

**KRASNOVA KRISTINA ALEKSANDROVNA:** Illegal drug market in Russia: recent changes and trends

**DALMA LUKÁCS:** Criminal geographical research of the stolen cultural properties from Hungary -based on the Psyche Project -

**ZSUZSA PISKÓTI-KOVÁCS – MILÁN KOVÁCS:** New method to measure crime: shifting the focus from simple counting to weighting

**ATTILA SUHAJDA:** Security matrix in an actual state

**VINCE VÁRI:** The history of the organizational efficiency measurement of the police in Hungary

# CGJ

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LECTORI SALUTEM!

**Dear Readers,**

It is a great pleasure for all editorial board members that the Criminal Geographical Journal is now 1 year old, as the first issue was published last December. It is no exaggeration to say that the most critical period in scientific journals' life is the first year. If a magazine survives this, there is a good chance it will survive for many years. Once again, I wish our magazine a happy birthday and thank all the editorial board members for their help. Without them, this journal would not have been created. Of course, I would also like to thank the colleagues who published in the journal because if they had not submitted their interesting articles, the Criminal Geographical Journal issues so far would not have appeared.

I would also like to thank the growing number of readers who have greatly helped the editorial board's work with their forward-looking suggestions and ideas.

I am confident that I can write an equally happy foreword in 2021 and mention the second birthday of CGJ.

I wish you useful pastime with CGJ.

**Szabolcs Mátyás**

Chair of the editorial board

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**ILLEGAL DRUG MARKET IN RUSSIA:  
RECENT CHANGES AND TRENDS**

## TABLE OF CONTENTS:

1. What is the Russian illegal drug market?
2. The demand side.
3. The supply side.
4. Conclusion.

**ABSTRACT**

An illegal drug traffic continues to expand from year to year due to an increase in demand (the emergence of more and more people with drug addiction) and supply (the emergence of new types of psychoactive substances). The author examines the state of drug crime, trends in the state anti-drug policy and propose a set of measures aimed at countering drug trafficking. The research results provide support for legislative initiatives in this area. The author maps out promising areas for further research.

**Keywords:** black market, crime, crime prevention, criminal law, narcotics

1. What is the Russian illegal drug market? Traditionally, a significant share in the structure of the Russian black market is made up of the segment of prohibited goods (Repetskaya A.L. 2008). Drugs are classified as prohibited for free circulation.

Drug trafficking has traditionally been a lucrative area of illegal activity, especially for organized crime. The latest criminological research has revealed some features of organized crime that complicate the fight against it: it penetrates into all spheres of society (Mercuriev V.V., Sokolov D.A., Ulyanov M.V. & Vasnetsova A.S. 2014); really affects the power structures, aiming its

impact, first of all, at the police and law enforcement, industrial, construction, immigration and customs authorities, authorities issuing permits for driving cars and certificates of technical inspection, financial and tax authorities, prosecutors, registration bureaus (Kholyst B. 2015).

In the modern world, the exponential growth of non-medical drug use remains one of the most acute social problems, the scale of which has led to it being classified as one of the biggest threats to international security (Kobets P.N. & Krasnova K.A. 2017). Suffice it to say that, according to the UN, at present, the total number of people who use drugs is about 271 million, or 5.5% of the total population of the planet between the ages of 15 and 64. Of these, about 188 million people use cannabis, 53 million people are regular opioid users, and 11 million people are injecting drug users (World Drug Report 2019). The severity of drug abuse is compounded by an increase in the rates of HIV, hepatitis C and tuberculosis, which invariably accompany illicit injecting drug use (Kobets P.N. 2019).

In recent decades, the processes of active drug addiction of the population have spread to Russia. World integration not only opened up unprecedented opportunities for humanity, but is also accompanied by the fact that a number of socially dangerous phenomena, including drug addiction and drug trafficking, have become a “problem without borders” (Grinenko I.M. (2010).

In Russia, the state anti-drug policy is to completely ban all types of drugs. Analyzing the national anti-drug policy, one should dwell on its principles, which are mentioned in the Federal Law of 08.01.1998 No. 3-FZ "On Narcotic Drugs and Psychotropic Substances", however, they are not indicated as imperatives of the relevant activity. These principles are as follows: 1) state monopoly on the main activities related to the circulation of narcotic drugs and psychotropic substances; 2) licensing of all types of this activity; 3) coordination of the activities of federal executive bodies, executive bodies of the constituent entities of the Russian Federation, local government bodies; 4) the priority of measures for the prevention of drug addiction and law violation related to the illegal circulation of narcotic drugs, psychotropic substances, stimulation of activities aimed at anti-drug propaganda; 5) state support for scientific research in the development of new methods of drug addiction treatment; 6) involvement of non-governmental organizations and citizens in the fight against the spread of drug addiction and the development of a network of institutions for medical and social rehabilitation of patients with drug addiction; 7) international cooperation in the field of combating illicit trafficking in narcotic drugs, psychotropic substances on a multilateral and bilateral basis.

The issues of drug trafficking control, combating drug crime, prevention of drug addiction, treatment and rehabilitation of patients with drug addiction, regulatory consolidation of the goals

and objectives of the relevant activities and regulation of their implementation in order to ensure national security are regulated by the Constitution of the Russian Federation, federal laws, decrees of the President of the Russian Federation and decrees of the Government of the Russian Federation, interdepartmental and departmental regulatory legal acts.

The Russian legislation generally complies with the international conventions of 1961, 1971, 1988 and 2005 ratified by Russia, and which prescribe prosecution for possession and distribution of all substances classified as drugs (Kobets P.N. & Krasnova K.A. 2019).

National legislation is represented by federal laws and the National Security Strategy of the Russian Federation (hereinafter - the Strategy). In the latter, the illegal "activity of criminal organizations and groups, including transnational ones, associated with the illegal circulation of narcotic drugs and psychotropic substances" is classified as a threat to state and public security (Decree of the President of the Russian Federation of December 31, 2015 No. 683). Improvement of the legal regulation of preventing the spread of drugs and combating this criminal phenomenon is included in the Strategy as one of the priority directions of state policy. Let us consider the dynamics of drug trafficking over the past decade, based on the data of official statistics. In Russia, the number of registered crimes related to drug trafficking was as follows: in 2010 – 222,564, 2011 – 215,214, 2012 – 218,974, 2013 – 231,462, 2014 – 254,230, 2015 – 236,939, 2016 – 201,165, 2017 – 208,681, 2018 – 200,306, 2019 – 190,197 (Legal statistics portal). So, over a decade, despite the legal (amendments made to the Criminal Code of the Russian Federation, Federal Law of 08.01.1998 No. 3-FZ) and organizational (transfer of the Ministry of Internal Affairs of Russia functions of controlling the circulation of narcotic drugs, psychotropic substances and their precursors, as well as in the field of countering their illegal trafficking) changes, the decrease in the quantitative indicators of registered drug crimes was only 15%.

Official statistics also indicate a downward trend in the number of identified persons who have committed crimes related to drug trafficking over the past five years: 2010 – 112,109, 2011 – 109,152, 2012 - 115,214, 2013 - 117,912 , 2014 – 123,300, 2015 – 121,557, 2016 – 108,258, 2017 – 106,292, 2018 – 95,683, 2019 – 85,425 (Ibid).

In the second decade of the XXI century in all regions of Russia cases of drug use or distribution are recorded. According to expert estimates, the number of people who use drugs is much higher than the official figures and may exceed several million (Kobets P.N. 2016). The predominance of the drug-addicted part of the population on the territory of certain regions of Russia is due to a number of interrelated factors, which include the geographical position of their region of residence. The prevalence of drug addiction and the intensity of its treatment have a pronounced

regional character. To illustrate this conclusion, let us turn to the statistics for 2019 provided by the Prosecutor General's Office of the Russian Federation and analyze the regions most involved in drug trafficking. The summarized data are presented in the regional context in the 1. table.

*Table 1. Summarized data in regional context*

Rank	Region of Russia	Number of crimes related to drug trafficking	Region of Russia	Number of persons who have committed crimes related to drug trafficking
1	Moscow	12761	Krasnodar region	4339
2	Moscow region	8330	Moscow region	3917
3	Saint-Petersburg	8240	Saint-Petersburg	3635
4	Chelyabinsk region	7618	Moscow	3608
5	Krasnodar region	6480	Rostov region	2846

As we can see from the table, the highest level was registered in the regions in which plant drugs are grown or transit territories, as well as in port cities. In particular, St. Petersburg, Krasnodar Region, Rostov Region have large sea ports, and several international airports are located on the territory of Moscow and the Moscow Region. According to its geographical location, the Chelyabinsk region has a long distance away from the seas; however, due to the rather long border with Kazakhstan, the route of the largest drug traffic passes through the territory of the region. The situation is complicated by the unabated flow of emigrants from drug-prone regions. Consequently, these regions are close to the supply side.

Considering drug trafficking as a criminal market, we believe that modern anti-drug policy in Russia should be aimed at developing the most effective measures aimed at reducing supply and demand in this market. Therefore, let us outline the most problematic issues on each side of relations in this market.

*The demand side.* As early as the mid-1990s, against the background of the profound socio-economic transformations taking place in Russian society and the integration of the Russian Federation into the world economy, the rates of drug addiction, accompanied by an increase in crime related to drug trafficking, have become critical.

At the same time, the level of the registered incidence of drug addiction, according to medical

statistics, decreases annually. So, according to data for 2018, the total number of patients with mental disorders related to drug use registered by the narcological authority was 505.6 thousand people or 344.5 per 100 thousand of the population. In 2018, the number of people diagnosed with a mental disorder associated with drug use for the first time in their life was 57.3 thousand people, or 39.0 per 100 thousand of the population<sup>1</sup>.

The proportion of drug users by gender was determined. Thus, among the patients diagnosed with drug addiction and substance abuse for the first time in their life, the proportion of women was 15% and men – 85%.

Of particular concern is the prevalence of non-medical drug use among young people, which not only worsens the demographic situation in Russia, but also criminalizes society as a whole. Organizationally, the following changes have taken place in the national anti-drug policy. Thus, in January 2020, the Ministry of Internal Affairs of Russia created divisions for combating the distribution and propaganda of drugs on the Internet. In addition, a mechanism has been established by The Federal Service For Supervision Of Communications, Information Technology, And Mass Media (Roskomnadzor) to restrict access to certain Internet resources on the basis of the decision of the Ministry of Internal Affairs of Russia on the recognition of prohibited information regarding the methods, methods of development, manufacture and use of narcotic drugs, psychotropic substances and their precursors, new potentially dangerous psychoactive substances, places of their acquisition, methods and places of cultivation of narcotic plants. The website of the Ministry of Internal Affairs of Russia contains a hyperlink for the website of the Unified Register of Prohibited Information, where concerned citizens can report resources containing prohibited information about drugs by filling out an online application form. Following the meeting of the State Anti-Drug Committee on 18 December 2019, the draft Strategy of the State Anti-Drug Policy of the Russian Federation for the period up to 2030 was approved, which is currently available on the Internet for the purpose of public discussion.

Analyzing the legal aspect of anti-drug policy, it is worth mentioning new bills that provide for the introduction of criminal liability for the promotion of drugs on the Internet (Izvestiya 2020). The problem of drug use should not be solved simply by means of criminal repression. It is undoubtedly the responsibility of law enforcement to reduce the supply of drugs and to hold accountable their drug dealers, but the most important factor in prevention is informing and educating current and potential drug users, including with the involvement of civil society

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<sup>1</sup> The total data is given by the number of persons registered with the institutions of the Ministry of Health of Russia and the Federal Penitentiary Service of Russia.

actors, whose potential in anti-drug prevention is not fully used. In this regard, the experience of a number of European countries is noteworthy.

In France, the state focuses on three areas: criminal prosecution of drug trafficking; prohibition of the use of all types of drugs; free anonymous treatment of drug addicts. Moreover, it should be noted that the country's criminal policy advises prosecutors to place maximum emphasis on the refusal of repressive measures against drug users in favor of expanding the range of treatment and prevention measures with their further social adaptation, which is considered by many experts as a positive experience (Vlasov I.S., Golovanova N.A., Kubantsev S.P., Menshikh A.A. & Chernukhina L.S. (2008).

In Hungary, most of the organizations working in this area are involved in general education activities. About 70% of them are non-governmental organizations using public funds (mainly on the basis of tenders). The remaining share of anti-drug work is mainly carried out by state and municipal organizations. The Hungarian police also conduct important preventive work, through their so-called crime prevention consultants. They are professional police officers, each of whom does drug crime prevention activities in 3-4 secondary schools on a regular basis (Ürmösné Simon, Gabriella 2018).

It is also necessary to dwell on one more aspect of the domestic anti-drug policy. We are talking about the refusal of the state to carry out substitution treatment of drug addiction with the use of narcotic drugs and psychotropic substances included in lists I (methadone) and II (buprenorphine) of the list of narcotic drugs, as well as legalizing the use of certain drugs for non-medical purposes (Subparagraph "d" of paragraph 32 of the Decree of the President of the Russian Federation of June 9, 2010). At the same time, in a number of European countries this practice has found a positive response from specialists.

*The supply side.* The current situation in Russia and in the world is characterized by the constant appearance of new types of drugs, and one would need completely different new equipment to identify them. This problem requires radical approaches. Currently, along with the predominance of Afghan heroin, synthetic drugs (amphetamine-type stimulants, synthetic analgesics and synthetic opiates, JWH synthetic cannabinoids) are becoming more widespread in drug trafficking. Every year, dozens of new types of psychoactive substances of synthetic origin are “launched” into illicit trafficking, due to their low cost, marketed primarily among the youth. The abuse of these types of drugs, along with other psychostimulants, are most widespread in places of mass recreation of young people and educational institutions of various levels.

One of the new trends that pose a real threat to the life and health of society is the epidemic spread of new synthetic drugs on the territory of Russia, disguised as consumer goods. Until 2009, these were mainly narcotic smoking mixtures, the so-called "spice". After the ban on their sale in 2009, new synthetic drugs are sold under the disguise of household chemicals, cosmetics, and animal feed.

Activities aimed at limiting the turnover of new types of psychoactive substances are under constant control of the Government of the Russian Federation. By decrees of the Government of the Russian Federation, List I of the List of narcotic drugs, psychotropic substances and their precursors subject to control in the Russian Federation is regularly updated with new prohibited substances (Subparagraph "d" of paragraph 32 of the Decree of the President of the Russian Federation of June 9, 2010). The latest changes were made on 29 July 2020. Despite the measures taken to legally restrict the turnover of new types of synthetic drugs, the drug market is constantly replenished with new types of psychoactive substances (analogs, modifications, derivatives), similar in effect on humans, not included in the above List. In this regard, we forecast a further expansion of the circle of people involved in the production and circulation of uncontrolled psychoactive substances, and an increase in the number of their users.

