

National University of Public Service

Doctoral Council

An author's summary and official reviews of the PhD dissertation by

János PATAKI

**Terrorism as a security challenge and defence of
critical infrastructure**

Consultant:

Colonel (Prof. Dr.) István RESPERGER

Budapest

- 2020 -

The Outlines of the Scientific Issue

According to Liddell Hart¹ “Guerrilla warfare is fought by a few, but depends on the support of many. Although it is the most individualistic activity, it is only effective, and would only reach its goal, if it is supported by many.” The thoughts of Liddell Hart confirm the statement made by Hans-Georg Maaßen² that around 550 “German” militants were fighting by the side of the Islamic State (IS) in the Middle East.

The goal of terrorism is to create panic and fear, to weaken and question the faith and confidence cast in the democratic social and political institutional systems. The terrorist movements does not accept the democratic values, and the historical international systems and their relations are destabilized by them.

A key international trend is economic globalization. The secure functioning of economy determines the welfare of humanity worldwide, because the safety and values of the participants of the global economy are very important both in the present and in the future. The standard of defence expenditures and responsibility have to be defined on the basis of a suitable risk analysis.

Professional views on security in Hungary vary typically at the administrative, measure development, execution and activity action implementing, without any overall agreement. This seems to stem from the fact that execution processes are optimized according to the participants’ own viewpoints. The most striking example is how the protection of different objects and buildings and the tasks of various fields in security can be/have to be implemented. Cyber-, and terrorist attacks, as well as protection against current terrorism are part of an integrated defence system. Due to the lack of a suitable crisis management, terrorist attacks of fundamentalist religious groups and the operation of terrorist organisations and the networks of organised crime make national states with advanced infrastructure more vulnerable from a political and economic viewpoint.

My primary research goal was to develop an integrated security system and a two-level crisis management system for a large company by applying state-of-the-art organizational, architectural, security and tactical methods. My secondary objective was

¹ B.H. Liddel HART: Strategy, Európa Publishing, Budapest, 2002, p. 559 (Translated by the author)

² President of the Bundesamt für Verfassungsschutz (BfV), the domestic intelligence service of the Federal Republic of Germany

to develop a system as a model for similar companies that can help them work out their own defence system.

The dissertation contains analyses and suggestions in the following main areas:

- Security challenges, the nature of terrorism, the tasks of security organisations and national authorities in the fight against terrorism (defence), and the impact of terrorism on the functioning of the world and national economy were analysed and evaluated.
- The characteristic general principles of a terrorist organisation were presented and summarized.
- The economic studies and impact assessments determined the elements and events by which the impact of a terrorist attack both on economy and on critical infrastructure can be examined .
- The tasks of government, police and private security services in defending critical infrastructure; furthermore, the aspects of protecting critical national infrastructure by private security were specified.
- It was concluded that the different security organizations and authorities should interpret the tasks of security and defence, their interfaces and new technical and tactical methods of protecting critical infrastructure the same way.
- Application of the principles and rules laid down in international law and their harmonization with the national law system were explored.
- Possible solutions to be implemented by integrated security and defence components of large companies were examined on the basis of analyses, evaluations, experience and legality.
- The full implementation of all the elements of security systems ensuring continuous and safe operation of companies according to the new security trends was worked out.

Research Hypotheses

- Security challenges of the 21st century - in particular those seen in the new forms of terrorism - have a significant impact on the world economy and its functioning. Terrorism can make a considerable impact on the various sectors and actors of the economy.
- The structure of the Hungarian economic system has changed completely as a result of the investments made by large international companies. The defence of investment centres is not covered by current national rules. With respect to critical Hungarian infrastructure this typically means that different expert opinions exist at the preparative, administrative, implementing, legislative and "user" (company) level including differences in and incomplete understanding.
- The deployment of security trends in establishing the defence capability of large companies, such as integrated organizational, architectural, security, tactical and management methods, must all be taken into account in order to reduce vulnerability.
- "Military" defence procedures set up against terrorist attacks can be integrated into the defence system of a large corporation, mitigating the threat of a terrorist act significantly.
- The four points can be demonstrated in the crisis management of a large company established with a new two-level method based on the military science.

