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Perceiving the relevance of security threats

This article follows the article published under the title *Exact estimation of the factor composition of security threats to the Czech Republic*.¹ This introductory article included the theoretical bases for the conception and evaluation of security threats, as well as for the substantiation of an alternative approach to their classification.² There were the results of the exact verification of the five-factor structure of security threats presented on the basis of the quantitative assessment of their relevance for the Czech Republic.

One of the outputs of the analysis, which has not yet been published, is the calculation of the so-called factor scores of individual groups of respondents. These are the T-scores of individual groups of persons (n = 127), respondents with a certain professional orientation, using five common factors.

This article is aimed at precisely verifying whether the perception of relevance of security threats is influenced by the professional orientation of the assessor, and in what way.

Searching for the aforementioned asymmetric dependencies is based on an analysis of the data obtained in the expert survey. In total, the research was attended by 127 respondents working within the field of security. The sample consisted of 36 experts dealing with the university professional training of members of the security forces, 26 members of the Czech Police, 35 members of HZS ČR (Fire Rescue Team of the Czech Republic), 10 customs officers and 20 respondents working mainly on the central authorities of state administration (or other public administration authorities) in the field of security.

With regard to the random method of acquisition of the sample, and with regard to the small range of individual sub-sets, statistical significance will not be used

¹ See: JAKUBCOVÁ, Lenka, KOVAŘÍK, Zdeněk and Bedřich ŠESTÁK. Exaktní odhad faktorové skladby bezpečnostních hrozeb pro Českou republiku. *Bezpečnostní teorie a praxe*. 2017, No. 4 [Printed]. ISSN 1801-8211.

² The authors refer to the classification of security threats within ten areas, as carried out by the National Security Audit according to the substantive threat content. In the referenced article, the authors used the alternative approach for the classification. Also, based on the results of the research, they organised the threats into five factors according to relevance of specific security threats to the Czech Republic.

in the analysis of dependencies; instead there will be the concept of so-called „substantive significance“.¹

When looking for dependencies between selected determinants and factor scores (to facilitate the analysis, they are converted to T-scores), Cohen index "d" will be preferred. This measure is based on the difference of averages in two groups; however, this simple indicator standardises (divides) by the standard deviation of the averages. This comes to a dimensionless variable which does not depend on the original measurement units and which allows comparison of the results in the research used to measure the same phenomenon of different scales.

Analysis of influence of selected determinants on perception of relevance of security threats to the Czech Republic

It can be assumed that perception of relevance of security threats is influenced by many factors, such as gender, age, life experience, our interests, things we read, media we watch, circle of friends, their activities and things we talk with them about, etc. As the author says, professional orientation is one of the dominant factors.

At this stage, the authors worked with the results of the exact verification of the five-factor structure of security threats according to a quantitative assessment of their relevance for the Czech Republic, using a calculation of the so-called factor scores of individual groups of respondents in five common factors. Substantive influence of professional orientation of individual groups of experts on the estimation of the average weighted score for individual factors was investigated.

As already mentioned, the concept of so-called substantive significance (effect size) is used while detecting dependencies. The concept of substantive significance (size of effect, power of dependence) is increasingly being promoted as a „non-static“ size of effect. Conceptually, it comes from applications in controlled experiments where the most striking difference between statistical significance as generalisability and the true „substantial size of an experimental effect“ was demonstrated.

The dominant consideration while searching for substantive significant effects between the independent nominal variable (type of professional orientation of the respondent) and the dependent variables of the interval character (average weighted scores of individual factors) will be the determination of the size of effect or, in other words, determination of so-called substantive significance of the difference of mean value.² The following rates are used for our needs: Cohen's d, Hedges's g, Glass's delta. Cohen's standard has several variants which try to address some of its shortcomings.

¹ When using quantitative data, the analysis often slides down to simply evaluate the statistical significance of the results. However, it should be possible to generalise the result to the population we are examining and the result should be practically useful. In: SOUKUP, Petr. *Věcná významnost výsledků a její možnosti měření*. Available in: <http://dav.soc.cas.cz/uploads/fd5db6d740120e06ee3102c9fa85a5febfc56b8_DaV_2013-2_125-148-1.pdf>.

² For the term of „substantive significance“, the English language includes these expressions: effect of size, effect size, practical significance, substantive significance, logical significance, scientific significance, result importance or result meaningfulness.

Hedges's g standardises the difference between groups via the so-called associated standard deviation to eliminate the effect of inhomogeneous variance in both groups. This approach provides the so-called associated standard deviation calculated on the basis of both the groups compared, where it is not necessary to assume homogeneity of variance in both groups.

Glass's δ is based on standardisation of the difference, whereas the difference between the compared averages is divided by the standard deviation of the control group (second group). Conventionally¹ recognised values of the substantively significant difference between Cohen "d" and Cohen "r" is shown in the following table (Table 1).²

Table 1 - Effect Size Magnitude (Cohen's "d")

		Effect Size Magnitude		
		Small	Medium	Large
d		0.20	0.50	0.80

The enclosed tables show all three levels of substantive significance, with an indication of responsibility interval. Responsibility intervals, in fact, only relate to the estimation of the lower and upper positions of a substantively significant difference in population. The fact that the range of responsibility intervals often shows the zero point only confirms the small ranges of the selected subsets.

In order to identify and more closely verify the reasons for the differences identified in the perception of relevance of security threats, the authors of the article conducted controlled interviews with ten experts from the environment of university professional training of members of security forces, as well as the experts from practical operations who represented individual groups of respondents. They were asked whether they think that career orientation influences perception of relevance of security threats, what direction their „profession“ or branch takes and why. The main ideas and theses presented by the authors were introduced; the respondents further developed, refined and supplemented them.