The involvement of the country's population, especially young people, in drug use is facilitated by the activities of drug dens. The popularity of desomorphine, which is home made by means of extraction from codeine-containing drugs, which are in the open over-the-counter sale, is associated with drug dens. The recipe for the manufacture of desomorphine is widely replicated on the Internet, which contributes to the introduction of an increasing number of drug addicts to the use of this type of drug. The danger of desomorphine to human health lies in its high toxicity. A person addicted to desomorphine is practically incurable and dies within 1.5-2 years due to severe damage to internal organs, cardiovascular system, brain, vein thrombosis (Kobets P.N. 2014).

The implementation of the state anti-drug policy is facilitated by the current system of monitoring the drug situation in Russia, including on the Internet, carried out at two levels: federal and regional (in the constituent entities of the Russian Federation in the context of municipalities).

Drug addiction has become a disaster on a national scale, a global problem, the solution of which will determine Russia's national security, namely, the security of its people, the security of the individual, society and the state from external and internal threats in all areas of life. The criminal drug trafficking market is constantly changing and expanding. Law enforcement agencies and specialists in this area should not weaken their attention to this problem, referring

to the declining statistical indicators of drug crime. On the contrary, the apparent improvement in the drug situation in Russia may indicate an increase in the secrecy of drug suppliers and distributors, and the refusal of consumers to seek medical help.

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**CRIMINAL GEOGRAPHICAL RESEARCH OF THE STOLEN  
CULTURAL PROPERTIES FROM HUNGARY - BASED ON THE  
PSYCHE PROJECT****Abstract**

During my research I have studied several databases, like ENYÜBS<sup>2</sup> or Leonardo, but I have always encountered the same problem, latency. This phenomenon has to be taken into account in research and analysis. With this in mind I started to investigate the theft of cultural properties in Hungary. My goal was to identify domestic "trends" in illicit trafficking from a database created within the Psyche Project. This database is the result of the collaboration between Carabinieri TPC and Interpol, which contains 944 items related to thefts in Hungary. The data showed that thefts occurred mainly along the border both in the north and south, as well in Budapest, furthermore that apartments were the number one target (85%), meanwhile the library and the museum (3-3%) to a lesser extent, they are also "victims" of art theft. The fine arts have the highest number of stolen works (746 cases). Next comes the book, goldware and religious objects. Books, just like religious objects, are easy targets. From libraries, anyone can easily steal books or rip pages such as old maps and drawings. These are usually a few pages of tiny paper booklets containing contemporary clothes, sketches and descriptions. Besides, the amount of archaeological findings from illegal excavations can still not be measure, and thus the extent of latent crime in the area under investigation cannot be estimated.

**Keywords:** cultural property, criminal geography, stolen artefacts, Psyche project

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<sup>2</sup> Egységes nyomozó hatósági és ügyészégi bűnügyi statisztika, Uniform Crime Investigation Authority and Prosecution Statistics

## 1. Introduction

The source of illicit trade of cultural properties is the transfer of items from illegal excavations and stolen works of art to the black market. Although we cannot determine the exact number of illegal excavations, the number of stolen items is much more accurate. If someone has a financial loss they report it to the police. With this move, there is a possibility that the stolen artefacts become part of the national database (if the country has one) and part of the international databases, such as the Interpol database. During my research, I investigate the stolen items from Hungary by examining data from the newest Interpol database, which created within the Psyche Project (Rush and Millington, 2015, p. XIV).

## 2. Databases

### 2.1 Leonardo

To understand the topic, it is important to talk about the origin and the structure of the databases and the data that contained there. There are several types of databases with several attributes. In these days the most advanced database is the Leonardo produced by the Carabinieri TPC (Lukács, 2019). Leonardo has the image search algorithm function which facilitates the work of the Carabinieri. However, the Carabinieri is also involved in rescuing the Vatican objects, as they are dealt with the cases after they are handed over by the Vatican City Gendarmerie. The Vatican State's online catalogue is the Beni Ecclesiastici in Web ("BeWeB") (<https://beweb.chiesacattolica.it>, 5/1/2020), that collects ecclesiastical items, protecting the identity of its owners, and it also helpful for the researchers. The website allows you to read various pieces of information by searching for art objects. For geographic information, we only see the region where the object is located. The reason for this is to protect the owner of the artwork against the robbers. However, researchers have the opportunity to send a message to the unknown owner, who may decide whether or not to disclose the location of the item. BeWeB is also useful if you need to take action in the event of a theft or natural disaster because Carabinieri can immediately join the online catalogue. They have the ability to see what objects are in the church and transfer the image along with the data to the Leonardo database and then to the Interpol database (LUKÁCS, 2020 p.137).

### 2.2. Works of arts

Interpol's pre-2019 database is the Works of Art (Lukács, 2018 p.123), which has now been transformed by the Italian system. However, the WOA database had a word searching function only, without the Italian image search algorithm system. During my interviews with the

professionals, it was revealed that one of the biggest problems they face during dealing with the illegal trade of cultural properties is the lack of communication.

### 2.3 Psyche Project

Carabinieri TPC<sup>3</sup> contributed to the development of the WOA database, creating the Protection System for the Cultural Heritage (the Psyche Project). Thus, Italian technological development can be found on the contemporary Interpol interface. The problem with the new system is that it has become too Europe-centered with Italian data. Originally designed to be up and running within 24 months, but the database was eventually changed to 33 months due to minor errors (<http://tpcweb.carabinieri.it/SitoPubblico/psyche/generic?lang=EN>, 4/1/2020). The process is divided into four phases:

- Collection of data such as location, time of the theft and associated images of the object.
- As a second step, the Leonardo and WOA databases were linked.
- As a third step, the image comparison function has been introduced.
- Finally, professionals were trained to use the new database.

### 3. Hungarian data in the Psyche Project

For my research, I used the Psyche Project database, from which I collected data of stolen objects in Hungary. Access to the database can be initiated online from Interpol's Paris headquarters, after which you can browse the database for one year. I chose the Psyche Project for my research because it combines international data with the Italian model. In addition to this, it is possible to inspect not only cities but also localities for stolen items (eg how many items have been stolen from a museum, how many apartments have been robbed, etc.), allowing for a comprehensive examination of the data. My goal is to make recommendations to the Hungarian law enforcement agencies in order to protect the cultural property more effectively. At the beginning of my research, I made questions about whether there is a tendency and connection between thefts? Is the size of the objects important to the perpetrators? My goal during this study is to answer such and similar questions. The data were recorded one by one into an Excel spreadsheet, then I analyzed them and prepared statistics and maps. I worked with a total of 944 subjects. It is important to note that a description of a cultural property can belong to multiple objects, for example in the case of Terény- Kiskérpuszta where seven silver bowls are registered as one item.

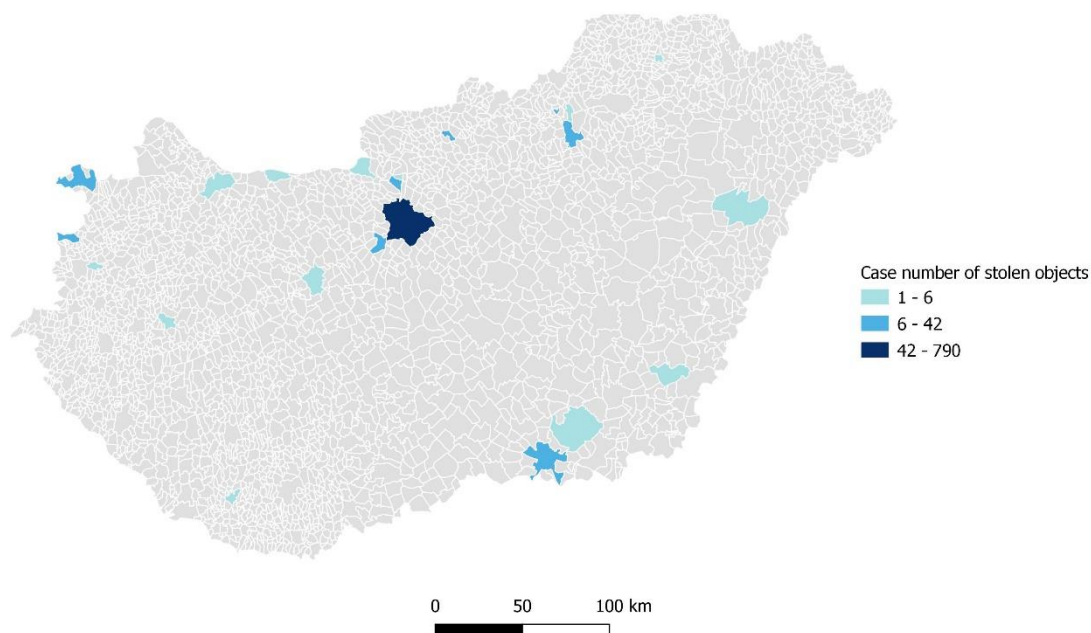
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<sup>3</sup> Comando Carabinieri per la Tutela del Patrimonio Culturale

#### 4. Hungarian settlements in the Psyche Project

There are 23 settlements registered in Hungary in connection with art theft. Most art thefts were committed in Budapest (790 cases), accounting for 83% of the crimes (See Mátyás 2018). Then Terény, Kiskérpuszta comes with 42 thefts (4%) and then Szentendre with 20 cases (2%). From the Figure 1, we can now see only cities with 13 or fewer offenses. Although the majority of thefts occurred in the capital, there were also thefts in the North and Northwest part of the country near to the state border and sporadically in the South. However, it is also noticeable that these settlements are not only close to the border but also function as a traffic hub. Theft occurred in the border areas close to Slovakia, Austria, Romania, Serbia and Croatia.

#### Distribution of stolen cultural property by cities



**Figure 1: Distribution of stolen cultural property by cities**

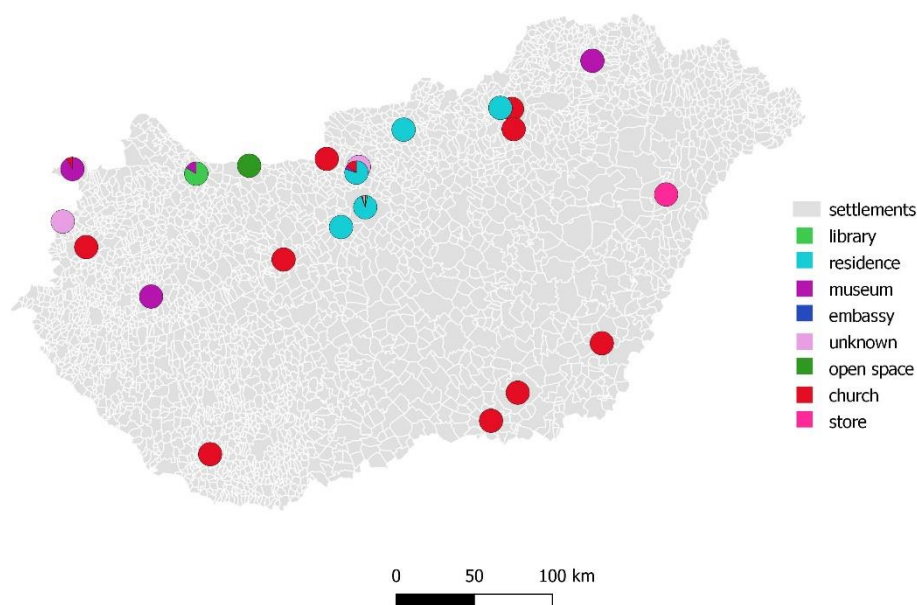
Database: Based on data from the Interpol's WOA database (own editing)

#### 5. The locations

Beyond the cities, it is also worth investigating where these thefts occurred. Most of the artefacts were seized from the accommodations (802 cases), which is 85% of all burglaries. Then a much lower number, the unknown sites (4%), churches (4%) and libraries (3%) also appeared, followed by a negligible number at the end of the line for the embassy, air space and shop. The residents (blue dots), the museums (dark green dots) and library (light green dots)

appear on North, meanwhile museums (purple dots) both in North and NorthWest. The church as a burglary site is interesting in many ways. While there are locations where there are more or fewer protrusions, it is still the religious location that is on the list in almost every city. The red dots indicate the churches on the map. The most interesting part is that the red dots appear in South and North Hungary. The church is also an “easy target” for perpetrators because it is open to everyone. Although it is becoming more common that many places still do not have a camera installed to help to identify the perpetrators or an alarm device to indicate if a burglary has occurred. In addition, the work of law enforcement agencies in Hungary is cumbersome, as the largest number of art thieves took place in both homes and churches. However, in most cases, they don’t have any good quality image or documentation about the cultural property, which also makes it difficult to find the objects. In the Italian system, the BeWeB online catalogue is designed to remedy this problem. In our country, however, there is no database of stolen objects in the hands of the police.

### Location-based identification of stolen cultural properties



**Figure 2: Location-based identification of stolen cultural properties**

Database: Based on data from the Interpol’s WOA database (own editing)

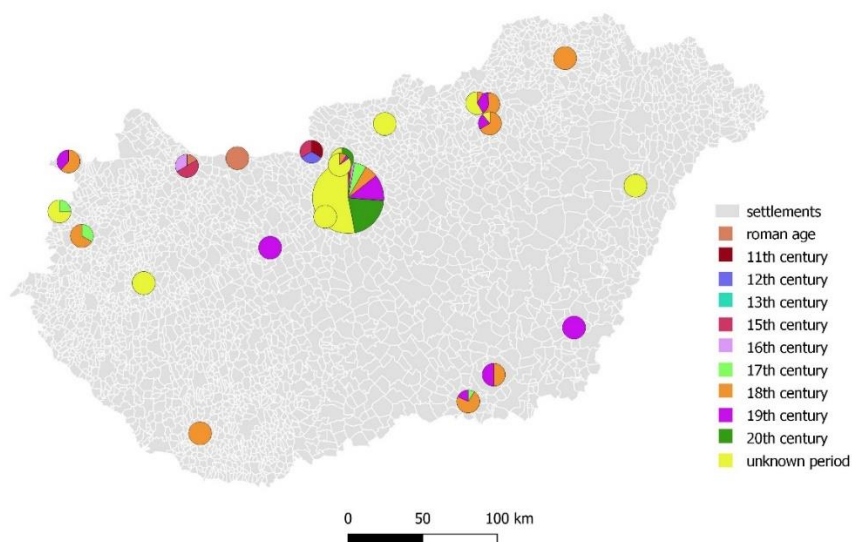
## 6. Periodic distribution of stolen cultural properties

The exact year or century was indicated in the database, and objects were also marked separately where the date is unknown. I find it important to mention, for both the era and the subject type section, that items from illegal excavation are not included in the Hungarian part of the database (and neither in other databases), although they are found in large numbers worldwide. There is no documentation, inventory or picture of the underground archeological finds, so we do not know its exact look, place or date of origin. Thus, I present the results without archaeological finds from illegal excavations. The objects are grouped by centuries for easier analysis. It is interesting that after the Roman period (8th century BC to 5th century AD), the 14th century was completely omitted from the 11th to 20th century, meaning that there is no item stolen from Hungary in the Psyche database, which is evidently from this century.