Research methods

The dissertation is based on fundamental research, being the first of this kind in Hungary about the integrated and complete planning, construction, operation of a large company's security and defence system, and its position in the national economy. Military science theories, methods and other military standards, guidelines are applied in the economic sector for the first time. Guidelines and methods practically applicable with reference to existing scientific results and applied research are worked out in the rest of the dissertation.

The intention was to achieve the set goals using the following specific methods:

- Studies of NIC and Reconnaissance Surveys, furthermore Bundesakademie Sicherheitspolitik textbooks were identified as source works for security challenges and studies, used in the analysis, and evaluated in the synthesis using a method based on my professional experience.
- The analysis of the Hungarian economic system was based on the Pareto theory.
- The various security trends, methods and standards were surveyed by interviews and quantitative statistical methods. This mathematical method was complemented by the analysis of my experience. A hypothesis using these methods was formulated and analysed in various contexts, compared to the safety systems of other large companies in Hungary.
- Professional consultations were conducted with the staff of the National Civil Service National Security Institute, the Military National Security Service, the Counter-Terrorism Centre, the Parliamentary Guard, the Standing Police, the Hungarian Defence Forces and the Disaster Management Organisation. Furthermore, I participated in the professional trainings of these institutes and organizations.
- The analysis of the theoretical basis was accomplished with the help of a review of the security and defence tasks put down primarily in the German specialist literature on security, proprietary, recognized research results and approaches as well as my own critical method. The United States Department of Defense and NATO's relevant minimum standards have been used to investigate terror bombings and terrorist attacks.
- Expert interviews were conducted with members of the management at AUDI HUNGARIA Zrt.

A summary of the research work done

Six chapters were developed in the doctoral thesis.

The first chapter studies the effects of progressive globalization that do not only pose a global security problem but also appear directly or indirectly at regional or local level. Poverty, civil wars, and other conflicts and disasters can result in a wave of refugees to neighbouring countries and regions. In these areas, emergency situations may emerge in security policy that the countries and regions concerned do not handle properly. This may also escalate into nearby regions. Therefore, closer cooperation with international organizations and institutions is needed in the critical zones.

The second chapter shows how the various factors of security policy are related and affected by each other. At present, the economic dimension is the most significant one. The impact of terrorism on the world economy is demonstrated on the example of the terrorist attacks of 2001, because this is the event on which sufficient amount of references exist. Economic prosperity brought by globalization does not only offer benefits, but it also involves risks. Extremists and critics of globalization started to attack the winners of the process way before 9/11.

The third chapter presents how a large enterprise is connected to the country's critical infrastructure, whose own operational priorities (production / market / operational capability) are almost fully mapped to EU criteria according to the primary (energy supply, infocommunication, transport) and sectoral criteria Protection of National Critical Infrastructure sectors.

Chapter 4 argues that the country's national security strategy and the "worldwide" security measures of a "mother" company in a multinational company must be fully taken into account when developing a company's security rules, regulations, and security organizations. The security and defence systems, the designing, construction and operation of the company's security strategy are basic documents that define the medium for the top management of the company and determine long-term safety requirements and regulations.

The fifth chapter describes the efforts taken against terrorist bombings and terrorist attacks, particularly with regard to the security challenges of terrorist attacks in implementing security measures.

The sixth chapter examines how the multinational companies should face new challenges in their operations. The members of the companies' management and safety management team should monitor the changes in their own fields of expertise. Accordingly, new procedures and methods should be developed and applied, so that the company's senior management can take decisions in due time in possession of adequate information.

Summarised conclusions

The effects of globalization will appear worldwide both at regional and local levels, which cause safety problems directly or indirectly. Europe cannot isolate itself from the events of the world either economically or politically.

