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## **Analysis of NATO and EU Approaches to Capability Planning and Potential Alignment of National Planning Processes**

### **Analyza přístupů NATO a EU plánování schopností a možné sjednocení národních plánovacích procesů**

**Zdeněk Petráš**

#### **Abstract**

The article presents a summary of analytical outcomes aimed at mapping current NATO and EU approaches to capability planning and their impact on national planning processes, which were carried out by security and defence institutions. The outcomes point out the fact that significant number of NATO nations and EU member states are using approaches to capability planning which reflect specifically national strategic objectives. It is of note that no country has implemented procedures that could be considered as standardised in terms of a single planning process within NATO or the EU. On the other side, analyses point out the fact that NATO and EU planning processes can be hardly expected to be unified in the short term. Nevertheless, NATO and EU member countries should pay close attention to the outputs of their national planning processes in order to comply with the single set of capability requirements as implemented in the relevant NATO and EU planning processes.

#### **Abstrakt:**

Článek představuje souhrn analytických výstupů zaměřených na zmapování současných přístupů NATO a EU k problematice plánování schopností a jejich dopad na proces plánování na národní úrovni, které provedly národní a mezinárodní bezpečnostní a obranné instituce. Výsledky poukazují na skutečnost, že značný počet zemí NATO a členských států EU využívá přístupy k plánování schopností, které odrážejí specificky národní strategické cíle. Je třeba poznamenat, že žádná země nezavedla postupy, které by bylo možné považovat za standardizované z hlediska jednotného plánovacího procesu v rámci NATO nebo EU. Na druhé straně analýzy poukazují na skutečnost, že v krátkodobém horizontu lze jen stěží očekávat sjednocení plánovacích procesů NATO a EU. Členské země NATO a EU by nicméně měly věnovat velkou pozornost výstupům svých národních plánovacích procesů, aby splnily jednotný soubor požadavků na schopnosti, jak jsou implementovány v příslušných plánovacích procesech NATO a EU.

**Key words:** Capability; Defence; EU; NATO; Planning.

**Klíčová slova:** schopnosti; obrana; EU; NATO; plánování.

## INTRODUCTION

In general terms, defence planning can be defined as a process aiming to build efficient and effective defence system that, in other words, represents military assets and capabilities that a country or alliance deems necessary to satisfy their defence and security ambitions. In this context, it is important to differentiate between two concepts, which are nevertheless closely interconnected - defence planning and operations planning – where the first one describes a way of how to produce required capabilities and the second one, how to engage them, if need be.

While concentrating on the first concept, it can be said that defence planning actually strives for reacting to current or future security challenges in the world and replies to question: what are the military implications arising from these challenges? And furthermore, what are defence strategic objectives and what military capabilities, in quantitative but also in qualitative terms, are necessary to fulfil strategic objectives? Military capabilities should be understood as a concept encompassing not only forces and equipment, but everything that renders them operational. This includes doctrines, operational concepts, support, training, stocks and munitions, etc. In this way, capability management can take diverse frameworks where the interlinking between respective functions may be defined under several paradigms.<sup>1</sup>

Of course, follow-on concerns might be specified in terms of how identified capabilities can be acquired, how long it will take, who will be responsible for plan execution and, last but not least, how to measure progress towards achieving defined strategic defence objectives. Measuring progress and effectiveness in capability development are definitely very delicate issues for any military organisation. On the other side, measuring progress in capability development, which includes capability trade-offs, assessment of capability strength, identification of capability shortfalls and their prioritisation within the capability planning process. It is expected that an effective implementation of outputs from that process can improve performance of a military organization by ensuring that resources are best allocated.

Intention of this article is to sum up outcomes of analyses aimed at identifying current approaches to capability planning as applied through NATO (North Atlantic Treaty Organization) and EU (European Union) planning structures as well as by countries. The article briefly summarises previous work completed under various working format, within national or international institutions dealing with security and defence issues, especially the NATO Science and Technology Organization (NATO STO), Systems Analysis Studies panel which is most relevant to the present study. Capability development is, beyond all doubt, a critical component of defence planning process and thereby, it has been extensively explored in a few previous analytical studies which provide in-depth coverage of

<sup>1</sup> The most common paradigm, being used within the NDPP and, under various modifications, by several NATO nations, is DOTMLPFI model, which integrates the essential capability elements - Doctrines, Organisation, Training, Materiel, Leadership, Personnel, Facility and Interoperability. Nevertheless, besides the DOTMLPFI model, the UK Ministry of Defence uses the Defence Lines of Development (DLOD) for itemising capability elements, Australia Department of Defence uses for managing capability development so-called Fundamental Inputs to Capability (FIC).

capability planning from different perspectives. The key objective of all these analyses was to map how countries matched their force development process with their capability based long-term planning.

## 1 GENERIC FRAMEWORK FOR DEFENCE PLANNING AND CAPABILITY DEVELOPMENT

In general terms, defence planning seeks to ensure that a country or a multinational community has the necessary assets and capabilities, i.e. military forces, infrastructure and facilities to fulfil given tasks throughout the full spectrum of its missions. Thus, the core task of defence planning is to identify and develop such capabilities in terms of quality and quantity which are needed for conducting the whole spectrum of operations according to the established level of ambitions. This is the reason for which this process is perceived as a very complex discipline having a direct impact on effectiveness and efficiency in dealing with national or common security and defence. At the same time, it is of note that there is no generally recognised and applied defence planning which should be based on universally accepted techniques or procedures. In any case, the ultimate product of defence planning, no matter if there is a national or NATO/EU planning, is a set of military capabilities which are supposed to enable to accomplish respective strategic goals in security and defence area. As such, defence planning is a complex, multi-stage, iterative process, including several stages, which are commonly interconnected, where the process of identification and achieving capabilities needed for accomplishing defined level of ambition plays a very crucial role. The sequence from strategic level to acquisition of required capability, through all relevant steps, is schematically illustrated in the Figure 1.



**Figure 1:** Generic framework of sequencing from strategy to capability acquisition<sup>2</sup>

<sup>2</sup> BRUSTLEIN Corentin (ed.). *Mutual Reinforcement: CSDP and NATO in the Face of Rising Challenges*. Focus stratégique, No. 93, IFRI: Paris, France. 2020. ISBN: 979-10-373-0082-9. p. 24.

Capability planning constitutes an integral part of a complex process, i.e. defence planning. It is expected that this process will be conceived in order to investigate possible future operating environments and develop plans to adapt defence organisation and military force structure to those environments. It can be assumed that a carefully designed defence planning process should ensure cohesion across various planning disciplines, so as to achieve overall force cost-effectiveness over the long term. And identification of capabilities needed for achieving defined objectives and subsequent development of required capabilities is considered as a key discipline of the defence planning process. So, in this context, capability planning cannot be seen as a simplified stand-alone process and isolated from all relevant security challenges.

### 1.1 Interaction between NATO/EU and national approaches to capability planning

From a generic perspective, many member countries forming international security and defence community, above all NATO, EU or UN (United Nations), consider the defence planning approach, as used by NATO, as the most suitable instrument for transforming challenging political guidance into military capabilities, which are defined as indispensable for a successful conducting of operations. In this context, *the NATO Defence Planning Process (NDPP) is the principal vehicle for the synchronisation and harmonisation of capability development efforts undertaken by Allies individually or collectively.*<sup>3</sup> As such, NATO continues to offer opportunities for increased coherence of capability development with partner countries and the EU. To this end, *NATO continues to work closely with the EU to support capability development and interoperability with a view to avoiding unnecessary duplication and maximising cost-effectiveness.*<sup>4</sup> A fact accentuating a need for closer cooperation between NATO and the EU is that the 21 countries are members of both NATO and the EU, not counting those countries, which are not NATO members but participate in specific NATO partnership programmes. So, for all these countries it is almost impossible to split up their planning processes and differentiate planning procedures while conceiving national contributions to NATO and to the EU. For above-mentioned reason, the process setting up of national capability planning is very often matching against the NDPP. Actually, many of national strategic documents refer to NATO and the NDPP, although there is no explicitly given that the national capability planning should reflect principles as implemented in the Alliance.

*It is fully understandable that the one of national capability planning objectives shall be to achieve requirements stemming from the NATO level of ambitions. However, the*

<sup>3</sup> NATO STO (ed.). *Key Performance Indicators in Measuring Military Outputs - Capability Planning*. STO Technical Report, STO-TR-SAS-096. NATO Science and Technology Organization Research and Technology Organization: Neuilly-sur-Seine, France: NATO, 2018, 58 p. ISBN 978-92-837-2153-6.

<sup>4</sup> NATO (ed.). *The NATO Defence Planning Process*. NATO Secretary General, PO(2016)0655 (INV). Brussels, Belgium, 2016. 1-1 p.

*question is whether to this end, it is indeed necessary to explore NDPP with a view to implement them into national environment. The analyses of national defence planning processes conclude that countries are using specifically tailored national approaches to capability planning.<sup>5</sup> Diversity and fragmentation of national approaches to capability planning is due to different strategic concerns, which stems from national security and defence policies and which may not be necessarily consistent with NATO common defence and security or EU common security and defence policy. Results of the analyses<sup>6</sup> illustrate that no country has implemented planning procedures in the form of an integral process as used through NATO or EU. Even though countries use neither NATO nor EU planning practice as a whole, principles as applied through NATO are commonly influencing national approaches far more than it is with the case of EU planning principles.<sup>7</sup>*

In some cases, countries are using some fragments from the NATO or EU capability planning processes, properly adapted to national objectives. What is symptomatic for national approaches to capability planning is a close interconnection between identification of capability requirements and existing military force structure, which results in situation when newly identified capability requirements are a priori affiliated to relevant force units or countries tend to pre-identified force units, which shall achieve capabilities as appropriate. As long as countries want to be really coherent with NATO/EU planning procedures, they should pay high attention to outputs from national planning processes to be in line with NATO/EU requirements for capabilities. In order to provide an effective interaction between national planning processes and the NATO/EU planning process, national planning process is proposed to use the same taxonomies as in NATO/EU planning documents. With respect to this aspect, assigned national assets and capabilities should have quantitative and qualitative parameters in line with NATO/EU requirements. This approach would be also supportive to acquisition and procurement process when it is necessary to clearly specify technical performance parameters of weapon systems and other military equipment.

<sup>5</sup> MAULNY, Jean-Pierre, Sylvie MATELLY, Fabio LIBERTI. *Analyse comparée des planifications capacitaires par pays de l'Union européenne et perspectives pour des orientations communes dans le cadre de la PESD et impact sur les programmations nationales*. Notes de l'IRIS Septembre 2005. Paris, France: IRIS, 2005. p. 209.

<sup>6</sup> The comparative analysis, carried out by RTG SAS-096 (see reference 3) was focused on identification of those aspects which are identical for both NATO and EU and which might be also beneficial for optimising the national capability planning process. Since the substance of the both NATO and EU processes lies in identification and development of required capabilities, the analysis was primarily aimed at comparing those procedures which are meant in both organisations to define capability requirements, identify and prioritise capability shortfalls.

<sup>7</sup> NATO STO (ed.). *Key Performance Indicators in Measuring Military Outputs - Capability Planning*. STO Technical Report, STO-TR-SAS-096. NATO Science and Technology Organization Research and Technology Organization: Neuilly-sur-Seine, France: NATO, 2018, 58 p. ISBN 978-92-837-2153-6.



## 1.2 Findings derived from analysis of national capability planning processes

*The synthesis of outcomes of the research focused on national approaches points out the fact that there is indeed no national capability planning process which could be strictly considered as identical to NATO or EU planning processes.<sup>8</sup> In addition, due to complexity of national concerns and interests in the area of foreign and security policy, it is hardly conceivable to create a unified NATO or EU planning process, which might be implemented as a standard by all countries. Nevertheless, the principles, based on which the NDPP is constructed, influence the national approaches far more than the EU planning scheme. In spite of differences between NDPP and EU planning process, it is possible to trace up a need for harmonising and synchronising national planning processes with NATO/EU ones as well as for standardising elaboration of national inputs to NATO or EU planning process.<sup>9</sup>*

Another neuralgic point relates to national responses to the NATO's Defence Planning Capability Survey (DPCS). In fact, one part of the DPCS, titled EU Military Capability Questionnaire (EUMCQ), is meant for gathering contributions of EU member states to be subsequently put into Force Catalogue (FC). In this respect, the DPCS is perceived as a single gathering tool summarising national contributions for both NATO and EU, even if the NATO and EU capability requirements, are different and as such they are supposed to be operationally used in a different way. Thus, the crucial point stemming from this fact is for NATO nations and EU member states, to differentiate their national contributions with respect to NATO and EU capability requirements. A specificity of national approaches to capability planning is mostly due to national security and defence policies which shall not be necessarily harmonised with NATO or EU strategic objectives. After all, outcomes of the analysis<sup>10</sup> highlight the fact that there is not any country which has implemented planning procedures in the form of an integral process as applied by NATO or EU.

