Reasons of Overpayments and Solutions for the Unduly Paid out Non-insurance Social Benefits in the Czech Republic

Lukáš MORAVEC, Jana HINKE, Enikő LŐRINCZOVÁ* and Michaela CHLADÍKOVÁ

Czech University of Life Sciences Prague, Prague, Czech Republic; moravec@pef.czu.cz; hinke@pef.czu.cz; lorinczova@pef.czu.cz; xchlm022@studenti.czu.cz

* Corresponding author: lorinczova@pef.czu.cz

Abstract: The aim of the paper is to evaluate the reasons of overpayments on all noninsurance social benefits and to define the cases in which a criminal complaint is filed. Partial aim is also to present the proposals of measures to eliminate the occurrence and to increase the enforceability of repayments of unduly paid out social benefits. The goals were achieved by the method of expert interviews with employees of regional labor offices of the Czech Republic, which were conducted in 2020 and 2021. The results show that the most common reason for overpayments on benefits tested for income is the concealment of decisive income and then the number of jointly assessed person in the household. Other reasons include not reporting decisive changes, receiving a benefit in the Czech Republic and also in another state of the European Union or not using the benefit for the intended purpose. The field survey identified an agreement of experts on three proposals to eliminate the occurrence and increase the enforceability of repayments of unduly paid out social benefits. These are the use and being equipped by a proper software, the possibility of deduction of overpayments from the paid out social benefits and the reintroduction of legal offences – misdemeanors for offenders as a form of prevention.

Keywords: social benefits; overpayment, repayment; labor office; debt collection

JEL classification: H53; H75; H83

1. Introduction

The abuse of non-insurance social benefits is a topic often discussed by professionals and general public, but the topic is not widely presented in professional literature. In the media, this topic is approached mainly politically, i.e., the level of benefits, the existence of these benefits and the financing, and is often used for political campaigns before elections. The authors are aware of the many ways the non-insurance social benefits are misused and abused, therefore a field survey was conducted with the aim, to identify in which cases a criminal complaint is filed and to find out the conclusions of state prosecutors and judges regarding these cases. Partial aim of the paper is to propose solutions leading to the elimination of unduly paid out benefits and increase the enforceability of repayments.

The aim of social benefits is to help people in difficult life situations that they are unable to manage on their own. These situations are called by law a "social event" in which the right to the benefit and its payment arises (Čeledová & Čevela, 2019). All laws stipulate the

conditions for entitlement to and payment of non-insurance social benefits and impose obligation on applicants. Failure to comply with these obligations may lead to the withdrawal of the benefit, reassessment of entitlement to thee benefit and, in the case of a benefit already paid out, to an overpayment, which the applicant is obliged to return. Enforcing the return of overpayments on benefits is very difficult. The Labor Office does not have the authority to issue execution orders like the Financial Administration of the Czech Republic which can enforce tax arrears through six types of execution orders (Kukalová et al., 2020).

Thus, if the social system of a given state is analyzed, it has a great importance on the perception on both of overuse and underuse of social benefits. (Wu, 2017). According to Roosma et al. (2016), overuse (abuse, fraud) and under-utilization of the social system is strongly perceived by the general public. Some studies also address the abuse of social systems. Gonzalez-Rabanal (2013) states the need to reduce the benevolence in social benefits in Spain. Delgado (2018) analyzes the sustainability of social systems in Spain in the context of fraud. The overuse of social systems by the population is related to their own interests and also to the level of economy and the spending on social benefits in the country (Roosma et al., 2016; Roosma et al., 2014). Lundstrom (2013) compared discussions about the benefits of fraud with social benefits in the Swedish and British newspapers and blogs. The profiles and motives of the perpetrators of these frauds were investigated by Tunley (2011). Social standards that discourage social benefit fraud and tax fraud are addressed by Halla a Schneider (2014) or Halla et al. (2010). Goveia and Sosa (2017) address fraud prevention through a risk management model. Appelgren (2019) analyzes the effects of different audit strategies on fraud in the social benefit system in Sweden.

Deliberate abuse can be considered as abuse of benefits, when the law allows a benefit to be provided even to those who would not be able to obtain the benefit (Průša, Víšek & Jahoda, 2014). All laws related to non-insurance social benefits contain a paragraph imposing a basic so-called reporting obligation on claimants or persons jointly assessed, consisting of the fact that these persons are obliged to notify changes in writing within eight days that affect the entitlement to the benefit, its amount or payment. The law also imposes an additional obligation, namely that if those persons have been called upon in writing by the Office to certify the relevant facts, they are required to comply with that request (Chladíková, 2021). If the claimant does not fulfill the imposed obligation or would accept the benefit, even if he was not entitled to it, he must return the benefit.