During the Cold War, ideological differences were exploited by terrorism. This was replaced by a philosophy based on the religious and cultural differences in the 21st century. Global terrorism and the clashes between civilizations have been intensified recently, causing a growing chasm among cultures and religions.

At present, the economic dimension is most decisive. The impacts of the 2001 terrorist attacks on the world economy and its various sectors were investigated by economists. It was established that the attacks' incidental damages were more severe than the amount of direct damage.

In the design phase of the protection of critical infrastructure the "domino effect" should be taken into consideration, due to which the damages and impacts of the events can multiple and secondary, tertiary damage can occur.

I suggest that the companies involved in the implementation of the safety profile of the security problems must have safety certificate issued by the national authorities.

The systems or facilities required for the continuous operation of the critical infrastructure are essential for the fulfilment of vital social functions. 80% of GDP is generated by the TOP50 Hungarian companies. 24 from the 50 economic operators are production companies. Only 26 – non-producing - companies form part of the critical infrastructure according to Annex 2 to Act CLXVI of 2012 on Critical Infrastructure Protection. In the Annex of the Act, section (industry) includes the manufacturing

companies that produce at least 2% of GDP at a single location. Critical Infrastructure Integrated Protection can be used to meet the security requirements of international and national legislation.

The system of corporate security policies should be developed primarily based on the country's national security strategy where it works as a subsidiary, and secondly based on the "worldwide" valid security measures of the "parent company."

Two levels should be defined by establishing security organizations. The strategic level where the specialties belong to, and the operational level where daily routine protection and defence tasks are provided by the Crisis Management Centre, intervention forces and other service organizations.

When examining the security issues of terrorist bombings and terrorist attacks, I found that the protection aspect of buildings / objects against terrorist bombings and terrorist attacks is not given enough attention in Hungary today, because the legal background is incomplete or does not exist.

New scientific results

- 1) It was shown that the new forms of terrorism have a significant impact on the world economy and its functioning. Based on the relevant analyses, it was found that the indirect damage of attacks is greater than the degree of direct damage.
- 2) The Pareto theory was used to verify that the structure of the Hungarian economy has undergone a complete transformation since the political transition. The Hungarian economic system is disproportionate, the ratio of the primary sector is negligible compared to the secondary and tertiary sector. It was also analysed, evaluated and verified that the protection of emerging investment centres and large companies is not covered by current national laws.
- 3) Research showed that the profession of civil security is split up, there is no common understanding of the threats and clear identification of their elimination. Only the use of an integrated security concept warrants complete safety and security for a large company.
- 4) On the basis of protecting a large corporation against terrorist bombings and terrorist attacks and of the "military" process orders a system of protection was designed and developed to be used as a model significantly reducing the level of terrorist threat to objects.
- 5) Based on the analyses and conclusions, the application of a two-level crisis management is proposed at the large company level, which is worked out on the basis of the principles of crisis management in military science. It is demonstrated that the theoretical and practical methods used in the NATO, EU Crisis Management and Situation Centres can be applied in the civilian environment and are part of the management processes.

Related potential new fields of research

New directions of research were identified for processing research-related literature and obtaining practical experiences:

- Hungary's security situation is influenced heavily by the crisis areas that are getting closed to our borders, such as the conflict in Ukraine, the civil war situation in North Africa and the Middle East, and the poverty-related migration crisis in the Mediterranean and the Balkans.
- Global terrorism, cyber terrorism and the clashes between civilizations have been intensified recently, causing a growing chasm among cultures and religions. Terrorists use the media more and more consciously to threaten and attack the public across the world. Terrorism benefits from and abuses technological progress and globalization.
- Indirect damages caused to the world economy and its various sectors by terrorist attacks are greater than the degree of the direct losses.
- The trade of civil security is split up, and the various business organisations use a number of different security models. Large companies have built up their own security systems diversely as a result, a research into these models can be a promising direction.
- The organizations which provide our economic prosperity are not rated as critical infrastructure.
- In Hungary, protection of buildings and objects against terrorist bombings and terrorist attacks does not receive the required attention, because the legislative framework is incomplete or the issue is not regulated.

