under the common law, too, the states are responsible for the international offenses of their authorities, the international legal norms imply an obligation on the receiving state and its authorities to respect, first and foremost, the immunities and privileges of the persons entitled to them, and additionally to provide them with enhanced protection from the actions of nationals as well as foreigners within its jurisdiction.[5] Namely, the duty to respect diplomatic immunities stems from the general duty to respect the international legal obligations undertaken. The Vienna Convention on Diplomatic Relations, the Vienna Convention on Consular Relations and the Convention on the Prevention and Punishment of Crimes against Persons enjoying International Protection, including Diplomatic Representatives (Veljić, 2004: 237) are standards that create an obligation for the states to respect diplomatic immunities, as in art. 29 (The Vienna Convention on Diplomatic Relations), "The diplomatic agent's personality is inviolable. They cannot be subjected to any type of arrest or detention. The accrediting state shall treat them with due respect and take all reasonable steps to prevent offending their persona, their freedom or their dignity".

In addition, the receiving state has the obligation to prosecute and severely punish those persons who commit illicit activities against the persons protected by diplomatic immunity, compensation for damages if the conditions are met, and the like. The receiving state should also act preventively, i.e. to take all steps to avoid such acts. The state should also take all legal measures in this regard, i.e. to prescribe adequate criminal offenses and sanctions (e.g., there is a criminal offense of exposing a foreign diplomatic representative, or violating the honour and reputation of foreign states, foreign heads of state or diplomatic representatives, etc.) (Tepavac, 1981: 38-51).

The security and protection of the diplomatic and consular representatives and the staff is an international multilateral and bilateral obligation of the receiving state and is classified as diplomatic immunity. In most countries, all issues related to the security and protection of the diplomatic and consular representatives and the staff go through the Protocol of the Ministry of Foreign Affairs (MFA), which, in cooperation with the competent special services and the police, takes care of the security of foreign diplomats and diplomatic missions (premises), security arrangements for foreign delegations and VIP visitors and the security of international conferences (Veljić, 2004: 183).

"On the whole, very few countries provide on-going protection for missions and staff, unless there are strong indications or evidence of a threat to the premises or staff, and even then only at the precise request of the head of mission" (Veljić, 2004: 239). "In most countries, protection applies only to the official premises of the mission (embassies, consulates) or the official residence of the ambassador/chief of mission. In other words, protection is limited to the workplace and the figure of the head of mission" (Veljić, 2004: 239). The state

5 This implies all protected subjects according to the international law, not only the diplomatic representatives (Tepavac, 1981: 38-51).

can provide protection via a permanent guard, as well as via mobile patrols (these can also be motorized pedestrian police patrols, environmental inspections, visits to the janitorial embassy), connection with the alarm system, the so-called "hot-lines" with a police station or a private agency, electronic surveillance, etc. (Veljić, 2004: 239, 240).

## ABUSE OF THE PRIVILEGED AUTHORITY OF THE DIPLOMATS

Article 3 of the The Vienna Convention on Diplomatic Relations sets out the functions of a diplomatic mission, consisting in particular of: a) representing the country with the country of accreditation at another country of accreditation; b) protecting in the state in which the accreditation of the state of accreditation and its nationals are accredited, to the extent permitted by international law; c) negotiating with the government of the country of accreditation; d) informing with all permissible means the conditions and developments in the country of accreditation and submitting a report thereon to the government of the accrediting state; e) promoting friendly relations and developing economic, cultural and scientific relations between the accrediting country and the accredited country.

This is about the abuse of immunity and the prohibited types of diplomatic activity, i.e. the so-called "negative diplomatic functions" (Milašinović, 1985: 143).

Ben-Asher cites the data (figures) suggesting that a relatively small number of offenses are committed by diplomats in relation to the total number of offenses (misparking, drunk driving, theft, violence, and misdemeanours and criminal offenses) (Ben-Asher, 2000: 9, 10). "Overall, when illegal parking is neglected, the percentage of offenses involving accredited staff does not seem particularly large" (Ben-Asher, 2000: 10).

In terms of the types of abuse of privilege and the committing prohibited forms of diplomatic activity, Ben Asher says, "Roughly speaking, there are two types of abuse:

– deliberate abuse of terrorist or political character; and

– the abuse of predominantly personal nature" (Ben-Asher, 2000: 8).