<sup>8</sup> NATO STO (ed.). *Key Performance Indicators in Measuring Military Outputs - Capability Planning. Chapter 2.* STO Technical Report, STO-TR-SAS-096. NATO Science and Technology Organization: Neuilly-sur-Seine, France: NATO, 2018. ISBN 978-92-837-2153-6.

<sup>9</sup> EEAS (ed.). *EUMC guidance for the further development of the EU Headline Goal Process into a new EU Military Capability Planning Process.* EEAS(2018) 939. Belgium: Brussels. 2018.

<sup>10</sup> PETRÁŠ, Zdeněk. *Analysis of approaches to capability planning used by NATO nations and EU member states within their national defence planning processes.* Economics and Management, 2016, no. 2/2016, p. 48. ISSN 1802-3975.

With respect to national capability planning processes, in general terms, countries are introducing approaches specifically tailored for their military force structures, envisaged operational engagements of their force units and capabilities which are assessed as indispensable for achieving expected level of ambition. *At the national level of planning, it is typical that identified capability requirements are affiliated in advance to relevant force units. Especially while assigning priorities in capability development, countries usually tend to pre-identified force units which are supposed to get relevant capabilities.*<sup>11</sup>

A common aspect, which accentuates a need for correlating national and NATO/EU approaches, is the mechanism when individual countries produce and submit their national contributions to NATO or to the EU. National contributions containing respective capabilities are effectively building materials based on which both NATO and the EU level of ambitions are constructed. As a general rule, national contributions should accordingly reflect capability taxonomy, which has been agreed to be commonly used by both NATO and EU. In October 2011 and subsequently in January 2020, NATO (namely Director General of International Military Staff) has distributed Bi-SC Agreed Capability Codes and Capability Statements<sup>12</sup>, which was developed with a view to provide the NATO and EU common language for area of defence planning and operations planning, and defines the capabilities requirements as used in DPCS/EUMCQ. This document was furthermore completed by another document, titled Bi-SC Capability Hierarchy<sup>13</sup>, whose aim is to introduce a single taxonomy and hierarchical structure of Main Capability Areas.

A reflection of NATO/EU capability requirements into national contributions is therefore a critical issue for an effective cooperation between both national and NATO/EU sides. This is also a reason for which NATO and EU planning structures are permanently seeking to harmonise and synchronise national planning processes with NATO/EU ones. Thus, regardless the diversity of national approaches to capability planning, the final conclusion is that national planners should ensure that national planning processes are able to:

- *generate contributions to NATO and the EU which strictly meet identified capability requirements;*
- *put the stated national contributions in a standard format by using agreed NATO/EU capability taxonomy and terminology with a view to provide smooth transfer of declared national capabilities into NATO or EU capability planning procedures.*<sup>14</sup>

<sup>11</sup> NATO STO (ed.). *Key Performance Indicators in Measuring Military Outputs - Capability Planning*. STO Technical Report, STO-TR-SAS-096. NATO Science and Technology Organization: Neuilly-sur-Seine, France: NATO, 2018. ISBN 978-92-837-2153-6.

<sup>12</sup> - SHAPE/ACT (ed.). *Bi-SC Agreed Capability Codes and Capability Statements*. CPPCAMFCR/JM/281143. Mons, Belgium, 2011. - SHAPE/ACT (ed.). *Bi-SC Agreed Capability Codes and Capability Statements*. SH/SDP/SDF/CFR/DPF/19 003782. Mons, Belgium, 2020.

<sup>13</sup> SHAPE/ACT (ed.). *Bi-SC Capability Hierarchy*. SH/PLANS/JCAP/FCP/15-310118. Mons, Belgium, 2015.

<sup>14</sup> PETRÁŠ, Zdeněk. *Analysis of approaches to capability planning used by NATO nations and EU member states within their national defence planning processes*. Economics and Management, 2016, no. 2/2016, p. 48. ISSN 1802-3975.

## 2 ANALYSIS OF NATO AND EU APPROACHES TO CAPABILITY PLANNING

The crucial task, which is assigned to both NATO and EU in the defence planning area, is basically identical - identification and development of capabilities needed for conducting the whole spectrum of operations as prescribed by respective level of ambitions. This can be considered as a matter of fact even if NATO and the EU were founded and built up under different historical circumstances and within different defence and security environments, which significantly influenced respectively NATO and EU level of ambition. Therefore, *the NATO and EU approaches to capability planning have three core differences as for the planning processes:*<sup>15</sup>

1. *NATO planning process is based on the strictly cyclic principle (4-year cycle inside which there is a 2-year reviewing process). Even if the EU applies, for the time being, a linear, sequential planning principle, there is an explicit intention to adapt the EU planning process to the NDPP principles. The aim of this initiative is to initiate the alignment with the relevant steps of NDPP in terms of synchronisation and harmonisation;*<sup>16</sup>
2. NATO planning process deals with both deployable and stationary military assets and capabilities e.g. military air bases, military training facilities or military fuel storage installations, while EU capability planning process is dealing with deployable military assets and force units only. The reason is that the EU primary objective is to conduct crisis management operations outside the European area;
3. *Relationship between NDPP and national planning processes is based on the Top Down approach*<sup>17</sup>, which means that NATO addresses capability deficiencies, identified as outcomes of respective steps of the NDPP and specified as capability targets, to NATO countries in order to achieve expected readiness for action and thereby fulfil minimum capability requirements needed for achieving expected military operation end-states. On the other hand, the EU is applying Bottom Up approach<sup>18</sup>. In this case, EU planning structures present identified and defined capability requirements. Nevertheless, delivering respective assets covering identified requirements is entirely under responsibility of EU member states. Relations between NATO and EU approaches to defence planning and capability development are schematically illustrated in the Figure 2.

<sup>15</sup>MAULNY, Jean-Pierre, Sylvie MATELLY, Fabio LIBERTI. *Analyse comparée des planifications capacitaires par pays de l'Union européenne et perspectives pour des orientations communes dans le cadre de la PESD et impact sur les programmations nationales*. Les Notes de l'IRIS Septembre 2005. Paris, France: IRIS, 2005. p. 209

<sup>16</sup>EEAS (ed.) *EUMC guidance for the further development of the EU Headline Goal Process into a new EU Military Capability Planning Process*. EEAS(2018) 939. Belgium: Brussels.2018.

<sup>17</sup> Item, p. 199

<sup>18</sup> Item, p. 209

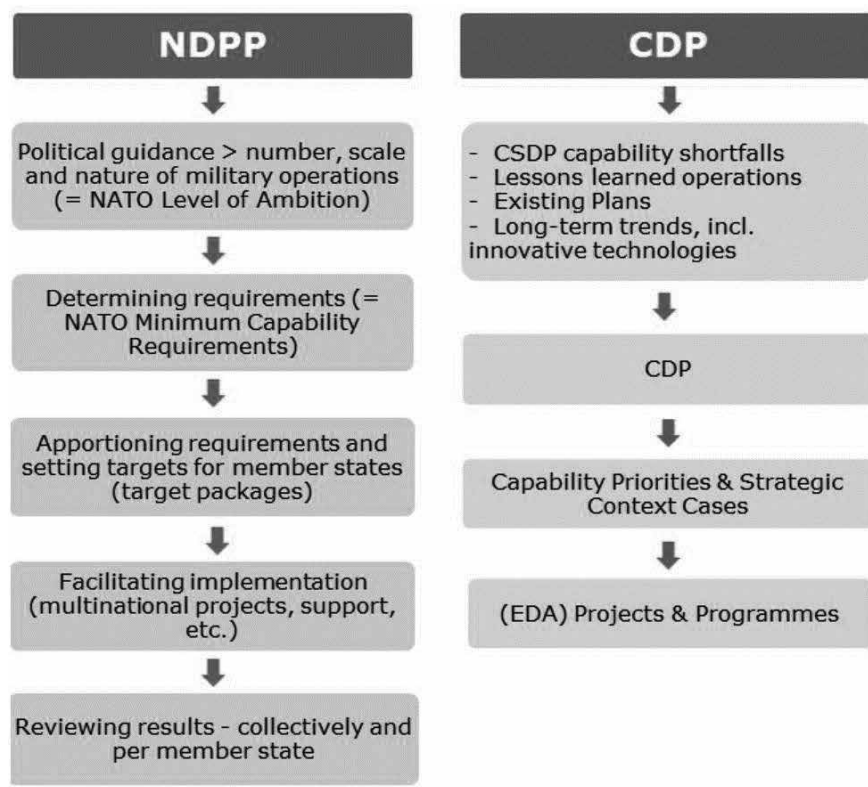


Figure 2: Relationship between NATO and EU planning mechanisms<sup>19</sup>

## 2.1 Specificity of NATO approach to capability planning

The aim of NATO Defence Planning Process is to provide a framework within which national and Alliance defence planning activities are harmonized and synchronised to meet agreed targets in the most effective way. The primary roles of the NDPP is to facilitate the identification, development and delivery of NATO's present as well as future capability requirements and to establish a common framework for the integration and rationalisation of capability development across all NATO structures. It is focused on the

<sup>19</sup> BRUSTLEIN Corentin (ed.). *Mutual Reinforcement: CSDP and NATO in the Face of Rising Challenges*. Focus stratégique, No. 93, IFRI: Paris, France. 2020. ISBN: 979-10-373-0082-9. p. 25.

short-term (up to 6 years), mid-term (6 – 19 years) and long-term planning (20 years and beyond).

*The NDPP assists the Allies in considering and realising their capability targets – the sum of which provides NATO with their assets and capabilities needed to carry out the NATO's Level of Ambition. The NATO Defence Planning Process consists of five steps as follows:<sup>20</sup>*

*Step 1 - Establish Political Guidance*

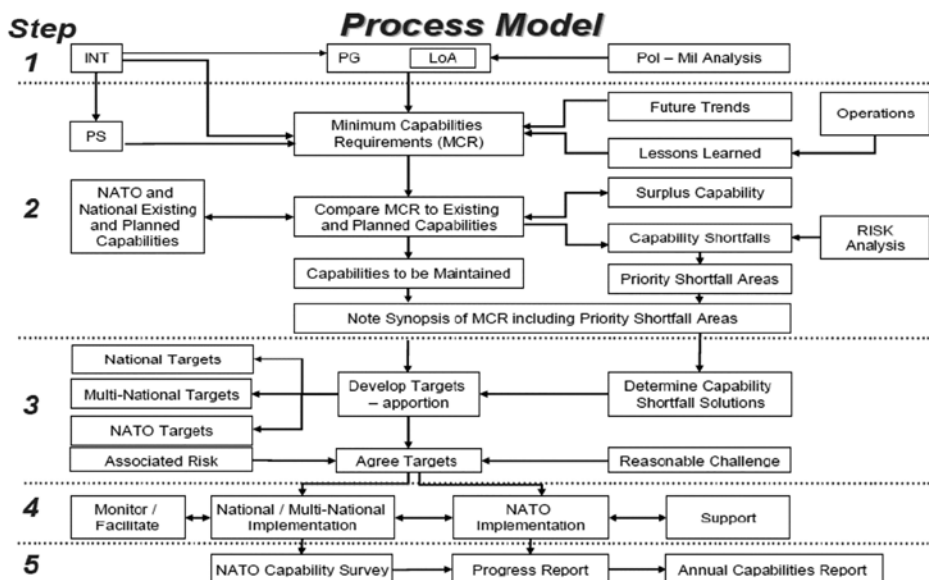
*Step 2 - Determine Requirements*

*Step 3 - Apportion Requirements and Set Targets*

*Step 4 - Facilitate Implementation*

*Step 5 - Review Results*

These steps are respectively conducted in the form of individual sequence operations. However, the process, as a whole, is of a cyclic character. Establish Political Guidance, Determine Requirements and Apportion Requirements and Set Targets (Steps 1, 2 and 3) are conducted in sequence every four years. While the Review Results (Step 5) is conducted every two years and efforts to facilitate implementation (Step 4) are continuous and, therefore, conducted in parallel with all the other steps (see Figure 3).