Unfortunately, we are not able to date most artefacts (505 pieces) based on the data from WOA. However, the most popular period is clearly the 20th century with 165 items, and as we go back, we will see fewer and fewer items according to the list.

The earliest items come from the North side of Hungary, meanwhile in South the most common cultural properties are from the 19th and 20th century. In Budapest, we don't know most of the item's period, but from almost every century there is an item.(12th-20th century).

Periodic distribution of stolen cultural properties



**Figure 3: Periodic distribution of stolen cultural properties**

Database: Based on data from the Interpol's WOA database (own editing)



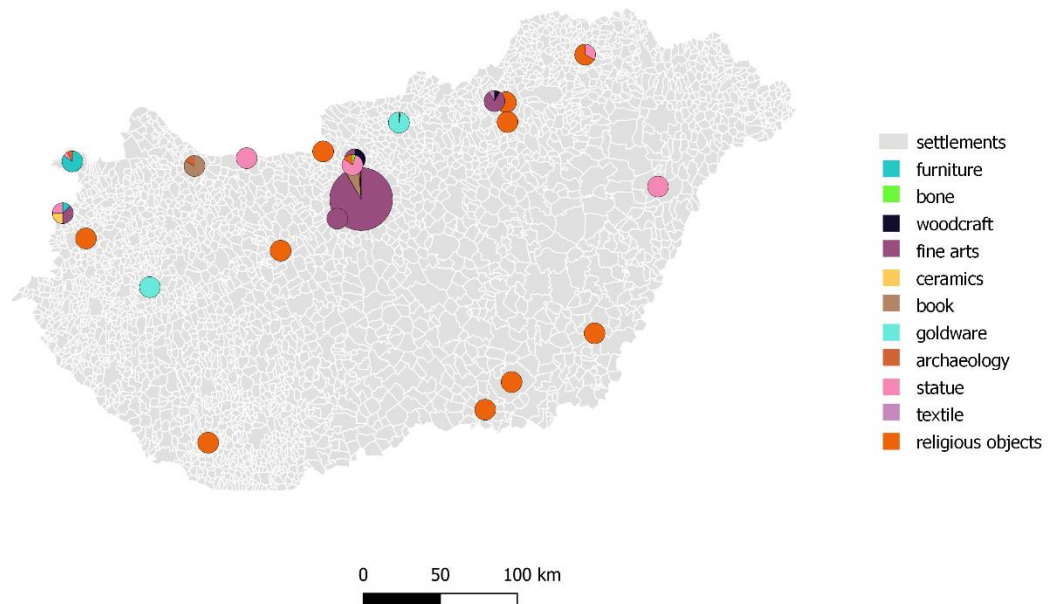
## 7. Types of cultural properties

There are several categories of object types. Thus, I examined them individually and divided them? into subject areas. I classified in the religious category all objects that were stolen from a church, so I also included books, paintings, sculptures and liturgical instruments in this category. I classified the paintings, drawings, and scratches into the subject of fine art, while the sculptures are separate. I classified wooden objects as wood art, while pots and other objects made of silver and other precious metals were classified as goldware category. I also gave a separate category to books stolen from other places than church. In addition, I created furniture, ceramic and bone work categories.

Examined together with the period, we can get interesting information about the object types. There is a book from each century among the objects, with the exception of the Roman age. And furniture only dates from the 18th and 19th centuries, according to the Psyche database. We can see that most of fine arts item were stolen from Budapest, meanwhile, religious objects were stolen from North, West and South.

It can be stated that the most endangered category of works of art is the fine art with 746 cases, which is followed by the book, goldware art and religious objects. Among these, books and religious objects are the ones that are most at risk because they can be easily removed from the churches and libraries. The perpetrator does not have to steal the whole book, he can easily tear out a sheet which can be maps and drawings.

## Stolen cultural properties from Hungary



**Figure 4: Stolen cultural properties from Hungary**

Database: Based on data from the Interpol's WOA database (own editing)

For stolen items, I also examined how aware the perpetrators were of the value of the goods. I approached this issue by collecting from the database which objects contain captions (era, artist signature). This makes it easier to accurately identify stolen items and estimate their price, which is easier to sell on the market later. However, in 286 cases there were only inscriptions on the stolen work of art, and in 658 cases there was no sign on them, so the perpetrators could not have known the artist either. In my opinion, because of that, the artist and the era do not play a role in thefts in Hungary.

It can be stated that while in the middle of the country, in Budapest, the objects of fine art are the most endangered, in the areas close to the state border, the religious objects are the ones that are stolen. It is also interesting that in Budapest, Egercsehi and Érd the fine art objects were stolen in the largest numbers, while they appear in less numbers in Kőszeg and Leányfalu. In Békéscsaba, Bélapátfalva, Eger, Esztergom, Hódmezővásárhely, Szeged, Székesfehérvár, Szigetvár, Tápé and Vép, only religious objects were stolen. Only sculptures were stolen from Debrecen and Komárom. Unfortunately, due to the small number of items, it is not possible to

establish with certainty and make a specific definition that only a certain type of artefact is stolen from each settlement, which is later sold on the black market. Although it can be stated that private collectors who own works of fine art are in the greatest danger in Budapest.

Regarding the size of artefacts, I examined the height and width of the objects separately. I separated 8 categories. Category 0 includes objects where we do not know the size. The first category includes objects up to 1-50 cm, the second category up to 51-100 cm, the third category up to 101-150 cm, the fourth category up to 151-200 cm, and increasing the amount by 50 cm further up to 350 cm. The largest size occurred in the height category, a 302 cm high, 177 cm wide rug that was stolen from an apartment in Budapest. However, these rugs are easy to fold together so they can be shipped in smaller sizes. The same is true for paintings if they are made on canvas or possibly on paper. It is easy to fold out of the frame, put in a holder and transport it in that way. However, if the robber is unaware of the value of the items, he can transport these artefacts without a holder. The first category is containing the largest number in terms of both height and width, i.e. most stolen objects belong to the range of 1-50 cm. This is followed by the second category and then category 0 in the ranking. Thus, it can be concluded that the smaller objects are the ones that are stolen mostly, and in the case of the larger objects, only the type that can be easily folded was taken away: for example, a rug and a picture painted on canvas.

**Table 1: Height divided into 7 categories**

0th category	83 pieces
1th category	557 pieces
2nd category	267 pieces
3rd category	22 pieces
4th category	10 pieces
5th category	3 pieces
6th category	1 pieces
7th category	1 pieces

Based on data from the Interpol's WOA database (own editing)

**Table 2: Width divided into 7 categories**

0th category	120 pieces
1th category	541 pieces
2nd category	248 pieces
3rd category	25 pieces
4th category	9 pieces
5th category	1 pieces
6th category	0 pieces
7th category	0 pieces

Based on data from the Interpol's WOA database (own editing)

## 8. Summary

This research investigates the artifacts that have been stolen from Hungary based on the WOA database which has been renewed by the Psyche Project. The aim of this study was to show if there are any trends of the stolen cultural properties in conjunction with places, types and period.

It can be stated from the domestic data that the accommodations of private collectors in Budapest are the main targets. It doesn't matter if the painting or other cultural goods contain a signature or other inscription. In addition, smaller or easily collapsible objects are those that are stolen in larger numbers. The works of fine art are the ones that owners should pay the most attention to, as 79% of the stolen objects are paintings, drawings, and scratches. Objects appear in the database from the roman period to the 20th century. Objects made in the 18th, 19th and 20th centuries were stolen in largest numbers. This is related to the number of stolen fine art objects, as the paintings date from these centuries. In addition, we are still unable to assess the amount of archaeological finds from illegal excavations, and thus not to estimate the extent of latent crime in the study area. It would be difficult to establish trafficking routes with regard to Hungary based on the WOA's data, because we are not aware where they found the objects. It would be useful to examine more databases and countries in Europe and compare the results. It is possible that even a trend or route could be detected in terms of theft of objects.

The protection of cultural property is not a priority in Hungary this may due tot he fact that most of the thefts came from private property rather than public property, so the state is not affected by such a financial disadvantage.

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**NEW METHOD TO MEASURE CRIME: SHIFTING THE FOCUS  
FROM SIMPLE COUNTING TO WEIGHTING****Abstract**

To evaluate the public safety of a certain spatial area, indicators of criminal situation and the investigation performance indicators are applied, which provide information about the work of the law enforcement authorities. The criminal situation is described by the number of known crimes, number of high-profile crimes, known crimes committed in public space and crime rate per 100 000 residents. However, it leads to several research questions: do the amount of crimes reflect properly the public safety? Does the current crime statistics provide an appropriate basis for the police for decision-making? Do all types of offences have the same effect on society? The Article focuses on a new trend of assessing criminality: it demonstrates the concept of crime harm indexes. In addition, it provides an overview about the existing ones. The Article could be interpreted as the first steps in the creation of Hungarian Crime Harm Index (HU-CHI).

**Keywords:** crime harm index, crime statistics, HU-CHI, methodology

**1. Introduction**

Police reports apply different indicators of crime and the investigation performance index to evaluate the public safety of a certain spatial area. The main research question is whether these indicators reflect properly the situation of public safety? Does the investigation performance index evaluate the work of law enforcement agencies correctly? Do all crime types have the same effect on society?

The Article provides information about the traditional measurement of public safety in Hungary and points out the problems. Thereafter it demonstrates the methods for estimating crime harm and introduces the concept of Crime Harm Index (CHI). A comparison of CHI methodologies will be carried out in order to find the best fitting one to Hungarian circumstances. The Article could be interpreted as the first step in the creation of Hungarian Crime Harm Index (HU-CHI).

## 2. The ‘traditional’ measurement of public safety according to police reports

To evaluate the public safety, the following crime indicators are applied in reports:

1. number of known crimes,
2. crime rate per 100 000 residents,
3. number of high-profile crimes,
4. number of crimes committed in public area,
5. crime investigation index for all crimes, for high-profile crimes and for crimes committed in public space.

While the first four provide information about the criminal situation of a certain area, the last one is for evaluating the efficiency of law enforcement authorities.

The *number of known crimes* involves all offences which are known for law enforcement authorities. *Crime rate per 100 000 residents* is applied for the sake of spatial comparisons. Change in the number of offences could be due to the change in criminal law, population, trust in authorities, etc. (VAVRÓ 1996). In addition, the presence of latent crime has to be taken into account during the analysis of crime statistics: according to KORINEK (1996) these are the crimes that are unknown, unreported for law enforcement agencies. There are several initiatives around the world that attempts to estimate the real volume of crime. The different crime victim surveys could provide a good example, for instance International Victim Survey or British Crime Survey. SKOGAN (1975, 2003) deals extensively with the reliability of crime data and his results lets us to be optimist. This statement is supported by HARRIES (2003) who found a connection between British Crime Survey data and known crimes. Besides the crime victim surveys there are questionnaire surveys which target the analysis of subjective safety feelings of residents and the extent of latency (for instance: PISKÓTI 2012; MÁTYÁS 2015; MÁTYÁS – CSEGE 2019; PÖDÖR 2020). The reports involve the *number of high-profile crimes and crimes committed in public areas* as well, because these have a particular impact for the safety feelings of residents.



In the police reports the *investigation performance indicator* is applied for assessing the work of the law enforcement authorities. VÁRI (2014) demonstrates the creation methods of investigation performance indexes in details and describes its general formula:

$$\text{Investigation performance} = \frac{\text{successful investigations}}{\text{successful investigations} + \text{unsuccessful investigations}} \times 100$$

VÁRI (2014) establishes that the investigation performance provides a view about the work of the law enforcement authorities, but these indexes – in spite of the crime statistics – are not specific, consequently the performance indicators of certain authorities are not comparable to each other. This is because these indicators do not represent the certain regulatory conditions, workload, ability, otherwise do not involve information about capacity.

The international literature pays attention to the problem of counting crimes as if they were created equal. SHERMAN ET AL. (2016) suggest an alternative method by integrating all crimes in a weighted index, which represents a far more useful approach for resource allocation and crime prevention. They state that the essential principle of a meaningful measure of crime is to classify each crime type according to its harmfulness, relating to all other crimes (SHERMAN ET AL. 2016). SHERMAN ET AL. (2016) summarized the 6 main problems of weighing crimes equally (Table 1).

**Table 1. Problems of counting police-recorded criminal events as if they were equal according to SHERMAN ET AL. (2016, 6.)**

1.	There is no meaningful, “bottom line” indicator of whether public safety is higher or lower in any year, place, offender’s record, or agency caseload.
2.	High volume, low seriousness crimes are disproportionately influential in driving crime counts up or down.
3.	Total counts of crimes, as distinct from crimes reported solely by individual victims and witnesses, include crimes detected solely or mostly by proactive police or corporate enforcement, which can be driven up or down by state action rather than by the behavior of criminals.
4.	If there are budget cuts it often leads to reducing investments in proactive enforcement, which can indicate a decrease in crime counts, however crime harm may rise.

5.	The management of offenders may be distorted by the tendency of prolific offenders to have relatively modest levels of seriousness, while very serious offenders may have very few convictions.
6.	Police face identical problems with counts in comparing areas at same point in time, or changes over time within areas.

SHERMAN ET AL. (2020) demonstrate extensively the problems of recent crime statistics and recommend an alternative way. They provide seven ‘statistical series’<sup>4</sup> for counting crime in a more useful way. The advantage of these statistical series is that they are based on existing systems of data collection and reporting, consequently they are inexpensive to create and report. One of them is the crime harm index, which will be detailed in the next chapter.

### 3. Methods for estimating crime harm

According to international literature there is an increasing interest on assessing harm in the last few years, SHERMAN ET AL. (2016) find three main reasons in the background: firstly, the growing demand for analyzing and understanding the harm caused to victims, secondly, after the economic crisis of 2008 the fiscal austerities and criminal justice budget cuts forced police to reassess their focus on traditional crimes and crime counts. Finally, the third reason is that there is renewed emphasis on the importance of harm reduction as an objective of law enforcement.

Before providing information about the estimation of harm and the concept, it is essential to demonstrate the definition of harm. According to SPROAT (2014) it can be established that *harm* and *harm reduction* is poorly defined in the field of policing, which led to different interpretations and competing methods of measurements. According to RATCLIFFE (2015) ‘harm is an amorphous term that is easily understood in the abstract but vague in a policy context’ (RATCLIFFE 2015, 3.). CURTIS-HAM – WALTON (2017) uses the term of harm in a broad-view, which includes the various negative physical, psychological, social and economic impacts caused by crime as a whole and a specific crime relative to each other.

Generally, ‘harm can be defined as the negative consequence deriving from an adverse event in a broad sense’ (TUSIKOV AND FAHLMAN, 2009, 157.). Harms caused by crime can be merged in different forms. ASHBY (2017) highlights its complexity: it could cause financial costs, emotional harm, environmental and social harm. Due to the different forms of harm it is a

<sup>4</sup> Article of SHERMAN ET AL. (2020) provides detailed description of the statistical series.

challenge to identify the real harm, which leads to the problematic estimation of it (ASHBY 2017).

