
The Identifying Characteristics of the Robbery Crimes and its Perpetrators in the Canton Sarajevo

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Purpose:

The intention of this paper is to present the characteristics of robbery crimes and its perpetrators in the Canton Sarajevo. In that sense, the impetus behind this empirical study stems from the following research question: „What circumstances and characteristics of robberies best structure a certain types of robbery offenders?“.

Design/Methods/Approach:

The methodology for this research involved methods of data collection relating to the documentation analysis of 120 court and police records, and methods of descriptive and inferential statistics for the analysis of collected data.

Findings:

The results of the empirical research indicate that the number of accomplices, and the characteristics of planning and preparing for the execution of these crimes, well-differentiate robbers in the Canton Sarajevo on professional and opportunistic. Furthermore, the results show that population of robbers mainly consists of recidivists.

Research limitations:

Main limitations of this paper are related to the quantitative empirical evidence, since it uses only data from the official police and court records. Future research should include qualitative measures.

Practical implications:

Our findings provide a useful source of information for academics and practitioners in the field of criminology and criminal justice. Police might benefit also from our results, since the knowledge of the *modus operandi* of this crime and the places of execution may contribute to revealing the identity of such perpetrators in the Canton Sarajevo.

Originality/Value:

The original contribution of this paper is that it introduces an authentic classification scheme for robbers in the Canton Sarajevo. No comparable research currently exists.

UDC: 343.3/.7

Keywords: robbery crimes, perpetrators, modus operandi, Canton Sarajevo

Prepoznavanje značilnosti kaznivih dejanj ropa in njihovih storilcev v kantonu Sarajevo

Namen prispevka:

Namen prispevka je predstaviti značilnosti ropov in njihovih storilcev iz kantona Sarajevo. Gonilo v ozadju te empirične študije izhaja iz naslednjega raziskovalnega vprašanja: „Katere okoliščine in značilnosti ropov najbolj oblikujejo posamezen tip storilca kaznivega dejanja ropa?“.

Metode:

V raziskavi uporabljena metodologija vključuje metode zbiranja podatkov z analizo dokumentov iz 120 sodnih in policijskih evidenc, opisne metode in sklepne statistike za analizo zbranih podatkov.

Ugotovitve:

Glede na število sosterilcev in značilnosti načrtovanja in priprav na izvedbo teh kaznivih dejanj rezultati empirične raziskave pomembno razlikujejo med profesionalnimi in priložnostnimi roparji v sarajevskem kantonu. Rezultati nadalje kažejo, da gre v glavnem za roparje povratnike.

Omejitve raziskave:

Glavne omejitve v tem prispevku so povezane s kvantitativnimi empiričnimi dokazi, saj so uporabljeni le podatki iz uradnih evidenc policije in sodišča. Prihodnje raziskave bi morale vključevati tudi kvalitativne metode.

Praktična uporabnost:

Naše ugotovitve ponujajo koristen vir informacij akademikom in praktikom s področja kriminologije in kazenskega pravosodja. Rezultati bi lahko bili koristni tudi za policijo, saj poznavanje načina storitve in kraja izvedbe kaznivega dejanja ropa lahko prispeva k razkrivanju identitete takšnih storilcev v kantonu Sarajevo.

Izvirnost/pomembnost prispevka:

Izvirnost tega članka je v tem, da uvaja avtentično shemo razvrščanja roparjev iz kantona Sarajevo. Primerljive raziskave trenutno ne obstajajo.

UDK: 343.3/.7

Ključne besede: kaznivo dejanje ropa, storilci, modus operandi, kanton Sarajevo

1 INTRODUCTION

The crime of robbery is a complex legal structure, because it consists of two separate crimes: theft and coercion. It is usually defined as “the unlawful taking or attempted taking of property that is in the immediate possession of another, by force or threat of force” (Osterburg & Ward, 2007: 444). Apart from this definition that generally recognizes property as an object of robbery crime, other conceptions define property as anything of value that is taken from the care, custody, or control of a person by force or threat of force (McCorkle & Miethe, 2003). For that reason, in the criminal law theory robbery is usually treated as aggravated form of theft.