**Figure 3: The NATO Defence Planning Process<sup>21</sup>**

<sup>20</sup> NATO (ed.). *The NATO Defence Planning Process*. NATO Secretary General, PO(2016)0655 (INV). Brussels, Belgium, 2016. 1-7 p.

<sup>21</sup> NATO RTO (ed.). *Analytical Support to Defence Transformation - Analytic Implications of the NATO Defence Planning Process*. Meeting Proceedings RDP. RTO-MP-SAS-081. MP-SAS-081-09. CSO: Neuilly-sur-Seine, France. p. 9-12. ISBN 978-92-837-0116-3.

The last step in the cycle is the capability review, taking place every two years. NATO staff and planning bodies assess whether the Allies, all together, can provide contributions consisting of assets and capabilities, in quantitative and qualitative terms, in order to reach the minimum requirements as defined in step two of the NDPP cycle. The review process begins with the development of the Defence Planning Capability Survey (DPCS), which is NATO's primary information gathering tool for the NDPP. This seeks detailed information on national policies and plans (particularly in relation to the implementation of apportioned NATO capability targets), information on the national inventory of military forces and associated capabilities, any relevant non-military capabilities potentially available for NATO-led operations, and national financial plans. The DPCS addresses the information required by all of the entities within the NATO planning domains and other associated bodies and staffs.

Based on the individual assessments, the Defence Planning Capability Report highlights individual, multinational and collective progress on capability development in relation to the NATO Level of Ambition and other agreed objectives. The report also includes a summary of the associated risks and any potential mitigation measures.

In addition, the Defence Planning Capability Report should contain any further guidance deemed necessary to steer future capability development, including any proposed changes to NATO's defence planning priorities. The report is issued in June of even years, after being agreed by respective NATO authorities and endorsed by national defence ministers. The summary of existing and planned national capabilities, performance in implementing apportioned capability targets, operational commitments and progress in multinational efforts, is reported in the Defence Planning Capability Review for respective period. In a final step, results are reviewed in order to determine the degree to which NATO's political objectives, ambitions and associated targets have been met and to offer feedback and direction for the next cycle of the defence planning process.

## 2.2 EU approach to capability development

In accordance with the Lisbon Treaty and the EU Global Strategy<sup>22</sup> the EU is supposed to organise CSDP (Common Security and Defence Policy) operations where military element would act alongside with non-military elements, i.e. intergovernmental agencies such as police, justice, diplomacy, non-governmental organisations etc. Crisis management operations integrating respective instruments of all EU's policies naturally implicate a more complex approach to the planning of military capabilities which should be so appropriately correlated to relevant civilian capabilities needed for conducted such a type of operations. The specific character of CSDP operations is aggregating military and civilian elements. This aspect also requires a specific approach to identification of relevant capabilities and of course, a specific process of their development. With a view

<sup>22</sup> COUNCIL OF THE EU (ed.). *European Union Global Strategy: Shared Vision, Common Action: A Stronger Europe*. General Secretariat of the Council. Brussels, Belgium, 2016, 60 p.

to provide substantial national contributions to be beneficial for the EU, member states have to thoroughly interpret capability requirements which are defined as indispensable for accomplishing the EU level of ambition.

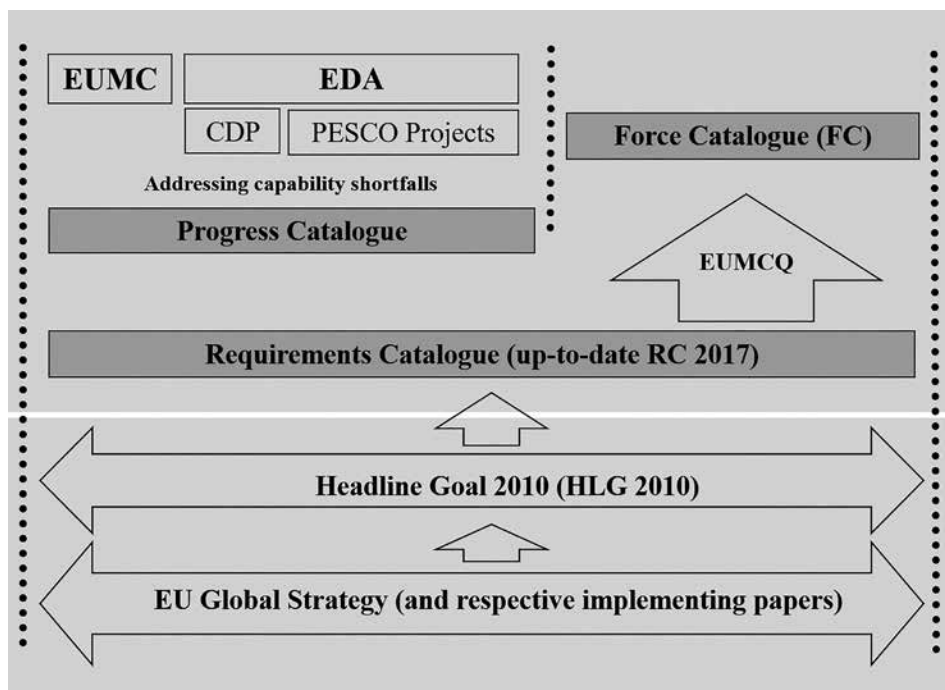
In fact, the capability planning in the EU<sup>23</sup> consists of the three main instruments: Headline Goal Process (HLG)<sup>24</sup>, the Capability Development Mechanism (CDM), that consists of developing three catalogues, i.e. Requirements Catalogue, Force Catalogue and Progress Catalogue, and the Capability Development Plan (CDP). A proper perception of EU capability requirements and subsequent reflection of these requirements in national contributions in terms of military capabilities is an essential step of the EU capability development process. The interaction between EU Global Strategy, HLG 2010, respective catalogues and CDP is shown in the Figure 4. *In this context, it should be said that the pivotal reference for capability development within the EU is the Capability Development Plan (CDP). The aim of the CDP, which was produced and implemented by the European Defence Agency (EDA) in 2008, is to provide a full capability picture that supports decision-making processes at EU and national level. It addresses security and defence challenges from the perspective of European capability development, looks at the future operational environment and defines EU capability development priorities agreed by Member States.*<sup>25</sup>

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<sup>23</sup> Defence planning and capability development process in the EU does not have a single, commonly agreed concept for calling this process.

<sup>24</sup> Headline Goal 2010 (HLG 2010) is the redefinition of the former Headline Goal 2003 approved by the Council of the EU on 4 May 2004 and validated by the European Council of 17 and 18 June 2004. This document sets out the objectives of being achieved by 2010 to respond with rapid and decisive action applying a fully coherent approach to the whole spectrum of crisis management operations covered by the Treaty on the EU. The text of this document is valid up to now.

<sup>25</sup> EUROPEAN DEFENCE AGENCY (ed.). *The EU capability Development Priorities – 2018 CDP Revision*. EDA Brussels, Belgium: EDA, 2018, 20 s.



**Figure 4:** EU capability planning and development architecture (source: author)

As for the CDP, the mechanism of this instrument is composed of four interconnected strands:

- Strand A identifies existing capability shortfalls;
- Strand B concentrates on future capability trends out to 2035;
- Strand C looks at the potential for European cooperative activities in the area of armaments programs, defence research and technology etc.;
- Strand D summarises and assesses the lessons learned from CSDP military missions and operations.

*The CDP process results in the articulation of priority areas so that EU member states will have a better common understanding of short-term capability requirements, what orientations for enhanced European defence capability cooperation exist over the medium-term and which longer-term defence capability needs should be planned for (up to 2035). The CDP provides an assessment of short-term, mid-term and long-term capability trend analysis, comprising the analysis of capability shortfalls in the context of EU CSDP, lessons learned from recent EU-led operations, planned capabilities and associated activities aimed at future European cooperation, and finally the long-term capability*



trends, considering innovative technologies and subsequent adaptation of military needs, following future capability requirements.<sup>26</sup>

Strand A consists of two main phases:

- Development of the three catalogues: Requirements Catalogue, Force Catalogue, Progress Catalogue from which the Requirements Catalogue represents a detailed set of required capabilities;
- Scrutinising, Assessing, Evaluating and Prioritising Process (SAEP Process).

The SAEP Process serves as the main reference and scrutiny mechanism for Strand A because it sets capability shortfalls against potential operational risks and vulnerabilities that may emerge during an operation. SAEP Process is basically carried out under the CDM and managed by EU Military Committee (EUMC) assisted by EU Military Staff (EUMS) and respective subject matter experts of EDA, or, if need be, other EEAS institutions. Moving from the CDM into the CDP is a critical moment for the credibility of EU defence capability prioritisation. The results of the SAEP Process are summarised in the Progress Catalogue. This catalogue constitutes a reference document providing a cascading effect of evidence-based analysis to support national planning of EU member states. As for interconnection between CDP and CDM, the SAEP process serves as the main reference for Strand A because it sets capability shortfalls against potential operational risks and vulnerabilities that may emerge during CDSP operations, and for Strand D, which takes stock of the capability-relevant lessons learned from CSDP operations. The most tangible output of the CDP is the set of EU capability development priorities. These priorities reflect existing capability shortfalls that should be the focal point of the processes and programmes running inside or outside the CDP, i.e. PESCO, Coordinated Annual Review on Defence (CARD), European Defence Fund (EDF) and the European Defence Industrial Development Programme (EDIDP).<sup>27</sup>

### 2.3 Convergence of NATO and EU capability planning terminology and taxonomy

Even though it exists a large scale of differences between EU and NATO defence planning procedures, one aspect appears as a positive signal for further convergence of NATO and EU processes. *For a long time, national defence planners have been facing a quite tricky issue – how to conceive national contributions with regard to different capability requirements in NATO and in the EU. Combination of different capability terminology and taxonomy used in NATO and the EU was the cause of many discrepancies. A fact of note is that until recently NATO used the structure of capability requirements*

<sup>26</sup> KEPE, Marta, James BLACK, Jack MELLING, Jess PLUMRIDGE. *Exploring Europe's capability requirements for 2035 and beyond - Insights from the 2018 update of the long-term strand of the Capability Development Plan*. RAND Europe, EDA Brussels, Belgium: EDA, 2018, 44 s

<sup>27</sup> SEDE (ed.). *EU Defence: The White Book implementation process. Study*. European Parliament's Subcommittee on Security and Defence (SEDE): Brussels, Belgium. 2018. 99 p. doi:10.2861/534879, ISBN: 978-92-846-4341-7.

*specified in Bi-SC Capability Code and Capability Statements, while the EU used capability requirements specifically structured in respective Requirements Catalogue. The capability requirements and their taxonomy in NATO and EU documents were diametrically different.*<sup>28</sup> A clear difference in capability requirements structure and terminology is obvious while searching Defence Planning Capability Survey 2010 which contains NATO Capability Codes and Capability Statements (in the Supplement 1) and EU Capability Codes (in the Supplement 2).<sup>29</sup>

A turning point came in October 2011 when a modified version of Bi-SC Agreed Capability Codes and Statements<sup>30</sup> was issued. This document should provide a consistency as for common NATO and EU terminology of capability requirements and their taxonomy, but it should be also supportive of national planners when conceiving their national contributions to NATO/EU Defence Planning Capability Survey (DPCS) and EU Military Capability Questionnaire (EUMCQ).