Abuse of diplomatic immunity from this first group includes espionage, too. In terms of this abuse, this form is most closely intertwined with the diplomatic intelligence function (Vajović, 2006a: 240; Mišović *et al.* 2003: 98, 99). The distinction between permitted and illicit actions is thin, and begins "from a legal standpoint, exceeding permissible interests is when a diplomatic representative attempts to obtain, through illicit means or manner, the information which is kept secret," (Milašinović, 1985, p. 103), when attempting to obtain information that is secret and could be misused by the regulations of the receiving state which stipulates such activities as a criminal offense, etc. "This exceedance of the permissible level consists of the activities of diplomats to obtain information about the host country in a manner that is qualified as a crime of espionage in its criminal code" (Mišović *et al.* 2003: 99; Vajović, 2006a: 240).

This first group also includes various forms that could be classified as interference with internal affairs. International practice has given, and theory has recognized, a number of forms of activity that are considered to be interventions in internal affairs by diplomatic representatives. These are, first and foremost, espionage, criticism of government or social policy, supporting and assisting opposition forces to overthrow the legal regime, disrespecting domestic legal regulations, propaganda activity, granting diplomatic asylum, negotiating on behalf of a third country, posting correspondence with the government, etc." (Bošković, 2006: 374-379). Since the functions of diplomatic representatives are in the domain of politics, through their basic function of representing the state, any step out of the function will not automatically lead to criminal responsibility but to political responsibility.

When talking about the abuses of a personal nature, the history of violations of diplomatic immunities has recorded a large number of criminal offenses committed by the persons protected by this immunity, e.g. shooting and severe wounding, rape, beatings, robbery, murder, exploitation, violence (Ben-Asher, 2000: 3), serious traffic, trafficking in narcotics, paedophilia, smuggling of weapons, etc. (Nwachukwu, 2005: 42-46).

## MEASURES AND ACTIONS OF THE COMPETENT STATE AUTHORITIES TOWARDS THE PROHIBITED ACTIONS OF THE DIPLOMATIC REPRESENTATIVES

In this part we can discuss what measures may be taken by state authorities, primarily from the national security system, towards diplomats (persons with immunity).

A) According to the rules of international law, first, the state gives its *consent* so that these persons may enter its territory at all (and before that agrees to start diplomatic relations in general). Namely, the state may declare that a person is unwelcome (*persona non grata*) even before they enter the territory of the receiving state, and otherwise, according to the Vienna Convention, the state is protected because it is stated in Art. 9 that the state may "at any time, without obligation to state its decision, inform the transmitting state that the Head of Mission or any member of the mission is a *persona non grata*, or that any other of its staff members is not welcome" (Tepavac, 1981: 69-74).[6]

When diplomats are already on the territory of the receiving state, although protected by immunities, a number of measures can be taken by the state authorities (primarily the national security system, when it comes to relations in this area).

B) Measures that can be classified as the most lenient, such as *asking someone to show their ID, stopping*, *identifying and detaining*, do not violate diplomatic immunity. Namely, "stopping diplomats *per se* in order to identify them is not a violation of immunity" (Bartoš, 2006: 341).

If a person is to be identified, and if that person shows a proper diplomatic ID, the executive authority is obliged to suspend any intervention. This does not mean that the executive authority should

6 See VCDR, Art. 9, p. 1

not politely warn a foreigner who enjoys diplomatic immunity for violating the regulations they have committed, because persons with diplomatic immunity are also required to comply with domestic regulations. This respect, however, cannot be coerced. Rather, in the event of contempt, the diplomatic channel may require a foreign diplomat's government to hold them accountable for having violated the regulations. Very often, incidents occur around the world exactly because the executive authority will not know or does not know about the diplomatic immunity (Bartoš, 2006: 340).

In terms of the retention and identification of an incident, the procedure is as follows: When a diplomat shows their ID, the state authority is obliged to fully respect the immunity. However, if they are unable to show their ID, or it is invalid, and an incident requires arrest or apprehension, then the state authority "may inform the suspect that they will be detained until their identity has been determined. The usual procedure is for the police officer to immediately notify their superior, who will check the identity of the suspect via the Ministry of Foreign Affairs hotline service and the Protocol (Veljić, 2004: 173-189).