Some theorists have placed robbery in the group of offences against persons and property, since it involves conduct “presenting threats not only to the ownership and enjoyment of property, but to the security of life and bodily integrity as well” (Allen, 1962: 58; Corman & Joyce, 1990). However, although robbery involves interaction between the offender and the victim, with potential for violence against persons, it must be noted that robbery is still located in the group of crimes against property within penal codes of certain countries (Masters & Roberson, 1990; Porter & Alison, 2006: 331; Swanson, Chamelin, & Territo, 2003: 433). According to the penal laws of two entities (Federation of B&H and Republic of Srpska) and District Brčko of B&H, robbery is considered a crime against property. Thus, these penal laws define robbery as taking another person’s property by another, with the use of force or threat of immediate attack upon his/her life or limb, in order to make an unlawful material gain. A person is held to have committed aggravated robbery if: bodily injury has been intentionally inflicted on a person; if the robbery has been committed by a group, or a weapon or dangerous tools have been used during the act; if the value of the seized items exceeds prescribed amount of money; and when a person has been intentionally deprived of life.¹

Considering the fact that robbery is regularly followed by use of force or threat of force, criminological conceptions depart from other criteria of classification. Unlike theories of criminal law, these criminological conceptions use *modus operandi* and wider social and individual (psychological) implications as the primary criteria for labeling robbery as a form of violent crime, together with assault, burglary and motor vehicle theft (Hagan, 2007). Such opinions assume that the combination of a motive for economic gain and the violent nature of robbery contribute to the serious nature of this crime (Baumer & Carrington, 1986). When it comes to the classification of robberies, it is evident that some criminologists make comparisons between characteristics of robbers and characteristics of robberies (Adler, Mueller, & Laufer, 2006: 257). Such understandings are actually based on earlier classification scheme by Conklin (1972), which remains one of the most well known typologies in the criminological literature. This typology has four categories of offenders:

Professional robbers make a long term commitment to crime as a source of livelihood. They carefully plan, organize and execute robberies, often with many accomplices, stealing large sums of money. These individuals have significant experience with this type of crime, which ultimately contributes to a hedonistic lifestyle. Generally, their focus is on commercial establishments, which offer larger profits than households.

Opportunistic robbers use the occasion for robbery due to permissive circumstances. Their targets are often vulnerable individuals with a small amount of money (\$ 20 and less). Compared to professional robbers, opportunistic robbers tend to be relatively young in age and generally inexperienced.

Addictive robbers are typically drug addicts that are less prone to robbery, but more prone to acts of theft. Their crimes are typically less planned than those

¹ Article 289. of the Criminal Code of FB&H (*Krivični zakon Federacije Bosne i Hercegovine*, 2003, 2004, 2005, 2010); Article 233. of the Criminal Code of Republic of Srpska (*Krivični zakon Republike Srpske*, 2003, 2006, 2009); Article 283. of the Criminal Code of Brčko District (*Krivični zakon Brčko Distrikta BiH*, 2003, 2005, 2010) .

of professional robbers, but more so than those of opportunistic robbers. Addictive robbers tend to go after money which enables them to get another “fix” and often carry firearms.

Alcoholic robbers are not robbers by trade but rather their involvement in robbery and related criminal activities are related to excessive consumption of alcohol. These individuals are less vigilant and thus less averse to being caught than the previously mentioned types of robbers.

At the same time, other scholars distinguish types of robberies from this typology of robbers (Siegel, 2006). For them, Conklin’s typology serves to characterize types of robbers based on their specialties. On the other side, in order to explain the nature and dynamics of robbery, such opinions are using classifications of robberies which are based upon the assumption that there are “collective attributes or behaviours that define similarities between robberies of one theme that are different to other themes” (Porter & Alison, 2006: 331). For the purposes of detection and prosecution of robberies, scholars and practitioners in the field of criminal investigation make distinction between: (1) residential robberies, (2) commercial robberies, (3) street robberies, (4) vehicle-driver robberies, and (5) carjacking (Berg, 2008; Bennet & Hess, 2007; Gilbert, 2007; Becker, 2005). Other authors consider that the most useful distinction to make when considering variations in robbery is the difference between commercial and personal robberies (Mccluskey, 2009).