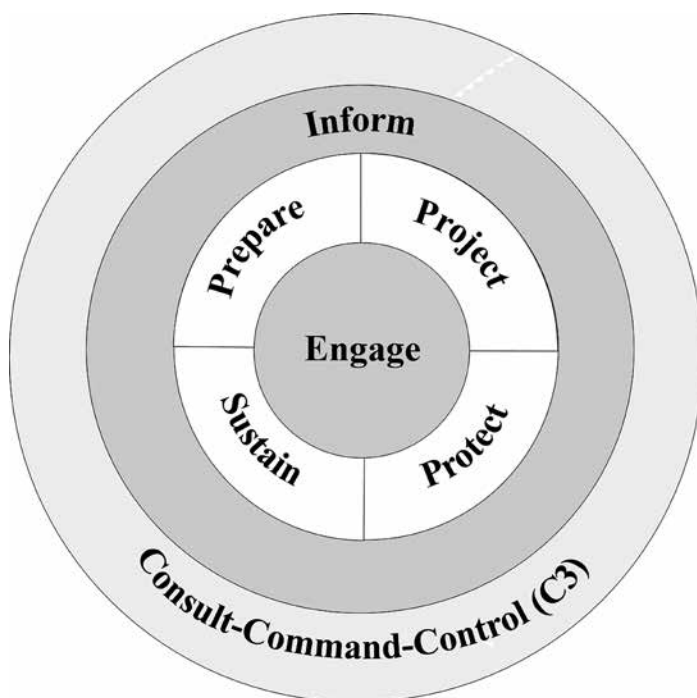
Another substantial step in harmonising and synchronising respective NATO and EU planning came in August 2015, when Bi-SC Capability Hierarchy<sup>31</sup> was issued, establishing the hierarchical structure of capabilities and providing description of relevant capability areas (Main Capability Areas - MCA). As illustrated in the Figure 5, the hierarchical structure of Main Capability Areas accentuates on C3 (Consult, Command, Control) together with Inform. These two Main Capability Areas are creating the frame for others, i.e. Prepare, Project, Protect and Sustain. However, Engage represents the centre of gravity for all related activities.

<sup>28</sup> NATO STO (ed.). *Key Performance Indicators in Measuring Military Outputs - Capability Planning*. STO Technical Report, STO-TR-SAS-096. NATO Science and Technology Organization: Neuilly-sur-Seine, France: NATO, 2018. p. 3-24. ISBN 978-92-837-2153-6.

<sup>29</sup> NATO (ed.). *Defence Planning Capability Survey 2010*. AC/281-N(2010)0014-FINAL (EWG(R)). Brussels, Belgium, 2010.

<sup>30</sup> SHAPE/ACT (ed.). *Bi-SC Agreed Capability Codes and Capability Statements*. SHAPE/CPPCAMFCR/JM/281143. Mons, Belgium, 2011.

<sup>31</sup> SHAPE/ACT (ed.). *Bi-SC Capability Hierarchy*. SH/PLANS/JCAP/FCP/15-310118. Mons, Belgium, 2015.



**Figure 5:** Capability Hierarchy Main Capability Areas<sup>32</sup>

The key contribution stemming from both documents to harmonising and synchronising NATO and EU capability planning processes could be summarised as follows:

- Establishing the single list of capability requirements unifying and integrating the area of defence planning and operations planning to be used by commonly by NATO, EU and national planners;
- Structuring of capability requirements in respective groups (Capstone, Principal and Enabling Capability Statements) defining key characteristics and effects that should be achieved;
- Establishing the hierarchy of main capability areas based on existing and accepted capability frameworks as used through NATO, EU and other countries.

<sup>32</sup>ITEM, p. 6.

## 2.4 NATO and EU planning approaches – Summary of outcomes

The overall outcomes of analysis comparing NATO and EU approaches to capability planning confirm two essential issues which are in close interaction:

1. Impossibility to implement a single defence planning paradigm identical for both NATO and the EU due to specificities concerning the level of ambition as stated for NATO and the EU;
2. Countries constituting membership of both NATO and the EU cannot efficiently differentiate their contributions to both organisations due to technical and administrative specificities of the two different planning processes.<sup>33</sup> In fact, both NATO and EU planning processes are primarily focused on completing assets and capabilities required for achieving their level of ambition, which cannot be necessarily in line with strategic objectives stemming from national security and defence policies;

However, national contributions in terms of force units and assets are to be seen as a crucial input to NATO or EU defence planning processes. It is of note that there would be beneficial if national processes implement NATO/EU capability terminology and taxonomy. This step apparently does not require a coincident implementation of planning processes as used in NATO or in EU into a national environment. The implementation of the common NATO and EU capability terminology and taxonomy in national processes would undoubtedly avoid duplication of effort when providing appropriate inputs to NATO/EU defence planning processes.

## 3 SYNTHESIS OF OUTCOMES OF ANALYSES EXPLORING NATO, EU AND NATIONAL APPROACHES

A key factor that has driven the alignment of approaches to capability planning is the number of countries which are members of both NATO and the EU. The number of 21 countries is undoubtedly of a paramount importance in conducting these efforts. For some of these 21 countries it is symptomatic the application of so-called single set of forces principle as a basis for conceiving their national contributions for NATO or EU bidding process. Basically, the single set of forces principle stems from the fact that respective countries have only one set of armed forces which cannot be split in two and separately developed to achieve different NATO and EU level of ambition objectives. So, this is the reason why some of countries typically submit an identical set of assets and capabilities as a national input to both NATO and EU defence planning regardless of the stated capability requirements.

<sup>33</sup> DE LANGLOIS, Maurice. *OTAN et PSDC: vers un rapprochement des processus capacitaires*. Note de recherche stratégique n°20 – juin 2015 Paris, France: IRSEM, 2015, p. 1 2. ISSN 2430-598. Available at: <http://www.defense.gouv.fr/actualites/operations/notes-de-recherche-strategique>

Of course, this practice might evoke questions to what extent countries tailor their proposed contribution to the requirement. But as findings from analysis confirm, countries tend to use NATO defence planning principles while preparing and developing their contributions. National contributions in the terms of military forces and assets stemming from bidding processes are key inputs for NATO and EU defence planning processes. That is why both NATO and the EU planning structures seek to develop and implement an appropriate mechanism that avoids duplication of effort:

- Enabling countries to design their national contributions in the context of NATO and EU capability requirements;
- Enabling to scrutinize and assess national forces and assets submitted to NATO or the EU through respective bidding process.

The comparative analyses lead to identification of the following key activities:

1. Collating of NATO and EU requirements on capabilities into the single list of capability codes and capability requirements and their structuring in main capability areas;
2. Aggregation of capability requirements to respective force units, services, components or other relevant groupings in accordance with force structure (air, land, maritime, enabling);
3. Classification of capability requirements in accordance with priorities (Capstone, Principal, Enabling Capability Statements);

In order to provide an effective interaction between national planning processes and the NATO/EU planning process, national planning process should ideally use the same taxonomies as given in NATO/EU planning documentation. With respect to this aspect, if a national contribution, being the subject of a NATO or EU bidding process, has ambition to be a significant contribution to NATO/EU, then assigned national assets and capabilities should provide facts and information on quantitative and qualitative parameters in line with NATO/EU requirements. This prerequisite can be covered by implementation of principles based on which NATO and EU planning tools are working. A significant degree of fragmentation in national defence planning approaches is apparently the result of different national concerns in security and defence policies. Consequently, it is unlikely it will ever be possible to align many national planning processes with those of NATO or the EU. However, national contributions in terms of force units and assets are the key input to NATO or EU defence planning processes.

## DISCUSSION AND CONCLUSION

For national planning processes, it would be definitely beneficial to implement and use common NATO/EU capability terminology and taxonomy, of course, provided this terminology and taxonomy also meet national requirements. This benefit could be achieved without the requirement to implement the identical planning processes as used in NATO or in EU into a national environment. The implementation of the common NATO and EU capability terminology and taxonomy in national processes would avoid duplication of effort when providing appropriate inputs to NATO/EU defence planning

processes. The key elements of the NATO and EU processes that would benefit from this would be applications/functions which include matching of capability requirements against available force units and assets. With regard to results of the analysis of national approaches to capability planning, it is not conceivable that an integral package of all applications/functions would be implemented into national environment in line with NATO or EU defence planning processes. However, some of relevant applications/functions, appropriately tailored and modified on specific national conditions, could be a basis for measuring progress and effectiveness of capability planning.

#### LIST OF ABBREVIATIONS

CARD	Coordinated Annual Review on Defence
CDM	Capability Development Mechanism
CDP	Capability Development Plan
CSDP	Common Security and Defence Policy
C3	Consult, Command, Control
DPCS	Defence Planning Capability Survey
EDA	European Defence Agency
EDF	European Defence Fund
EDIDP	European Defence Industrial Development Programme
EU	European Union
EUMC	EU Military Committee
EUMCQ	EU Military Capability Questionnaire
EUMS	EU Military Staff
HLG	Headline Goal
MCA	Main Capability Areas
NATO	North Atlantic Treaty Organization
NATO STO	NATO Science and Technology Organization
NDPP	NATO Defence Planning Process
PESCO	Permanent Structured Cooperation
SEAP	Scrutinising, Assessing, Evaluating and Prioritising

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## **NATO's Strategic Interest in Africa - a Possible Multi-Criteria Analysis**

### **Strategický zájem NATO v Africe – možná vícekriteriální analýza**

**Craisor-Constantin Ionita**

**Abstract:** The paper demonstrates that the Multi-Criteria Analysis (MCA) is one very useful analytical tool and method to help Allied political decision makers and military strategists to rethink the Alliance's new role and mission in Africa, as the Southern neighbour of NATO and the EU having great possibilities to influence, either positively or negatively, the European and Euro-Atlantic security. Thus, the paper's scope is to use MCA in order to highlight the importance of Africa for NATO's Geopolitics and what Member States should undertake in order to join the competitive North African and Sahel region's arms and presence race against the increased Russian and Chinese economic and military interests.

**Abstrakt:** Příspěvek představuje multikriteriální analýzu (MCA) jako jeden z velmi užitečných analytických nástrojů a metod, jež pomáhají spojeneckým politickým činitelům a vojenským stratégům přehodnotit novou roli a poslání Aliance v Africe jako jižním sousedovi NATO a EU, který má velké možnosti pozitivně či negativně ovlivnit evropskou a euroatlantickou bezpečnost. Cílem příspěvku je tedy pomocí MCA zdůraznit význam Afriky pro geopolitiku NATO a to, co by měly členské státy podniknout, aby se zapojily do konkurenčního závodu ve zbrojení a přítomnosti v severoafričském a sahelském regionu proti rostoucím ruským a čínským ekonomickým a vojenským zájmům.

**Key words:** North Africa; Sahel region; Multi-Criteria Analysis; NATO Strategic Interest; Geopolitics.

**Klíčová slova:** Severní Afrika; oblast Sahelu; vícekriteriální analýza; strategický zájem NATO; geopolitika.



## INTRODUCTION

The increasing importance of Africa started to be considered and monitored by NATO political and military experts in the last decade because of three reasons. The first one is represented by the increased political and economic interest, followed by a raised military presence in the area of regional powers, like China, Russia and Iran, materialised through numerous indirect and direct activities to influence and/or control some African dictators and corrupted political elites. This increased interest and presence started with the discovery of huge gas and oil reserves in some African states, easy to access, which exacerbated the race for resources in the area. Including African countries, like Libya, Nigeria, Sudan, Angola, Algeria, Egypt, Congo-Brazzaville, Central African Republic (CAR), Equatorial Guinea, Tunisia, Cote-d'Ivoire, Cameroon, Congo-Kinshasa, Mauritania, Morocco, South Africa, Ghana, Benin, and Ethiopia, into the international list of the biggest petroleum and natural gas reservoirs from the world just exacerbated the regional fight for illegal resource trafficking, together with gaining control of continental diamonds, copper and nickel mines, and enlarged the corruption and dictatorship in those countries with huge resources.

The second reason is represented by the increased presence of some international terrorist organisations in Africa and their intense extremist activities undertaken in North Africa and the Sahel region. Despite the appearance and spread of the coronavirus pandemic in Africa, Al-Qaida and Islamic State of Iraq and Syria (ISIS) have found real "safe havens" in the respective regions, where they could use local corrupted politicians and population in support for financial and human recruiting as well as joining local paramilitary forces, militias and criminal organisations to control other illegal activities, like arms, drugs and human trafficking or taxing tourists, and illicit businesses of fishing, rare animals trade or deforestation.

Lastly and not of a lesser importance, there is the reason of the climate change that is taking place all around the world, with devastating effects everywhere. In Africa, the effects of global warming are most deeply felt on food insecurity, poverty and population relocation. The climate change is also taking shape by changing the type of rainfall, rising temperatures and occurring extreme events. Over the past years, these effects have exacerbated the socio-economic situation and the health crisis brought on by the Covid-19 pandemic across the African continent. There is strong evidence about the desertification in the Horn of Africa and the island of Madagascar, as a result of continuous warming, an increase in the water level of the surrounding oceans, due to the melting of the world's glaciers, but also the melting of its own mountain glaciers, as well as the emergence of extreme weather events, such as earthquakes and volcanic eruptions on the island of La Palma.