Before issuing a decision on the occurrence of an overpayment, it must be proven that the applicant was actually at fault for the overpayment. If it is proven that the person in question intentionally provided incorrect or incomplete data, manipulates tangible property, does not use the benefits for the intended purpose, does not fulfil the obligation to notify changes in decisive facts within eight days, etc., a decision on the overpayment is issued. Here it is stated how the overpayment arose, how this fact was found out, for what period it arose, in what amount, how it is to be paid back and by what date (Sirovátka, 2000).

However, neither in the Czech Republic, nor in the researches of international authors was it ascertained what reasons are prevalent in the creation of unduly paid out social benefits. Therefore, the authors of this paper decided to conduct a field research and bring this knowledge, which can contribute both to the level of prevention and the level of repayments of unduly paid out benefits from the claimants.

2. Data and Methodology

In order to achieve the aims of the paper, the authors conducted a field survey, in which the method of expert interviews of a systematic nature was chosen. The expert interviews focused on the uniqueness of the experts' knowledge and experience, and emphasis was placed on the comparability and combining of the information. All interviews had therefore a similar course which was given by a predefined structure. The field survey took place in the Czech Republic in 2020 and 2021, specifically in 14 regional branches of the Labor Offices of the Czech Republic in individual regions. Within each regional branch, two experts were interviewed, so the total of 28 interviews were conducted by a single interviewer (in order to maintain a uniform interviewing style). The questions combined the possibility of open narrative answers and answers determined according to the Likert scale.

Experts from the regional branches of the Labor Offices were selected on the basis of the findings that the registration of receivables to claimants due to return overpayments is carried out by the relevant departments, which monitor the payment of receivables by the debtors within the due date set in the overpayment decision. If the debtor appears in front of the Labor Office of the Czech Republic to discuss the overpayment, the deadline for repayment is discussed with him and, depending on the situation, set so that the debtor can return the overpayment in instalments. If the debtor does not appear to discuss the return of overpayment, the deadline for repayment if short (usually until the end of the month following the enforcement date of the repayment decision) and after its expiration the receivable to the debtor is handed over to the legal control department. Partially paid receivables, which the debtor does not pay within the specified due instalment date or cease to repay in full, are also transferred to the control legal department. The employees of the legal control department must determine how the receivable to the debtor will continue to be handled. The department has to determine whether the Labor Office is competent to recover the claim or whether it is a claim without the authority of recovery by the Labor Office. The fact if the Labor Office of the Czech Republic has authority to recover the claim is determined by individual laws on social benefits.

The limitations of the survey are given by the method used – expert interviews, the disadvantage of which may be the wrong choice of respondents due to differences on the part of experts (degree of trust, length of practice, degree of sharing experience). For further research it would be appropriate to conduct a field survey at more levels of professional experience which would also increase the sample of respondents.

3. Results

3.1. Reasons of Overpayment Occurrances

All experts agreed that the most common reason for overpayments on income-tested social benefits was the concealment of decisive income. Claimants often believe they do not

have to prove all their income at all and the Office will never find out. Such income may be an income from short-term employment, received rent (residential or non-residential premises), received alimony provided for children, business income or income from abroad (from employment or receiving family benefits). The Office usually finds out about the existence of these incomes retrospectively after inspections in companies that the Labor Office of the Czech Republic must carry out by law, or during electronic inspections of income evidenced by the Czech Social Security Administration (payment of sickness benefits, pensions, etc.) or evidenced by the Financial Administration of the Czech Republic (the income subject to income tax). Income from abroad is most often found out due to the coordination of benefits according to EU Regulation EC No. 883/2004 and EC No. 987/2009.

As the amount of state social support and basic material needs of benefits also depends on the number of jointly assessed persons in the household, the second most common cause of overpayment on the benefit is the failure to notify of a change in the number of persons in the household. The change in jointly assessed persons is mostly found out by the officials during local or social inquiries, checks in population registers or with the help of other citizens notifying this fact. Determining the correct number of persons for the material needs benefit and housing allowance is based on the Living and Subsistence Minimum Act, and the most frequent problem arising is the inclusion of the child's father in the application. Some female claimants intentionally do not mention their children's fathers in the child's birth certificate (even though the children's father lives with the family), some purposefully end the relationship with the children's fathers, so they do not have to prove his income.