Bearing in mind that robberies are typically violent crimes, it is therefore necessary to stress that this article examines the characteristics of robberies that occur in the Canton Sarajevo in order to assist in predicting this form of criminality in the future. According to the official police statistics in the Canton Sarajevo, in the period 2003-2010, police registered totally 3039 cases of robbery crime (averagely 379, 8 per year), with the clearance rate of 50.4 %. Thus, data from the police and court records on convicted robbers are used for analysis. Generally, when it comes to explaining violent crimes, researchers collect facts about convicted criminals; previous arrests and convictions; social and employment history; and, for juveniles, their school records, particularly truancy rates; drug use; family backgrounds etc. (Williams, 2004: 195). Finding from such studies may provide a solid basis for improving robbery investigations and for contributing to the prevention of such crimes (Dvoršek, Meško, & Bučar-Ručman, 2005).

2 GOALS OF THE STUDY

Although research on robbery crimes covers a range of issues, (i.e. types of robbers and robbery, personal characteristics of the victim), this study focuses on identifying key characteristics of the robbery crimes and their perpetrators in the Canton Sarajevo. Therefore, the obtained results allow reliable identification of characteristics of robbers according to the Conklin’s typology of robbers (Conklin, 1972), where this article aims to compare Conklin’s classification of robbers with the manifestations of robberies in the Canton Sarajevo, in order to identify some additional characteristic of robbers that were not included in this well-known classification.

2.1 Method

The above mentioned classification is used as a prelude to an analysis of the robbery crimes for the population of robberies that occurred between the 1997 and 2007 in the Canton Sarajevo (N=245). The method of random numbers was used to obtain a sample of 120 robberies, meaning that a *de facto* analysis has been conducted for every second robbery. The size and method of sample selection enabled access to the inferential processing of results, that is, obtained differences in the data sample give the right to conclude about distribution and categorical presence of these crimes. Research questions were focused on the circumstances in which these acts occurred, and the characteristics of such acts in terms of whether they were committed by professional or an opportunistic offender. These questions were integral part of the protocol that was used for collecting data from the court and police documentation. Content of the used protocol implied identification questions, as well as questions regarding characteristics of the crime, characteristics of the accused, characteristics of victims, characteristics of the investigative actions, characteristics of prosecution procedures.

3 RESULTS

At first, we will present certain data that are relevant for understanding the general profile of robbery offenders in the Canton Sarajevo. The general profile of robbery offenders includes their year of birth between the 1978 and 1982 with an average 28 years of age. They are Bosnians with incomplete secondary education, unemployed and unmarried. Perpetrators have not been forced to war migration, they are largely domicile, and crimes are committed outside their domicile residence.

In our research, we found it reasonable to question whether recidivism is a separate feature that determines the robbery regardless of characterization through professionalism and opportunity. In other words, it was necessary to check whether the professionalization of robbery is significantly related to recidivism. In that context, with relative certainty it was possible to determine that 25 or 20.8 % of all perpetrators of robberies is not among the recidivists. For a further 26 or 21.7 %, there were no sufficiently strong anchor data which would place them among the recidivists. Therefore, if they are treated as "non-recidivists", remains the fact that 57.5 % of them is among the recidivists. The differences that were tested depending on the professional and opportunistic robbers, as determined by the number of accomplices are not statistically relevant. Thus, it can be concluded that the population of robbers in the Canton Sarajevo mainly consists of recurrent perpetrators who are already known to the police and court. Most of them commit this criminal act with one or two accomplices, who are involved in planning, preparation and execution of the crime, which indicates that they mainly fall into the category of professional robbers, among whom there is a dominant majority of recidivist.