C) With regard to *traffic measures*, *improper and speedy driving*, etc., diplomats "are obliged to obey all traffic regulations of the receiving state and all restrictions on speed, parking and alcoholic driving" (Veljić, 2004: 181). States mostly keep records of diplomatic traffic violations. In a number of countries, especially Anglo-Saxon, police can stop any vehicle and a motorist who has immunity and has committed a misdemeanour (speeding or other serious traffic offense) can be ruled an appropriate warning or punishment on the spot. On such an interpretation the ruling of a mandatory sentence is not the violation of immunity. Namely, the patrol-officer will submit a written report to the superiors, who then, depending on the severity of the offense, notify the Protocol of the Ministry of Foreign Affairs (Veljić, 2004: 181).

D) This also implies *preventive measures* - The authorities of the home state have the right to take protective measures and to prevent acts aimed at undermining the foundations of state and social order, its security and independence, as well as the life and health of its citizens, but in doing so, they must ensure not to violate the diplomatic immunity of representatives of other states (Vajović, 2006: 297).

Preventive measures may also be applied in traffic. For example, our authorities have the right to stop diplomatic cars moving on the left side of the road since it is prescribed to drive on the right (Vajović, 2006: 296). In addition "preventive measures may be taken that will stop the crime from being committed, but they must not constitute a violation of diplomatic immunity". For example, "if a diplomatic agent recorded a prohibited object, they should be warned on the spot that it was prohibited and asked to surrender the footage" (Vajović, 2006: 296). In case they refuse to do so, the superiors should be notified immediately who will contact the Protocol of the Ministry of Foreign Affairs. However, in such situations, the state authority will seize the recording "prior to identifying the person who made the recording" (Vajović, 2006: 296).

Preventive measures may also include: "more rigorous notification procedures for deploying potential diplomatic mission staff, limiting the size of

missions, scanning and weighing diplomatic bags, limiting the size of mission assets, and announcing a greater willingness to declare a person accredited as a *persona non grata* even in cases of serious civil charges and constant failure to pay fines for misparking" (Ben-Asher, 2000: 38; Veljić, 2004: 235).

F) Although protected by immunity from the criminal, civil and administrative judiciary of a territorial state, it should be noted in particular for this criminal part that immunity eliminates its criminal liability, but only to the extent that they cannot (except under certain conditions) be brought before a court of a territorial state because of the crime, but the question is, who will then try them for that crime, and the answer is that *they fall under the jurisdiction of their state*, so that the competent courts of the state may judge them. It means that the state will ask their state to be tried (Zečević, 1985: 115, 116), because the Vienna Convention does not release them from responsibility before their own state.

G) *Identification and the courts of the receiving state*: A home state may bring a diplomatic representative to its trial only if their state waives the criminal immunity that protects them (Vajović, 2006: 297). A diplomatic representative cannot be ordered to give expert testimony or testimony before domestic courts (this also applies to civil disputes). They may only be asked to do so, and if they agree to do so, the competent authority should go to the representative office and take their testimony there (Vajović, 2006: 298). Nevertheless, the judgment cannot be enforced (Vajović, 2006: 298).

It is rare for states to accept the lifting of their diplomats' immunity,[7] because in such cases they would be revoked first, and the very request for the lifting of the immunity usually indicates that it is a delict to such an extent that unless the sending state suspends the diplomat's immunity, the receiving state will no longer be ready to accept the diplomat (Värk, 2003: 118). We could add here that if the sending state does not terminate diplomatic immunity to such a diplomat (who has violated the laws of the receiving state) or does not bring them to trial in their state, then the receiving state could refuse the admission of any other diplomat as well, and to terminate diplomatic relations, as the sending state makes it clear that its other diplomats may be in violation of the laws of the receiving state and therefore not held responsible.

H) Irrespective of the immunities, it would be a misinterpretation that the executive authorities have a passive attitude towards the illegal actions of diplomats. Although they cannot be arrested, "any violation or criminal offense committed by a foreign diplomat should be *recorded, investigated and reported* by the security authority, who must then obtain any evidence available" (Bartoš, 2006: 342, 343). These are then transmitted through the competent superiors to the protocol of the Ministry of Foreign Affairs. "On the basis of such reports, the Protocol Division can intervene not only by requiring the government of such a diplomat to be held accountable, but such a diplomat may also be denied acceptance (Bartoš, 2006: 343).

I) *The diplomatic mail is inspected* in accordance with a special procedure, whereby the courier has to be escorted to the Ministry of Foreign Affairs, where an

7 For example due to a huge public pressure the Georgian president abolished immunity of Makharadza (for the case of severe car accident) who was later sued and is serving his sentence in the USA (Värk, 2003: 118).

official of this institution will inspect the mail in the presence of the mission representative, i.e. the mail holder. In the case of a positive result, only those items which do not constitute correspondence can be seized (for example, the shipment contained gold, weapons or other items). The secrecy of diplomatic correspondence must not be violated even when the post is examined (no papers should be read). This may not be the only way to conduct a mail inspection. In practice, there are other ways, such as airport or border inspection, etc. (Vajović, 2006: 300).