List of Publications

In Hungarian

Pataki, János: Az objektumok és épületek terrorrobbantások elleni védelme (Antiterrorist Standards For Buildings), Műszaki Katonai Közlöny (Bulletin for Military Engineers), 2014/1. p. 72 -82

Pataki, János: Különleges védelemmel felszerelt járművek (Vehicles with Special Protection), Hadmérnök (Military Engineer), 2014/2. p. 56 – 72

In Hungarian, co-author

Pataki, János, Dr. Király, László: Egy multinacionális nagyvállalat kritikus infrastruktúrájának illeszkedése a hazai (vertikális és horizontális) kritikus infrastruktúrákhoz (Adjsutment of the Critical Infrastructure of a Multinational Company to Domestic Critical (Vertical and Horizontal) Infrastructure, Hadtudomány (Military science), 2012/3. p. 150 – 165

In English

Pataki, János: Situation Centre in the Private Sector, NATIONAL SECURITY REVIEW, 2019/3. p. 18 – 27

Pataki, János: NATO in 2030 and what the future will bring, “Essential security, dynamic engagement”, 2019/4. p. 61 – 70

In German

Pataki, János: SICHERHEITSPOLITIK DES MULTINATIONALEN UNTERNEHMENS (SECURITY POLICY OF MULTINATIONAL COMPANY), Military Engineer, 2019/2. p. 354 – 360

In German, co-author

Pataki János, Dr. Resperger István: Einführungsaufgaben der Sicherheitsmaßnahmen der Sicherheitsbehörde der Ungarischen EU-Ratpräsidentschaft im ersten Halbjahr 2011 (Introduction of Safety Measurements of Security Authorities in The First Half-Year of the Hungarian EU-Presidency in 2011), Hadmérnök (Military Engineer), 2011/3. p. 154 – 160

Pataki, János, Dr. Sulányi, Péter: Lage- und Analysezentrum bei einem internationalen Unternehmen (Situation Centre at a Large Company), Hadmérnök (Military Engineer), 2011/3. p. 161 – 168

Pataki, János, Dr. Sulányi, Péter: Personenschutz (Close Protection), Hadmérnök (Military Engineer), 2011/4. p. 261 – 269

Pataki, János, Dr. Sulányi, Péter: Werkschutz (Factory Protection), Hadmérnök (Military Engineer), 2012/3. p. 26 – 32

Pataki, János, Dr. Sulányi, Péter, Pongrácz, Attila: Integrierte Brandschutzeinrichtungen (Integrated Fire Protection Systems), Hadmérnök (Military Engineer), 2013/4. p. 150 – 165

Pataki János, Dr. Sulányi Péter, Dr. Kuti Rajmung, Dr. Földi László: Aufgabenstellung und Rolle der Werkfeuerwehr bei einem multinationalen Unternehmen (Tasks of the Fire Department at a Large Company), Hadmérnök (Military Engineer), 2014/1. p. 57 – 66

Curriculum Vitae

Place and Date of Birth: Szolnok, 4th October 1965

Stationed (with the Hungarian Defense Forces): Győr, Eger, Pécs

Present Employment: Audi Hungaria Zrt., Győr

University degrees:

- Intelligence officer (Kossuth Lajos Military Academy)
- Mechanical engineer (Kossuth Lajos Military Academy)
- Business intelligence (Budapest University of Technology and Economics)
- Security and Defence Policy Expert (Zrinyi Miklos National Defence University)
- Security engineer (Zrinyi Miklos National Defence University).

Language skills:

- German "C1" grade complex test
- English language "B1" grade complex test

Membership in professional associations:

- Association of Intelligence Society
- Hungarian Reservists's Organisation
- The Association of Reservists of the German Armed Forces