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Table 1:
Comparative overview on the crossing data on recidivism with the data on the accomplices of robbery crimes

Recidivism		Number of co-perpetrators			Total	
		Indiv. perpetration	With one more person	With two or more person	N	%
0	Not recorded	9	11	5	25	20.8
1.	Unknown	8	8	10	26	21.7
2.	Recidivist for the same offense	13	8	3	24	20.0
3.	Recidivist for other offenses	20	15	8	43	35.8
4.	Chronic violent recidivist	-	1	1	2	1.7
	TOTAL	50	43	27	120	100.0

The analysis of robbery crimes indicates that there is a primary division on street robberies (N=60), and robbery breaking into houses, flats, shops and stores (N=60). In order to analyse the relationship between this crime and characteristics of its perpetrators, we have used criminological classifications of robbers.

Table 2 provides results which show that perpetrators of robberies perform independently this crime in 41.7 % of all participants from obtained sample, where this fact, according to the previously mentioned categories of robbers, classifies these perpetrators into the non-professional group of robbers. A further 35.8 % of robbers have perpetrated the robbery with one more person, and the rest of them (22.5 %), with several co-perpetrators. Since involvement of more perpetrators in committing a crime, in some way, has elements of organized crime, this category, thus, should be treated as a professional group in the sample. Therefore, according to presented data, robbers in the Canton of Sarajevo are characterized by a clear dichotomous division into two major groups: non-professional (opportunist who used an opportunity) and professional robbers, of which first make 41.7 % (individual perpetrator). The second group, where the crime was committed with another co-perpetrator (35.8 %), can be treated as a transitional, from non-professional to professional group. The third remaining group can be classified as perpetrators of robberies, where this crime has been committed by two or more perpetrators, and their total is 22.5 %. Furthermore, the data results from the Table 8, suggest that most of the robberies that were committed with the participation of several co-perpetrators, should be treated as professional, since the absolute majority of the accomplices were involved directly in planning and carrying out this crime. Because of their roles, such results justify the assumption that the categories of complicity may be considered as an element of professionalism in committing this crime.

		N	%	
1.	Crime committed individually	50	41.7	
2.	Crime committed with one more perpetrator	43	35.8	
3.	Crime committed with two perpetrators	18	15.0	} 22.5%
4.	Crime committed with three perpetrators	8	6.7	
5.	Crime committed with four (or more) perpetrators	1	0.8	
	TOTAL	120	100.0	

Table 2:
Number of perpetrators of robbery crime

		N	%
0	No data	9	9.5
1.	Co-perpetrator in planning and perpetration of crime	50	82.0
2.	Co-perpetrator in planning of crime	10	16.4
3.	Incitement to perpetrate a crime	-	-
4.	Accessory	1	1.6
5.	TOTAL	61	100.0
	Individual perpetration of crime	50	
	ALTOGETHER	120	

Table 3:
Form of co-perpetration

From the perspective of data regarding planning and preparation of robbery crimes, we find that the interpretation of these results has been limited by the relatively high percentage of those cases, where from court records, the exact answer to the questions on the planning and preparation of robberies could not be determined. However, it is evident that there is a lack of long-term planning and preparation (which is a characteristic of highly professionalised crime), and that the commission of robbery in the short-term has been planned in 59.2 % of cases. In less than half cases (29.2 % of cases), short-term preparations are performed for the execution of this crime.