For a long period of time, Africa was considered an area with less geostrategic importance because of the global powers' competition for Eurasia, the two Americas and Oceania. It had little strategic resources, particularly difficult conditions in desert areas and tropical forests, as well as a strong insecure style of life of its inhabitants. Even so, for a long period of time, NATO let some of its European Allies to take care of the security situation in Africa and fulfil their national interests in the region. Former colonialist

powers, like France, Italy or Germany, continued to be interested in what happened with the European Southern neighbour, interfering directly to control and monitor the security situation in different areas of the continent.

The appearance of the Chinese and Russians on the African market has exacerbated the competition, which only few Allies have been involved in so far, turning it into a real race for economic control of the region, even reaching proxy crises and overwhelming the national capacity of those NATO Member States to compete. The only global superpower, the United States, does not seem to attach much importance to the African continent, having several strategic interests in Southeast Asia, the Middle East, Europe, Latin and South America. This is why, nowadays, Africa has started to gain more geostrategic importance.

As a result, this paper aims to analyse what the main strategic interest of NATO towards Africa should be, using the Multi-Criteria Analysis (MCA) method. At the end, we wish to demonstrate, using a scientific approach, if NATO might reconsider its Geopolitics for the region and what NATO decision-makers could undertake to join the competitive African economic and militarisation race in order to contain its military part.

## 1 METHODOLOGY

The presented paper has two objectives: to identify those reasons which makes Africa an evolving actor in the proximity of NATO Area of Responsibility and to provide to the Alliance's political-military decision makers some demonstrated thoughts for developing a robust strategy for Africa with some further ways for implementing it.

In terms of research methods, the first part presents a multi-criteria analytical tool that might be used by political and military analysts to standardise the main elements of a Geopolitical evaluation/assessment of international/regional security and defence organisations' strategic interests, as well as their member states' ones, regarding some specific world regions, like Africa. This is followed by a descriptive research using content analysis and empirical observation to present the evolving importance of Africa and the fierce international race to control and influence its future. In the later part, a demonstration was conducted, using the MCA method, to present some existing solution to increase NATO's ambition and strategic interest regarding Africa, as well as its possible future involvement in the South. Therefore, using an existing analytical tool and the available data and information regarding the current security situation in Africa, it was possible to elaborate an optimal solution, amongst other potential ones, to be taken into consideration by NATO's decision makers to develop its further strategic interest and implication in that region.

The limitations of the paper are mainly related to scientific resources in terms of the rapid changes of the security environment in Africa, determining the bibliographical sources to be mostly mass-media open sources, as the specialty literature is slowly upgraded in time, but also in terms of the language gap provided that parts of texts already translated by other authors from Arabic, Russian or Chinese are used for the content analysis. Another limitation is related to research itself as the paper is not meant to

present all dimensions of the described African security situation (i.e., each area's evolution in the near future, or each main actor's implication for different parts of Africa), but just to show that there is a trend of regional powers' strong implication in the region, where NATO should reconsider its strategic interest and desire to act in order to better protect its southern flank in the future.

## 2 THE USE OF THE MULTI-CRITERIA ANALYSIS TOOL

The Multi-Criteria Analysis (MCA) is usually performed through a structured approach, based on the objectives specified by a group of analysts and experts who pursue such an activity. The analysis continues with the identification of attributes or indicators corresponding to each objective and ends with determining general preferences between several alternative options. The analysis also includes a procedural approach that establishes the logical steps to be followed, in order to reach an expected final result, through scientific methods. The staging of the Multi-Criteria analytical process pays attention to a number of steps to follow, such as: establishing the context/issue, identifying options, defining criteria and establishing the optimal version by prioritising/weighting the criteria. In the methods used in this article, the calculations and the achievement of a final result are not considered.

MCA has been and is more often used in the Project Management, especially in domains such as economic, financial and civil infrastructure. In the military domain, MCA has been introduced, starting with 2010, in the training manuals of the American Corps of Engineers, as the "Multi-Criteria Decision-Making Analysis (MCDA)". Thus, in the defence, MCD was used to manage the main resources within the military installations, to choose/select the necessary military equipment to fulfil the mission, to technologically support the distribution process of graduation posts for military education institutions, to take some special measures in contaminated areas and, more recently, in the development of the "Multi-Criteria Information Analysis (MCIA)" methodology.<sup>1</sup> Being considered the most adequate and modern type of MCA, we will make use of the latest approach to Multi-Criteria Analysis, in the field of military intelligence, in order to standardise the main elements of a Geopolitical analysis for determining the possible NATO's Strategic Interests in Africa.

The standardised process of Multi-Criteria Geopolitical Analysis includes five distinct stages, in which the analytical elements taken into account are established, the method

<sup>1</sup> The Multi-Criteria Information Analysis (MCIA) is a methodology developed in 2017, which adapts the Multi-Criteria Decision-Making Analysis (MCDA) to the context of Information Analysis, adding methods and techniques provided by the Artificial Intelligence (AI) and the theory of unorthodox methods of Decisional Analysis ("Fuzzy Sets Theory") of the Dutch professor Hans-Jürgen Zimmerman. See: FRINI, Anissa. A Multi-Criteria Intelligence Aid Methodology Using MCDA, Artificial Intelligence, and Fuzzy Sets Theory, *Hindawi*, 15 May 2017. <http://downloads.hindawi.com/journals/mpe/2017/9281321.pdf>, [26.02.2022].

of calculating the criteria and their weighting are specified and the Performance Matrix is filled up, as follows:

- **Step 1. Determining the Geopolitical issue**, which must answer the question “Is NATO interested in one of the most sensitive regions of the globe? If so, what would be the main Geostrategic and Geo-economics elements of its interest and to what level/degree compared to other national/organisational interests?” To answer this question, the analysts, together with several of the personnel involved, must clearly understand the source of the main problem, as well as the influences it might encounter at the Geopolitical level, internally, but also from the outside factors/actors - it is not advisable to consider and analyse other secondary Geopolitical issues, which would be a waste of time and lead one away from the process.
- **Step 2. Defining the objectives associated with the successful solution to the problem**, as well as the criteria (C) that can be used to evaluate the success or failure of their achievements. These objectives must be well defined and linked to the main Geopolitical issue, and the criteria set will have correct and up-to-date indicators that can measure the degree of efficiency in achieving these objectives. Surely, the first objective would be of political nature and could represent the need to take over/maintain influence in the respective region. This goal would indeed be of Geopolitical interest that would lead to the involvement of the Alliance in the policy of that region. The second objective would be of economic nature and could be the realisation of a number of economic projects in the region of interest, which would increase the physical presence of regional organisations and Member States in the respective regions, but would also exacerbate unfair competition with other actors. The final objective could be to strengthen the common/national security by reducing the risks and threats that come from those regions, such as terrorism, illegal migration or illicit trafficking of drugs, people and weapons. As criteria for quantitative and qualitative measurement of these objectives, we can list:
  - protect the safety of its own citizens in the region;
  - reduce local corruption;
  - reduce/prevent local crises and conflicts;
  - improve the safety of interregional transport;
  - increase jobs in the region;
  - reduce illegal migration to the area of responsibility of regional organizations;
  - reduce terrorist acts and link extremist groups with local organized crime groups;
  - contribute to efficient local economy;
  - support the growth of the sustainable economy at the national/Member State level;
  - facilitate accessibility to technological developments at the economic level by the states in the region;
  - promote the access of the states in the region to the usual facilities and services that can be provided by regional organizations and the great powers;
  - attract the support of the local population to the political/economic/security actions undertaken in the region;
  - monitor the impact on the local population.

$$C = \{C_1, C_2..., C_n\}$$

- **Step 3. Establish and describe the options/alternatives (A)** that could be followed to achieve the objectives associated with successfully solving the problem. If competitive targets have been set, then some options/alternatives will have a margin of effectiveness within these objectives. Thus, we can set the following options:
  - economic and financial support;
  - economic efficiency;
  - economic growth;
  - enhanced security;
  - security through cooperation;
  - safety of citizens and critical infrastructure;
  - resilience;
  - political-diplomatic involvement;
  - protection of transport routes;
  - control for influence.

$$A = \{A_1, A_2..., A_m\}$$

Each regional organisation with great analysed power will have 1-2 objectives associated with solving the Geopolitical problem, with 2-3 evaluation criteria (C) and 3-4 options (A) to follow.

- **Step 4. Collection of data and information** necessary to establish and measure indicators (R) of success or failure of the criteria and achievement of objectives. The indicators represent “quantitative (numerical) measures of the contribution of a certain alternative to the satisfaction of a certain decision criterion.”<sup>2</sup> Thus, it will be necessary to be able to measure the criteria referred to in step 3, by establishing the following indicators, such as:
  - without impact (p1) = 0-10%;
  - with minimal impact, which can be positive (p2 +) = 10-20% or (p2-) negative = -10-0%;
  - with limited impact (p3) = 20-30%;
  - with moderate impact (p4) = 30-50%;
  - with significant impact (p5) = over 50%.

<sup>2</sup> Babeş-Bolyai University. Cursul de Teorie a Deciziilor C5/29.10.2019. UBB Cluj-Napoca, p. 11. [http://www.cs.ubbcluj.ro/~per/Dss/Dss\\_5.pdf](http://www.cs.ubbcluj.ro/~per/Dss/Dss_5.pdf), [12.12.2021].

$$R = \{r_{ij}, 1 \leq i \leq m; 1 \leq j \leq n\}$$

where “the  $r_{ij}$  element represents the consequence for the criterion  $C_j$  resulting from the choice of the alternative  $A_i$  ( $r_{ij}$  can be numbers, but they can also be expressed by binary values (yes/no) or through qualitative terms (color, taste, etc.)”

Obtaining appropriate weights ( $P$ ) for the established criteria is thus based on their relative importance in meeting the objectives. The weights of the indicators are “associated with the criteria and establish their importance.”<sup>3</sup> This step explains the likelihood that different criteria will affect the success or failure of a different decision or, in other words, will have more or less influence over the goal ( $S$ ). The exact way of calculating the percentages for each criterion will be established by experts and other participants in the analytical process, based on their experience and the national and international context of that period.

$$P = \{p_1, p_2, \dots, p_n\}$$

where “each criterion  $C_j$  ( $1 \leq j \leq n$ ) is associated with the weight  $p_j$  (established by the decision maker in a subjective manner or by a special technique)”

- **Step 5. Achieving the Performance Matrix** of solving the Geopolitical problem, in which each data entered will correspond to the performance provided for an option in front of the criteria established for an objective. It is expected that, at this stage, the measurement method will be established to quantify or qualify options in order to achieve the set objectives (see the table below). For the standardised process of Multi-Criteria Geopolitical Analysis proposed, we will use the method of “direct analysis of the performance of options,” in which only a limited amount of information on the relative qualities of options can be obtained by directly examining the performance of alternatives. The dominant position of certain criteria over others is also verified, when the performance of one option is at least as good as that of another for all criteria and is strictly better than that of another for at least one criterion.<sup>4</sup>

<sup>3</sup> Ibidem, p.13.

<sup>4</sup> Romanian Government. Manualul de analiză multi-criterială Contract no 46/08.12.2010 - Dezvoltarea capacității pentru analiza cost-beneficiu. Co-financed project from the European Regional Development Fund through the Technical Assistance Operational Programme 2007-2013, January 2012, Bucharest, p. 7.

**Table 1:** The Performance Matrix Model

<i>The Performance Matrix</i>				
<i>Decisional Alternatives (Options)</i>	<i>Decision Criteria</i>			
	<i>p1</i>	<i>p2</i>	<i>...</i>	<i>pn</i>
	<i>C1</i>	<i>C2</i>	<i>...</i>	<i>Cn</i>
<i>A1</i>	<i>r11</i>	<i>r12</i>	<i>...</i>	<i>r1n</i>
<i>A2</i>	<i>r21</i>	<i>r22</i>	<i>...</i>	<i>r2n</i>
<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>	<i>...</i>
<i>Am</i>	<i>rm1</i>	<i>rm2</i>	<i>...</i>	<i>rmn</i>

The proposed standardised methodology for the MCA of the Geopolitical problem will end here, even if the Multi-Criteria Decision-Making Process has a few more steps to follow. But the purpose of the article is to use MCA to assess how NATO could materialise its interests in sensitive regions worldwide, and not to analyse decisions made at the political level. In order to do this type of multi-criteria analysis, NATO decision-makers and military leaders should identify what is the real Geopolitical issue when dealing with Africa and then establish a group of experts and specialised planners to evaluate the region, define the objectives at the Strategic level, as well as the possible options to achieve them. The final attribute of this group is to collect all necessary data and information in order to fill up the Performance Matrix, using the method of “Direct analysis of options’ performances”, in which only a limited quantity of information on relative qualities of options can be obtain by directly examining their performance.