¹ Jacob Cohen warned against the uselessness of the sizes of effect. A researcher should justify the acceptable substantive significance of the difference. However, it is sometimes difficult, and therefore the convention is being held.

² KOVAŘÍK, Zdeněk. *Problémy profesní motivace pracovníků Policie České republiky*. Brno: Tribun EU, 2012, pp. 23–41. LEDESMA, Rubén Daniel, MACBETH Guillermo and Nuria Cortada de KOHAN. Computing Effect Size Measures with ViSta – The Visual Statistics System. *Tutorials in Quantitative Methods for Psychology* [online]. 2009, Vol. 5, No. 1, pp. 25–34. [quotation 28.10.2016]. Available in: <<http://www.tqmp.org/Content/vol05-1/p025/p025.pdf>>.

Factor score of the first factor – threat of the state's competence and economic stability

Table 1.1a

Factor score 1.F Groups compared Groups	Selected descriptive statistics							
	Average Group 1	Number - Group 1 n	SD - Group 1	Responsibility interval for difference of averages		Average Group 2	Number - Group 2 n	SD - Group 2
				Lower	Upper			
Police departments – crisis management	47.34	9	5.211	-15.49	-1.03	55.6	8	8.571
Customs officers – officials	48.85	10	10.97	-13.87	1.91	54.83	20	9.43
Policemen – officials	49.12	26	11.21	-11.99	.57	54.83	20	9.422

Table 1.1b

Factor score 1.F Groups compared Groups	STANDARDISED EFFECT SIZE					Size of effect
	Effect Size	Bias corrected (Hedges)	Confidence Interval for Effect Size		Effect Size based on noctrl gp SD Glass's Δ	
			lower	upper		
Police departments – crisis management	-1.18	-1.12	-2.15	-0.1	-0.96	Great effect
Customs officers – officials	-0.61	-0.59	-1.36	0.19	-0.63	Medium effect
Policemen – officials	-0.55	-0.54	-1.13	0.06	-0.61	Medium effect

The first of five areas of threats, defined on the basis of quantitative assessment of their relevance for the Czech Republic, is the area of threat to the state's competence and economic stability.

According to the results of the first phase of the research, this area is¹ characterised by threats such as influencing public administration by foreign power,² misuse of

¹ Fulfilment of an individual factor by specific threats is, in all cases, dependent on the results of the first phase of the research, which focuses on perceiving the relevance of security threats by respondents. This first phase of the research conducted using the method of exploration factor analysis is described in: JAKUBCOVÁ, Lenka, KOVÁŘÍK, Zdeněk and Bedřich ŠESTÁK. Exaktní odhad faktorové skladby bezpečnostních hrozeb pro Českou republiku. *Bezpečnostní teorie a praxe*. 2017, No. 4 [Printed]. ISSN 1801-8211.

² In order to adopt a decision damaging the interests of the Czech Republic, which in addition to the direct consequences associated with such a decision, also undermines the credibility and political independence of the Czech Republic.

public procurements and budgets,¹ misuse of legitimate services for the purposes of organised crime,² the spread of organised crime to public administration,³ organised tax crime,⁴ the influence public opinion by foreign power,⁵ legalisation of revenue from crime activities,⁶ acquisition of legally protected information by foreign powers⁷ or criminality associated with insolvency proceedings.⁸

¹ Complex systems of granting and awarding subsidies and public procurements, associated with the absence of a consistent system of control and individual responsibility for specific decisions, lead to such a situation where many projects are being manipulated in favour of criminal groups.

² Organised crime commonly uses various services which are legal in their nature. Their illegal aspect does not arise from the nature of these services themselves but from the purpose of their use.

³ For example, appointment of officials influencing performance of public administration and also allocation of financial funds on the basis of shorter selection of pre-selected individuals who are loyal to criminal structures. There are also contacts of organised crime in the environment of the law enforcement authorities and supervisory bodies of state administration; organised groups penetrate the legislative process at the level of local self-governments, as well as at the governmental and parliamentary level. Criminal structures gain access to non-public information in this way. In the field of justice, there is suspicion of influencing the outcomes of criminal cases by circumventing the system of allocation of the particular agenda.

⁴ Intensive operations of organised crime also threaten public revenues with unpaid taxes (especially VAT and excise taxes). Using fictitious invoices obtained from illegal structures, the legally operating companies pretend having higher costs and conceal the real profit they earn. Through so doing, they reduce the tax base; the tax is deducted and paid at a lower amount, which is against the law. Tax breaking includes a wide range of possible activities and ways, including the illegal operation of lotteries and other similar games. Due to the so-called carousel frauds, honest entrepreneurs in some business areas have basically been destroyed, due to the fact that they were unable to compete with the final prices of goods and had to leave the market.

⁵ It is about spreading disinformation through media and quasi-media platforms, including social networks, „independent“ non-government organisations, publicly known persons including political representatives, those who are influenced or promote an interest different from the interests of the Czech Republic in order to weaken the trust in the state, build friendliness towards interests of foreign states, support hostile attitudes towards the Czech Republic within the alien communities, radicalise the general public, etc.

⁶ Activities of organised crime structures generate high profits which shall be legalised by investing in legal assets (commercial companies and real estates). An important problem in this area is associated with the creation of highly sophisticated structures of trading companies in order to legalise the funds originated in crime activities.

⁷ Such leakage of information may seriously jeopardise the security, political or economic interests of the Czech Republic.

⁸ Fraudulent insolvency petitions are being filed at a locally inappropriate court; there is abuse of procedural adjustments to obstruct insolvency proceedings; their subject matter is represented by the doubtful claim of the petitioner based on a contract of work, loan or promissory note. These petitions are misused in a competitive struggle and shall be used to unlawfully enrich the petitioners or groups behind them. Another problem of the current insolvency proceedings lies in the possibility of collusion of the insolvency judge or the administrator with some of the parties involved and the consequent advantage of these participants compared to others.