Changes that affect the amount of the benefit also include a change in the child's dependency (if a child under the age of 26 completes full-time study or a child under the age of 18 is excluded from the register of job seekers, it is considered dependent). These changes are most often found in cooperation with the department of employment.

The reason for the overpayment on the benefits of child allowance and parental allowance is the fact that the claimant stops taking care of the child. This fact is in most cases reported by the institution that took the child into its care or by the person who got entrusted the child to care. The claimant who caused the overpayment on these benefits (by not notifying the decisive fact within the statutory time limit) usually does not even respond to calls or notifications about the overpayment proceedings.

Another reason (also addressed internationally) for child allowance and parental allowance (the so-called family benefits) is receiving a similar benefit in the Czech Republic and at the same time in another country of the European Union. Regulation (EC) No. 883/2004 does not allow receiving several benefits of the same kind for the same period of insurance. Nevertheless, some citizens apply for the same benefit in the Czech Republic and the EU country, in both countries. However, there is now fast electronic system called the Electronic Exchange of Social Security Information (EESSI) through which EU countries communicate with each other to verify the information, so the number of cases has decreased rapidly.

In foster care benefits, overpayments arise mainly on the foster care allowance and the allowance for the child's needs. The most common reason is not notifying a change in the child's dependency. Overpayments also arise on the foster parents' remuneration due to the

termination of the care of the entrusted child. It is important that the caregiver notifies in time that the child has been placed in the car of another person or institution. Overpayments on this benefit also arise because the claimant does not declare that the child is receiving pension insurance benefits (orphan's pension benefit, disability pension benefit).

Another benefit where care is terminated and not notified within the statutory time limit is the care allowance benefit. The overpayment arises for this benefit if the person being cared for is hospitalized throughout the calendar month (and the carer is not hospitalized with him and does not provide care) or if that person dies. Caregivers most often state that they did not report the hospitalization in time because they did not know that the hospitalization would be long-term. According to experts, there are arguments from claimants for not reporting the death that the Office should find out from electronic databases. Due to the failure to notify the death of the entitled person, overpayments are most often incurred also on the mobility allowance benefit.

The fact that the benefit was not used for the purpose for which it was granted was stated on the Likert scale as a common and for some benefits the only reason for the overpayment. Such a benefit is the emergency immediate assistance benefit.

The allowance for the purchase of a personal motor vehicle will result in an overpayment if the claimant does not purchase the vehicle (or does not have it repaired according to the decision to provide the benefit), does not use it or the persons for whom it was intended, sells the vehicle or uses it for business purposes. Similarly, the benefit of aid for special aid is checked (the check will take place directly at the claimant's place of residence), where the recipient of the benefit is obliged to use this benefit within 3 months of payment (to buy a guide dog, adjust the bathroom, buy a motor vehicle, etc.) and to use this aid at last for the statutory time period.

According to experts, the most thoughtful reasons for overpayments are revealed on the state social support benefit – housing allowance. In addition to the above reasons (not proving the income, change in the number of persons or change in the child's dependency), another common reason for the overpayment is the termination of the tenancy to the apartment for which the claimant claimed the benefit. The benefit is paid to a specific property at a specific address. Therefore, if the rental agreement is concluded for a specific apartment and the tenant leaves the apartment (the rental relationship with the apartment has ended), he must report this fact and the benefit must be terminated. The procedure is similar for the owner of the apartment (house) who used the property and applied for the benefit. If he stops using the property or sells it, he must report this fact within eight days. In this context, "modified" leases are also documented, which were issued by the property owner only for a definite period of time and the tenants do not pay the rent or costs, and the owner no longer extends the agreement. However, some claimants still document the extension of the lease, after doctoring the old contract themselves (sometimes these modifications by the claimants are quite professionally looking).

Experts consider the providing of false data for the housing costs to be a truly fraudulent intent of intentional misuse of this benefit. The long-term experience of the expert showed that claimants most often edit or directly prepare themselves the income documents for the

payment of rent or costs associated with the use of the apartment, or altering the bank account statements by computer themselves, or postal orders that were actually sent but not to the correct account number (the amount will be then returned to the sender as undeliverable). Proving this behavior is very demanding and requires not only the precise work of officials, but also cooperation with property owners and, last but not least, the law enforcement agencies.