### 3 EVALUATION OF THE AFRICAN REGION AND NATO’S STRATEGIC INTEREST

#### 3.1 Africa - geoclimate characteristics and economical importance

Africa is a poor continent, well-known for its lack of water and strategic resources, as well as an improper climate for work and productivity.

It was condemned to poverty as a result of the plunder in the era of colonialism and the continued foreign exploitation of its natural resources, even long after decolonisation. Despite all the benefits of colonialism, through missionaries and technology, more than half a century after independence, most African states face major obstacles to progress and poverty becomes even more extreme. The causes of this destabilising situation are multiple, both internal and external. Most are of internal origin, representing crisis and conflicts difficult to manage and resolve, still maintaining the organisation on ethnic, tribal or religious aspects, the existence of political guerrillas, corruption and, more recently, the scourge of terrorism. The causes of external origin are characterised by the lack of regional solidarity, imperfection of collaborative tools and mechanisms, realisation of unbalanced trade exchanges, impossibility of taking control of the raw materials and existence of illegal trade.<sup>5</sup>

Thus, Libya, the African country with the largest oil reserves, encountered a civil war that seems unsolvable because of proliferation through proxy states. African states with significant natural resources, such as the Central African Republic, Congo-Brazzaville, Equatorial Guinea, Gabon, or Mali are unable to use them for their own economic development because of internal turmoil and military coups. Nigeria, Africa's largest oil producer, fails to reap the benefits of this wealth, in a chronic crisis, not only economic, but also social.

American political scientist Michael L. Ross, professor at the University of California, Los Angeles (UCLA), studying how to exploit and manage resources in underdeveloped states, has said that there are at least three adverse consequences for the economic situation of these countries: the emergence of rent, as means of maintaining totalitarian regimes; wealth favouring corruption and clientelism; in the end, they become a factor in military coups and civil wars.<sup>6</sup> Other experts on the African economy argue that if underdeveloped countries pursue a policy of economic growth, wealth rents increase their vulnerability through the game of prices. This is also financially true where, if measures were taken to assess national currencies, the effect would have a negative effect on exports, encourage imports and prevent the diversification of the economy into agriculture and industry. The income from Africa's natural resources (oil, diamonds, copper, nickel, etc.) maintains the model of the "neo-patrimonial" African post-colonial state and favours the appetite of ruling classes to confuse national wealth with their particular interests. This facilitates the transformation of power into a source of unequal accumulation of unequally divided wealth between privileged political or tribal clans, and poverty, migration, terrorism. This is where African crisis and conflicts have their economic roots.

Nick Dearden, the director of the British Global Justice Now, says that "Africa is rich, but its riches are being stolen."<sup>7</sup> To illustrate this point, he cites the findings of a report by several regional economic organisations interested in Africa, which presents both the

<sup>5</sup> APOSTOIU, George. În Africa bogățiile nu sunt o binecuvântare. In *Ziarul Cultura*, 13 April 2015. <https://revistacultura.ro/nou/2015/04/in-africa-bogatiile-nu-sunt-o-binecuvantare/>, [13.02.2022].

<sup>6</sup> SPRÎNCEANĂ, Vitalie. Africa nu este săracă...doar că bogățiile îi sunt furate. In *Platforma Z*, 5 June 2017. <http://www.platzforma.md/arhive/36618>, [03.02.2022].

<sup>7</sup> Ibidem.



situation of foreign investment in Africa (about \$ 162 billion each year in the form of loans, remittances from those who work outside Africa and send money home, and aid), as well as huge sums that leave the continent every year (about \$ 203 billion, from which \$ 68 billion come directly through tax evasion, \$ 30 billion is “repatriated” by multinational corporations as profits from the area. \$ 29 million is annually stolen as a result of illegal deforestation, fishing and illicit trade in wildlife, and \$ 36 billion represents the additional cost paid by Africa for the climate change's damages caused to its societies and economies). The resulting difference of about \$ 41 billion is the net credit that Africa owes to the rest of the world.<sup>8</sup>

If the above mentioned data shows that the so-called “illegal financial flows” amount to about 6.1% of Africa's Gross Domestic Product (GDP) - three times more than the international community aid sent to Africa -, there is another negative aspect of the financial situation on the continent. This negative aspect is represented by the possibility to transform more than \$ 50 billion external loans to governments and private sector (often taken by speculation and as a result of strategic interests), into huge debts, difficult to pay.<sup>9</sup> As for corruption, the same report states that there are now about 165,000 Africans with a combined wealth of \$ 860 billion, and of that huge amount, over \$ 500 billion is hidden in safe havens. Thus, Africa's corrupt economic system allows a small minority of Africans to become rich, while the wealth of the peoples of the region is effectively stolen and leaves the continent.

The existence of some natural resources, so generous, does not yet provide a real basis for the development of African states, but has become, rather, a curse. As the English economist Richard Anty stated in 1993, the abundance of natural resources, instead of providing profit to a country, slows down its economic growth and development.<sup>10</sup> This thesis has an explanation related to political springs, rather than economic mechanisms, and is the drama of states that do not have the capacity to manage their wealth in the national interest.

Consequently, the drama of the inconsistent policy of African states is exploited by the geopolitics for control and influence of regional powers, such as China or some European states that still had colonial interests on the African continent. At the same time, regional organisations (such as NATO and the EU) try to protect European security at the exposed borders of their areas of responsibility and to support African security organisations to deal with disastrous crises and humanitarian situations in the various African areas of conflict.

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<sup>8</sup> Ibidem.

<sup>9</sup> Ibidem.

<sup>10</sup> APOSTOIU, George, *Art. Cit.*

### 3.2 Security threats and challenges in Africa

Both the Coronavirus pandemic and global warming have affected not only the economic and social situation of African countries, but influenced actions of parties involved in various military conflicts or African terrorist acts, as well as some activities and presence of the international community in the region. The two factors have made it even more difficult to control the situation in the area.

The last few years characterized North Africa and the Sahel region with the emergence of new virulent conflicts and the continuation of the existing ones, some with the tendency to diminish the actions of the belligerents and increase the involvement of the international community, but most with the tendency to amplify the expected magnitude and disasters. Over time, these phenomena have been amplified by the effects of the continuing Coronavirus pandemic and global warming, increasing the disastrous humanitarian situation in the area and even leading to famine, a particularly dangerous phenomenon for the human race.

Thus, in the context of the continued spread of the SARS-CoV-2 virus in Africa, the military actions of the parties involved in the Libyan Civil War, as well as those of the supporting regional powers, have substantially diminished the effectiveness of security organisations measures in achieving partial stabilisation of the situation in the region. However, the unrest among neighbouring African and European countries has not diminished.

The situation in the area has been exacerbated by the continuation of violent actions in the Tigray region and the establishment of a state of emergency throughout Ethiopia, in the wake of the escalating conflict in the region, which has been going on for a year. The involvement of neighbouring Eritrea in the conflict has not calmed the situation, rather, it has amplified the actions of the Tigray ethnic group not only against regular forces but also against other neighbouring tribes.

After the end of 2020 began with the beneficial effect of the spread of Coronavirus in North Africa and the Sahel region, by signing a peace agreement between the Sudanese authorities and the rebel alliance in early October in Juba, a year later (late October 2021), Sudan woke up with a coup in the capital Khartoum, where General Abdel-Fattah Burhan dissolved the government led by Abdalla Hamdok and imposed a state of emergency. Thus, instead of ending a long period of civil war and leaving open the gates of a future economic recovery of the country, the military coup stopped any attempt to democratize the country and endangered the financial situation and security of the Persian Gulf states.

The conflict situation in Mali and the Central African Republic (CAR) continues to worsen, despite efforts by the international community, especially the UN and the African Union, to ease it and bring the two countries back to normalcy. But in Mali, Colonel Asimi Goita, who led the August 2020 coup, is in no hurry to restore the country's civilian, democratic leadership, and in the CAR, the government forces do not want to give up the services of the Russian Wagner Group and they even indulged in atrocities against the peacekeeping forces. The same phenomenon seems to be happening in Western Sahara,

where the peace agreement reached in 1991 between the Moroccan authorities and the Polisario Front risks breaking.

Coups have also taken place in Guinea and Chad, where ad hoc military juntas have arrested the corrupt President of Guinea, Alpha Conde (September 5, 2021), and killed Chadian President Idriss Déby Itno (April 19, 2021), respectively. These violent undemocratic military acts, amplified by the adverse effects of the Covid-19 pandemic, have disastrous repercussions on the socio-economic situation in the two countries, but also in the entire region and have already raised concerns of major economic powers in the area. USA, Russia and France.

The existence of divergent interests of regional powers and neighbouring states in maintaining the tense situation in some African countries made it impossible to resolve the respective crises and conflicts through negotiations or peacefully, especially in terms of return to democracy. This can be seen in the implementation of the ceasefire agreement in Libya, where Turkey wanted to maintain its deployed military forces, in Sudan, where the generals are supported by Saudi Arabia, the United Arab Emirates and Egypt, or in Ethiopia, where Eritrea, Sudan and Somalia's intervention have deepened the humanitarian crisis in the area. Neither did France's politico-military involvement in its former colonies Mali and Chad lead to the resolution of these conflicts, on the contrary, they allowed the French-trained and equipped local military to take power by force. The same occurred in the CAR, where Russia's support through the Wagner Paramilitary Group worsened tensions with the MINUSCA peacekeepers. In turn, the United States was involved in the conquest and possession of the Western Sahara region by Morocco, in exchange for the recognition of the state of Israel.

Moreover, the continued activities of extremist groups Al-Qaeda, Islamic State and Boko Haram in Africa, as well as the emergence of local terrorist groups affiliated with them, funded by international actors, represent a serious socio-economic challenge for African states in the area. This phenomenon has been exacerbated by the recent rise in coups and pandemics that have had adverse economic effects, bringing large numbers of Africans back to the poverty they have escaped after the last two decades of economic growth. Moreover, the effects of climate change have also led to increasing social and economic fragility and escalating resource conflicts.

Despite the negative trend of increasing the number of coups that have overthrown democracies in several African states, we can say that there are some positive aspects that give hope to the normal socio-political development in the region. Thus, free and incident-free local elections were held in Burkina Faso in May 2021, and in countries such as Niger and Zambia, the transfer of power from the military to civilians took place peacefully, following the presidential elections - February 2021 in Niger and August 2021 in Zambia.

As a result, the continuing effects of the Coronavirus pandemic in Africa and the accelerated climate change in the region have influenced the development of African military conflicts during last years and worsened the economic and social situation of African countries. In turn, those negative aspects have a lot of implications in the regional stability, affecting the Euro Atlantic security, too.

### 3.3 NATO's strategic interest and possible future involvement in Africa

NATO had some unsuccessful experiences in or near Africa in the past. This was because of the lack of a well-defined common Strategic interest in the area and the competition of some Allies for different parts of Africa, acting independently and not within the Alliance.

Thus, in 2001, the North Atlantic Alliance launched one of its first Article 5 operations (Collective Defence) in the Mediterranean Sea, called Operation "Active Endeavour" (OAE), in response to the terrorist attacks in the United States on September 11 of the same year. Originally established for the Eastern Mediterranean and control of entry points into the Red Sea, in 2003, the OAE mission was extended to the western part of the sea, including the Strait of Gibraltar, with the mission to monitor and control any ships suspected of involvement in terrorist acts.<sup>11</sup> The operation continued until 2016, when it was transformed into a non-Article 5 Crisis Response Operation (NA5CRO), called "Sea Guardian", still an active NATO-led operation of today.

At the 2008 NATO Bucharest Summit, the Allies decided to support the international efforts to combat piracy in the Gulf of Aden, launching Operation "Ocean Shield" (OOS) a year later, with the mission of deterring and preventing piracy attacks as well as protecting merchant ships to increase security in the region.<sup>12</sup> The operation was completed in 2016, considering that there was no longer a major danger off the coast of Somalia.