J) *Measures against espionage include the declaration of the diplomat concerned as persona non grata.* Examples from this domain indicate that the host state does not easily decide to implement this measure. It is usually preceded by the patient obtaining of evidence of the non-diplomatic activities of a particular diplomat. The host state, in principle, applies two methods of cutting the aforementioned activities: 1) situational - at the moment when the offense of espionage is committed; and 2) subsequent (published evidence of espionage activities of a particular diplomat at the time they deem it most favourable to their international position) (Mišović *et al.* 2003: 102).

K) Diplomatic representatives are exempt from taxes, fees, duties and other financial charges. This does not imply that customs duties can be exempt from things intended for trade. Abuse of these privileges is very common in practice (Vajović, 2006: 298). No sanctions can be imposed on a diplomatic agent caught in smuggling, but they can be imposed on their accomplices, citizens of their home country or foreigners who do not enjoy diplomatic immunity (Vajović, 2006: 299). The very *search of diplomatic items and baggage* should be approached with caution only when we have the information that the delivery contains, in addition to the items indicated, the items intended for trade or other items whose removal or entry is prohibited. In this case, the possessions that the diplomatic representative did not have the right to take out or bring in are seized in a special procedure, and the customs charges are paid for the possessions intended for trade (Vajović, 2006: 299). In a considerable number of states, the request of the customs authority to open the trunk of a motor vehicle is not considered a violation of immunity, but without the examination of personal luggage (Veljić, 2004: 186).

L) *In the event of a natural disaster*, despite the inviolability enjoyed by the mission's official premises, the courtyards of the buildings, the apartment and the carriage of diplomatic representatives (Vajović, 2006: 300), no conclusion should be drawn from this that the authorities of the home state cannot enter the premises of the mission or apartment rooms in the case of a natural disaster, to assist and prevent an accident. For example, if a fire broke out in one of the premises belonging to a diplomatic mission, it would be absurd not to allow the home state's authorities to enter the building and put the fire out. It is understandable that the privilege of inviolability of the archive must also be respected on this occasion (Vajović, 2006: 301).

M) *In the event of a criminal incident, if public security is in jeopardy and a serious crime is committed*, the police may intervene to the extent necessary to stop the criminal activity, inform the superior, and make a report (from a diplomatic ID card, participants, witnesses, too). The superior will order the arrest of all those who do not enjoy immunity, notify

their command centre as soon as possible, who will inform the duty service and the Protocol of the Ministry of Foreign Affairs and immediately send a detailed incident report (Veljić, 2004: 182).

N) *The diplomat in some cases may also be intervened. One case could relate to the situation if the diplomat would be caught* in that part of the national territory where that person does not have the right of residence and movement. In this case, local authorities have the right to establish such a fact and to ask the diplomatic representative to move from the prohibited to the prohibited zone as soon as possible, possibly accompanied by the authorities, too, no longer the subject of special measures . The authority can then escort the diplomat back to the border of the prohibited zone to the safe zone, and may even reach the state capital (Bartoš, 2006: 341).

Another type of intervention towards diplomats is to eliminate threats of the interests to other citizens. For example, it may happen that one member of the diplomatic corps uses firearms to carouse. It is considered that the domestic authorities may in this case intervene in order to disarm and render such a diplomat harmless, but that their intervention should cease as soon as this is achieved. In other words, the seized revolver should be returned diplomatically to the representative office where the diplomat belongs (Bartoš, 2006: 342).

O) The receiving state may invoke *self-defence* in the actions of state authorities towards diplomats. Self-defence does not imply a basis for trial and punishment, but rather an immediate and proportionate reaction to the delicts of diplomats who may endanger the lives of others or the state (Värk, 2003: 115).

One example of a self-defence measure is an example of a USA police officer executing a warrant for the arrest of a Danish diplomat, followed by a fight and several shootings, and the Court stated that "... if a representative attacks someone else, they may be killed in self-defence, though not through punishment" (Ben-Asher, 2000: 39). Self-defence is limited to eliminating the "... imminent threat posed by a diplomat" (Ben-Asher, 2000: 39).