Regarding harm it is worth mentioning the *seriousness* of crime. According to ROSSI ET AL. (1974) ‘the seriousness of criminal acts represents a conceptual dimension of criminality indispensable in every discourse, in legal theory and practice, and in sociological work. The seriousness of a criminal act may be viewed as a normative evaluation, an overall judgement, which allows comparisons among criminal acts, cultural values in different societies and cultures, and individual value differences’ (ROSSI ET AL. 1974, 224.). SHERMAN ET AL. (2016) treat harm as a synonym of seriousness.

The demand of estimating crime harm using a common metric merged in the 60’s, also there is a long tradition of harm measurement. RACTLIFFE (2014) distinguishes three basic methods: the *crime seriousness indexes*; *cost of crime estimates* and the *crime harm indexes*. BARNHAM (2018) uses the same classification, he divides the methods into the following categories: *public opinion*, *cost* and *sentencing in court*. He found the third method the most promising, because it is democratic and reliable.

The first *crime seriousness index* was the *Sellin-Wolfgang index*. It involved 3 components and each elements of components had a score, which expressed the seriousness of certain character of the offence (Table 2). The score for a criminal event was the sum of the component scores for each victim of crime. The crime index for the nation was simply the sum of those seriousness scores for these individual crime events (BLUMSTEIN 1974).

**Table 2. Sellin-Wolfgang Seriousness Components and Scores (source: BLUMSTEIN 1974, 855.)**

Components	Score
<b>Injury Component</b>	
<i>Victim assaulted</i>	
Minor injury	1
Treated and discharged	4
Hospitalized	7
Killed	26
<b>Intimidation Component</b>	
<i>For each forcible sex offence</i>	
The sex offence	10

Intimidation by weapon	2
<i>For non-sex offense</i>	
Physical or verbal intimidation	2
Weapon intimidation	4
<b>Property Component</b>	
Premises forcibly entered	1
Stolen vehicle	2
<i>Value of property stolen</i>	
Under \$ 10	1
\$ 10-\$ 250	2
\$ 251- \$ 2 000	3
\$ 2 001- \$ 9 000	4
\$ 9 001- \$ 30 000	5
\$ 30 001- \$ 80 000	6
Over \$ 80 000	7

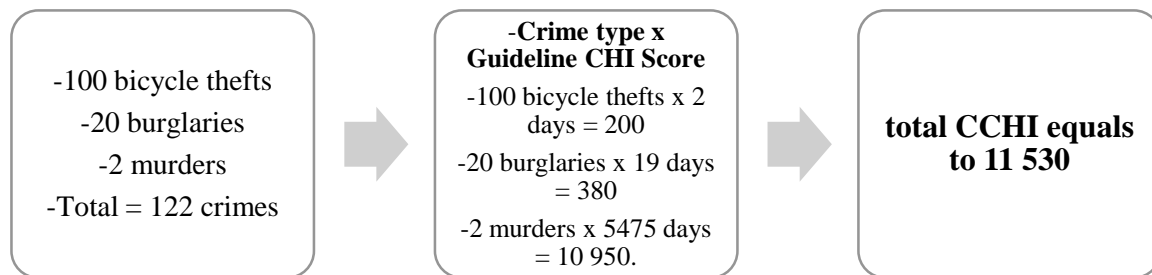
RACTLIFFE (2014) states that this approach was briefly popular due to two reasons: on the one hand there were methodological problems regarding the survey on which the determination of weighting was based (MALTZ 1975), on the other hand because of the difficulty of distinguishing generic harms from individual victimizations (COHEN ET AL. 1994). One of the biggest problems relating to an index using weights that are based on public opinion is the fact that these kinds of surveys could be very expensive, and according to BARNHAM (2018) changes in public opinion would make long-term comparisons unstable (SHERMAN ET AL. 2014).

An alternative approach has emerged focusing on *the cost of various offences*. Cost of crime estimates involve two aspects: they try to express that which crimes mean greater cost to the society and they also examine the effectiveness of prevention programs from an economic perspective. RACTLIFFE (2014) summarizes four main challenges with operationalizing these measures: firstly, due to the inflation the calculations have to be reviewed by year to year, secondly, 'the monetary costs to society mean little to the police as they do not recoup the cost of any crime reduction directly'. The third thing is that many significantly harmful crimes have low volume and do not have easily calculable costs, finally 'cost of crime generally calculated

for sweeping categories (such as robbery or homicide) and are limited by not being able to distinguish between types of crimes within these large categories' (RACTLIFFE 2014, 166.). WICKRAMASEKERA ET AL. (2015) reviewed the literature focusing on the estimation of the cost of crime and they concluded that these estimations are not effective.

In the last few years, several studies have emerged which have focused on *crime harm indexes (CHI)*. But what is CHI? To create a crime harm index, 'crimes are integrated into a weighted index, based on how much harm the different offences cause. Technically, a *CHI is a score derived from the application of a metric, which weights different offences based on a proxy measure of the harm it causes, relative to other crimes*' (KÄRRHOLM – NEYROUD – SMAALAND 2020, 16.). From the usefulness of CHI, it is essential to comprehend that a small minority of all crimes cause a great portion of the total harm (KÄRRHOLM – NEYROUD – SMAALAND 2020). SHERMAN (2007) calls this phenomenon as the *power few*.

SHERMAN ET AL. (2020) provide an example and detailed description about how to calculate a crime harm index. These data represent the crime data of a hypothetical village, which suffered the following count of by category during a year (Figure 1).



**Figure 1. Sample calculation of CHI according to SHERMAN ET AL. 2020.**

In case of Cambridge Crime Harm Index (CCHI), the weights are derived from the Sentencing Council of England & Wales "starting point" guidelines. Consequently, the CHI can be calculated by multiplying the number in each category by the days of imprisonment. According to the calculation, total CCHI equals to 11 530.

SHERMAN ET AL. (2016) summarized three basic criteria toward CHIs. These criteria are interpreted as questions by MITCHELL (2019, 105.):

1. *Democracy test*: does the metric reflect the resolution of conflicting viewpoints by a process adopted by a democratic government reflecting the will of the people?

2. *Reliability test*: Does the metric provide reliable measure that can be consistently applied to each unit of analysis – time, place, people – with the same results for the same levels of harm?
3. *Cost test*: Is the metric readily available at virtually no cost to be adopted without any new budgetary appropriation?

CURTIS-HAM – WALTON (2017) completed these three criteria with two following implicit, but related ones:

4. *Validity*: The metric needs to measure harm simply and objectively, the harm value must be associated solely with the offence type, without adjustment for prior criminal history, other offender attributes or the circumstances of the particular offence.
5. *Easily operationalized*: the index must be simple, not too complex. For the creation a minimal instruction or training is expected.

If any CHI does not pass these three tests, a standard metric will most likely not be adopted in policing (MITCHELL 2019).

#### 4. Methodologies in the literature

MITCHELL (2019) states that ‘harm indexes lack a broad sense of research, as it is a relatively new approach evaluating policing interventions’ (MITCHELL 2019, 104.). The main aim of this chapter to provide an overview of the existing crime harm indexes. Studying the international literature, seven crime harm indexes have been developed until today (Table 3.). To create the HU-CHI, it is worth to know that which methodologies are applied in the existing ones. This is the reason why the Authors focuses on the methodology and the source document of weights.

**Table 3. Developed Crime Harm Indexes according to the literature**

Name	Source Document of the weight	Methodology
<b>California Crime Harm Index (CA-CHI)</b> (MITCHELL 2019)	<u>Sentencing statutes</u> derived from the <u>Californian Penal Code</u>	First, they count up the number of crimes of each type, then they multiplied it with the maximum number of prison days recommended for crimes of that type by first offenders. It is calculated in all crime types, then they summed it up to yield the total crime harm (MITCHELL 2019)
<b>Cambridge Crime Harm Index</b>	English-Welsh <u>sentencing guidelines</u>	The number of years or days imprisonment is converted into a total number of days.

<p><i>(Cambridge CHI - CCHI)</i></p> <p>(SHERMAN – NEYROUD – NEYROUD 2016)</p>		<p>They applied the lowest starting point guideline for each offence.</p> <p>In case of offences, where the minimum tariff is a period of days or hours Community service, the days/hours have been converted into number of days.</p> <p>Where the starting point is financial penalty, they calculated the weighting by assessing the number of hours/days it would take to earn the money to pay the fine while working for the minimum wage for an adult. (SHERMAN – NEYROUD – NEYROUD 2016)</p>
<p><b>Danish Crime Harm Index</b></p> <p><b>(DCHI)</b></p> <p>(ANDERSEN – MUELLER-JOHNSON 2018)</p>	<p><u>Prosecutor Guidelines</u></p>	<p>The analysis coded the recommended number of days in prison for each offense type based on guidelines set out by the Danish Office of Public Prosecutions. The sentencing value from the prosecutor guidelines was reviewed by five prosecutors. (ANDERSEN – MUELLER-JOHNSON 2018).</p>
<p><b>New Zealand Crime Harm Index</b></p> <p><b>(NZ CHI)</b></p> <p>(CURTIS-HAM – WALTON 2017)</p>	<p>Actual sentences delivered by the <u>Courts</u></p>	<p>The NZ CHI uses an alternative approach to existing CHIs developed overseas, by estimating the minimum sentence for a first-time offender using actual sentencing data. The data set is provided by the Ministry of Justice containing the outcomes of charges for the period 2004-15 inclusive.</p> <p>Relevant outcomes and sentences are translated into Equivalent Prison Days; for the used transformation formula see CURTIS-HAM – WALTON 2017; 6.</p>
<p><b>Queensland Crime Harm Index</b></p> <p>(RANSLEY ET AL. 2018)</p>	<p>Community and police officers <u>survey</u></p>	<p>The index based on community and police officer surveys of perceptions of crime harm.</p> <p>(RANSLEY ET AL. 2018)</p>
<p><b>Swedish Crime Harm Index</b></p>	<p><u>Sentencing statistics</u> published by The Swedish National Council for Crime Prevention</p>	<p>They applied 5 alternative methods to develop the CHI: the weight could be based on expert estimates; sentencing data; penal code maximum, minimum or average. They compared the 5 alternatives, in addition tested the 5 criteria showed above, and concluded that the average prison</p>

(KÄRRNHOLM – NEYROUD – SMAALAND 2020)		sentence was the best one. Data derived from sentencing statistics.  (KÄRRNHOLM – NEYROUD – SMAALAND 2020)
<b>Western Australian Crime Harm Index (WACHI)</b>  (HOUSE – NEYROUD 2018)	<u>Criminal court and traffic court cases</u> captured by the WA Department of Justice	They studied four possible methods for deriving relative harm values for each offence category: sentencing guidelines, maximum sentences, actual sentences and first offender sentences. Finally, the WACHI based on the median number for each offence category. (HOUSE – NEYROUD 2018)

According to the international literature, the development of CHI could be based on several methodologies. However, there is an emerging academic consensus suggesting that the preferable method to develop a CHI is using the law and sentencing outcomes. The main reason behind this is that these sources are subordinated to the criteria of the rule of law and therefore they are considered to produce a compromise of conflicting viewpoints of how to assess harm, expressed through law (KÄRRHOLM ET AL. 2020).

What makes it difficult to create a system for Hungary is the fact that *no sentencing guidelines are available* for the legal practitioners and in addition, there are legal obstacles for obtaining court sentences in individual cases. There are some types of case law which are published but these court decisions are primarily focusing on legal questions and less information are available for assessing the judge's concept regarding the form and amount of the penalty given to the accused person. We believe that the cornerstone of the HU-CHI should be the rules of the Criminal Code, in particular the rule of imposing median penalty (Section 81 paragraph 2).

## 5. Summary

One of the main aims of the recent Article was to provide an overview about the literature of Crime Harm Indexes. The goal of the Authors was to demonstrate the different methodologies existing worldwide and to show the basic criteria for creating such an index. The Article could be considered as a prelude of the construction of the Hungarian Crime Harm Index (HU-CHI). The application of CHI has several benefits: according to SHERMAN ET AL. (2016) it 'would provide far greater clarity for evidence-based policies, ensuring a standard 'currency' for cost-effectiveness comparisons of alternative strategies of targeting, testing, and tracking resource allocation by police, law enforcement agencies and wide range of government policies (SHERMAN ET AL. 2016, 8). 'CHI values can more meaningfully measure national trends in public safety year-on-year, annual comparisons in safety and performance' (SHERMAN ET AL.



2016, 9.). BARNHAM (2018) supports this idea, he states that the application of CHI could result more effective targeting of police resources and help in portraying the nature of crime in the community.

The Authors believe, that the above-mentioned benefits could be achieved in Hungary as well and the HU-CHI could be a useful additional “tool” for the police and decision-makers. The Authors strongly agree with BARNHAM (2018), that ‘the use of crime harm index should not replace traditional counts of crime but complement them in order to give a rich picture of crime’ (BARNHAM 2018, 17.). It could be applied in several fields of law enforcement: for instance, it could make the police work more efficient by allocating their dwindling resources to the most harmful areas, or it could be involved into the evaluation of police departments. Moreover, it could provide information about the public safety feelings of residents. It is obvious that it is impossible to find a perfect index which reflects all harm of crime, but according to the international literature we are going to create it taking into account the available crime data sets and legal environment in Hungary.

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**SECURITY MATRIX IN AN ACTUAL STATE****Abstract**

This paper examines the condition of Austria with the application of the method of security matrix. With this method, the writer will make a comparison between the security conditions before the COVID-19 pandemic and the conditions after the pandemic. First, the writer will introduce the method, then in the second part of this paper, the writer will seek responses for the possible problematic impacts the COVID-19 pandemic can have on the Austrian security conditions, relying on open data and information. Moreover, the writer will deal with the question of what kind of impact does the two time period have on the condition of criminal geography.

**Keywords:** Austria, security conditions, descriptive matrix, analysis, COVID-19 pandemic, criminal geography

**1. The placement of security matrix in the range of intelligence analysis methods**

The security matrix is considered to be one of the potential methods of the analysing-evaluating part in the intelligence cycle (Vida 2013). The selection of the best method depends on the given task of analysis and also depends on the free choice of the analyser, who wants the best method from the relatively big toolbar (Clark 2019) for fulfilling the task. The security matrix is one of the complex analysing-evaluating methods, thus the need for big data, time and experience is one of its key features. Moreover, the human factor is a key factor, because it has a big impact on the quality of analysis (because of the complexity of the process) (Vida 2012).

**2. The method of the security matrix**

The security matrix has the function to analyse those dimensions (military, political, economic, social, geographical), first mentioned by Buzan, in the case of the individual, communal, national, regional and global perspective in a given topic.