These are the threats related to the activities of organised crime, to a large extent. Organised crime is mainly motivated by financial profit; the secondary motivation lies in strengthening the possibilities of implementation of this profit by increasing the influence on the decision-making of the state authorities in the relevant areas (especially in the area of the allocation of public funds but also in legislative activities) or by the strengthening of one's own defence using infiltration into the law enforcement authorities. At the same time, the criminal groups perform their activities in a hidden way to avoid attention of the law enforcement authorities. Modern organised crime works by influencing the decision-making processes of public authorities, by creating clientelistic and corrupt networks and by impacting on normative formation rather than with classical illegal activities (such as trade with drugs, trade with people, trade with weapons, organised property crime, counterfeiting of documents, etc.). All of these activities are difficult to prove; a large part of them can be considered as legitimate and legal; their harmful nature results only from their overall effect which is usually an ineffective use of public funds. Organised crime also commonly uses various services (such as financial institution services, telecommunication service providers, etc.) which are legal themselves but they are abused by organised crime structures for illegal activities (e.g. drug transfer by postal service, transfer of stolen money to a bank account).

Respondents in the research survey intentionally included their perception as well as threats related to the influence of foreign powers to this category of threats regarding the relevance (influencing public administration by foreign powers, influencing public opinion by foreign powers or gaining law-protected information by foreign powers). These threats mostly act within the sphere of competence, credibility and the economic stability of the state; they are closely interconnected with the above-mentioned threats.

Tables 1.1a and 1.1b clearly show that the experts in the area of the university-level training of security forces members (hereinafter referred to as „experts“), those with professional orientation in police activities, perceive the area of threats of the state's competence and economic stability as much more important than the experts oriented to the issues of crisis management.

The controlled interviews revealed that the „crisis operators“ put a stronger accent on the types of threats which may be manifested themselves as extraordinary events, from the point of view of their profession, e.g. those with natural or sociogenic characteristics. However, this is not the case with the above-mentioned threats. On the other hand, professionals involved in police procedures, or in the process of investigating crimes associated with these threats, are professionally closer to the threats defined here; they have more detailed information about them; they process them at some level and handle them within preparation of security forces members; they have access to specific cases or statistics they work with. At the same time, they are encouraged within connection related to practice at the level of security research, expert activities or within consultations to solve the aspects; therefore they perceive them as much more important. A large percentage of these experts (those aimed to police activities) are also policemen or former policemen from various departments and former members of other security forces, which again reinforces their perception of those phenomena which they may have encountered in their active careers. On the other hand, crisis operators are oriented more to the systemic, comprehensive approach of the crisis management towards security threats. In their professional activities, they get acquainted with various documents at the state level, those which grasp and evaluate

the threats in some way (such as the Security Strategy of the Czech Republic,¹ the Threat Analysis for the Czech Republic,² the National Security Audit,³ etc.). The systemic and complex approach can then represent a greater insight when evaluating the relevance and severity of security threats.

However, it is important to emphasise that the authors do not, of course, want to assess which of the approaches and insights are „more correct“ or more relevant to reality (this is applicable for the whole article); they only demonstrate the influence of professional orientation on perceiving the relevance of security threats.

Tables 1.1a and 1.1b also show that customs officers perceive the area of threats to the state's competence and economic stability as more important than officials.

Basic duties of customs administration include the protection and regulation of the domestic market by collecting customs fees on imported goods and also ensuring that these goods do not endanger the lives or health of people, animals or plants. In fact, customs officers deal primarily with economic issues, movement of goods across borders; they investigate tax offences including detection of flows of funds; they detect and explain illegal trading with counterfeit goods, endangered plants and animals, narcotics and psychotropic substances, tobacco products, etc. Thus, in the course of their professional activities, they emphasise the threats which may disturb the economic stability of the state. Therefore, it is possible that they also perceive issues related to the economic security of the Czech Republic as professionally closer to their focus and they tend to appreciate them by higher ratings. On the other hand, officials represent a very inhomogeneous group. They come from various central government offices and other public administration authorities; each of them is professionally oriented in a different direction; thus their preferences are mutually interfered; as a group, they have no clear and unified views.

Policemen also perceive the area of the threat of state competences and its economic stability as substantially more important than the officials do, as demonstrated in Tables 1.1a and 1.1b.

The results of the controlled interviews point again in this context to the disparity of the collecting category of officials. Many central administrative authorities (and even other authorities of public administration) do not deal with a comprehensive solution of this range of threats; the officials are rather specialised in the sectoral issues of their offices. On the other hand, police officers know the issue of organised crime, legalisation of criminal revenues, tax criminality, crimes related to insolvency proceedings, corruption or espionage, if not directly from their practice, then at least from the stage of preparation. They are more involved in the fight against these threats.

¹ *Bezpečnostní strategie České republiky 2015*. Praha: Ministerstvo zahraničních věcí České republiky, 2015. 23 s. ISBN 978-80-7441-005-5.

² *Analýza hrozeb pro Českou republiku: Závěrečná zpráva*. Praha: Ministerstvo vnitra České republiky, 2015. 9 s.

³ *Audit národní bezpečnosti*. Praha: Ministerstvo vnitra České republiky, odbor bezpečnostní politiky a prevence kriminality, 2016. 141 s.