P) *Persona non grata and the expulsion: a persona non grata* procedure may be implemented for purely political reasons. It is also used against persons who have committed a serious criminal offense in the territory of the receiving state or have shown serious disregard for the laws and regulations of the receiving State (Veljić, 2004: 178). For the declaration of *persona non grata*, the most common cases are when meddling in the internal affairs of the receiving state, espionage, insulting the receiving state or its officials, and often without any special reasons, as a measure of deterioration of relations between the two states (Đorđević *et al.* 2000: 95).

Q) *The disruption of diplomatic relations* - Another sanction and prevention measure for governments is the termination of diplomatic relations. In the case where the whole diplomatic mission serves the purposes of activities contrary to the aims of diplomatic missions in establishing and maintaining friendly relations, when it turns to its opposite, it serves subversive activities, organizing terrorism, etc., the most drastic measures are possible to happen, too, such as the ending of diplomatic relations. For example, the US closed the Libyan People's Bureau in Washington in 1981 with the aim of stopping the threat of

terrorism that stemmed from that mission (Ben-Asher, 2000: 38). A variety of reasons and causes for ending diplomatic relations are recorded in the history of diplomatic relations (Đorđević *et al.* 2000: 96-99).

Measures can also be taken for various offenses, because non-compliance with domestic regulations violates international law, and on this basis, the state can:

For example, expose to compromise the media, diplomacy, etc. in the international public, because of the acts done, thus damaging the reputation of the diplomacy of the respective state; or even,

In addition to the possibility of compromising the whole diplomatic mission, there is always the danger of a broader international compromise of the entire foreign policy of the given state (Milašinović, 1985: 108).

S) *The International Criminal Court* – Together with all the aforementioned possibilities, there is another one, namely that diplomats are subject to criminal proceedings before the International Criminal Court. It is about a Rome Statute that is equally applied to all persons without any privilege based on official capacity (to diplomats, as well, even when it comes to the state president, the president of the government or a member of parliament, a government official or any office held), meaning that it does not exclude anyone from criminal responsibility (Värk, 2003: 118).[8] Article 27 of the Rome Statute of the International Criminal Court states: This Statute herein shall apply equally to all persons without distinguishing whether they are public officials or not. In particular, the public office of the President or Government, a member of the government or parliament, an elected representative or a government official shall in no case constitute grounds for exclusion from criminal responsibility under this Statute, nor shall public office in itself constitute a basis to mitigate punishment. Namely, the immunity and other special rights deriving from public office, which they hold under either national or international law, do not constitute an obstacle for the Court to act in accordance with its jurisdiction over such persons (Dimitrijević *et al.* 2005: 151-165). As a result, a diplomat cannot hide behind their immunity to evade criminal proceedings before the International Criminal Court (Värk, 2003: 118).

T) *International Court of Justice* - The International Court of Justice may establish jurisdiction in respect of the Convention on Diplomatic Relations. The establishment of jurisdiction, however, is not stipulated by the Convention itself, and it remains for the states between which the dispute arises as to whether to bring the dispute to the jurisdiction of the International Court of Justice. In its work so far, this Court has considered disputes in several cases in the subject matter of diplomatic law. One of the cases concerned an incident that occurred in Iran in 1979 in breach of the provisions on the inviolability of diplomatic and consular premises and their personnel, as well as the duty of the receiving states to protect that inviolability. Namely, militant members of some domestic organizations then attacked and conquered the US embassy, held hostage detained members of hostages, and appropriated a part of the property and the archives. There was no protection of state authorities. Moreover, some members of the Iranian government supported this action. The US lawsuit

8 See Article 27 of the Statute of the International Criminal Court.

against the International Court of Justice followed (Dimitrijević *et al*. 2005: 162).

Namely, the fundamental norms defined by the Vienna Convention on Diplomatic Relations have been violated, that the diplomat's personality is inviolable, that the archives and mission documents are inviolable at all times, that the premises of the mission are inviolable (Art. 29, Art. 24, Art. 22 The Vienna Convention on the Diplomatic Relations), which brought forth the duty and obligation of respect from the receiving state. On May 24, 1980, the court issued a judgment in which it ruled that the Government of Iran had breached its obligations under international conventions and the rules of general international law established by ancient times and that it therefore bore international responsibility (Dimitrijević *et al*. 2005: 162).

Finally, in connection with the further role of the UN Security Council, the shortcomings of this authority are shown, because success depends on the composition of the Council and the complex relations among the permanent members (Ben-Asher, 2000: 40).