3.2. Solution for Overpayments by Reporting Criminal Offence

According to the Czech Criminal Procedure Code, the Labor Office of the Czech Republic is obliged to report to the public prosecutor or police authorities facts indicating that a criminal offense has been committed. In the area of non-insurance social benefits, criminal reports are filed in writing pursuant to Section 158 (1) of the Criminal Procedure Code on suspicion of the criminal offense of fraud pursuant to Section 209 of the Criminal Code. The perpetrator of such a criminal offense may be a person who misled another person (in the case of the Labor Office of the Czech Republic a representative of the body) or concealed decisive facts, as a result of which there was a damage to other people's property and enrichment of the perpetrator or another person. At the Labor Office of the Czech Republic, these are all cases where the fault of the overpayment on the paid out benefit had been proven and a final decision had been issued quantifying the overpayment and the obligation to return the overpayment by the claimant by a specified date.

Until October 2020 the Labor Office of the Czech Republic filed a criminal complaint according to the experts, in cases where the amount of damage (total overpayment of benefits) was higher than CZK 5,000. Before filing a criminal complaint, the authorized employees of the Labor Office of the Czech Republic consulted the given cases with the representatives of the Czech Police (Economic Crime Department) who after studying the available file documentation assessed whether it could actually be a criminal offence and, in that case, an official written criminal offence report was filed. If the case could be resolved only as a misdemeanor (according to the Act No. 250/2015 Coll., on liability for misdemeanors and proceedings on them), a copy of the file is handed over to the municipal authority with extended powers, which is competent for misdemeanor proceedings. In some cases, the case is adjourned after a preliminary hearing, because even though the overpayment had been proven and quantified, further action by the claimant who caused the overpayment does not indicate an intention to enrich oneself. According to experts, postponing a case or handing it over to the misdemeanor proceedings is most often in cases where the quantified overpayment borders on the amount where the state authorities are obliged to report the case (formerly e.g. CZK 5,100), the claimant not only recognizes the overpayment on that date but will actually meet the obligation to return it. The police authority is also considering how the overpayment occurred, i.e., whether it was simply not reporting a decisive fact (e.g. not notifying the child's change of care - termination of studies) or submitting false information (not paying the costs of the house/apartment). After the official filing of the criminal complaint, the Labor Office of the Czech Republic is waiting for the results of the investigation of the Police of the Czech Republic and after handing over the file for the result of the investigation to the public prosecutor.

The most common conclusions issued by prosecutors or judges in this regard are given in Table 1.

Type of conclusion	Content of the conclusion
Criminal command	Determination of a custodial sentence, but the execution of the sentence is
	conditionally postponed for a certain period of time, the obligation to pay
	damages is determined
Criminal command	Determining the obligation to pay damages and perform a specified
	number of hours of community service
Decision or resolution on	The debtor is obliged to pay damages
conditional suspension of	
proceedings (for a definite	
period)	
Verdict on imprisonment	No conditional postponement is set
(with a time period)	

Table 1: Conclusions of prosecutors and judges (own findings according to internal sources of Labor Offices of the Czech Republic, 2021)

3.3. Proposals of Measures to Eliminate the Occurrence of Unduly Paid Out Benefits and Increase the Enforcability of Repayments

During the field survey the authors identified agreement in three areas, in which it would be realistic to make adjustments leading to the elimination of the occurrence of unduly paid out benefits and increase the enforceability of repayment. These areas are the software use and equipment, the possibility of deducting overpayments from the paid out benefits and the reintroduction of the misdemeanour offenses as a form of prevention.

At present, the Labor Offices of the Czech Republic have a very imperfect and in some areas no software application for processing the overpayment receivables to the claimants. According to the internal regulations of the Labor Office of the Czech Republic, the handling of these receivables is a matter of the workplace where the receivables arose. Experience confirms that it is necessary to record all receivables in one nationwide application program so that there is an overall overview of both their volume and settlement methods. Individual regional offices keep records of receivables and their settlement (repayments) just for their region. According to the findings, receivables are entered manually into one economic program, but there is a high percentage of error both at the time of entering and the settlement of the receivable. Furthermore, neither the economic program nor the application program can process all the necessary ways of managing the receivables. For example, it is not possible to determine how many receivables were issued as executions and which ones, how many receivables were enforced to repay in this form and in what amount. Or at how many receivables the preclusive period is interrupted and for what reasons and for what reason the receivables were written off. This and other information are kept by the staff handling receivables themselves in auxiliary tables or notebooks, some do not keep it at all because they do not have to. It would be appropriate to have a program where the receivables generated in individual departments and offices were copied automatically (without the operator's intervention) and could then be monitored in detail from all aspects necessary for successful recovery of overpayments. The application should be nationwide and enable the

complete digitalization of file documentation, so that it is possible to successfully recover the receivables even if the debtor moves to another region.