		N	%
0 -	No data	15	12.5
1 -	Long-term planning	4	3.3
2 -	Short-term planning	71	59.2
3 -	Used opportunity	30	25.0
	TOTAL	120	100.0

Table 4:
Planning a crime

		N	%
0 -	No data	29	24.2
1 -	Careful preparation	1	0.8
2 -	Short-term preparation	35	29.2
3 -	Without any preparation	55	45.8
	TOTAL	120	100.0

Table 5:
Preparing a crime

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Furthermore, interesting is the fact that almost half (55 or 45.8 %) of robbery crimes are carried out without any preparation, and so constructed criminal acts can be reasonably classified into the non-professional robberies (opportunistic). In order to verify this assertion, we will present the following comparative analysis of crossing data on the number of accomplices with data on planning and preparing these criminal acts of robbery. Also, we tested the significance of obtained differences, and established contingency relationship between the number of accomplices, planning and preparation of robberies. Given that the method of choice has been conducted by using the table of random numbers, this provides a complete representative sample of the population of robberies. Thus, the proportions, relationships and differences that are identified in the sample can be generalized to the total population of robbery crimes in the Canton of Sarajevo, and due to the sample size, also to the entire population of robberies in Bosnia and Herzegovina.

Table 6:
Comparative
overview of
the number of
perpetrators
and the
planning of the
crime

Planning of criminal act		Number of co-perpetrators						Total	
		Individual perpetration		With one more person		With two or more persons		N	%
		N	%	N	%	N	%		
-	Planned	21	42	30	70	24	92	75	62.5
-	Used opportunity	18	36	12	27	-	-	30	25.0
-	No data	11	22	2	5	2	8	15	12.5
	TOTAL	50	100	44	100	26	100	120	100.0

$\chi^2=38.658$ significant at .000 CC=0.494

Note: For purposes of contingency analysis data from the modality "long planned" and modality "three or more accomplices" have been collapsed

Table 7:
Comparative
overview of
crossing data on
the accomplices
with data about
preparing a
criminal offense

Preparation		Number of co-perpetrators						Total	
		Individual perpetration		With one more person		With two or more persons		N	%
		N	%	N	%	N	%		
-	Preparation	9	18	13	30	14	52	36	30
-	No preparation	25	50	24	56	6	22	55	46
-	No data	16	32	6	14	7	26	29	24
	TOTAL	50	100	43	100	27	100	120	100.0

$\chi^2=29.678$ significant at .003 CC=0.445

Our intention was to examine the relationship between two aspects of professionalism: group involvement in the crime and noted efforts relating to planning and preparation in the lead up to the event. Starting from the Conklin's classification scheme and the assumptions that a) professional robbers rely

on planning and preparation, b) that they tend to involve a greater number of accomplices, it was important to consider what trends are observed in the cross-analysis of number of participants as independent variables with the variables of planning and preparation (which can be treated as independent variables). In both Tables (6 and 7), it is clearly observed that there is tendency of increasing data of planning and preparation in the columns that show the growth of the accomplices. For example, in 42 % of cases involving individual perpetrators we found evidence that planning have occurred, and that number climbs up to 70 % when the act was committed with another person, and at 95 % when the crime was committed by two or more accomplices. Conversely, the number of cases in which perpetrators were compelled by opportunistic circumstances to act without a plan increases in relation to the degree of their independence in committing this crime. Testing statistical significance of these differences confirms these tendency deflections, and coefficients of contingency of 0.494 for planning and 0.445 for preparation indicate that the increase in the number of perpetrators is significantly associated with planning or preparation prior to the act of robbery being committed. In order to highlight the significance of these tendencies, we point at the methodological axiom of social sciences, including criminology, that within the empirical research of phenomena, a scientific principle is primarily manifested in the tendency of variation of data whose size of deflection is verified by tests of significant differences and coefficients of nonlinear correlation. Therefore, considerations on data crossing in Tables 6 and 7, as well as verified correlation tendencies on the number of accomplices, and their preparation and planning of robberies, allow an approximation to the division on professional and opportunistic robbery attacks.