## CONCLUSION

The international legal norms imply an obligation for the receiving state and its authorities to respect above all the immunities and privileges of the persons entitled to them, and, on the other hand, to provide them with enhanced protection.

Here we can see why the way of dealing with diplomats is important, so a proposal can be made for special training and organization of all subjects of the state, first of all national security, who will be trained and educated to work with diplomats. Namely, even when diplomatic representatives do not obey the laws of the receiving state, they may ultimately be held accountable to international law, as well as disrespect or misconduct by the security authorities against diplomats in the receiving country, and even if they do not provide further protection for diplomats, may result in diplomatic or even greater problem before international law, because the state authorities are also obliged to respect diplomats and provide additional protection under international law. In the case of wrongdoing, the state may also be held responsible because it is a signatory to the VCDR, and thus responsible for international law – i.e. before international institutions.

A diplomat has a duty to obey the laws of the receiving state,[9] given that the legal regulations of a territorial state are considered not to have full legal character for diplomats, according to a functional theory for the exercise of their functions (because they are in fact another state and other legal regulations) (Shiddo, 1977: 86), a proposal can be made here to harmonize at the level of international law all major prohibited acts, and then to apply to all, if they occur, that the sanction is the same everywhere, etc., so that the territorial state can implement measures.

It may be suggested to form special units, police, intelligence, judicial, customs etc. in each state, which would be trained and would be able to treat diplomats in various situations, in order not to make mistakes in the work of state

9 See the VCDR, Article 41, p. 1

officials, because even the slightest mistake can cause intergovernmental problems later.

It has been said that even when a diplomat fails to comply with the regulations, immunity prevents the state from implementing regular measures. As it cannot implement these regular, the question arises as to what measures a state has at its disposal to protect its legitimate interests. This does not mean that the state cannot apply any sanctions, if it cannot apply the regular ones, because no one waives their own protection, not even the state (Tepavac, 1981: 69-74).

In this regard, the most common measures and procedures applied by state authorities (primarily the national security system) to the prohibited forms of action by diplomatic agents are outlined.

## REFERENCES

1. Bartoš, M. (2006). Službenici resora unutrašnjih poslova i imunitet diplomatskih predstavnika. In Đ. Lopičić (Ed.), *Diplomatija: zbornik radova* (pp. 339-344). Beograd: Vaša knjiga.
2. Ben-Asher, D. (2000). *Human rights meets diplomatic immunities: Problems and posible solutions*. Cambridge, MA: Harvard Law School.
3. Bečka konvencija o diplomatskim odnosima. (2005). In V. Hadži-Vidanović, M. Milanović (Eds.), *Međunarodno javno pravo: zbirka dokumenata* (ppr. 63–72). Beograd: Beogradski centar za ljudska prava.
4. Bečka konvencija o konzularnim odnosima. (2000). In S. Đorđević, M. Mitić, (Eds.). *Diplomatsko i konzularno pravo* (pp. 297–318). Beograd: Službeni list.
5. Bošković, M. (2006). Prava i dužnosti diplomatskih predstavnika i zabranjeni oblici diplomatske aktivnosti. In Đ. Lopičić (Ed.), *Diplomatija: zbornik radova* (pp. 369–381). Beograd: Vaša knjiga.
6. Dimitrijević, V., Račić, O., Đerić, V., Papić, T., Petrović, V., Obradović, S. (2005). *Osnovi međunarodnog javnog prava*. Beograd: Beogradski centar za ljudska prava.
7. Đorđević, S., Mitić, M. (2000). *Diplomatsko i konzularno pravo*. Beograd: Službeni list.
8. Konvencija o sprečavanju i kažnjavanju krivičnih dela protiv lica koja uživaju međunarodnu zaštitu, uključujući diplomatske predstavnike. (2000). In S. Đorđević, M. Mitić (Eds.), *Diplomatsko i konzularno pravo* (pp. 369–375). Beograd: Službeni list.
9. Kreća, M. (2010). *Međunarodno javno pravo*. Beograd: Pravni fakultet Univerziteta u Beogradu.
10. Milašinović, R. (1985). *Teror slobode: lice i naličje diplomatije*. Zagreb: Jugoart.
11. Mišović, S., Cvetković, M. (2003). *Diplomatska špijunaža* (pp. 91–107). Beograd: Fakultet civilne odbrane.
12. Nwachukwu, A. (2005). *A comparative study of state practices relating to diplomatic immunities and privileges*. Mild: University of Lagos.