This topic can be a given area to be analysed or an event, factor or process (for example migration) that has an effect on the security conditions. If in this given topic in a different time a new analysis is created, the illustration of the change in security conditions will be possible. Into the fields of the matrix those words are written that are the most typical for that topic and for the security dimension. The field gets a colour which demonstrates the seriousness of the situation. The blue colour means that the factor is irrelevant according to the topic of analysis, the green colour means that the state is ideal, the yellow colour means that the situation is getting worse, the orange colour means further deterioration, the brown colour means a little less extreme state than the red colour, which means that the state is the worst. In some cases, it is simple to decide about which colour matches to the given word.<sup>5</sup> Naturally, it is difficult to characterize a given security dimension with one word and to find the appropriate colour. As in the cases of other intelligence analysis methods as well, there is an opportunity for subjectivity, because of these difficulties stated above. However, the possibility of this subjectivity can be decreased by collecting data in a wider range (Vida 2016) as well as by explaining certain decisions of the analyser. When the process comes to the final conclusion the created matrix will be analysed and evaluated. Drawing a final conclusion is *en general* an inductive process, because it consists of the fields of the matrix and its colours. Because of the difficulties stated above it is probably needed to justify the final conclusion according to the expectations of the report.

### 3. The security matrix of Austria before the COVID-19 pandemic

Nowadays Austria is one of the most developed<sup>6</sup> and the most significant foreign trade partner of Hungary (it is between the 1st five of the most significant trading partner on the list of Hungary's export and import partners since the second millennium<sup>7</sup>).

In this phase the writer analyses the state of Austria from the beginning of the operation of the second government of Sebastian Kurz (7th of January 2020). (In the previous time period in 2019, after a political scandal and a constructive confidence motion, a caretaker government led Austria until the elections during the end of the autumn period. The new government became established as a result of a multiround negotiation for coalition in order to acquire the 50%.)

The writer created the following matrix for this state:

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<sup>5</sup> For the detailed method description, see: Vida Csaba (2011): A biztonságpolitikai leíró mátrix.

<sup>6</sup>The countries of Europe according to the GDP in 2019 based on the IMF data about purchasing.

<sup>7</sup>Data source about the Hungarian export and import: A gazdasági komplexitás atlasza és <https://atlas.cid.harvard.edu>

	<b>military</b>	<b>political</b>	<b>economic</b>	<b>social</b>	<b>environmental</b>
<b>individual</b>	obligatory military service	freedom	stability on the financial market	problems of the social system	extreme weather conditions
<b>small communities</b>	unusual application	partial intervention	decreasing poverty	decreasing unemployment	climate change
<b>national level</b>	international responsibility taking	debates	economic increase	freedom	poactive political intentions
<b>regional</b>	transformation of the army	choices for debates	pesence of competitiveness	opportuntiy for interest validation conflicts	different political solutions
<b>global</b>	armed crises	non-functioning countries	phenomenons after a crisis	social dissatisfaction	natural and industrial disasters

During the analysis there was an opportunity to demonstrate the regional and global level with blue colour as a representation of neutrality. However, the writer realised that it could be a huge mistake to not take into consideration the effects of the events happened inside and outside of the European continent, especially when we are analysing the security state of a country.

In the military dimension the individual level (=members of the Austrian society) got the green colour, because of the natural existence of conscription/ obligatory military service of young adults in a certain age. (Obviously the above-mentioned political formations of the 2019 elections made statements with differing opinions in their programs about the army and its future /Suhajda 2019-2020/) The small Austrian communities meet with the action of the army when special events occur, for example during the process of handling extreme weather conditions. The process can be evaluated positively, when the citizens meet the army in a special case, therefore the field gets green colour. According to the country's international commitments, Austria takes part in the foreign military missions, which means relatively low and manageable security risks (for example, attack against the foreign stationed soldiers). Austria has currently soldiers in Kosovo (359), Libanon (156), Bosnia (152), Afghanistan (11), Mali (8), on the Mediterranean Sea (6), Georgia (5), West-Sahara (5), Jerusalem (4), Cyprus (3) and in Moldova (1) ([www.bundesheer.at](http://www.bundesheer.at)). On the European continent, which is equal to the regional level, the questions of defense and military force (hybrid and assymmetric threats, danger technological innovations, cyberwarfare) is under transformation, according to the challenges of the century. With this process the Austrian army will have a stable and good budget on the regional level (SIPRI Military Expenditure Database). The writer finds this

transformational process natural, the field gets green colour. (Obviously the transformation can have negative effects in the long run.) Armed crises on the global level may have an effect on the security of Austria, however the country was able to handle this crisis successfully, therefore the field gets the yellow colour.

In the political dimension the liberty and the democratic rights are prevailing on the individual level. There are debates about the human rights, for example about the ban on using headkerchief in schools (<https://www.parlament.gv.at>) which affects basically those who belong to the islamic culture, or the ban on building islamic schools (<https://www.addendum.org>) and mosques (Fürlinger 2013). The writer thinks that these debates can be solved successfully in order to not be a security problem, therefore the field gets green colour. On the level of small communities, the political dimension has a partial, but not negligible impact on the everyday life and economy (<https://www.gallup.at>). One of its existing manifestation nowadays is the significance of political affiliation of the individual in the case of some jobs (<http://www.demokratiezentrum.org>). Because of this partial manifestation, which can potentially be a problem, the field gets the yellow colour. On the national level the 'debates' word is the most appropriate that can be used to the political dimension, and for this the programs of the last elections' political formations are the evidence, because they pictured the future of Austria with rather different values and programs. In addition, the above-mentioned constructive confidence motion, which resulted in new elections, can also be a reason to mark this field with the yellow colour. On the regional level, according to the experiences of the last 10 years, it is possible that in certain political questions (for example migration) -relevant in other countries' cases as well- situations with negative impact on security matters can be born. In the global political dimension with differing interests the situation is similar, especially in the case of those countries that are incapable for operation and can decrease the security state of the country.

On the individual level of the economical dimension the financial stability field deserves the green colour because of the slow increase of the Consumer Price Index (Austrian Statistical Office) and the increasing tendency of salaries (Austrian Statistical Office). (It is worth to consider that in Austria, the doctors, policeman, teacher and soldier are between the best paid jobs /Austrian Statistical Office/.) It is also positive and deserves green colour that the poverty of the level of small communities is decreasing (<http://www.statistik.at>). It can be stated that the Austrian economy is on the rise, and even after joining the European Union in 1995 the country could maintain the competitiveness of its industrial and agricultural sector (<http://www.statistik.at>). Moreover, the positive balance of trade (comparing to other developed



countries) can provide further evidence to the regional competitiveness (<http://www.statistik.at>). It has to be mentioned, that the Austrian economy also has weaknesses, as other countries have. One of its weaknesses is the continuous multiple need for workforce because of the ageing population. Other weak point is the exposition to the world market in some significant sectors, like tourism. After the global crisis of 2008-2009 the main feature of that period was the economical reorganisation and recovery, which led to the slowdown of the dynamical growth.

In the social dimension the difficulties that show up in the operation of the welfare state and the social system has an impact on the state of the individuals as well (Mátyás 2015). One of the most crucial problems to be solved is the social system's management of the changing demographical situation and migration, as well as the possible role of the state in this case. Moreover, in what kind of form and with what kind of role can a social integrity take the state's place in a total or partial way? (<https://www.politischebildung.at>) On the level of small communities the decrease in the phenomenon of unemployment is the most significant and most welcoming progress, on the other hand, the possibility of its increase showed up in 2019 may generate problems (<http://www.statistik.at>). The green colour of this field is justifiable on the country's level because of the prevailing democratic norms and the existence of the society's self-organisation (Vida 2011). As in the political dimension of the regional level, there is potential for conflicts in the social dimension as well. The writer gave the yellow colour to this field, as it was also done on the global level because of the existence of social dissatisfaction that has an impact on the security state of Austria.

In the environmental dimension the extreme weather conditions are present because of the climate change, which has an impact on the life of the individual and small communities. The various appearing forms of these extreme weather conditions are the impacts of fronts, the extreme quantity of snow in winter, the heat waves in the summer as well as the sometimes extreme rainfalls. Because of the danger posed on the individuals by the weather, this field is marked with orange colour (according to the article on methodology /Vida 2011/), and the level of communities is marked by yellow colour because of the climate change.

On the national level there is a need for the application of green environmental politics, and the membership of the Green party (Grüne) in the government coalition can be an evidence for that (the party owns the membership of leaders in those ministries that are relevant to environmental protection). The countries of the European continent on the regional level make different perceptions on environmental problems and environmental protection, and therefore make different solutions. The environmental problems get more and more serious and intensive,

that is why the differing political solutions and measures can cause problems, which justifies the yellow colour of the field. The global level is the same in this case considering the number of the environmental and industrial disasters, therefore this field also gets yellow.

By summarising the security matrix we can conclude, that Austria is a secure, and regionally as well as globally competitive country. The security state of Austria can be understood as the part of the European security complex. As a consequence, the global processes have an impact on the state of the country. As in the other European states, in Austria also different opinions emerged about the future of the country and about the future role of the army. The dissimilarity of the political opinions, the exposition of the economy to the world market, and the problems with the social system (for example unemployment) can be a root of problems. Moreover, the impact of environmental factors on security of Austria are also unavoidable (for example on tourism, which is a leading sector). The individual, community and national level has – despite the debates and problems – a higher level of security as the regional and global level has, where thanks to the high number of factors and members, and -despite of the results of a strong Austrian diplomacy- it is difficult to guarantee security. Although the average Austrian citizens' conditions can be considered to be good, the factors stated above can have an effect on their everyday life.

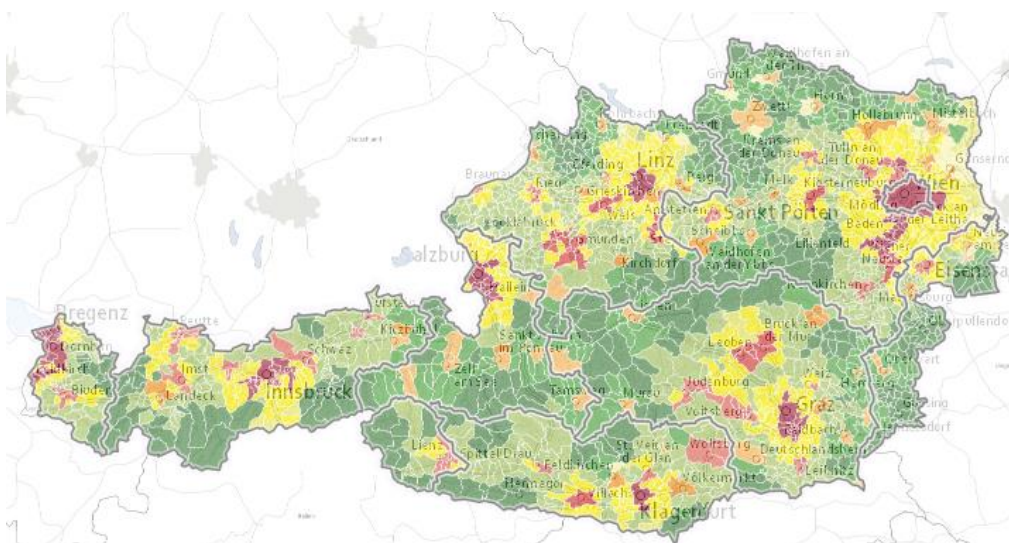
#### **4. Security matrix and criminal geography before the COVID-19 pandemic**

In the literature of the Austrian criminal geography, criminological, predictive, descriptive and other approaches can be found focusing on the big cities.

It is obviously difficult to explain reliably a complex phenomenon, in this case the criminal geography of Austria, with one analytical method. Using the political, economic and social dimension is the best way to get one country's picture of criminal geography from the security matrix. The role of the political dimension is little, because of the integrity of laws on the country level, additionally the penal code which is strongly connected to crime is seldom modified. Between those criminogen effects that has an impact on the crime committed by the individual (those effects, that in the appropriate situation can help the person to commit a crime) there are some which are in connection with the person's social and economic conditions, as well as that legal and sociocultural environment accepted by the person which can deter or attract him/her to commit a crime. The community level may also contain criminogen factors (for example, social problems because of the region's economic disadvantage), which is rather equal to the level of *Gemeinde* in the Austrian administrative system, as the lowest level incorporating many municipalities in themselves. Obviously more factors are needed to draw

the geographical pattern of crime (Mátyás et al. 2019). If the geographical pattern of crime on the country level is compared with the geographical pattern of unemployment, a slight match can be found. With taking a glimpse to the map it is sure that the main explanatory factors are the landscape, the population number of a settlement, the infrastructure and the role in the settlement hierarchy. These factors have a geographical and economic nature. (In addition, there are social and sociological factors that are also important, but not mentioned in this essay.) In 2019 the decrease of the number of committed crimes stopped, began to increase, but the spatial distribution has not changed (<https://bundeskriminalamt.at>). Taking into consideration the number of crime per 100 000 person we can find that the most outstanding areas are the districts of Vienna and the cities with big population (Linz, Wels, Steyr, Salzburg, Graz, Wiener Neustadt, Innsbruck, Bregenz, Bludenz, Klagenfurt, Sankt Pölten, Eisenstadt), which has space organisational force. Those areas have low values, which are in leeward position because of the landscape. The area of Schwechat was an exception with its high rate in crime because of its airport. In Vorarlberg the closeness of the border has a consequence in the high number of cases (<https://www.bmi.gv.at>). The global scale and the globalisation make its impact felt on the criminal and criminal geographical conditions in a special style. Through the tools of the Internet of Things (IoT) the cybercrime came to the foreground and on the Darknet many illegal things became available and usable (<https://bundeskriminalamt.at>) (Figure 1).

*Figure 1: Area types in Austria in 2017 (from central towards periphery):  
red-orange-yellow-light green- dark green*



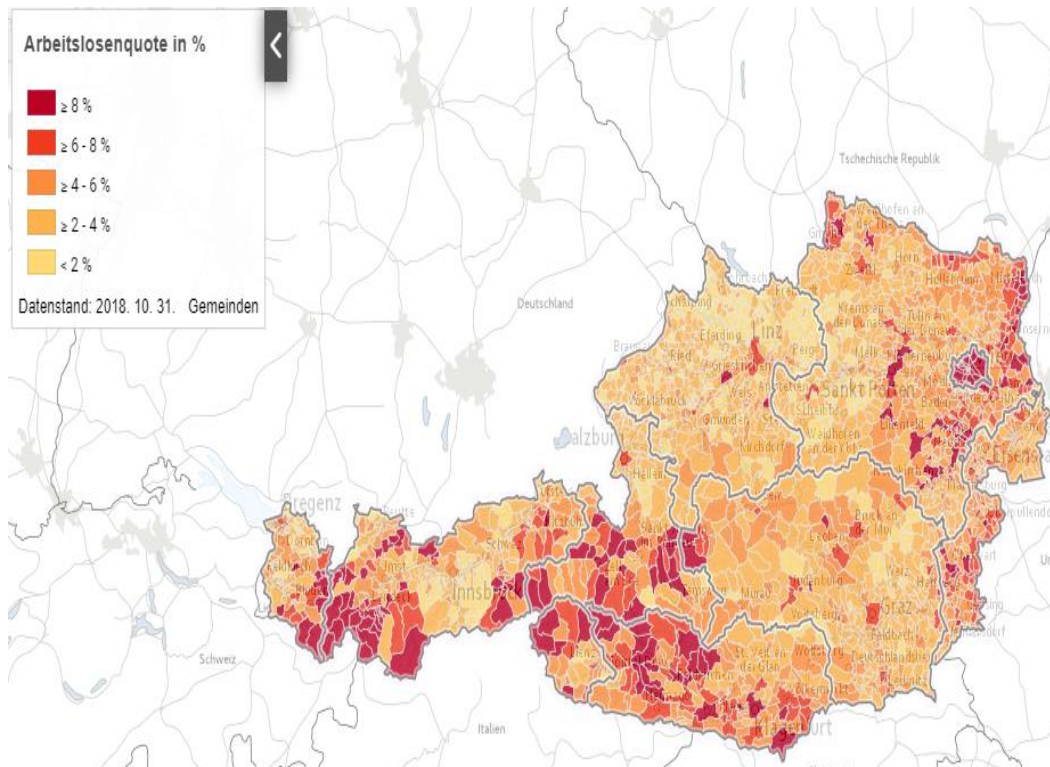
Source: Austrian Statistical Office – Atlas of Statistics – City – Land – Statistical Typology

Figure 2: Map of Austria



Source: <https://www.welt-atlas.de>

Figure 3: Unemployment rates in Austria at 31st of October, 2018.