Factor score of the second factor – threats in cyberspace

Table 1.2a

Factor score 2.F Groups compared Groups	Selected descriptive statistics							
	Average Group 1	Number - Group 1 n	SD - Group 1	Responsibility interval for difference of averages		Average Group 2	Number - Group 2 n	SD - Group 2
				Lower	Upper			
Police departments – crisis management	50.93	9	12.36	-18.57	1.93	59.25	8	5.942
Legal departments – police departments	57.18	6	8.786	-6.41	18.91	50.93	9	12.356
Legal departments – social sciences	57.18	6	8.786	-1.53	23.45	46.22	8	11.744
Social sciences – crisis management	46.22	8	11.74	-23.01	-3.05	59.25	8	5.942
Customs officers – officials	51.65	10	8.834	-1.69	11.93	46.53	20	8.47
Officials – academics	46.53	20	8.47	-11.75	-0.59	52.7	36	10.711

Table 1.2b

Factor score 2.F Groups compared Groups	STANDARDISED EFFECT SIZE					Size of effect
	Effect Size	Bias corrected (Hedges)	Confidence Interval for Effect Size		Effect Size based on noctrol gp SD Glass's Δ	
			lower	upper		
Police departments – crisis management	-0.84	-0.8	-1.79	0.19	-1.4	Great effect
Legal departments – police departments	0.56	0.53	-0.52	1.58	0.51	Medium effect
Legal departments – social sciences	1.03	0.95	-0.16	2.07	0.93	Great effect
Social sciences – crisis management	-1.4	-1.32	-2.41	-0.24	-2.19	Great effect
Customs officers – officials	0.6	0.58	-0.19	1.35	0.6	Medium effect
Officials – academics	-0.62	-0.61	-1.17	-0.05	-0.58	Medium effect

The second area of threats - the area of cyber-threats - is characterised by threats of cyber espionage,¹ disruption of IT infrastructure resistance,² cyber-terrorism,³ disruption of eGovernment security,⁴ but (partially) also by threat of hostile campaigns⁵ and hybrid threats.⁶ More and more often, foreign countries carry out cybernetic spying or hostile campaigns in the cyber-space, e.g. their security structures. In addition, the impact of criminal, terrorist or other extremist groups and individuals in cyberspace is becoming increasingly important; in the foreseeable future it may escalate to the first cases of cyber-terrorism which have an impact on the lives and health of people. Hybrid campaigns can link a range of classical tools from the full spectrum of power dimensions (DIMEFIL⁷). Incorporating hybrid threats into the area of cyberspace threats by respondents of the survey is not accidental. Cybernetic space has a specific position in relation to the above-mentioned tools. It represents an environment where different dimensions of power intersect together; its importance for the functioning of states and

¹ Cybernetic espionage aims at obtaining strategically sensitive or important information and data of personal, sensitive or secret nature without consent of a holder. The attackers want to gain personal, economic, political or military advantage while using cyberspace, Internet, social networks and information and communication technologies in general.

² Resistance of IT infrastructure means ability of an entity to maintain an acceptable level of services, adapt quickly and respond no matter what problems and complications arise. There are many possibilities and factors which may cause IT infrastructure disruption, including attacks (particularly attacks on critical information infrastructure and important information systems managed by public authorities) with cybernetic attacks through cyber-espionage, cyber-terrorism, criminal organisations, hacking and others.

³ The National Cyber Security Center defines cyber-terrorism as an aggressive and excessive behaviour conducted with the intent to incite fear in society to gain political, religious or ideological goals. Using cyberspace and information and communication technologies, it threatens the state's operations, constitutional establishment or defence capabilities, including targeting the critical information infrastructure and important information systems. In a narrower sense, cyber-terrorism can be linked with such terrorist activities in cyberspace which cause extensive disruption of computer networks or devices with serious to fatal impacts.

⁴ The Government is aimed at governing public affairs, by using modern electronic tools to make public administration more accessible, more efficient, faster and cheaper. The major project of Czech eGovernment (digitisation of public administration) is the network of contact points of public administration called Czech POINT, as well as the system of data boxes, EiDAS, ISZR, eSbírka, eLegislativa and others.

⁵ A cybernetic hostile campaign represents many different cyber-related operations targeted at one particular strategic point or outcome. This is a time period in which several planned and coordinated cyber attacks or other cyber-space operations are carried out. The campaigns can be carried out by individuals, but more often there are more actors, mostly those of state authorities or those supported by state authorities (systematic acting of foreign powers).

⁶ What we understand under the hybrid threat (hybrid wars, hybrid ways of conflict management, hybrid strategy or hybrid campaigns) is primarily the method or way in which confrontation or conflict is led. This method of conflict management represents a combination of conventional and unconventional means, open and hidden activities primarily having the nature of coercion and subversion, those carried out by military, semi-military, and various civilian actors.

⁷ Diplomatic/Political, Information, Military, Economic, Financial, Intelligence, Legal. In: *Audit národní bezpečnosti*. Praha: Ministerstvo vnitra České republiky, odbor bezpečnostní politiky a prevence kriminality, 2016, s. 127.

economies is critical. Cyber-attacks can interfere with and jeopardise the functioning of public administration, critical infrastructure (power supplies, etc.), financial sector; they can threaten the safety of important objects; they are a means of espionage, disinformation campaigns, etc.

The results of the research show that the area of threats in cyber-space is perceived by police specialists, as well as by experts with a focus on socio-scientific issues, as much more important than by crisis operators.

Managed interviews have confirmed that cyberspace and threats associated therewith represent a relatively separate but very interdisciplinary dynamic area which is closely linked to other threats deserving our full attention. The „crisis operators“ are, within the scope of their profession, more oriented to classical emergencies whose primary impact is associated with the loss of life, damage to human health and extensive property damages (there may be an attack whose effects will include loss of life). For the „crisis operators“, the current impacts of cyber-terrorism are thus „scarcely visible“ in their practical activities. Experts who are focused on police activities or the area of social sciences deal with cyber-space security in specific aspects of security forces training (legal punishments for behaviour against security of cyber-space; ways of disruption of security in the cyber-space, criminal offences related, investigations of such crimes, etc.). The fact that cyber terrorism and other threats to cyberspace are something of a trend nowadays plays its role. This can also be related to the tendency to overestimate the threats associated. Crisis management has to assess the risks in a comprehensive manner; such evaluation must be balanced in relation to other risks affecting the system. In this view, smaller importance may be attributed to threats which do not present a direct risk of impact on the life and health of people at present (there have not yet been any serious cases in the Czech Republic which could lead to fatal impacts on health and life).