13. Povelja Ujedinjenih nacija. (2005). In V. Hadži-Vidanović, M. Milanović (Eds.), *Međunarodno javno pravo: zbirka dokumenata* (pp. 46–62). Beograd: Beogradski centar za ljudska prava.
14. Protokol sa fakultativnim potpisivanjem koji se odnosi na obavezno rešavanje sporova. (2005). In V. Hadži-Vidanović, M. Milanović (Eds.), *Međunarodno javno pravo: zbirka dokumenata* (pp. 72–73). Beograd: Beogradski centar za ljudska prava.
15. Rimski statut Međunarodnog krivičnog suda. Available at: http://www.podaci.net/_z1/8126847/S-mksuda02v0105.html [Accessed 10.11.2019].
16. Tepavac, M. (1981). *Imuniteti i privilegije u međunarodnom pravu* (PhD thesis). Beograd: Pravni fakultet Univerziteta.
17. Shiddo, S. E. (1977). *Olakšice, privilegije i imuniteti diplomatskih predstavnika* (M.A. thesis). Beograd: Pravni fakultet Univerziteta.
18. Statut Međunarodnog suda pravde. (2005). In V. Hadži-Vidanović, M. Milanović (Eds.), *Međunarodno javno pravo: zbirka dokumenata* (pp. 189–197). Beograd: Beogradski centar za ljudska prava.
19. Vajović, P. (2006). Neka pitanja privilegija i imuniteta diplomatskih predstavnika i rad organa unutrašnjih poslova. In Đ. Lopičić (Ed.), *Diplomatija: zbornik radova* (pp. 293–302). Beograd: Vaša knjiga.
20. Vajović, P. (2006a). Obaveštavanje kao diplomatska funkcija. In Đ. Lopičić (Ed.), *Diplomatija: zbornik radova* (pp. 225–243). Beograd: Vaša knjiga.
21. Värk, R. (2003). Personal Inviolability and Diplomatic Immunity in Respect of Serious Crimes. *Juridica International*, *20*(8), 110–119.
22. Veljić, Z. (2004). *Diplomatski protokol: praktikum*. Beograd: Diplomatska akademija.
23. Zečević, M. (1985). *Vojna diplomatska predstavništva u savremenim međunarodnim odnosima* (M.A. thesis). Beograd: Pravni fakultet Univerziteta.

# HISTORY OF POLICING

БРОЈ 1. У БЕОГРАДУ, НЕДЕЉА 8. ЈАНУАРА 1912. ГОДИНА VIII

ПОЛИЦИЈСКИ ГЛАСНИК

СЛУЖБЕНИ ЛИСТ МИНИСТАРСТВА УНУТРАШЊИХ ДЕЛА

„ПОЛИЦИЈСКИ ГЛАСНИК" ИЗЛАЗИ ЈЕДАНПУТ, А ПРЕМА ПОТРЕБИ И ВИШЕ ПУТА НЕДЕЉНО. ПРЕТПЛАТА СЕ ПОЛАЖЕ У НАПРЕД, И ТО НАЈМАЊЕ ЗА ПОЛА ГОДИНЕ, КОД СВИЈУ ПОЛИЦИЈСКИХ ВЛАСТИ, И ИЗНОСИ: 20 ДИНАРА НА ГОДИНУ ЗА ДРЖАВНА И ОПШТИНСКА НАДЛЕШТВА, А ЗА СВЕ ДРУГЕ ПРЕТПЛАТНИКЕ У ОПШТЕ 12 ДИНАРА ГОДИШЊЕ. ЗА ИНОСТРАНСТВО: ГОДИШЊЕ 24, ПОЛУГОДИШЊЕ 12 ДИНАРА У ЗЛАТУ. ПОЈЕДИНИ БРОЈЕВИ „ПОЛИЦИЈСКОГ ГЛАСНИКА" НЕ ПРОДАЈУ СЕ. РУКОПИСИ СЕ НЕ ВРАЋАЈУ.

*POLICE GAZETTE No. 3, January 22, 1912, pp. 18–19*

# POLICE REORGANIZATION
## (Final Part)

**D. Đ. Alimpić**

We mentioned earlier that in Switzerland and Belgium misdemeanours are within the jurisdiction of the police justices of the peace.