In the case of receivables arising from non-insurance social benefits, the inconsistency in terms of their collection and recovery is striking. According to the law, the Labor Office may recover some benefits, but not others. It depends on the law according to which the benefit was granted, paid out and according to which the overpayment was calculated. This fragmentation should be unified by legislation.

One of the possible solutions to achieve a higher return of overpayments is to deduct the incurred debts from the normally paid out tor later granted benefits. At present, this possibility is offered only by the Act on Material Need, but it is conditioned by the fact that the person has to have at least the substantial living minimum. In practice, it was found that this method of repayment of receivables is very inefficient and used very rarely, and only if the receivable is a few hundred CZK. A similar option is to issue an execution order for certain benefit overpayments that can be affected by execution (parental allowance, foster parent's remuneration, child allowance), but even here the execution rules are set, so the success of recovery is not great.

There are still many debtors who have received benefits illegally, overpayments have been quantified, the debtor has not returned the overpayment, and the receivables have been written off due to lack of property of the debtor, and the debtor continues to receive benefits. He often asks for the benefits retrospectively, because he knows that if he fulfils a legal claim, he must be granted a benefit, but the debt must not be deducted from it. Debts incurred on non-insurance social benefits should be deductible (even without the content of the debtor) of the benefits normally paid out or subsequently granted, regardless of the fact on which non-insurance social benefit it arose and from which it will be deducted. Of course, even here, certain restrictions would have to be set in order for the debtor to receive at least part of the benefit. For example, a deduction of one third of the granted benefit could be made (without consent). If there was a single program in which all the receivables were entered and the laws allow the deduction of these debts from the paid out benefits, the repayments of overpayments would be higher and only recovered by the employees of the control and legal departments but also by employees of the departments where the receivables to debtors arise (by calculation the overpayment) and where benefits are granted.

4. Discussion

Until 1st January 2018 the State Social Support Act allowed a person (benefit claimant or a person jointly assessed) to be fined for failing to comply with the legal obligations (e.g. not reporting a decisive change within eight days and causing an overpayment). The maximum amount of the fee could be CZK 10,000. In practice, this meant that if it was found that the claimant had intentionally reported a decisive factor that affected amount of benefit or its entitlement itself, or provided false information (forged leases, proof of payment of housing costs, etc.) and it was proven, such a person could be fined. This form of "punishment" was more effective for many claimants that today's calculation of the overpayment and its transmission to the Police of the Czech Republic (especially when the Labor Office is obliged to make a criminal report from a receivable over CZK 10,000). If the claimant received a fine, the justification always stated exactly why the fine was imposed. Claimants then mostly did not try further frauds. The fines were imposed in a reasonable amount, taking into consideration whether or not the claimant violated the law repeatedly and also how high overpayment was caused. This possibility of imposing fines for breaches of obligations was allegedly cancelled due to a change in the Misdemeanor Act. As the Labor Office is a state organization, the possibility to impose fines for non-compliance with legal obligations and their violation should be reinstated and extended to all laws on non-insurance social benefits.

5. Conclusions

Expert interviews identified concealment of decisive income and the number of jointly assessed persons in the household as the most common reason for overpayments on benefits tested for income. Other reasons include not reporting a change in decisive events, receiving a benefit in the Czech Republic and in another country of the European Union, and last but not least, not using the benefit for the specified purpose. According to experts, the most thought out reasons for overpayments are revealed on the state social support of housing allowance, where there is often a creative correction of documents by the claimants.

The field survey identified the agreement of experts in three proposals to eliminate the occurrence of overpayments and increase the enforcement of repayment of the unduly paid out benefits by the claimant. These are the use of a proper software, the possibility of deducting overpayments from the normally paid out social benefits and the reintroduction of misdemeanors as a form of prevention. These proposals could enable more efficient management of non-insurance social benefits within the framework, as i tis state money resp. taxpayers' money – whether current or future.