Tables 1.2a and 1.2b further show that the experts who deal with police activities perceive this area of threats as more important than the experts who deal with legal disciplines; experts in the field of social sciences perceive this area as even much more important than the experts dealing with legal disciplines.

The interviews show that policemen and future policemen feel the need to prepare for the investigation of cyber-space attacks, which is also perceived by experts in the field of profession preparation aimed at police activities. However, the area of application on a legal level has some shortcomings (slow reaction of a legislator to these threats in the form of effective provisions of legal standards, problems in detection of offenders and subsequent evidence associated with insufficient legislative means for gaining, documenting and evidencing use of electronic evidence, etc.). The relatively new introduction of this type of threat, and also the inability to learn by practice, may indicate inexperience with application of legal provisions in this area, which, in conjunction with the announced problems, may lead to a lower assessment of relevance of threats from this area. The law cannot physically protect a computer from cyber attacks; it can only respond to the attack by imposing punishment on the perpetrator. Therefore, we can assume that the experts who deal with legal disciplines perceive these threats, in general, in the same way they perceive similar threats; they cannot contribute to the fight against cybercrime using their proactive activities (unlike other

professional groups of respondents, since they are not involved in preventing or investigating such phenomena, etc.). They only interpret the applicable law; however, they cannot influence such the law. They only respond to an action which has occurred, the action qualified as the crime event in this area; they seek solutions in the already existing provisions of the criminal law. On the other hand, social sciences take individual phenomena reflected in the area of security threats as a very complex issue. Politicalology, sociology, psychology or criminology (and other science branches) are eager to reach every new phenomenon and try to grasp and explain it from the point of view of their branches. Application to practice, especially in the area of law, is, however, more problematic in this group of threats, as previously mentioned.

Tables 1.2a and 1.2b also demonstrate that officials attribute greater importance to cyberspace threats than customs officers or experts in the branch of university-level training of security forces members.

The controlled interviews revealed that the customs officers perceive more significantly the threats connected with the economic security of the Czech Republic, as a result of their profession. They deal with the smuggling of goods, reducing customs duties when importing goods from non-EU countries; they encounter some forms of organised crime; they monitor financial flows; they deal with tax criminality, etc. Cyber-space threats are not the direct focus of their practical activities.¹ The fact that officials were attributing higher importance to these threats than experts in the branch of university-level training of security forces members may be a bit surprising. It may be also caused by the fact that their activities often involve working with non-public materials and information processing via computer networks; so they might consider cyberspace security to be more important in terms of fear of possible information leaks, etc.

Factor score of the third factor – threats related to migration

Table 1.3a

Factor score 3.F Groups compared	Selected descriptive statistics							
	Average Group 1	Number - Group 1 n	SD - Group 1	Responsibility interval for difference of averages		Average Group 2	Number - Group 2 n	SD - Group 2
				Lower	Upper			
Police departments – social sciences	56.55	9	8.654	-4.48	16.76	50.41	8	11.816
Customs officers – officials	55.14	10	9.299	-2.29	13.89	49.34	20	10.598

¹ However, the Customs Administration of the Czech Republic has a specialised unit too - Internet Crime Report Department, which is included under the General Directorate of Customs. It is mainly aimed at investigating and documenting information related to illegal activities carried out over the Internet in relation to the competencies of the customs administration, in particular in the branch of intellectual property rights protection, customs administration, excise duties, etc. This is only about activities of a specialised unit, not the customs administration in general.

HZS ČR (Fire Rescue Team of the Czech Republic), academics	49.46	35	8.987	-9.08	-0.26	54.13	36	9.626
HZS ČR (Fire Rescue Team of the Czech Republic), customs officers	49.46	35	8.987	-12.23	0.87	55.14	10	9.299
Policemen – customs officers	48.05	26	9.616	-14.3	0.12	55.14	10	9.299

Table 1.3b

Factor score 3.F Groups compared	STANDARDISED EFFECT SIZE					Size of effect
	Effect Size	Bias corrected (Hedges)	Confidence Interval for Effect Size		Effect Size based on noctrl gp SD	
	d	g	lower	upper	Glass's Δ	
Police departments – social sciences	0.6	0.57	-0.4	1.54	0.52	Medium effect
Customs officers – officials	0.57	0.55	-0.22	1.32	0.55	Medium effect
HZS ČR (Fire Rescue Team of the Czech Republic), academics	-0.5	-0.5	-0.97	-0.02	-0.49	Medium effect
HZS ČR (Fire Rescue Team of the Czech Republic), customs officers	-0.63	-0.62	-1.33	0.1	-0.61	Medium effect
Policemen – customs officers	-0.74	-0.73	-1.48	0.02	-0.76	Medium effect

The third area of threats – migration-related threats – threats of uncontrolled migration, Islamic radicalism, terrorism of lone wolves, foreign fighters or threats of unsuccessful integration. Here, again, not accidentally, in terms of the perception of relevance of security threats by the respondents of research, there was a combination of threats directly linked to migration (threat of uncontrolled migration,¹ threat of

¹ The threat of uncontrolled migration lies in the inadequate set-up of functioning of the immigration policy system in the country, its limited credibility and limited ability to implement established procedures.

unsuccessful integration¹) and the threat of terrorism² originated mostly by Islamist radicals, lone wolves³ or foreign warriors.⁴ Migration crisis along with other factors (such as the widespread destabilisation of some states in the Middle East and North Africa; uprising of the so-called Islamic State and other terrorist groups; phenomenon of foreign fighters; radicalization of individuals and groups in various segments of society, self-radicalization of individuals via the Internet) mutually increase the risk of a terrorist attack in Europe.

