UDC 34.

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STATISTIC AND MEASURING THE EFFICIENCY OF CRIME INVESTIGATION

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.[1] The efficiency quotient was based on criminal statistics and it has become the most important indicator displaying 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

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[1] Domokos (2013) 64.

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.

Non-parametric DEA models have been used for measuring efficiency abroad for years and they progressively calculate with the role of exogenic – external social factors. Meanwhile, in Hungary the performance of criminal investigation is exclusively in the focus, independently of the locally different criminality and the different personnel and equipment/staff and material requirements. Strictly connecting efficiency statistics with individual and team performance evaluation, nevertheless, rather means the harmful effect of all this, which forces police units into such a pursuit where increase of statistic manipulation and illegal procedures cannot be avoided.

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Seeking the Ways and Means of Efficiency in the 80's

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.»[2]

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

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[2] Hungarian Great Encyclopaedia (1999) 275.

the complex system of several factors.[3] 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 did not go further than surveying and indexing the regional characteristics of the criminal situation.[4]

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. In 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.

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[3] Somogyi -Vass- Madács (1979) 22.
[4] Somogyi-Vass-Madács (1979) 21-30.

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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.[5] «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.»[6]

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

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[5]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.
[6]Tauber (1980) 62.

investigation can only be imagined if all the bodies taking part in the criminal procedure strive for maximum performance.»[7]

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.»[8] «It is likely that while the given organization tries to maximize its own functional autonomy, it also endeavours to minimalize that of other subsystems, which can cause tension and conflict between them.»[9]

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;

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[7] Tauber (1980) 59-63.
[8] Farkas (2002)51.
[9] Connidis (1982) 32, in Farkas(2002) 27.

however, the law places the responsibility for controlling investigations on the attorney who controls the activity.»[10]

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 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»[11] was essential to promote this idea, but unfortunately he only published it well after the change of regime in 1995.

Measuring Efficiency in the 90's

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

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[10] Nyíri (2003) 65.
[11] Korinek László (1995) 92.

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- 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.[12]

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.[13]

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.[14] 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. 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.[15]

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[12] Dános (2002) 20-23.
[13] Komáromi-Teremi (1996) 63-71.
[14] Komáromi-Teremi (1996) 64-65.
[15] Komáromi-Teremi (1996) 66-68.

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 could not 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.[16]

Measuring Efficiency in Practice[17]

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.[18] 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

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[16] Wolfgang-Figlio-Tracy-Singer (1985): *National Survey of Crime Severity*. Washington D.C.
[17] Dormán (2002) 15-23.:
[18] Dormán (2002) 15.

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, 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. 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.

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Measuring Efficiency by the police – international overview

DEA is a non-parametric frontier estimation methodology originally introduced by Charnes, Cooper, and Rhodes (1978) who built on the work of Farrell (1957) and others. It is a linear programming-based methodology that has proven to be a successful tool in measuring relative efficiency. It computes the comparative ratio of outputs to inputs for each unit, with the score between 0 and 100. A decision-making unit (DMU) (in our case a police station) with a score of less than100 is inefficient compared to other units. It is used to identify best practices and is increasingly becoming a popular and practical management tool. DEA was initially used to investigate the relative efficiency of non-profit organizations, but now its use has spread to hospitals, schools, banks, and network industries, among others (Avkiran, 2001). It is more flexible than the parametric approach. Further, DEA has been extensively used to measure public sector efficiency in many countries by a host of researchers, like Ouellette andVierstraete (2004), Verma and Gavirneni (2006), Hauner (2007), or Adam, Delis, and Kammas (2011) who point out that DEA is so popular because it is easy to draw on diagrams and easy to calculate. Furthermore, it is more reliable for measuring technical efficiency as it can be applied to multi-input and multi-output variables.

As the efficiency of a police station in transforming inputs into outputs is also influenced by external environmental factors, which are usually beyond its control, a three-stage approach is proposed to employ to obtain a measure of net technical efficiency. This approach estimates efficiency scores with the original DEA programme using only the discretionary inputs (i.e., controlled inputs). This produces a measure of the total inefficiency of the different police stations comprising contributions from both the non-discretionary (i.e., uncontrolled) variables and from non-measurable management inefficiency. Subsequently, a regression analysis is used in the second stage to decompose both of them.

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Therefore, exogenous variables (Zf) are explanatory variables and the dependent variable is the first-stage efficiency score (wf) (McCarty & Yaisawarng, 1993).

The key advantage of such analysis lies in the easier interpretation of the calculations and/or the possibility of defining for each inefficient unit how it could become efficient and by how much it must increase individual types of output. One of the biggest advantages of (input-oriented) DEA analysis is its ability to show the decreases in inputs needed to achieve efficiency. For police managers this is crucial as they obtain a comprehensive and precise picture of the situation of the inefficient police stations.

Thanassoulis (1995) was the first to apply the DEA methodology to measure the performance of police efficiency at the regional level. The research included 41 police forces in England and Wales. It analysed three outputs (number of violent crimes, burglaries, and other crimes» clear-ups) against four inputs (number of employed officers in each force, number of violent crimes, burglaries, and other recorded crimes).

Drake and Simper (2005) included environmental, socio-economic, and demographic variables in their comparative analysis. With a two-stage procedure the authors verified that the exclusion of external factors may lead to inaccurate efficiency scores with respect to some police units of analysis. Further, some authors, such as Gorman and Ruggiero (2008) analysing police efficiency in the United States, and Wu, Chen, and Yeh (2010) evaluating the performance of the police in Taiwan, confirmed that the omission of external environmental factors may distort the efficiency measures of each unit when evaluating the police's performance. Nyhan and Martin (1999), Gorman and Ruggiero (2008) for the United States, Diez-Ticio and Mancebon (2002), Verma and Gavirneni (2006) for India, Aristovnik et al. (2013) for Slovenia, Hu, Tung, Shieh, and Lo (2011) for Taiwan.