Source: Austrian Statistical Office – Atlas of Statistics – Unemployment

### 5. The security matrix of Austria at the beginning of 2020 June

Although relaxations happened in connection with the daily routine of the citizens, it cannot be stated that the time of the pandemic is over (even because of the social effects appeared after the springtime of 2020). This security matrix is created about the conditions measured on 5th of June 2020 and will be analysed by focusing on the change between the two conditions and on the effects.

	<b>military</b>	<b>political</b>	<b>economical</b>	<b>social</b>	<b>environmental</b>
<b>individual</b>	obligatory military service	decreasing freedom restrictions	possibility of problems with livelihood	growing problems with the social system	extreme weather conditions
<b>small communities</b>	unusual application	decreasing governmental intervention debates	possibility of increasing poverty governmental intervention	possibility of increasing unemployment	climate change
<b>national level</b>	international responsibility taking			pandemic	poactive political intentions
<b>regional</b>	transformation of the army	need for cooperation	changing competitiveness	pandemic	temporary decrease of contamination
<b>global</b>	armed crises with temporarily decreasing dynamics	non-functioning countries	crisis phenomena	pandemic, increasing social dissatisfaction	natural and industrial disasters

In the military dimension the participation of the army in handling the pandemic from the beginning until today means a change. During this process the army had a chance to use its toolbar and the citizens had an opportunity to observe the operation of the army in an unusual way (<https://www.bundesheer.at>). Consequently this became the driving factor of the transformation of the military next to the experiences of handling the crisis and drawing the lesson. On the global level the pandemic decreased the intensity of emergence of the old and new conflicts, however the pandemic can bring latent social oppositions to the surface (as it did in the USA) (<https://www.wienerzeitung.at>), and these can create new crises.

In the political dimension there is a decrease of the state interventions and freedom restrictions during the pandemic on the individual and national level. In general, it can be concluded, that in Austria the communication of the previous restrictive measures was successful. One of the social impacts of the method of handling the pandemic (not only in Austria) was that it made people aware of those situations, that can appear any time and consequently under the governance of the state people have to surrender some parts of their freedom. On the regional level nevertheless, there is a positive impact next to the numerous negative impacts, namely

that because of the pandemic, cooperation is needed between the states of Europe, and this could be a good basis for further cooperations as well. On the other hand, it is possible that after the pandemic the handling of the potential social and economic difficulties will lead to political oppositions between the countries of the continent.

In the economic dimension in some sectors (mainly in tourism, retail, individual and product transport / <https://www.oenb.at/>) problems may arise because of the decrease in employment and consumer mobility, drop in needs as well as the temporarily sealed borders (Hungarian citizens who work in Austria are exposed to this). According to this the danger of unemployment and social impoverishment is present. This danger will diminish with the drop of restrictions and with the restart of economy. For achieving this, the Austrian government separated a significant sum of money when the new, pandemic-concerned legal package was accepted / <https://de.wikipedia.org/>. Moreover, the institution of *Kurzarbeit* became introduced, which means that the state takes the responsibility for 80-90% of the wages of the administratively reported employees depending on the economic sector and the workplace / <https://www.bmafi.gv.at/>. Obviously it is the question of the future, whether this state intervention has the macroeconomic cover and what kind of impact it will have. On the regional level there is a chance for the transformation of competitiveness conditions after the pandemic. On this, naturally, the previous conditions will also have impact. It is an interesting thought or rumour that many manufacturer and work module will be brought back to the continent from Asia after the pandemic, because it is known that the pandemic first appeared in China (Bod). If this comes into effect, it may lead to the transformation of the potential competitiveness conditions. As it is on the regional level, so it is on the global one. After the pandemic it will be the task of the whole globe to build back the supply chain and create new ones. This will also be the driving force of the economic processes, as it will be in the case of the changing customer and social behaviour as well as in the case of handling the economic recession. (The colour-coding of this column of the table was also made according to the methodology article.) In the social dimension according to the pandemic, the existing problems of the social system and the problem of unemployment can intensify and can have an impact on the economic and political dimension. According to the news on the pandemic, it currently has a decreasing intensity, but still has an effect on Austria, as it has on the regional and global level, because there are new infections and no vaccine to be used. (On the other hand, there is a positive potential for the virus' mutation into the range of manageable viruses.) (Rafai). The secondary effects of the pandemic can increase the social dissatisfaction on the global level and can bring

about negative impacts. (The colour-coding of this column of the table was also made according to the methodology article.)

In the environmental dimensions there were no dramatic changes happened because of the pandemic. The environmental conditions obviously got a chance for recovery during the pandemic with the travel restrictions and closing down the borders, but this time given is may be not sufficient, moreover, the positive impacts can be ignored when the economy will be restarted after the procession of the pandemic under an ideal interval of time. The interdependence on the global, regional and individual level created by the pandemic, can form a good base to further cooperations on the field of environment as well. Many difficulties can arise during the implementation, but the issue of environment may come to the front in Austria even more than before.

By analysing the table above, it can be concluded, that Austria could handle the conditions of the COVID-19 pandemic more successfully, than it was made on the regional and global level. The pandemic has a strengthening impact on the current and manageable political debates, and on the economic and social difficulties. However, the main lesson can be drawn just after the end of the pandemic and the true outcome of the current economic conditions.

## **6. Criminal geography at the beginning of June 2020**

Because of the presence of the COVID-19 pandemic in Austria and in the international arena, it is difficult to make conclusions about its impacts on the criminal geography. On the other hand, the security matrix can give a limited but helping hand to find these impacts. The army's role in border protection and the measures taken will be present in the future in the criminal statistics. According to the current state of affairs, the number of crimes committed in this year compared to the same time period of the previous year, is significantly decreased in some form of crime: burglary, car stealing, physical harm. The number of cybercrime and the misuse of drugs has absolutely begun to rise. As a specific crime does appeared the lack of wearing masks, the distribution of fake masks and the denial of the periodical limitation on entering and leaving (homes and the country) (<https://www.nachrichten.at>). The number of domestic violence and intimidation has also increased. However, the police follows the cases of domestic violence with highlighted attention, and there is cooperation with the ministry of female matters. This time period with full of restrictions created favorable conditions for the organised crime (<https://www.youtube.com>). The organised crime in Austria can be traced back to the geographical situation of the country (which is Central Europe), as well as the financial situation and the good living conditions of the existing small communities in the country. The pandemic

created such conditions, which make the view of criminal geography not depending dominantly on the above mentioned social, economic and political factors or the factors of the spatial structure, but also depending on the human factors with the same significance. Under human factor we can understand the controll over the compliance of measures taken by the government, and the decision of the citizens made on the extent of their intention to accommodate to the already existing and new rules during a period full with restrictions. The sense of vulnerability and closeness caused by pandemic may have an effect on the psychical state of the individual, therefore have an impact on the latest factor. Moreover, the tighter cooperation done more than ever before with the healthcare system determine the spatial organisation of the work of the police, which helps the compliance of the measures and makes the operation to be effective. Therefore it can be concluded, that the number of the long-range controlling tasks of the police has increased because of the pandemic. This factor has an effect on the spatial location of the police.

## 7. Conclusion

The security of Austria was analysed by the security matrix, which is a complex analysing-evaluating method. The writer compared two time periods: the time of the establishment of the current Austrian government and the beginning of June 2020. After the analysis, it can be concluded, that Austria is secure, however, the country has social problems to be solved. Debates appear equally on the individual, communal and national level. The effects of the pandemic did not avoid Austria, and next to the impact on the healthcare system, the economic level also sensed change in the system, which can intensify the already existing problems as well. That can be offset by the internationally already recognized Austrian crisis management and communication.

The security matrix illuminates the crucial factors of criminal geography in a limited, but useful way. From the dimensions of the security matrix, the economic, social and political ones were the most important factors before the pandemic, because these factors can show the spatial structure of the country as well as the conditions of its society. The pandemic transformed the criminal conditions of Austria, the crime accommodated itself to the new state of affairs. During the pandemic new factors appeared next to the ones already existing, and these are the human factors (psychical conditions, human connections, accommodation to the law, using the internet) and the governmental measures. These factors together will transform the criminal geographical conditions of Austria in 2020.



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**THE HISTORY OF THE ORGANIZATIONAL EFFICIENCY  
MEASUREMENT OF THE POLICE IN HUNGARY****Abstract**

In my study I intend to present the endeavour to improve efficiency and introduce the current model for its measurement. I attempt to analyse the disadvantageous effect of linking performance measurement to statistics-based efficiency measurement on the organizational culture and work ethic of the police, thus influencing the subjective feeling of safety of the society.

**Keywords:** organizational efficiency, police, performance, work culture, organization

**1. Introduction**

Hungarian statisticians quickly recognised the potential lying in criminal statistics: without the information and patterns hidden in the data of criminal statistics the state is unable to do anything against crime (Domokos 2013, 64). The efficiency quotient was based on criminal statistics and it has become the most important indicator showcasing the quality of the system. The reciprocal of efficiency exposes the ratio of inner variables to one another, especially in the simplified relation of investment and profit. Moreover, it shows the integrity of implicit and explicit factors by inserting the whole system into an external environment. When measuring the efficiency of criminal investigation, we examine the operation of a complex system; in case of incorrect fundamental assumptions, the results, if applied to the system, can cause its structural and functional disorder.

An outcome oriented approach can cause the weakening of the formal and informal facets of the organization. As a consequence, in contradiction to its original intention, measuring efficiency can lead to the demotivation and demoralization of the criminal investigation

organization, and instead of strengthening its structure and functionality, the opposite outcome occurs.

In this way measuring efficiency can lead to the refusal or questioning of criminal investigation indicators and indices. Not recognizing the real nature of effects is an “ostrichism”, which attempts to evade or dodge objective statistical indicators. It does not take into consideration that criminal investigation is a complex system based on several factors, the efficiency of which is almost impossible to be expressed in simple figures.

As a result, delivering the expected figures becomes the sole measure of performance of the organization and the system itself. Delivering these figures at all costs practically becomes more important than fulfilling the fundamental governmental and social function of the organization. Therefore it is essential to lay down certain principles which might ensure the theoretical basis for the enforcement of these ‘objective’ figures.

They can be objected not only because they are old-fashioned or represent a different kind of mentality, but because they represent a factual and serious obstacle for development.

## **2. Seeking the Ways and Means of Efficiency in the 80s**

The Hungarian Great Encyclopaedia defines efficiency as follows: “1. the ratio of output and input. Depending on the type of input, different efficiency indicators can be created, e.g. efficiency of material consumption, the capital (inverse of capital intensity, i.e. the quotient of capital and production), and productivity (inverse of labour intensity). Complex indicators can also be produced, which include all the (factors) inputs, in case of fixed or convertible inputs, or in case of those inputs which can be expressed in mutual units of measure. 2. evaluation deriving from the comparison of production processes which can be described with diverse, not commensurable outputs. One procedure is more efficient than another, if, for the same output (combination), it uses less of at least one of the inputs, while from the other inputs it does not use more; respectively, with the same input combination it results in more output in case of at least one of the outputs, while the others remains unchanged (vectorial comparison). In this respect procedures are efficient if more efficient procedures do not exist.” (Hungarian Great Encyclopaedia 1999, 275.)

Some police researchers approached the question of efficiency in the 80s based on the above given definition. They were aware of the existence of latent crime, and although they accepted that total crime included latent crime, they could not count with it when measuring efficiency.

The criminal investigation authorities set the theoretically possible maximum as the benchmark, and not total crime which includes latent crime, too.

In case of criminal investigation, efficiency is nothing but a ratio which includes the volume of labour input, the work load and the achieved result, where the result is weighted by the danger to society and refers to recorded crimes, and where the volume of labour input and work load is determined by the complex system of several factors (Somogyi –Vass – Madács 1979). The new indicator evaluates the activities of the criminal investigation authority regulated by the Criminal Procedure Law; other activities are not included. The categorization of certain crimes was based on the average court sentences and Penal Code sanctions, which resulted in a “danger to society indicator”; nevertheless, this efficiency formula didn’t go further than surveying and indexing the regional characteristics of the criminal situation (Somogyi – Vass – Madács 1979).

*Somogyi, Vass and Madách* focused their research on the question whether the labour input of the police reflected the judicial system’s (i.e. court decisions) imposed average sentence in relation to certain crimes. When defining efficiency, they did not draw any conclusion besides indexing crimes; still, their results could show how the courts perceive crimes after criminal investigation, creating a ground for comparison. This way criminal investigation authorities could allocate work and organizational conditions better. If they wished get an objective picture of a given investigation authority’s efficiency, they could transfer the indexed crime numbers to the recorded crime data of the given authority, and compare the labour input of the organization to that data. However, they did not draft further recommendations as to how the system should be adapted or how labour input data should be obtained. Although establishing crime categories is a valid line of research, it does not provide enough information to define efficiency. They failed to point out, that the “danger to society” index does not reveal how complicated and time-consuming investigations and verifications are. In fact, only by indexing how time-consuming the verification process is (amount and nature of evidence) and how dangerous a certain crime to society is, can the priorities and the scope of authority of the criminal investigation organization be determined.

I fully agree with *Tauber István*’s contemporary reflection on the above mentioned research, who, while defining the efficiency of criminal investigation, strongly doubted that the work of criminal investigation can be measured. According to his view, the efficiency of the social function of crime prevention can only be defined through negative procedures, and only as a

tendency. With this method, latent crime is not considered assuming that it is less prevalent than recorded crime. I believe in Hungary this is the case.<sup>8</sup> “It is not the social perception of committed crimes that matters, but the labour intensity of the investigation and prosecution of various crimes. Of course, the social perception of a committed crime can also be considered, but only as an underlying characteristic feature.” (Tauber 1980, 62.)