Further, bearing in mind the above-mentioned classification model of Conklin (1972), which states that professional criminals are directed to the situations and the victims of which they are expecting large prey while keeping risks to a minimum (Conklin, 2004), it is thought that the expectation of higher amounts of values and money should be linked with the characteristics of professionalism. In that sense, we were interested whether the combination of these expectations with the presence of numerous accomplices will indicate on the statistically significant differences and correlation. Our analysis shows that test of differences is not significant and therefore it cannot be determined whether independent and "organized" criminals differ significantly in relation to the variable that refers to the size of profit expectations. Specifically, 82.5 % of the total number of robberies in the Canton of Sarajevo were motivated by the expectation that the victim or object has a large amount of value in money or things. Therefore, this characteristic is not differentiating in terms of individual or group robbery attacks. Independent perpetrators or perpetrators in the pair did not differ from each other, while the apparent difference in group perpetrators (with three or more accomplices) is not confirmed as statistically significant (see Table 8). Generally it can be stated that the population of robbery offenders in Sarajevo, the number of accomplices, and the characteristics of planning and preparing for the commitment of these crimes, well differentiate types of professional and opportunistic robbers, while the expected level of values of those who they want to rob are not a differentiating factor.

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Table 8:
Ratio of
perpetrators
and
expectations of
higher amount
of profit

What did the perpetrator expect that the victim has		Number of co-perpetrators						Total	
		Individual perpetration		With one more person		With two or more persons		N	%
		N	%	N	%	N	%		
-	High monetary value	39	78	34	79	26	96	99	82.5
-	Lower monetary value	11	22	9	21	1	4	21	17.5
	Total	50	100	43	100	27	100	120	100.0
$\chi^2=5.866$ not statistically significant at 8 degrees of freedom									

Although robberies are not significantly differentiated in either criminal investigations or the criminological literature in terms of the means of attack, we decided to examine the characteristics of the *modus operandi* of robberies in the Canton Sarajevo. Our decision was based upon the assumption that after the war in Bosnia, the availability and ownership of weapons remains high. Therefore, it could be expected that firearms are used in the commitment of most robberies. Further, we examined whether there are differences among opportunistic and professional robbers in their ways and means of executing this crime. According to the obtained data, in 20 % of all cases, robberies were committed with the threat of physical force, while in a further 16.7 %, an object was used to intimidate. Generally, we can state that every third (36.7 %), robbery was committed without the use of firearms and cold weapons, and in 38.3 % of cases, cold weapons were used. Thus, 25 % of them included firearms, primarily handguns, and revolvers. Here it is important to note that the differences in the aggregated data from the Table 9 are not statistically significant between the cases of professional and opportunistic robbery.

Table 9:
Means of
committing
robberies

Used means		Number of co-perpetrators						Total	
		Individual perpetration		With one more person		With two or more persons		N	%
		N	%	N	%	N	%		
0.	No data about means	10		7		7		24	20.0
1.	Some object	7		6		7		20	16.7
	TOTAL	17	34	13	30	14	52	44	36.7
2.	Cold weapon	19		23		4		46	38.3
3.	Short-barreled firearms	12		6		9		27	22.5
4.	Long-barreled firearms	2		1		-		3	2.5
	TOTAL	33	66	30	70	13	48	76	63.3
	ALTOGETHER	50	100	43	100	27	100	120	100.0
$\chi^2=3.77048$ with 2 degrees of freedom is not statistically significant									

Manner of perpetrating		Number of co-perpetrators						Total	
		Individual perpetration		With one more person		With two or more persons		N	%
		N	%	N	%	N	%		
-	Used a weapon, physical force and injury	3	6	9	21	8	30	20	16.7
-	Used a weapon, physical force, but no injuries	39	78	27	63	15	55	81	67.5
-	Used only physical force and threats	8	16	7	16	4	15	19	15.8
TOTAL		50	100	43	100	27	100	120	100.0

$\chi^2=8.2463$ with 4 degrees of freedom significant at the .05 level

Table 10:
Comparative overview of manner of robbery perpetration by number of accomplices