When a few years ago, acting on a special order, we studied the semi-annual reports of the county chiefs (which they submit in terms of Article 23 of the Law on County and District Governance), we remarked that the majority of county chiefs pointed out in particular the fact that our municipal authorities in villages seriously misuse their right of judging in misdemeanour cases and that this right should be limited to them. We find that it should go even further and that this right should be transferred to state police authorities, which would once the Law on District and Town Courts enters into force remain without almost any authority. It would be, of course, more natural and better if this right was to be transferred to the district and town courts, but they are already overburdened with other tasks. Municipal authorities, as a last resort, might be left to be able to deliver a 24-hour prison penalty for disorder and disobeying their orders.

It would be of incalculable benefit for the state, for the municipality, for municipal mayors and municipal officers, as well as for all those who have material connections with the municipality (teachers, priests, servants, etc.), if a way and manner would be found for the municipal accounting to be regulated on the model of accounting in rural municipalities of the Geneva canton, i.e. to take away money operations from the municipalities. The municipalities in this canton do not have any cash in their pouches. All revenues, both state and municipal, are gathered by tax collectors

and are given to cantonal treasury in which each municipality has an account set, within the limits of their respective budget of course. Accounting for all municipalities is concentrated within the ministry of internal affairs. Payments are made based on checks, which are issued by municipal mayors, certified by the ministry of internal affairs and paid out by the cantonal treasury.

In our country these tasks could possibly be transferred to district financial authorities. In any case tax collection should be taken away from municipalities.

As we have already mentioned the Geneva canton municipalities, let us then mention one fact which would illustrate best the way they are organized.

In order to get better acquainted with the tasks and functioning of rural municipalities, one day we went to the village of Jussy (two hours away from Geneva). We were rather surprised when we saw that the municipal building was closed and that absolutely not a single person was in front of it. We were told in a nearby house that the municipal mayor was at his home and that he would not come to the office that day. Our surprise was even greater when we met the mayor – who was, by the way, a doctor of law and a very intelligent man – and we found out that under the regular circumstances he would go to the municipality just once a week to finish his official duties (official mail was brought to his home on a daily basis); that there was not at all many things to do in the municipality; that apart from one civil servant there were not any other office personnel; that in the previous four years there were only 33 municipal meetings and that not any salary was paid to him by the municipality and that he was performing his duty out of honour.

The municipality of Jussy has about 800 residents and the budget for 1910 was 12,000 dinars. The municipality supports three elementary schools and one school for linen sawing; there are three field keepers and a voluntary fire-fighting company. For the equipment and maintenance of municipality roads in the past four years 2800 dinars were spent, and 250 dinars to improve the municipality library.

As the mayor argued, the majority of rural municipalities in the Geneva canton were equal in number of residents and size of territory with the municipality of Jussy, and therefore the tasks and duties were equal.

For proper functioning of the municipal administration, it is necessary to resolve the issue of *municipal clerks*. We find that the municipalities would not lose anything of their autonomy if they were appointed by the county chiefs or just the Ministry of Internal Affairs, and only after they previously passed the exam.

It is sad, but it is essentially true, that our self-governing bodies in just a few years of their functioning did not show almost any result (except for Podrinje and Pozarevac districts to a degree). Instead of working on cultural improvement and material prosperity, they were fervently getting into debt and disputing with state authorities impeding them often, even the entire state administration, in the time of important tasks. Due to these and many other causes which are well known so we do not state them here, we are of the opinion that the supervision of state authorities over self-governing bodies should be increased considerably. In general, we find that state authorities should be centralized and strengthened in all directions as much as possible in order to avoid anarchy which affects se-

riously even France and Belgium and Switzerland to a degree, and

Four years ago we spent several months in Nis doing certain official business and on that occasion we came to be convinced that this town as the biggest one after Belgrade, in the interest of both police service and due to many other reasons, should be given a separate administration – the administration of the town of Nis – which used to exist earlier.

***

Our draft on police reorganization, and partly internal administration, is limited, as can be seen from the above said, to the main principles only. We did not go into details because they will mainly depend on the main principles adopted and therefore would always remain within their limits. In our opinion it is of paramount importance to resolve the matter in principle and the details will come of their own accord.

Police profession is the most important, and police authorities carry the burden of the greatest number of tasks in our country. It is undisputable that so far the profession has additionally been despised on a regular basis, with or without reason, attacked by anyone and everyone. It is about time, however, to end this once and for all and that our police rightfully take the place which belongs to them in a decent society having in mind their dangerous, difficult, arduous and delicate duties.