The results of the research show that the experts who are focused on socio-scientific issues perceive the area of migration-related threats as more important than the experts involved in police activities.

The technique of managed interviews was used again to explain the causes of these differences of opinion. Based on the outputs of these interviews, we can state that migration and negative social phenomena associated with migration, radicalism or terrorism are perceived as social phenomena with which the social sciences such as politics, psychology, sociology, criminology and others deal and respond to them. The experts focused on police activities are more practical in their work, while focusing on processes and activities associated with responding to specific events; while social sciences deal more with contexts; they are more involved in the theoretical aspect and nature of the phenomena themselves; therefore, they feel closer to the wider spectrum of topics and they assess the risks associated with threats, rather according to the importance of impacts of society (life, health, psychological impacts, etc.) than on the basis of frequency of occurrences of actions associated with the presence of these negative social phenomena in society. The socio-scientific area also naturally more closely compares things with foreign countries, reflecting more foreign experiences with given social phenomena. This can also result in higher rating values of threat relevance, as these threats are manifested more often abroad (especially those associated with terrorist attack). The experts focused on police activities, of course, also do not avoid inspiration from foreign experience; however, the nature of their orientation clearly shows that they must mostly respect the legal framework and conditions in the Czech Republic when using orientation in practice.

¹ Integration is a long-term bilateral process of integrating foreigners into society, with the emphasis on the necessity to involve both foreigners and the majority society. The integration procedures are aimed at achieving the problemless and mutually favourable coexistence of foreigners and majority society. Successful integration in the territory is a crucial factor for eliminating many negative phenomena which in turn can lead to security threats. Insufficient or unsuccessful integration brings the risk of creating closed communities of foreigners, radicalization of individuals in these communities and rise of xenophobia, intolerance and extremism in society.

² Terrorism can be represented by such behaviour which is politically, religiously or otherwise ideologically motivated and uses violence or its threats in order to invoke feelings of fear.

³ Lone Wolves - individual terrorists who act in isolation. They carry out attacks on their own, but they can be supported by wider terrorist clusters.

⁴ Citizens of the Czech Republic who are involved in armed conflicts abroad (fighting in Ukraine, armed clashes in Syria and Iraq, etc.). This may lead to their radicalization and they may represent a security risk for the Czech Republic after their return. Also, the citizens of foreign states (foreign fighters) who transit through the territory of the Czech Republic may be problematic.

Tables 1.3a and 1.3b also show that customs officials perceive the area of threats associated with migration as being substantially less important than civil servants or police officers.

Here, we expected a different result, because customs officers have experience with movements across borders and the risks which these movements may bring to the country. The interviews revealed that customs administration is interested in foreigners, especially in the case of illegal employment where there is close cooperation with labour offices, as well as in connection with criminal offences or other violations of legislation (for example, in relation with the customs clearance formalities) to which the customs administration is competent. On the other hand, individual security aspects associated with migration interfere with many issues addressed by individual ministries and other central government offices the respondents come from. They have the opportunity to meet them within their work activities, which increases their awareness of the threats and also influences perception of the relevance of these threats. Police officers are also much more involved in the fight against terrorism; some of them also deal directly with problems related to border crossing, illegal migration or problems related to integration of foreigners (radicalism, extremism, etc.), since the issue of migration and terrorism falls to the competence of the Ministry of Interior (Czech abbreviation MV ČR). The police are systematically involved in working with minorities and foreigners. Since 2005, police specialists for minorities have been working in all regional headquarters - liaison officers for minorities.¹ The Ministry of the Interior and the Police of the Czech Republic intensively concentrate on the training of police officers in the field of working with minorities and foreigners, cooperation of the police in this area with the local administration, non-governmental sector and academic sphere, employment of members of minorities in the police, etc. Therefore, the police officers take these threats „seriously“, those which belong to them professionally, which is also reflected by the higher evaluation of their relevance.

Tables 1.3a and 1.3b also show that even the members of HZS ČR (Fire Rescue Team of the Czech Republic) perceive the area of threats related to migration as more important than customs officers and even the experts in the branch of university-level training of security forces members.

This can be explained by the wide range of topics and activities the members of HZS ČR (Fire Rescue Team of the Czech Republic) encounter at their work. The negative phenomena associated with migration are no longer just a matter of theory. HZS ČR is the main unit of the Integrated Rescue System (hereinafter referred to as IZS) which solves various extraordinary events using mutual co-operation of the units, including proper preparation. There are shared exercises and other forms of preparation for emergency events, including, for example, response to a terrorist attack. HZS ČR is also a first-class unit in the implementation of measures for the protection of the population; it fulfils the tasks resulting from elaboration of the type plan of the MV Migration Wave (MV – Ministry of the Interior) of a large scale, etc. The members of the HZS

¹ The liaison officer acts as a mediator for contact and communication between minorities and the Police of the Czech Republic. He assists in resolving possible conflicts and serious offences and provides the members of minorities with assistance in addressing specific issues. These experts may work with members of their working groups; there are about 150 police officers in the Czech Republic, in total.

ČR therefore encounter proper preparation for situations related to the threats described above. As the issue of migration and terrorism belongs to competences of the Ministry of the Interior, the General Directorate of the HZS ČR also states its opinions on many materials discussed at the highest level of the state; it provides comments to them and it even acts as their creator. The category of „experts in the branch of university-level training of security forces members“ includes all surveyed professionals, regardless of their professional orientation, which somewhat diminishes the power of the opinion potential of this category.