Acknowledgments: This paper is a partial result of the research project [No. 2019B0010] - Czech Social System Fraud Rate Estimation and System Optimization Proposals, supported by the Internal Grant Agency (IGA) of Faculty of Economics and Management, CULS Prague.

Conflict of interest: none

References

- Appelgren, L. (2019). Optimal auditing of social benefit fraud: a case study. *Empirical Economics*, 56(1), 203-231. https://doi.org/10.1007/s00181-017-1356-9
- Čeledová, L., & Čevela, R. (2019). Laskavý průvodce po sociálních službách [A kind guide to social services]. Publishing Karolinum.
- Chladíková, M. (2021). *Recovery of debts arising from the abuse of the system of non-insurance social benefits in the Czech Republic*. Czech University of Life Sciences in Prague: diploma thesis.
- Czech Republic. (2021). Act No. 141/1961 Coll., Criminal Procedure Act (Criminal Procedure Code). https://www.zakonyprolidi.cz/cs/1961-141
- Delgado, J. L. G. (2018). The Fight against Fraud in Social Security under the New Management Principles in Public Administration. *Aposta-Revista de Ciencias Sociales*, 77, 235-256.
- Gonzalez-Rabanal, M. D. (2013). Challenges of the Welfare State: The Spanish Case. In *Economic and Social* Development: 2nd International Scientific Conference (pp. 234-240).
- Goveia, L., & Sosa, A. (2017). Developing a compliance-based approach to address error, evasion and fraud in social security systems. *International Social Security Review*, 70(2), 87-107. https://doi.org/10.1111/issr.12136
- Halla, M., Lackner, M., & Schneider, F.G. (2010). An Empirical Analysis of the Dynamics of the Welfare State: The Case of Benefit Morale. *Kyklos*, 63(1), 55-74.

- Halla, M., & Schneider, F. G. (2014). Taxes and Benefits: Two Options to Cheat on the State. Oxford Bulletin of Economics and Statistics, 76(3), 411-431. https://doi.org/10.1111/obes.12024
- Kukalová, G., Moravec, L., Bína Filipová, D., & Bařtipán, M. (2020). In P. Jedlicka, P. Maresova, K. Firlej, &
 I. Soukal (Eds.), *Proceedings of the International Scientific Conference on Hradec Economic Days* 2020 (pp. 407-416). University of Hradec Kralove. https://doi.org/10.36689/uhk/hed/2020-01-047
- Lundstrom, R. (2013). Framing fraud: Discourse on benefit cheating in Sweden and the UK. *European Journal of Communication*, 28(6), 630-645. https://doi.org/10.1177/0267323113502737
- Průša, L., Víšek, P., & Jahoda, R. (2014). Alchymie nepojistných sociálních dávek [Alchemy of non-insurance social benefits]. Wolters Kluwer Publishing.
- Regulation (EC) No 987/2009. Laying down the procedure for implementing Regulation (EC) No 883/2004 on the coordination of social security systems. https://eur-lex.europa.eu/eli/reg/2009/987/oj
- Roosma, F., van Oorschot, W., & Gelissen, J. (2014). The weakest link in welfare state legitimacy: European perceptions of moral and administrative failure in the targeting of social benefits. *International Journal of Comparative Sociology*, 55(6), 489-508. https://doi.org/10.1177/0020715214565932
- Roosma, F., van Oorschot, W., & Gelissen, J. (2016). The Achilles' heel of welfare state legitimacy: perceptions of overuse and underuse of social benefits in Europe. *Journal of European Public Policy*, 23(2), 177-196. https://doi.org/10.1080/13501763.2015.1031157
- Sirovátka, T. (2000). Česká sociální politika na prahu 21. století: efektivnost, selhání, legitimita [Czech social policy on the threshold of the 21st century: efficiency, failure, legitimacy]. Masarykova univerzita.
- Tunley, M. (2011). Need, greed or opportunity? An examination of who commits benefit fraud and why they do it. *Security Journal*, 24(4), 302-319. https://doi.org/10.1057/sj.2010.5
- Wu, X. (2017). Analysis of Medical Insurance Fraud Mathematical Model. In 2017 7th International Conference on Education and Sports Education (ESE 2017) (Vol. 7, pp. 514-518).