Then, in 2011, at the express request of France, the Alliance carried out Operation "Unified Protector" (OUP) in Libya, where it secured a no-fly zone over Libya, which allowed Franco-British forces, sent by French President Nicolas Sarkozy and British Prime Minister Tony Blair, to defeat the Libyan military resistance and overthrow dictator Muammar Gaddafi, with far-reaching consequences.<sup>13</sup>

Since then, NATO conducted only limited support actions for the African Union (AU) and on AU's request, only, even if the deteriorating security situation in North Africa and the Sahel region would have required a more active military intervention. But the political and legal constraints imposed by the Washington Treaty did not allow the Alliance to militarily interfere in the respective region, because it is out of the established SACEUR's Area of Responsibility. So, for the Allied political and military leaders the NATO's Geopolitical issue is the dilemma of a military intervention in Africa, especially in North Africa and the Sahel region, at the request of some Member States (former colonising powers, such as France and Italy) or even international/regional organisations (the UN, EU, or AU), outside its area of responsibility and current strategic concerns that is currently oriented towards Eastern Europe. In fact, this represents the beginning

<sup>11</sup> NATO HQ. Operation Active Endeavour (Archived), NATO, 27 October 2016. [https://www.nato.int/cps/en/natohq/topics\\_7932.htm](https://www.nato.int/cps/en/natohq/topics_7932.htm), [15.02.2022].

<sup>12</sup> NATO HQ. Counter-piracy operations (Archived), NATO, 19 December 2016, [https://www.nato.int/cps/en/natohq/topics\\_48815.htm](https://www.nato.int/cps/en/natohq/topics_48815.htm), [15.02.2022].

<sup>13</sup> ALEXE, Dan. De ce nu poate interveni NATO în Africa, *Europa Liberă*, 21 January 2020, <https://moldova.europalibera.org/a/de-ce-nu-poate-nato-intervenii-C3%AEn-africa/30389307.html>, [10.01.2022].

of the Multi-Criteria Analysis and fulfils the first step of the process - ***Determining the Geopolitical issue***. Nowadays, NATO's only involvement in the region is politico-military one (more political than military), being represented by the "Mediterranean Dialogue"<sup>14</sup> (MD - launched in 1994) partnership programme activities and the support for the African Union<sup>15</sup> (AU - started in 2005), which is based on the mission of ensuring security through cooperation.

The support provided by the Alliance to the AU and its MD partner states is based on the NATO's conceptual framework established for the Strategic Direction "South" and the Allied stability design efforts, with the following common objectives.<sup>16</sup> These objectives are established at the strategic level and represent the continuation of MCA within the second step - *Defining the objectives associated with the successful solution to the problem*. These common objectives refer to:

- a) a) providing operational support in the areas of logistics and finance within the AU Mission in Somalia (AMISOM), as well as in the planning of operations, by deploying experts (SME) to the AU Department of Peace Operations at its Headquarters in Addis Ababa, Ethiopia;
- b) b) strengthening defence capabilities by providing opportunities for participation in education and training courses in Allied facilities and deploying NATO Mobile Education and Training Teams (METTs) to MD partner countries;
- c) c) providing assistance in the development and support of the African Stand-by Forces (ASF) - African long-term peacekeeping capabilities - through courses, assessment, expertise, scientific activities.

To fulfil those common goals, NATO opened, in 2015, an Allied Liaison Office at the AU Headquarters and in 2017 inaugurated a NATO Centre (Hub) for Strategic Direction "South" (NSD-S Hub) at the Allied Joint Force Command (JFC) in Naples, Italy, to address all current and evolving security issues in the Southern neighbourhood and strengthen relations with Southern partners. In 2019, the two regional organisations signed a new Cooperation Protocol to strengthen the partnership and a closer policy and practical

<sup>14</sup> As per the site [https://www.nato.int/cps/en/natohq/topics\\_60021.htm](https://www.nato.int/cps/en/natohq/topics_60021.htm), the Mediterranean Dialogue includes seven non-member states in the Mediterranean area, incl. Algeria, Egypt, Israel, Jordan, Mauritania, Morocco, and Tunisia. The partnership initiative was established on the basis of the political dialogue and practical cooperation of the seven non-member states with NATO and is coordinated by the Allied Committee on Policy and Partnership. The main instrument of cooperation is the Individual Cooperation and Partnership Programme (IPCP) established for each partner state.

<sup>15</sup> As per the site [https://au.int/sites/default/files/documents/31829-doc-au\\_handbook\\_2020\\_english\\_web.pdf](https://au.int/sites/default/files/documents/31829-doc-au_handbook_2020_english_web.pdf), the African Union (AU) was established in 2002 as a forerunner of the Organization of African Union (OAU - created in 1963 to assist African states in gaining independence and recovery after exiting colonialism and apartheid) and has 55 member states. The main objective of the AU is the development of African states and their integration into Africa, by: supporting their promotion in the global economy, discussing the many social, economic and political issues facing the African continent and promoting peace, security, stability, democracy, good governance and human rights.

<sup>16</sup> NATO HQ. Cooperation with the African Union. NATO, 13 November 1919, [https://www.nato.int/cps/en/natohq/topics\\_8191.htm](https://www.nato.int/cps/en/natohq/topics_8191.htm), [15.01.2022].

approach to address common risks and challenges.<sup>17</sup> The new agreement expanded the scope of NATO's support for the African Union, including counter-terrorism, countering improvised explosive devices, increasing role and protection of women in conflict, increasing integrity and supporting AU-led operations.

In order to continue the step 2 of the multi-criteria analysis method of solving NATO's Geopolitical issue of its military or non-military involvement in Africa, we propose to the NSD-S HUB to establish the following quantitative and qualitative criteria:

C.1 - the level of ensuring the Allied Strategic Air and Naval Transport for African troops in AU-led operations and missions - as an example, NATO already provided the air transport for the AU mission in Sudan in 2005, the air transport for the AMISON mission in 2007 and shipping for the AMISON mission in 2009;

C.2 - the level and percentage of participation of Allied experts in the planning process of African operations - number of SMEs in the AU Department of Peace Support Operations varies annually, depending on AU requests and priority areas (maritime, financial, monitoring, procurement, coordination air transport, communications, information technology, logistics, human resources, military human resources management, contingencies, strategic planning, movement and exercises) and is established for a period of 6 to 12 months;

C.3 - the number of African soldiers and civilians who have completed courses and other forms of education and training in different Allied facilities - 20 students / year at courses and, since 2015, 30 students x 3-4 METTs;

C.4 - the number of ASF training activities organised by some Allies - certification and evaluation, training programmes for staff, assistance in establishing procedures for lessons learned, development of concepts, establishment of the ASF Continental Logistics Base in Douala, Cameroon, conducting the "Amani Africa II" exercise with field troops to operationalise the FSA (October-November 2015);

C.5 - the number of Allied Command and Control (C2) elements involved - JFC Naples, NATO Centre (Hub) for the Strategic Direction "South", Allied Liaison Office at the AU Headquarters;

C.6 - the degree of mitigation / prevention of local crises and conflicts - Libya, Mali, South Sudan, Sudan, Somalia, Ethiopia, and Eritrea;

C.7 - the level of attracting local population support to the political actions and practical cooperation undertaken in the region;

C.8 - the level of achieving consensus in between the Allies.

Each criterion is calculated by adequate weighting (p) of indicators for the criteria's success or failure and the level of meeting the objectives, using an enough level of data and information for each and stipulated in the Performance Matrix table.

The analysis should continue with the third step - *Establish and describe the options/alternatives* in order to answer to the question "What options does NATO have for its direct military or politico-military involvement in Africa?" To do so and provide NSD-S HUB with some realistic alternatives, a group of researchers from the Centre for Defence and

<sup>17</sup> NATO HQ. NATO-African Union plan closer collaboration, NATO, 5 November 2019, [https://www.nato.int/cps/en/natohq/news\\_170512.htm?selectedLocale=en](https://www.nato.int/cps/en/natohq/news_170512.htm?selectedLocale=en), [20.01.2022].

Security Strategic Studies (CDSSS) from the “Carol I” National Defence University from Bucharest conducted an analysis of the Allied policy in this region, the actions taken so far, the interests of the Member States, and domestic and international legislative criteria and came to a conclusion that the Alliance would have the following possible options:

A.1 - to continue the current political and practical cooperation, as has been the case so far;

A.2 - to reinforce NATO - AU relations, by operationalising the measures established in 2019 and increase practical cooperation in areas of mutual interest;

A.3 - to plan and conduct direct military involvement, at the request of the UN, the AU or the EU.

The fourth step - *Collection of data and information* is represented by subchapters 4.1 - 4.3, from where the group of researchers took all possible information and available data to establish and measure the following indicators of success or failure of the criteria and achievement of established strategic objectives:

- without impact (p1) = 0-10%;
- with minimal impact, which can be positive (p2+) = 10-20% or negative (p2-) = -10-0%;
- with limited impact (p3) = 20-30%;
- with moderate impact (p4) = 30-50%;
- with significant impact (p5) = above 50%.

This method of obtaining the appropriate weights (p) for the established criteria is called “direct analysis of the performance of options” and it is described in subchapter 1. 3. It is based on their relative importance in meeting the objectives. This step explains the likelihood that different criteria will affect the success or failure of a different decision or, in other words, will have more or less influence on the goal (s).

The final step - *Achieving the Performance Matrix* represents the masterpiece of the scientific analysis of the process. The performance matrix of solving the geopolitical problem will be completed, in which each date entered will correspond to the expected performance of an option against the established criteria. for an objective, according to Table 2.

**Table 2:** The Performance Matrix of solving NATO's Geopolitical issue

<i>The Performance Matrix</i>									
<i>Decisional Alternatives (Options)</i>	<i>Decision Criteria</i>								
	x 1	x 2	x 2	x 3	x 1	x 3	x 2	x 3	<i>Total</i>
	<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>C5</b>	<b>C6</b>	<b>C7</b>	<b>C8</b>	
<b>A1</b> To continue the current political and practical cooperation	1	6	4	6	1	3	2	6	29

<b>A2</b> To reinforce NATO - AU relations	2	4	6	9	2	6	4	9	42
<b>A3</b> To plan and conduct direct military involvement	3	2	2	3	3	9	6	3	31

The exact method of calculating the percentages for each criterion is determined by experts and other participants in the analysis, based on their experience and the national and international context of that period. In the model above, the group of researchers from CDSSS considered the followings:

- p1 to p3 as having a minor importance for the established criteria and no multiplying effect (x1);
- p4 as having a medium importance and some kind of multiplying effect (x2);
- p5 as very important and with greater possibility to multiply its effect (x3).

Thus, by verifying the dominant position of criteria C4, C6 and C8 over the others, when the performance of option A2 is at least as good as that of A3, it turns out that the option of strengthening NATO's partnership with AU is the best one with regard to the Alliance's policy towards Africa.

## CONCLUSIONS

If, until recently, Africa represented a region of lesser Geostrategic importance to the interests of the Alliance, the complex and unpredictable changes in the security environment of the area, exacerbated by the Sino-US economic war, global warming, regional competition for resources, and the coronavirus pandemic, have repositioned the area in the spheres of interest of the respective regional organisation and raised its interest to include it in its Geopolitics.

China's direct economic involvement in sub-Saharan African states, through major investments and the implementation of "Belt and Road Initiative's" (BRI) projects (which would later attract protection and security structures on the African continent), demonstrated Beijing's expansionist intentions to take political and economic control of the former French colonies in the area and influence their long and very long-term development. Of no less interest were Russia and other regional powers' military interventions in African conflicts as well as the increase in terrorist actions in the Sahel region, which drew the international/regional organisations' attention of the poor and ineffective involvement in managing the catastrophic political situation and the humanitarian disaster in Africa. Especially the position of NATO towards the African states and the African Union is at stake, due to the individualistic policy of some Member States, former colonising powers.

In the face of the US reluctance to get involved and resolve African tensions, because of its strategic interests in other parts of the world, a fierce competition for the exploitation of large oil and gas reserves on the continent, the fight for control of diamond,



copper and nickel mines, illegal permissive activities (drug, arms and human trafficking, deforestation, fishing and wildlife illegal trade), the growing presence of terrorism with international ramifications (Al Qaeda and the Islamic State), corruption and political dictatorship in African states with natural resources, triggered the growing interest of the great powers to control and manipulate those African states and to use non-state actors in the area to win the competition for resources.