Data results from the Table 9, further point at testing differences between the opportunistic robbery, which is identified as an independent criminal act, and professional, which is identified as a group criminal act, and this was directed on the entirety of *modus operandi*. Specifically, interest was focused to the question: do professional criminals differ from others by their tendencies to harm the victim? Thus, Table 10 shows a slight tendency for professional criminals who carry out criminal offense with one or more accomplices to tend (statistically significant) to commit injury to victims than individual (opportunistic) robbers. However, the obtained score of chi test is not sufficient, and therefore we cannot speak about a significant functional correlation between robberies committed in pairs and in groups with tendencies to injury victim. Instead, there is only statistically significant difference between the "steam-group" and individual perpetrators of these crimes. From the standpoint of risk assessment for the body and the life of the victim, it can be concluded that only in 16.7 % of all robberies in the Canton Sarajevo there is a real risk for personal injury of victims. In the remaining 83.3 % of cases, it boils down to threats and intimidation, whether by using firearms (67.5 %), or only physical force (15.8 %). Similar findings were found in the study that was conducted by Meško, Dvoršek, Dujmović, and Bučar-Ručman (2004) on the sample of 187 robberies committed in Slovenia, which showed that typical robber uses physical force to threaten a potential victim. Generally, we can conclude that the *modus operandi* does not represent a significant differentiating feature of professional and opportunistic robbers in the population of these acts committed over a period 1997 until 2007 in the Canton of Sarajevo.

3.1 Cluster Analysis and Classification of Robbers

In an effort to get to the authentic classification of robbers, cluster analysis has been applied to identify homogeneous groups that have a maximum matching characteristics within the group (cluster), and different among groups (cluster's). Cluster analysis has homogenized most of the perpetrators in clusters 1, 4 and 5,

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while in the clusters 2 and 3 small number of perpetrators was specified. By the number of offenders of all respondents of the used sample, dominant is cluster 1 N=54 or 45 %. It includes the perpetrators of the youngest age (1986 as year of birth), unmarried, unemployed, immigrant newcomers to the city, who have short and long-term crime planning and preparing with another participant, expecting the great value of the robbery. They did not know the victim, and a recidivist status for them could not be determined. On the basis of the reported features, they could reasonably be called a **young professional robbers**. The second group consists of homogeneous individuals classified in cluster 4 N=36 or 30 % of all respondents. They were with another accomplice in the planning and execution of the short-term planning and without any preparation committed a robbery. They knew very well the victim, and therefore expected a great value from the robbery. According to their average birth year (1974), they are middle aged, married and have a full-time job. There is no information whether they are immigrant or indigenous, but it certain that they are not registered as recidivists for this or for other crimes. They could be called a domicile professional robbers of middle age.

Table 11:
Results of
cluster analysis

MANIFEST VARIABLES		clu 1 N = 54 (45.0 %)	clu 2 N = 6 (5.0 %)	clu 3 N = 4 (3.3 %)	clu 4 N = 36 (30.0 %)	clu 5 N = 20 (16.7 %)
02	No. of accomplices	with 1 pers.	with 1 pers.	independ.	with 1 pers.	independ.
03	Type of of complicity	in plann. and commit.	in plann. and commit.	-	in plann. and commit.	-
04	Planning	long planning	short planning	short planning	short planning	no data
05	Preparation	short preparation	without preparation	without preparation	without preparation	no data
06	Relationship with the victim	doesn't know	doesn't know	doesn't know	knows well	doesn't know
07	Assumed that the victim has	great value	great value	great value	great value	great value
53	Year of birth	1986	unknown	1947	1974	1965
55	Marital status	not married	not married	married	married	married
57	Employment	un-employed	un-employed	temporarily employed	permanently employed	unemployed
58	Moved / domicile	moved	moved	moved	unknown	domicile
59	Recidivist	unknown	recidivist for same crime	recidivist for other crimes	not recidivist	recidivist for other crimes