In his efficiency theory *Tauber* created the following groups of factors:

1. Cases should be categorized on the basis of a point system according to how complex they are, how much data we have and the quality and type of the data etc. The types of cases can be indexed based on how much time needs to be devoted to them. The crimes might be assigned between 1–10 points.
2. The average investigation and verification activity done at a given type of crime. Personnel conditions of the examined police unit. Professional preparedness, practice and qualification is also rated.
3. Social perception of certain crimes, according to the type and size of the court sentence.

Tauber focuses on the cooperation of the criminal procedure’s subsystems from the point of view of efficiency, as he says: “Criminal prosecution requires the cooperation and coordination of different bodies, because efficient criminal investigation can only be imagined if all the bodies taking part in the criminal procedure strive for maximum performance.” (Tauber 1980, 59.)

However, maximum performance can be strongly questioned if the requirements for success differ in the subsystems. “The subsystems of open systems – like the judicial system – are interdependent; the certain subsystems are partly independent from each other, i.e. they are autonomous regarding their functions. Therefore they wish to preserve their independence, which can run counter to the endeavour and overall aim of the whole system. This also stands for the relation between certain elements, and conflicts between the subsystems can derive from the attempt of certain sub-systems to preserve their level of functional autonomy.” (Farkas 2002, 51.) “It is likely that while the given organization tries to maximize its own functional autonomy, it also endeavours to minimize that of other subsystems, which can cause tension and conflict between them.” (Connidis 1982, Farkas 2002)

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<sup>8</sup>At that time there was not an overall latency survey that is why the author supposes it. After the political change of 1989 Korinek László published data concerning Hungarian latent criminality.



In this question the relation system between the prosecution and the investigation authority is of cardinal importance, since criminal procedure has its activity management and operations management at different places, which is not negligible from the point of view of efficiency. “Operations control and activity control interact with each other. The latter depends on the former one. Operations control ensures the budget funds for the organization, it establishes the organization and its structure, takes decisions on the personnel, and it has an effect on the qualification of the workers. The high quality, legal activity and its control postulates the perfect control of operations. Otherwise functional disorders can occur in the field of law enforcement, the efficiency of activity control will be lower. Activity control is vulnerable to operation control; however, the law places the responsibility for controlling investigations on the attorney who controls the activity.” (Nyíri 2003, 65.)

*Tauber* uses the commonly accepted efficiency formula to calculate the efficiency of criminal investigations, while also considering factors which really influence the efficiency of the activity, such as:

- crime situation,
- quantity and quality of the caseload,
- time factors in the investigation,
- quantity, quality and successfulness of work,
- personnel and material conditions of the criminal investigation.

According to his viewpoint, the efficiency formula cannot be automatically applied to the field of criminal investigation, since defining and measuring “effective output and established output” is a complicated task, and the “social need” element of criminal investigation efficiency raises interpretation problems. His efficiency approach is much more chiselled than the former theory, which was flawed from the start. Still, in his assessment of efficiency he neglects the role of the the feeling of subjective safety and the significance of public opinion on the police. However, these aspects are indispensable to determine the efficiency of a modern police force, integrated into a society. *Korinek László*’s monograph ‘Fear of Crime’ was essential to promote this idea, but unfortunately he only published it well after the change of regime in 1995.

### 3. Measuring Efficiency in the 90s

*Dános Valér* conceived the evaluation of police work along three lines: measuring effectiveness, performance and efficiency:

- how well the police manages the resources at its disposal: human resource, budgetary funds and material infrastructure,
- performances compared to each other and their tendencies,
- meeting social expectations, changes in efficiency in relation to crime data (*Dános 2002*).

The medium-term research of Dr. univ. *Komáromi István* on measuring the efficiency of criminal investigation at the Pest County Police Headquarters in 1996 is also worth mentioning (*Komáromi-Teremi 1996*).

According to his views the development of a unified measuring system is still in the initial stages, calling for more research. Our current system, which is based on statistical data, is unfair; it does not account for the different working conditions of the authorities; it does not differentiate between the various types of crimes and offences, each crime counts as one. A further problem is that statistics, which is meant to provide objective results, do not correlate with the public's subjective feeling of safety. Different crimes have different effects on the public consciousness. *Komáromi*, being result oriented, prefers the objective approach, since subordinates cannot be blamed for lower efficiency if organizational aims are not in accordance with efficiency indices (*Komáromi-Teremi 1996*). Economic efficiency aims to achieve the most with as little effort and as few resources as possible. The outcome is the output itself. The index of efficiency is the quotient of input and output during a given period of time. After defining correctly the input and the output, they have to be converted to a commensurable unit of measurement. The measure of efficiency is not the same as the achieved result and different results can be compared thanks to efficiency measurement (*Komáromi-Teremi 1996*).

*Komáromi's* analysis and research is a serious advancement in defining efficiency. Nevertheless, his approach remained mainly statistical, and he failed to clarify several conceptual elements. Neither could he solve the efficiency dilemma between objective safety and subjective feeling of safety. The inner evaluation method of the variables in his system is rudimentary, therefore his system couldn't become a self-regulating coherent efficiency measurement system, since the variables can be changed arbitrarily.

Marvin E. *Wolfgang* and his colleagues conducted a similar research about how people see the seriousness of crimes and offences compared with each other. They came to the conclusion that when cases – and not offences (contrary to the Hungarian research) – were graded according to their seriousness, people based their decision on whether the victims were able to defend themselves, how big the loss or damage was, what type of firm or organization had been wronged, and what the relationship between the perpetrator and the victim was. Almost all the respondents agreed that white collar crimes are more serious than crimes against property (*Wolfgang-Figlio-Tracy-Singer 1985*).

#### 4. Measuring Efficiency in Practice

By the mid-1990s it became obvious to certain police experts that the evaluation practice established for the crime situation in the 90s contained several dysfunctional elements. The common performance indicators used for evaluating the professional performance of the police was not suitable to measure the real performance of the given body (*Dormán 2002*). In 1997 a completely new evaluation system was presented to the leadership of the National Police Headquarters, and its trial implementation was decided upon. The system was to be introduced in three phases, first applying it to the data of three counties, than to five counties and finally to Pest County. The new evaluation system inevitably brought about positive changes. A lot of information, which was not demonstrated by the former statistical indicators, was revealed transforming the former efficiency indices:

- measurements regarding the density of police officers rearranged the order of ranking between the headquarters,
- police authorities could channel their forces better, after the prevalence of specific crimes became visible in the regional data,
- the expenses per criminal case ranking significantly rearranged the efficiency ranking.

The aspects of the new evaluation system became the following:

- Citizens and local governments became involved in the evaluation system through opinion polls.
- Combining traditional criminal statistical data with social statistical indices, e.g. certain type of crime incidences per 100 thousand people.
- Regional statistics are not compared to each other, but to the former period of time, revealing tendencies and changes.

- Creating weighted indices with nominal numbers based on the average sentences imposed according to the Penal Code.
- Using a clarifying index, which shows how many cases the police dealt with during a given period of time. It also contains cases closed but not solved.
- The human, material-technical and financial conditions of the given body, such as how much money and how many police officers they have, what their technical-equipment utilization is like, etc.

The whole system was to be introduced by 2003, but in the end it was not implemented. However, it started a way of thinking which led to the acknowledgement of the role of subjective feeling of safety.

### **5. Current Model for Measuring the Efficiency of Criminal Investigation<sup>9</sup>**

The 'efficiency' calculation method as the basis of performance evaluation

Efficiency, which is the aim of the directive, is closely linked to the performance evaluation of the organization.

The evaluation system of the set objectives uses 30 index numbers out of which:

- 20 are crimes
- 2 are offences
- 4 are related to public order
- 3 are related to traffic regulations
- 1 reflects the opinion of local governments (<http://prezi.com>).

The weighting of the index numbers

Not of extreme importance (1x):

1. the number of investigations per 1 policeman
2. the number of successful investigations per 1 policeman
3. the number of prosecution per 1 policeman
4. the efficiency index of investigating crimes committed in a public space
5. the efficiency index of investigating negligence to help
6. the efficiency index of investigating hit-and-run accidents

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<sup>9</sup> 18/2012. (X. 12.) ORFK Directive about the Procedure of Evaluation of County (Capital) Police Headquarters, Police Headquarters and Borderguard Offices Based on an Objective Measurement System

7. the efficiency index of investigating vandalism
8. the efficiency index of investigating vigilantism
9. the efficiency index of investigating cases involving private vehicles
10. the efficiency index of investigating arbitrary taking of vehicle
11. the efficiency index of investigating damage of property
12. the efficiency index of investigating plundering
13. solving offences against property committed by an unknown perpetrator
14. the rate of prosecution
15. the average time of the infringement procedure
16. hours spent in a public space per 1 policeman.

The weighting of index numbers:

Of increased importance (2x):

1. solving a crime committed by an unknown perpetrator
2. the number of crimes committed in a public place per 100.000 inhabitants
3. the rate of prosecution
4. the average time of investigating cases
5. the number of apprehensions per 1 policeman
6. the number of arrests per 1 policeman.

The weighting of index numbers:

Of increased importance (3):

1. solving homicide cases committed by an unknown perpetrator
2. the efficiency index of investigating theft
3. the efficiency index of investigating burglary
4. the efficiency index of investigating robbery
5. the change in the number of traffic accidents with injuries compared to an earlier period of time.

The weighting of index numbers:

Decisive (4x):

1. the number of registered crimes
2. the opinion of local governments.

## 6. Conclusions concerning the weighting of index numbers

The original significance of the different crimes (20 crimes, 2 offences, etc.) significantly changes after weighting, so it seems that the original rate is only a principle. On the other hand, there are common criminal statistical and other index numbers, which have no relation to either branch of service.

After the multiplication (weighting) there are 51 units from which the proportion of the different measure groups are the following:

- a., 9 of common criminal statistics,
- b., 28 concerning criminal service, 4 of which are connected to the criminal investigation capacity of the authority,
- c., 2 concerning traffic service,
- d., 2 concerning offences
- e., 6 concerning public order service,
- f., 4 reflecting the opinion of local governments.

The measure is dominated by the former (investigation) and the current (ITE)<sup>10</sup> performance indicators of certain crimes, that is, by the output statistics of criminal investigation. It is a positive development that the condition of the authority appears in the evaluation, however, it makes up for only 18% of the evaluation. The proportion of criminal tendency index numbers is also low in the measure: only 18% of the whole evaluation system. Moreover, it is a significant question whether empty positions and appointments are accounted for in the per capita values, since at these measures a reduced number of staff means higher efficiency. The proportion of the local government's opinion is also low in the measure (below 10%). Although the opinion of the local government is important, it is not equivalent with the public's feeling of safety, which does not appear in the evaluation at all. Furthermore, we do not get a picture on the rate of latent crime either.

Analysing the directive, one can declare that the evaluation is still largely based on statistics, while to a certain degree it also calculates with the workload of the authorities and with the figures of local crime, the change of which – we must add – is not always due to the effective

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<sup>10</sup> reconnaissance index in case of an unknown perpetrator

operation or activity of the investigation authority, but to several macro factors mentioned in my study. Unfortunately, efficiency measures do not reflect how effectively the police react to criminal tendencies, but rather focuses on the number and rate of files that the criminal investigation authority produces. Apart from this, the advantage of the directive is that it deals with authorities on the same level in a comparative way regarding their conditions; however, rates could have been weighted more, not to mention the necessity of representing the differences of local criminal 'characteristics'.

### **7. The Preconditions for Demonstrating 'Efficiency' in the Statistics of Criminal Investigation**

At a conceptual level, the separation and independent handling of crime and criminal investigation (and their effects) requires consideration. In fact, the authentic interpretation of the relation between the subjective approach to criminal investigation and crime and the objective figures of public safety is flawed because it is approached in a causal scheme. Crime is not the consequence of criminal investigation; in the causal chain neither of them fulfils the role of reason or result. In this way different institutional solutions and interventions which treat delinquency, no matter how strict they are, such as 'zero tolerance', wish to make a change via the tools of criminal investigation, meanwhile remaining within – the tight one-way causality – its uniformed formula (Sárosi 2008).

We have to realize that improving the quality and the credibility of the criminal investigation authority together with a growing confidence of the population has a bigger effect than simply fighting crime. It was also verified by researches, which, by analysing the results of opposing criminal investigation approaches, came to the conclusion that they transformed the criminal situation with very similar effectiveness (Harcourt 2001). However, criminological researches consistently verified the close relation and interaction between crime and criminal investigation. "Crime is a social phenomenon that is why its prevalence is the failure of the society not of criminal investigation. So crime is the result of social conditions, which itself creates other conditions like criminal investigation. Criminal investigation is meant to deal with the conditions created by crime being the most significant social institution to control crime. Its result or lack of success, i.e. its efficiency is in interaction with public safety, which nowadays cannot be measured with traditional methods at all. Even with the optimal investigation rates of the criminal investigation apparatus crime rates are increasing." (Szabó 2002, 34-36.)

The two subsystems, affecting and influencing each other, represent crime, therefore evaluating and emphasizing their conditions independently from each other is meaningless, inconsequent and does not assume a strategic aspect at all. Handling criminal investigation outside the scope of crime and using its statistics for research purposes leads to faulty results, which can encourage wrong conclusions. Crime can be handled solely in correlation with criminal investigation and social processes, where several factors must be considered, which can make the real nature of criminal investigation exact and intelligible. Such factors can be:

- Complex statistics integrated into society

When evaluating the quality of criminal investigation it is indispensable to know and reveal local social conditions and figures. Local unemployment, social stratification, standard of living and other significant macro factors can definitely create different expectations towards the police as a criminal investigation authority. At a national, county or local level the root cause of crime is the functional disorder of basic social processes which can be traced back to social disorganization, the weakening of social control, cultural conflicts or other anomalies (Szabó 1985).

- The opinion of local governments, civil organizations and churches

We must pay considerable attention to specifically local public safety requirements, since criminal investigation can be qualified as meeting these. If local government law enforcers work hand in hand and in active cooperation with civil public safety self-organizations, they can react more effectively to the local challenges of public safety.

- The basic unit of criminal investigation is the local body

The foundation of efficiency is the evaluation and measurement of local settlement units revealing its specific crime and criminal investigation situation. The national survey is not able to show and deal with the social, economic, cultural and other processes of smaller geographical units; which not only creates an opportunity to crime, but also motivates perpetrators (Déri 2000). Knowing the real quality and size of crime makes it possible to adapt the strategy of crime prevention and investigation; adjusting the organization, structure, division and location of the forces, while considering the tendencies and prediction of crime (Boge 1991).



## 8. Organization and Efficiency

Perhaps organizational uncertainty and mistrust is the most important factor decreasing efficiency. Unfortunately, for the past 25 years police officers have not been given guidelines as to what their social objective and task is. Only a negative definition was provided for the social role of the police force saying it is supposed to be different from what it used to be. Consequently, police officers only have a vague idea of what they should be, but do not know who they really are in a democracy (Krémer 2003). Therefore the police needed to develop a certain kind of defensive mechanism which can be described as faith in professionalism above all which lead to the full isolation from the critical society. This self-defence reflex was a consequence of the above mentioned and the fully developed uncertainty which dominated not only the vertical but also the horizontal level. It is also observable in the lack of information flow: the exchange of information occurs via informal ways to bypass the extremely regulated official channels, which has become an obstacle of confidence (Krémer – Molnár– Szakács– Valcsicsák 2010).