Factor score of the fourth factor – threats of extremism

Table 1.4a

Factor score 4.F Groups compared	Selected descriptive statistics							
	Average Group 1	Number - Group 1 n	SD - Group 1	Responsibility interval for difference of averages		Average Group 2	Number - Group 2 n	SD - Group 2
				Lower	Upper			
Policemen – customs officers	45.82	26	9.085	-15.54	-0.46	53.82	10	12.115

Table 1.4b

Factor score 4.F Groups compared	STANDARDISED EFFECT SIZE					Size of effect
	Effect Size	Bias corrected (Hedges)	Confidence Interval for Effect Size		Effect Size based on noctrl gp SD Glass's Δ	
			lower	upper		
Policemen – customs officers	d	g	-1.54	-0.03	-0.66	Medium effect

The fourth area of threats - threats associated with extremism¹ - is manifested by threats of right-wing extremism, left-wing extremism; the respondents of the survey also included the threat of political extremism to this group, in terms of their perception of the relevance of security threats, which is the threat classified by the National Security Audit in the area of threats associated with terrorism, whereas a political extremist² is perceived as one of the possible originators of a terrorist attack.

¹ The term "extremism" means ideological views which go beyond constitutional standards; they are characterised by features of intolerance; they attack the basic democratic constitutional principles and are capable of transitioning into activities which act destructively on the existing democratic system.

² In this case, it is an assessment of a possible terrorist threat which may be originated by groups or individuals affected by radical political ideology (right-wing or left-wing extremists).

Tables 1.4a and 1.4b show that the members of the police of the Czech Republic perceive the area of threats associated with extremism as being substantially more important than customs officers.

This finding corresponds to the assumption. Police officers frequently encounter actions of extremists and these are not necessarily about the specialised units of the Czech Police. The Ministry of the Interior is responsible for the issue of extremism in the Czech Republic; the key role is played by the police of the Czech Republic. Within the police, several departments are involved in anti-extremist measures. The police also use specialists for extremism in relation with criminal police service and investigation. On the other hand, customs officers are more oriented towards the economic and financial area; they are closer to the area of organised crime. Political forms of extremism are not significantly associated with their professional orientation.

Factor score of the fifth factor – energetic, raw-material and industrial threats

Table 1.5a

Factor score 5.F Groups compared	Selected descriptive statistics							
	Average Group 1	Number - Group 1 n	SD - Group 1	Responsibility interval for difference of averages		Average Group 2	Number - Group 2 n	SD - Group 2
				Lower	Upper			
Police departments – crisis management	46.59	9	9.05	-18.6	6.02	52.88	8	14.457
Policemen – customs officers	47.97	26	10.17	-15.72	-0.38	56.02	10	10.091
HZS ČR (Fire Rescue Team of the Czech Republic), customs officers	49	35	10.13	-14.34	0.3	56.02	10	10.091

Table 1.5b

Factor score 5.F Groups compared	STANDARDISED EFFECT SIZE					Size of effect
	Effect Size	Bias corrected (Hedges) g	Confidence Interval for Effect Size		Effect Size based on noctrl gp SD Glass's Δ	
			d	g		lower
Police departments – crisis management	-0.53	-0.5	-1.47	0.46	-0.44	Medium effect
Policemen – customs officers	-0.79	-0.78	-1.53	-0.02	-0.8	Medium effect
HZS ČR (Fire Rescue Team of the Czech Republic), customs officers	-0.69	-0.68	-1.4	0.04	-0.7	Medium effect

The last, fifth area of threats, identified by the research investigation on the basis of quantitative assessment of their relevance for the Czech Republic is the area of threats related to energy, raw materials and industry. This area is characterised by threats of large-scale disruption of food supply, large-scale disruption of gas supply, large-scale disruption of electric power supply, large-scale disruption of petroleum supply, large-scale disruption of drinking water supply, threats of radiation accident, issues related to industrial security,¹ security of raw materials,² leakage of hazardous substances; however, the respondents included here even the cases of flood³ and long-term droughts. This area is therefore associated with threats from the group of threats of energy,⁴ raw materials and industrial nature, as well as the group of anthropogenic threats⁵ and the group of natural threats.⁶

The results of the research investigation show that the experts who deal with police activities perceive this area of threats as more important than crisis operators.

This is a rather surprising finding, since it does not correspond to the assumption that the people who deal with the threats (they perceive their consequences professionally) and consider them as more important consequently see them as more „visible“. There is an opportunity to overestimate the risks which we cannot adequately grasp in terms of our expertise. If we do not have a wider awareness of the issue (and this area of threats is quite specific and remote from the other threats identified by the Audit), we are more prone to accepting others' opinions; more prone to be influenced through presentation of certain topics in the media, press, etc. „Crisis operators“ should have comprehensive insight into the issue of threat assessment and they should be more familiarised with the probability of these threats actually occurring in the conditions of the Czech Republic. This means that these threats should not be such a „fear“ for them

¹ Regarding industrial security, there is threat of, for example, the important role of foreign investors in larger businesses or outflow of foreign investments due to lack of skilled employees in technical professions. Significant risk for the Czech industry may be represented by influence and infiltration operations of reporting services of foreign power directed against the strategic economic interests of the Czech Republic; industrial and scientific-technical espionage.

² Interruption of supplies of certain strategic minerals would endanger certain strategic production or damage to competitiveness of the Czech economy.

³ However, with a very low regression coefficient. Interestingly, both floods and long-term droughts were not included in a separate factor, which could have been expected. However, the mutual correlation between these two threats is only 0.207. It is a very low correlation, which makes it difficult to integrate both threats into a common factor.

⁴ Energy security is threatened by threats of large-scale disruption of gas supply, large-scale disruption of electric power supply, large-scale disruption of petroleum supply.