The third homogeneous group consists of respondents in cluster 5 (N=20 or 16.7 %). The offenders classified in this group committed robbery alone, and for them it could not be determined whether and how much did they plan, or how much they were prepared to carry out this crime. They did not know the victim. According to the average birth year (1965), they belong to the older part of the criminal population (above 40 years of age). They are married, unemployed, and are part of the inhabitants of Sarajevo, known to police as recidivists for numerous other crimes. They could be called older domicile opportunistic robbers. The fourth group (cluster 2), is classified only by 6 or 5 % of respondents, those who committed the crime of robbery with another participant, after a period of short planning or without preparation. They did not know the victim, but they supposed that it had great monetary value. Year of birth of this group did not affect the structuring of this cluster, but the offenders classified in this cluster are unmarried, unemployed, they had moved to Sarajevo where they repeatedly carried out the robbery crimes. Therefore, they can be called opportunistic recidive- entrant robbers. Fifth, the smallest group (cluster 3) consists of only four respondents or 3.3 %, and they primarily differ from the fourth group by features that they independently carried out acts of robbery. They belong to the oldest population group with an average year of birth 1947, married and are occasionally employed, settled after the war in Sarajevo, and recidivists for other crimes. In this sense, we consider it justifying to refer to them as chronic occupational oldest criminals.

4 CONCLUSION

Presented results indicate that robbery crimes in the Canton Sarajevo are characterized by professional and opportunistic robbers, who by their specialities fit into the Conklin's typology of such categories of robbers. For the other two classification groups cited by Conklin, the relevant indicators could not be determined from the court documents and police records, except for three cases, when the court decided to impose an obligation treatment for offender in a psychiatric institution because of the excessive consumption of drugs and alcohol. Further, our cluster analysis supports Conklin's (2004, 2007) statement that unemployment is closely correlated with robbery crimes, and that robbers and their victims do not usually know one another. However, by applying cluster analysis, we have established the authentic classification of robbers in the Canton Sarajevo. Expressed classification of robbers in the Canton Sarajevo, determined by cluster analysis, which distinguishes similar individuals (entities) and gathers them into homogeneous groups, is partially compatible with Conklin's typology, but profound in terms of age, immigration and domicile, marital status and employment of the robbery perpetrators in the Canton Sarajevo. Types (clusters) that are obtained are quite clear regarding the basic criteria of collaboration, planning and preparation for a criminal offense, and this differentiates them to the professional and opportunistic robbers. On the other side, the criterion of domicile, movement, and type of recidivism (for the same or similar offenses) makes further distinctions among them, and therefore makes this classification complex. However, such findings serve as a contribution to the better

understanding of the robberies in the Canton Sarajevo, rather than some new form of typology which would be significantly different from Conklin's one.

It is also interesting to emphasize that general characteristics of robberies in the Canton Sarajevo are showing equal distribution between commercial and street robberies so as for the level of professionalization. This is quite opposite finding from one that has arisen from Meško et al. (2004) study, in which they found out that 64 % of the robberies were committed in the outdoor space. Moreover, results from current study shows that half of all analyzed cases have involved certain number of accomplices but without some serious levels of planning. Such finding is evidently valuable contribution to the Conklin's classification of robberies since it shows that planning of robberies together with the involvement of more persons are significantly associated. With regard to the *modus operandi* analysis, it is clear that in the most of the cases, different types of weapons are used while committing robberies and they usually serve only for the purposes of threatening the victims. This is useful finding for creation of specific prevention and self protection programs in this field.

Main limitations of this paper are related to the methodology of data collection. It uses only those data from the public records of police and courts, but not one from the alternative sources (such as victimization and self-reported studies). The analysis and results are limited only to cleared cases with known offenders, since characteristics and circumstances of robberies in general can be quite different. However, such findings still allow certain degree of generality for the area of the Canton Sarajevo, as well as for the rest of the state. Such claim is based on the fact that the Canton Sarajevo is the largest urban area in the B&H, with highest rates of property crime so as for the robberies. Moreover, high recidivism rate in the sample (more than 50 %) contributes to such inference, and it can be concluded that results of this article serve as solid ground for development of more efficient measures for prevention of robberies in the Canton Sarajevo. Further research in this field should use qualitative analysis of the robber's personality and their socio-demographic background in order to better understand process of the development of their criminal careers, and thus give additional contribution to theory and practice in this field.

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