“The organization which reduces almost all of its members to the role of a servant, as a result of its hierarchical order, risks losing all of its ability to co-operate with its external contacts, and practically speaking regards its whole surroundings as an enemy. Someone belonging to the organization can pass the surrounding all the humiliation and affront they are forced to bear inside the organization.” (Finszter 2006, 648.) This claim expressively points to the problems coming from the structural disorders.

Deprivation of the organizational culture strongly correlates with the bad situation of the workforce. It has been already examined by the ombudsman who also issued several statements.<sup>11</sup> The characteristic features of the police are the following: exploitation, overwork, personal needs are not considered, no police association, no social scenes, no traditions and customs to foster, no control, no supervision helping the operation, crime is considered a moral defect, which is reflected in the measures, and statistics do not provide a faithful picture of the operation of the police (Németh 2007).

Difficult economic circumstances do not help successful work either, since it is a problem to find funds for the operation; most regional bodies keep struggling with debts. Human resources

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<sup>11</sup> The Ombudsman’s Report about the Situation of Human Rights of Policemen: OBH 5007/1997.

are scarce. Several regional bodies operate in buildings which were designed for other purposes therefore they are outdated and not practical at all (Salgó 2004).

### **9. Principles and Methods for Measuring Performance**

The managerial concept of performance mostly focuses on the financial efficiency of the organization and endeavours to reach higher efficiency by improving the management of human resources. If the loyalty of the employees is increased and higher performance is promoted, the whole organization's efficiency is affected. There is no doubt that the functional expenses are significantly increased because of the training costs caused by high fluctuation, since the quality and speed of work is closely related to the qualification, working capacity and motivation of the employees.

Performance expectations, personal and professional competence requirements towards colleagues on duty in the criminal investigation branch of service are completely different from other branches of service at the police. They resemble a market-oriented service company rather than a public institution. The driving force that inspires performance is first of all the motivation of human resources. Regarding its nature and meaning, several theories have been created, but its essence can be grasped in the leader's behaviour towards their subordinates in order to entice them to reach the organizational aims (Pedagogy and Psychology Studies for Police Management, 2009). Encouragement is different from motivation, which is essentially external, but also includes internal feelings, which are generated when good performance is reached (Gelei 2006).

Performance evaluation is a means of incitement and motivation. As an inherent part of organizational life participants mutually evaluate each other's performance, as their shared aim is the success and efficiency of the whole organization. Two methods of evaluation are distinguished:

- informal evaluation, it happens spontaneously because leaders pay close attention to their employees' work and they evaluate it (Gyökér 2007). It is subjective and based on an opinion.
- formal evaluation, a consciously developed system by the organization; with the help of this system the employees' performances are regularly and systematically evaluated.

The performance evaluation of criminal investigation is a completely formal, paper-generating activity without any motivational force; moreover, it is far from reality in many cases.

Individual performance evaluation and organizational efficiency targets should be synchronized; still the statistical indices showing the efficiency of the organization have no significance in measuring the performance of the criminal service. Annual performance targets or the actually completed and finished tasks do not occur on either the quality or the quantity side of the employees' incentive system (Kiss 2011). First of all, the contradicting situation of uncertainty and inertia must be eliminated in order to make performance evaluation motivating. It is connected to the fact that organizational efficiency is unclear and immature. Subjectivity cannot be eliminated; however, it must be expressed in the leaders' expectations in accordance with the general objectives of the organization. Apart from this, all the objective elements of the evaluation system must be laid down in order to obtain a tangible performance measurement system.

In terms of loyalty and performance incentive, the most significant aim is achieving motivation. As can be inferred from the above, motivation, besides implementing a result oriented approach, can also be encouraged by eliminating continuous overwork, rationalizing excessive expectations and division of labour, ensuring rehabilitation and relaxation, and making it possible for colleagues to spend more time on themselves and their families both physically and mentally. By doing this, instead of enforcing a result-oriented motivation system, the workforce would have the proper background and energy, which would certainly manifest itself in the standard of work and also in the results.

## 10. Measuring Efficiency and Performance

In accordance with the notion of efficiency expounded above, the following aspects should be considered when developing the method of performance evaluation of law enforcement employess:

- the number of operations, including executed investigation actions,
- the number of solved cases (perpetrators and crimes),
- the number of dissolved and suspended cases,
- the number of cases passed on to prosecution,
- weighting the investigation difficulty of cases based on the crime and the concrete case, which would be a "prequalification" from the leader
- the period of time spent on certain investigation activities in proportion to the working hours in the given period of time,
- the rate of decisions rejected by prosecution, the same in case of supplementary investigations, compared with the number of investigations in process,

- the number of commander revisions, and the quantity and quality of the discovered deficiencies, etc.

The listed aspects of evaluation are not complete and they may vary according to the sphere of activity, nevertheless, it can be seen quite well that a performance evaluation system developed in accordance with organizational efficiency, could basically change the functional system of the organization and would steer it towards the direction of efficiency.

Selection, recruiting and training as part of human resources are also affected by the lack of a clear view of efficiency. Obviously, an organization which struggles with the challenge of efficiency and performance evaluation will not manage workforce optimally either.<sup>12</sup> The symptoms appear from selection to employing, and let there be no mistake, they cannot be reduced to only an economic question. An effective selection and incentive system can be set up even from little money if there is a properly motivated workforce with good competences at the beginning and if a healthy incentive and career system is ensured during their whole career and advancement. "It can be definitely stated, that the expense of training and equipping an unsuitable person, and the negative financial consequences of their improper actions, (...) the allowances in connection with their discharge, cost several times more than the expenses of an aptitude test." (Csatai 2010, 97.)

Measuring performance is significant for the efficiency of criminal investigation, because through increasing individual performances the whole system is developing. To achieve this, there has to be a harmony between the long term and short term objectives of the organization and between the objectives of the branches. Management theory provides a scientific approach as to how this should be carried out, defining the advantages of modern management principles and methods, and explaining the means to increase performance motivation.

A relevant performance survey at the police contains:

- a committed management,
- an active participation of the subordinates,
- consistent endeavour,
- regular appreciation,

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<sup>12</sup> A consequent performance evaluation system is needed and also a system of taking responsibility which puts requirements in the centre. Statistic approach must be given up, as it is a scientifically proved fact that it does not show real values. Measuring performance must be set to competences. As a consequence of it, positions must be given according to ranks, it is also true in reverse. Indicators for measuring performance can be people's feedback and local and national researches done regularly. (Krémer-Molnár-Szakács-Valcsicsák, 2010).

- consistency in the rewarding system,
- adequate and regular trainings to improve the necessary skills.

If the organization wants to operate successfully, it has to establish a culture which appreciates effort by concentrating on results and performance. All this helps to establish the adequate performance-centric culture based on endeavour (Morgan 1995). “It is not accidental that, similar to several other fields of life, inadequate measurement of results causes disorders in case of the police too, since such an unambiguous and uniform measure and index of success is missing which could show the real efficiency of police work. (...) This led to there, that police leaders exclusively saw the solution in increasing the number of police forces and equipment; they required more and better policemen and technology. This deformed conception which is missing the point made it difficult to clear up and understand the nature of police work and performance measurement.” (Dános 1995, 129.) The crime-case solution index cannot be the basis for performance evaluation; its use deliberately misleads society, public opinion and citizens, and at the same time it is a self-deception to overemphasize its importance in the system of performance evaluation (Finszter 2008).

The impracticality of using the crime-case solution index lies in the interaction between cause and effect, since public safety is the aggregate of objective factors and phenomena, which are also significantly influenced by the efficiency and result-oriented approach of the criminal investigation. The crime prevalence index, since ignoring the macro structural elements of social relations, is not suitable for comparison.

To sum it up, objective criminal investigation indices are unsuitable for performance evaluation since:

- There is no causal relation between performance and these indices; e.g. the inverse proportionality between crime solution indices and crime prevalence cannot be measured or verified. It means that the improving crime case solution indices do not necessarily reflect the improvement of the crime situation, they simply show that the activity of criminal investigation has increased. E.g. if crime indices have increased = public safety has deteriorated = the police have worked badly. On the other hand, if the same happens in case of a hidden crime (drunk driving, family abuse, etc.), we can surely state that the efficiency of the criminal investigation body has increased (Kertész 2002).

- The crime situation, i.e. the objective safety is the result of complex factors, which depend on the efficiency of the criminal investigation to a great extent; the role and effect of criminal investigation, that is the procesual and regressive model cannot be measured or separated from the effect of the proactive model. Only the separated measurement of these two could explain the necessity of their use.
- The crime rate data does not consider important factors, such as the composition of the population or the structure of crime.

According to *Dános*, goal setting reveals the vision and the basic philosophy of the police, which determines the leading motive of the activities of the whole police force, its units and its members. The quantitative indices of the measurement must be in harmony with the most fundamental aims of the police; the close interaction between them must be thoroughly examined.

As far as community goals are concerned, first of all the indices of contentment must be taken into consideration. The indices of case solving and successful investigations provide only an indirect and deformed picture of how successfully the police work. As if the success of legislation lay in the number of acts passed each year instead of their social effects. Similarly, the criminal investigation authorities of the state are successful if they produce the least possible data, and they guarantee social peace and public safety. Guaranteeing objective safety (negative criminal investigation indices) is only important as far as they increase the subjective feeling of safety and reveal the fight against hidden crime.

Concluding from the above described, we can declare that the connection between the number of staff and the success of criminal investigation is extremely distant ().<sup>13</sup> Difficult economic circumstances do not help successful work; often it is difficult to find the funds for operation and most regional bodies keep struggling with debts. Human resources are scarce. Several regional bodies operate in buildings which were designed for other purposes; therefore they are outdated and not practical at all (Salgó 2004, 41-51.). The same can be said about the presence of the police, as in most of the cases the procedure starts on the initiative of the population. The

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<sup>13</sup> In the United States between 1970 and 1990, the number of policeman increased with, 70,7% and the number of serious crimes increased with 78,8%, the number of violent crime increased with 147%. In Great Britain from 1977 to 1990 beside the 12% increase in the number of staff there was a 67% growth in the number of crimes. In Canada from 1970 to 1990 there were 16% more policemen meanwhile criminal statistics showed 34% increase. In 1990 in the United States there were 393 inhabitants per 1 policeman, in Japan 552. In the same year 100 000 inhabitants had to bear 728 violent crimes in the USA, while in Japan less than 10. (Kozáry, 2008)

increase of social solidarity has a positive effect on the inputs of criminal investigation, since the increase of interaction is a question of confidence. Open communication channels, i.e. the possibility of sincere and free information exchange between policemen and citizens, are of extreme importance. However, communication is strongly limited due to the bureaucracy and hierarchical relations. Police communication can be characterized by passivity at best, caused by the fear of the sensation-hungry and news-distorting attitude of the media. It culminates in the complete chaos of how communication rights are delegated, especially on the lower level of the hierarchy at local bodies, where such decisions are regulated by strict and formal rules. However, if the community feels that meeting performance indices made up by the criminal investigation authority is more important than the outcome of authentic and correct satisfaction surveys coming directly from the community itself and the objective feedback of performance evaluation, then its attitude will significantly change. It is misleading to generate “objective” statistical performance indices instead of working for community objectives (Bujdosó-Györki 2011).

Starting from the interpretation of police philosophy, the objective situation of safety and the subjective feeling of safety need to be defined with great precision. We can distinguish between performance and efficiency measurement, the former can be the basis of bonuses, appreciation or advancement, the other can have an effect on resources, means and methods, principles, activities and functional characteristics of practically the whole organization.

We must make sure that (either centrally or locally) set aims are reached. This activity can be described as measuring general police efficiency. Where the set aims have been reached, the resources used for reaching the aims have to be evaluated, then decide whether they were excessive or not. Another factor must be considered, namely the ‘profitability’ of the organization in terms of expenses. This is another kind of efficiency measurement or survey to reveal how much loss there is, how much time and energy have been wasted. The ratio between results and methods must be considered here (Skuli 1995).

The crime solving index is also paramount in evaluating the performance of the organization, but while it highlights the successfully closed cases, it ignores unsuccessful activities and wasted working hours. Therefore it is important to assess how much time is spent on a case, i.e. how long it takes to produce a report, furthermore how much time is spent on processing cases either successful or unsuccessful. The reasons for stopping investigations can be further detailed revealing how many working hours and how much energy input the authority needs to achieve

its success indices. Trends of certain activities must be analysed and all the legislative or law enforcement anomalies must be uncovered, in this way the work load conditions of successful and unsuccessful procedures become detectable. The robocop system records all the investigation activities; these electronic records can uncover the relations between work load and the number of staff providing an insight into the nature of efficiency. We must pay attention to the fact that only the results of similar police bodies can be compared and evaluated drawing conclusions from them. A clear advantage of the revision is that standard figures can be established, which reveal the time-scale of various working processes, and highlight more clearly the relations between administration load and success.

The disadvantages of using criminal investigation statistics for performance evaluation have been presented in several studies. Its problems mainly appear in its inadequacy to reflect latent crime. It is improperly connected to the quality of work and to the salary system, which creates serious contradictions and dissatisfaction inside the organization (Kádár 1967).

The more efficient German criminal investigation system evaluates the changes and tendencies in the crime scene. Police management, both at higher and lower levels, reacts to the dynamically changing face of crime with flexible measures. On local levels it means strengthening the patrol and surveillance service, organizing large-scale public safety actions and raids, and establishing different special investigation teams, for which workforce is taken from other fields (Ziegler 1995).

## 11. Conclusion

On the basis of the above considerations it can be safely stated that basing performance evaluation on “objective” criminal investigation statistical data, does not correlate with the original objective of improving the efficiency of criminal investigation. This paradigm disregards strategic thinking and does not examine crime and crime control with a scientific approach. It also fails to perceive crime as a social phenomenon and criminal investigation as an institutional means reacting to it. Moreover, it has a negative effect on the motivation / incentive system of the organization by serving ad-hock purposes and thus alienating the society. Criminal investigation cannot be handled separately from crime and society as a hierarchically controlled system.



There is no question that the objective indices of criminal statistics are too complicated to completely exclude the possibility of their manipulation if they are connected to performance evaluation. The efficiency indicator is especially important in moving away from quantity towards quality. The subjective feeling of safety as an efficiency factor must be acknowledged and included in the system. That is, gaining the confidence of the people and the community should be as essential as producing a more successful criminal investigation index from a lower budget.

The efficiency of a community type police integrated into society, measured with the “objective” indices of criminal statistics is an antagonism in itself. This contradiction can be solved in two ways. First we could take a cost efficiency approach (market based, neoliberal) deceiving ourselves and the citizens with favouring statistics. Or with the help of a new model we could create an organizational culture, which appreciates human resources, making them more efficient with incentives and a fair performance evaluation system.

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