⁵ In order to identify and distribute the types of danger which may occur in the Czech Republic, the Threat Analysis document for the Czech Republic was prepared, which was approved by the Government on April 27, 2016, by Resolution No. 369. There were 72 types of hazards identified, those which were subsequently subjected to multi-criteria analysis taking into account both frequency of occurrence and severity of the impact on the protected interests. Subsequent risk assessment prioritised and defined what needs increased attention. The National Security Audit then took into account only the threats for which an unacceptable level of risk was identified, namely the threat of extraordinary flood, leakage of hazardous chemical substance from a stationary facility, threat of radiation accident and large-scale disruption of drinking water supply and large-scale disruption of food supply.

⁶ Floods and long-term drought.

as for the otherwise professionally oriented respondents, owing to the fact that they know the methods of security and the procedures required to deal with these „crises“. Therefore, a more realistic assessment of the significance of these threats for the Czech Republic can also be expected. The crisis operators may also analyse threats and risks less intuitively (they know how to analyse threats and they may compare them); they do so more in relation to the particular territory and the consequences which the manifestation of the threat may cause. They also know the procedures with which the territory is protected (substitute sources of drinking water for a particular site, standby power supplies, emergency petroleum reserves, etc.). Other respondents may perceive this threat area more „globally“. For example, we all see that diminishing supply of non-renewable energy sources is a global problem; other threats related to overpopulation, such as fight for „drinking water“ or food crisis (in some parts of the world) are also (to some extent) a constant „nightmare“ we cannot solve in the global perspective.

Tables 1.5a and 1.5b also revealed that the police officers and members of the HZS ČR (Fire Rescue Team of the Czech Republic) perceive the area of threats of energy, raw materials and industry as more important than customs officers.

This is quite a logical result, as the police (and even more the Fire Rescue Team of the Czech Republic) deal with a very wide range of tasks related to the threats defined here. The police of the Czech Republic, among other things, work on security measures resulting from type plans addressing the above-mentioned crisis situations and must be able to implement such measures. Customs officers, however, do not have much to do with these matters and they are relatively narrowly specialised in comparison to these security forces. The Fire Rescue Team of the Czech Republic is the basic and main unit of the integrated rescue system; it implements measures for the protection of the population; it prepares and implements measures based on type plans addressing the above-mentioned types of crisis situations; therefore the members of this team are well-familiarised with these threats. The Fire Rescue Team of the Czech Republic also prepares documents in the field of security threat analysis at the level of states and regions; its representatives participate in discussions of bodies at national and international level aimed to cooperation and exchange of information related to these threats. It is therefore the most competent unit to deal with this agenda; it also reflects the perception of relevance of threats in this area.

Conclusion

The results of the first phase of the research show how the respondents of the research investigation perceive security threats according to their relevance; these results were compared with those from the expert group used to create the Audit. However, further comparisons were seen as prospective, too; mainly the mutual comparisons of the professional groups of respondents. The authors of the second phase of the research investigation worked with the hypothesis that one of the determinants for perceiving the relevance of security threats is the professional orientation of an assessor. The quantitative part of the research was supplemented by qualitative data processing where so-called substantive significance was examined. Significant correlations between the professional orientation of the respondents and their perception of relevance of the security threats were revealed by calculation of the factor scores of individual groups of respondents. This article deals with the

interpretation of these contexts. When interpreting the results in this article, the authors do not only rely on their professional view of the issue, but they also rely on the opinions of ten experts representing individual professional groups of respondents obtained through the method of controlled interviews in the third phase of the research.

Interpretation of the research results show that the professional orientation of the respondents certainly influences their perception of the relevance of security threats. It can be stated that one of the significant determinants for perceiving the relevance of security threats is the professional orientation of the assessor. It was also found that there are substantively significant differences in approach to the perception of relevance of security threats among professionally different groups of respondents. They perceive the relevance of security threats most often by the optics of approach of „the closest thing for me professionally is more visible to me - and I assess it with higher ratings“. This was the case of „known“ threats where respondents knew the consequences and were aware of their prevention, likelihood of occurrence and the procedure of how the security system responds. In the case of categories of threats which are not so easy to discern (food security, raw material security, drinking water supplies, etc.), there was a "reverse" tendency to frequently „overestimate“ threats. Such threats include those which we do not have too much information about, those which we are not familiarised with in terms of how the state deals with these threats, and also in terms of how systems of prevention and response to these threats by security structures are set up. The risks arising from these threats were perceived rather in a global context; their relevance in the conditions of the Czech Republic was not adequately assessed.

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RESUMÉ

Předložený článek se zabývá vybranými determinantami, které ovlivňují vnímání relevance bezpečnostních hrozeb pro Českou republiku. Výsledky analýzy vycházejí z empirického výzkumu, jehož se zúčastnilo celkem 127 respondentů s různou profesní orientací v bezpečnostní oblasti. Zjištění exaktně prokazatelného vlivu profesní orientace bylo uskutečněno porovnáním věcně významných efektů vlivu profesní orientace na jednotlivá faktorová skóre pěti společných faktorů (v podobě T-skóre) dle indexu Jacoba Cohena, s dolní hranicí indexu $d \geq 0,5$.

Klíčová slova: Bezpečnostní hrozby, faktorová skóre, věcná významnost, indexy věcné významnosti, Cohenovo d .

SUMMARY

This paper deals with selected determinants which influence the perception of the relevance of security threats to the Czech Republic. The results of the analysis are based on empirical research, attended by a total of 127 respondents with various professional orientation in the security branch. Finding the exact demonstrable influence of professional orientation was accomplished by comparing the substantively significant effects of the influence of professional orientation on the individual factor scores of five common factors (T-scores) according to the Jacob Cohen Index, with the lower limit of the index $d \geq 0.5$.

Keywords: Security threats, factor scores, substantive significance, indexes of substantive significance, Cohen's d .