In the Portuguese context, Barros (2007) conducted a two-stage DEA analysis on 33 Lisbon police precincts to measure and compare the technical and technological efficiency change in total productivity from 2000 to 2002.

In the same vein, García-Sánchez (2009) evaluated the efficiency of local police in Spain regarding public and road safety using the DEA methodology. Moreover, application of the procedure prior to the analysis reduces the subjectivity in the statistical selection of variables by measuring the impact of each activity in the proposed area on the overall performance of the police.

After the international overview I would like to present the efficiency measuring model currently applied by the Hungarian police. The model is not only a tool in the hands of the management, but a centrally done annual compulsory task, which results in serious disadvantages for the leaders of those police stations and departments- considering that the leaders can be replaced without stating the reason -which are at the end of the list, that is not efficient enough.

Current Model for Measuring the Efficiency of Criminal Investigation[19]

The «efficiency» calculation method as the basis of performance evaluation[20]

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

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[19] 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
[20] http://prezi.com/t-pqeagzd1pn/ismeretlen-tetteses-felderitesi-mutato-es-szervezeti-teljesitmenyertekeles/ alapján (looked at: 10.05.2014.)

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- 2 are offences

- 4 are related to public order

- 3 are related to traffic regulations

- 1 reflects the opinion of local governments.

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

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.

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,

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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)[21] performance indicators of certain crimes, which 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 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

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[21] reconnaissance index in case of an unknown perpetrator

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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».

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.[22]

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.[23] However, criminological researches consistently verified the close relation and interaction between crime and

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[22] Sárosi (2008) 1-6.
[23] Harcourt (2001) 90-104.

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.»[24]

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

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[24] Szabó (2002) 34-36.

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back to social disorganization, the weakening of social control, cultural conflicts or other anomalies.[25]

- 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.[26] 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.[27]

Instead of Summary

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

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[25] Szabó (1985) 16.
[26] Déri (2000)162.
[27] Boge (1991) 1-3.

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. Alternatively, 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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Вінс Варі

Статистика та вимірювання ефективності розслідування злочинів

У дослідженні автор представив кореляції статистики кримінального розслідування та ефективності роботи органу карного розшуку в Угорщині. Коли вимірюється ефективність розслідування кримінальної справи, оцінюється робота такої складної системи, яка, в разі неправильного фундаментального припущення, загрожує її структурними і функціональними розладами. Статистичні показники відображають результати «неправильного» дослідження ефективності, в результаті чого відбувається ентропія формальних та неформальних чинників організації. У дослідженні представлені пошукові методи і засоби вимірювання ефективності, що застосовувались у 80-х і 90-х роках, викладається система принципів, які повинні бути враховані при розробці вимірювання ефективності кримінального розслідування. Показано міжнародний досвід відповідної теми дослідження та модель «Вимірювання ефективності» на прикладі угорської поліції.

Ключові слова: кримінальне розслідування, поліцейські, вимірювання ефективності, статистичні показники, вимірювання продуктивності.

Винс Вари

Статистика и измерения эффективности расследования преступлений

В исследовании автор представил корреляции статистики уголовного расследования и эффективности работы органа уголовного розыска в Венгрии. Когда измеряется эффективность расследования уголовного дела, оценивается работа такой сложной системы, которая, в случае неправильного фундаментального предположения, угрожает ее структурными и функциональными расстройствами. Статистические показатели отражают результаты «неправильного» исследования эффективности, в результате чего происходит энтропия формальных и неформальных факторов организации. В исследовании представлены поисковые методы и средства измерения эффективности, которые применялись в 80-х и 90-х годах, излагается система принципов, которые должны быть учтены при разработке измерения эффективности уголовного расследования. Показан международный опыт соответствующей темы исследования и продемонстрирована модель «Измерение эффективности» на примере венгерской полиции.

Ключевые слова: уголовное расследование, полицейские, измерения эффективности, статистистични показатели, измерения производительности.

Vince Vári

Statistic and measuring the efficiency of crime investigation

There is no doubt about the significance and scientific sense of criminal statistics nowadays, however this blessing can become a curse if the marker points and ideological objectives of its development and use are set wrongly, that is statistic data do not provide a basis for scientific analyses and

criminological researches, but they dominate in the judgement of the quality of the effective criminal investigation and in measuring performance, even more they are exclusive. In my study I mainly wish to present the correlations of criminal investigation statistics and the operation efficiency of the criminal investigation body in Hungary, since the endeavour to measure efficiency has grown from the statistic view and the expansion of the omnipotence of statistic figures. When we measure the efficiency of criminal investigation, we examine the operation of such a complex system, which, in case of a wrong fundamental assumption, threatens with a consequency that referring the result to the system itself, and feeding it back, it can cause its structural and functional disorders. Statistic view, as a causer, reacts with the expressioned results of the «wrong» efficiency thesis, causing the entropy of the formal and informal factors of the organization. In my study I wish to present the seaking ways and means of efficiency measurement int he 80ies and 90ies, moreover I wish to lay down those establishment of principles which should be considered when developing the efficiency measurement of criminal investigation. In the following chapters I show the international overview in this topic, after I would like to demonstrate the «efficiency measurement» model of the present Hungarian police.

Key words: criminal investigation, police, measuring efficiency, statistic view, measuring performance.

▪ Statistic and measuring the efficiency of crime investigation / Vince Vári // Часопис Національного університету «Острозька академія». Серія «Право». – 2015. – № 1(11) : [Електронний ресурс]. – Режим доступу : http://lj.oa.edu.ua/articles /2015/n1/15vvvoci.pdf.