Therefore, the inclusion of the Multi-Criteria Analysis method has the expected effect of assessing how NATO should materialise its interests in such a sensitive region of the globe and not to analyse decisions made at the level of the regional organisation in this respect. In this context, the analysis includes a procedural approach, with established logical steps, in order to reach an expected final result, by scientific methods. The staging of the Multi-Criteria Analytical Process focuses on a five-step process to follow: establishing the context/problem; defining possible strategic objectives to achieve; identifying options; defining criteria; and establishing the optimal choice by prioritising/weighting the criteria. In the present article, the calculations and the achievement of a final result were not considered.

The MCA result of the main strategic interests of the Alliance towards Africa reveals the best possible option to be followed for the regional Geopolitics, resulting from the Performance Matrix and presents the political/strategic objectives, quantitative and qualitative criteria, as well as indices for measuring these criteria and leading to the achievement of the proposed objectives. It is, of course, up to NATO's decision-making authorities to take these scientifically argued results into account and implement them.

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## **A Case Study of Defense Resource Management in a (Un)Sustainable Development Perspective**

### **Případová studie řízení obranných zdrojů z hlediska (ne)udržitelného rozvoje**

**Daniela-Elena Hrab, Gheorghe Minculete**

**Abstract:** The US military presence in Afghanistan has been the subject of retrospective analyzes that facilitated the identification and learning of important lessons for future military actions. This article analyses, through the case study method, the way defense resources were managed from a sustainable development perspective, focusing on the durable effects of the main projects aimed at ensuring this country's initial steps towards a sustainable development destination. As a result, this study points to the positive potential that the military instrument could have in a country's efforts to achieve sustainable development goals, highlighting the way that unsustainable management practices can compromise or even nullify the progress in this area. Consequently, the main product of this research is a model of unsustainable use of defense resources that decision makers should know and avoid in the future, to obtain long-term beneficial results.

**Abstrakt:** Tento článek analyzuje s využitím případové studie způsob, jakým byly obranné zdroje řízeny z hlediska udržitelného rozvoje, a zaměřuje se na trvalé účinky hlavních projektů, jejichž cílem bylo zajistit prvotní kroky této země směrem k udržitelnému rozvoji. Tato studie následně poukazuje na pozitivní potenciál, který by vojenský nástroj mohl mít v úsilí země o dosažení cílů udržitelného rozvoje, a zvýrazňuje cestu, jakou mohou způsoby neudržitelného řízení ohrozit nebo dokonce zmařit pokrok v této oblasti. Hlavním výsledkem výzkumu je model neudržitelného využívání obranných zdrojů, který by orgány s rozhodující pravomocí měly znát, a kterému by se měly v budoucnu vyhnout, aby dosáhly dlouhodobě prospěšných výsledků.

**Key words:** Afghanistan; Defense Resources; Military Expenditures; Sustainable Development Goals; Unsustainable.

**Klíčová slova:** Afghánistán; obranné zdroje; výdaje na obranu; cíle udržitelného rozvoje; neudržitelný.

## INTRODUCTION

Sustainable development is a desideratum of responsible societies and institutions, which aims to reconsider the way economic development goals are designed and implemented, so that limited resources can be used efficiently and accessed by future generations<sup>1</sup>. In this context, sustainability practices aim at achieving long-term beneficial effects at the economic, social, environmental and institutional levels<sup>2</sup>. By contrast, unsustainable practices lead to financial efforts without achieving the expected effects or to superficial results in the short term, which translates into the resumption of steps and the repetition of the unsustainable process.

The idea that military conflicts and the exacerbation of the arms race lead to unsustainable development has been reported since 1987<sup>3</sup>. What is worrying is that 35 years after this, Russia's invasion in Ukraine shows that conflict issues cannot always be solved through diplomacy, the military instrument of power still being used. It can be noticed that the appetite for conventional armed confrontations still exists, causing major destruction and humanitarian crises, which interrupt the progress of sustainable development and prolong the time to achieve sustainability, its ultimate goal<sup>4</sup>.

From this perspective, the last NATO mission in Afghanistan, conducted between 2015 and 2021, that is, the Resolute Support Mission, consisted of "training and assisting Afghan forces and institutions in building their own capabilities to defend and protect citizens in a sustainable manner"<sup>5</sup>. Although the idea of sustainability was introduced too late in the formulation of the Alliance's mission in this country, this attests to the fact that the need for long-term beneficial effects has nevertheless been realized.

Taking into account the fact that the military organization uses financial resources allocated from the state budget, it is expected that the generated benefits be as sustainable as possible. This article draws attention to the need for sustainable management of defense resources, highlighting the effects of unsustainable practices, which should be avoided in the future. As a result, the goal was to identify the unsustainable ways in

<sup>1</sup> United Nations. *Report of the World Commission on Environment and Development: Our Common Future*. [online]. Oslo: Oxford University Press, 1987, p. 16, [viewed date: 10 April 2022]. Available from: <<https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>>.

<sup>2</sup> Munasinghe, M. *Sustainable Development in Practice. Sustainomics Methodology and Applications*. [online]. New York: Munasinghe Institute for Development (MIND), Cambridge University Press. 2009. p. 35. ISBN-13 978-0-511-53996-1. [viewed date: 10 April 2022]. Available from: <<https://z-lib.org/>>.

<sup>3</sup> *Ibidem*, pp. 242-247.

<sup>4</sup> Blewitt, J. *Understanding Sustainable Development*. [online]. Third Edition. London and New York, Routledge, Taylor & Francis Group, 2018, p. 4. ISBN 978-1-315-46585-2. [viewed date: 10 April 2022]. Available from: <<https://z-lib.org/>>.

<sup>5</sup> Inspector General, U.S. Department of Defense. *Audit of Coalition Partner Reimbursement of Dining Facility Services at Resolute Support Headquarters, Kabul, Afghanistan*. [online]. 2020. Report No. DODIG-2020-096. p. 1. [viewed date: 10 April 2022]. Available from: <<https://media.defense.gov/2020/Jun/26/2002321943/-1/-1/1/DODIG-2020-096.PDF>>.

which US military defense resources were used in Afghanistan, to provide the military management with recommendations to manage defense resources in such a way as to have a constructive contribution to sustainable development. Starting from this main objective, a secondary one was developed, namely to design a model of unsustainability of defense resources management, which should be avoided by all military structures that manage defense resources and want to follow a sustainable path.

The first part of the article examines the extent of defense resources involved by the US Department of Defense in Afghanistan, to create an image of the effort made along these lines. At the same time, this first part represents the basis for identifying the sustainable development goals that should have been the focus of the US military management in Afghanistan from the beginning of the mission.

The second part is dedicated to exemplifying the unsustainable ways of using American defense resources, while reporting these results to the goal of sustainability. The third part reviews specialists' recommendations to avoid the unsustainable use of defense resources. Based on these recommendations and the reported problematic issues, a model of unsustainability of defense resources management was developed in the fourth part. Finally, the conclusions and recommendations align the objectives and results of the case study, emphasizing the positive contribution that defense management could have, if unsustainable practices were avoided.

## 1 METHODOLOGY

To achieve the objectives mentioned above, the research was based on a qualitative approach. Therefore, an individual case study was conducted by analyzing both relevant documents in the field and available content on the Internet, to obtain answers to the following questions: 1) can unsustainable defense resource management practices affect the sustainable development of a nation? 2) how could unsustainable defense resource management practices be avoided? 3) why should unsustainable defense resource management practices be avoided? In this sense, the case of Resolute Support Mission, recently completed by US troops in Afghanistan, can be considered both representative and revelator, highlighting the need for sustainable use of defense resources, a prerequisite for the military organization's contribution to sustainable development.

## 2 THE DEFENSE RESOURCES USED BY THE US MILITARY MANAGEMENT IN AFGHANISTAN AND THE SUSTAINABLE DEVELOPMENT GOALS

The 9/11 terrorist attacks on some of the iconic American infrastructure and the tragedy created at that time led the country's leadership to the invasion of Afghanistan,

whose officials refused to hand over the culprits<sup>6</sup>. Twenty years after that, the level of the implied defense resources, weighed against the effects of the withdrawal from Afghanistan, shows that this decision led to an “unsustainability trap”<sup>7</sup>, which calls into question the effectiveness of the military instrument in large scale missions.

Although the “huge” opportunity cost of US military spending due to involvement in Afghanistan has been reported since 2008<sup>8</sup>, the decision to withdraw forces from Afghanistan proved to be difficult. Experts believe that this was caused by the widespread involvement of the military instrument in solving the problem of post-conflict reconstruction, the initial mission, focused on establishing security, being completed with the one on the sustainable economic development of Afghanistan<sup>9</sup>. In order to carry out these missions, a well-developed strategy was undoubtedly needed.

However, the authors of some studies conducted in 2011 and 2020 showed the lack of such a long-term vision. While the first study describes the entire strategy aimed at the widespread use of the military instrument as “unsustainable and unbelievable”<sup>10</sup>, the study developed nine years later highlights the need to properly link the mission to the military resources involved<sup>11</sup>. In other words, the very involvement of military resources in the sustainable development of the country was not a long-term beneficial measure, without questioning their inadequacy. Following the withdrawal of troops from Afghanistan, it was concluded that the US military management had the expertise and resources to carry out a reconstruction mission, but not for large-scale missions and

<sup>6</sup> The 9/11 Commission Report. *Final Report of the National Commission on Terrorist Attacks upon the United States*. Authorized Edition. New York: W.W. Norton & Company, Inc., 2004. p. 369. ISBN 0-393-32671-3.

<sup>7</sup> Glickstein, D; Spangler, M. Reforming the Afghan Security Forces. *Parameters* [online]. 2014, **44** (3), p. 92. [viewed date: 10 April 2022]. Available from: <<https://press.armywarcollege.edu/cgi/viewcontent.cgi?article=2731&context=parameters>>.

<sup>8</sup> Clark, G.E. War and Sustainability: The Economic and Environmental Cost. *Environment: Science and Policy for Sustainable Development* [online]. 2008, **50** (1), p. 3. [viewed date: 10 April 2022]. Available from: <<https://doi.org/10.3200/ENV50.1.3-5>>.

<sup>9</sup> Duczynski, G.; Jablonski, J.; Huddleston, S. Sustainability of the Afghan Law Enforcement and Security Forces: A ‘Wicked, Messy Problem’. *Journal of Information Warfare* [online]. 2015, **14** (1), pp. 48-58. ISSN 1445-3347. [viewed date: 10 April 2022]. Available from: <<https://www.jstor.org/stable/26487518>>.

<sup>10</sup> Abshire, D. M.; Browne, R. The Missing Endgame for Afghanistan: A Sustainable Post-Bin Laden Strategy. *The Washington Quarterly* [online]. Center for Strategic and International Studies, 2011, **34** (4), p. 60. [viewed date: 10 April 2022]. Available from: <[https://csis-website-prod.s3.amazonaws.com/s3fs-public/legacy\\_files/files/publication/twq11autumnabshirebrowne.pdf](https://csis-website-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/twq11autumnabshirebrowne.pdf)>.

<sup>11</sup> Yasa, A. R. From Security Sector Reform to Endemic Corruption: The Case of Afghanistan. *Journal of Strategic Security* [online]. 2020, **13** (3), pp. 99-100. ISSN 1944-0472. [viewed date: 10 April 2022]. Available from: <<https://digitalcommons.usf.edu/cgi/viewcontent.cgi?article=1755&context=jss>>.

not without the involvement of economic and government instruments<sup>12</sup>. This highlights a level of ambition that was too high, even for the modern American defense, which should have received additional support from other instruments of power (political, economic, civil)<sup>13</sup>.

In general, the involvement of the US military structures in the post-conflict reconstruction issue has led to a shortage of initially estimated capabilities, which has conducted to an increase in the level of military resources, and also in the outsourcing of services and the widespread involvement of contractors, which generated poor results<sup>14</sup>. This fact determined the allocation of some defense financial resources that could have been used strictly for military missions.

For example, at the level of the US military management, it can be considered that the civil solutions have been augmented by the military ones. The conclusions of a specialized analysis showed that the American defense management adopted the use of contractors as an “implicit” solution<sup>15</sup>. The documents attest to the lack of a comprehensive analysis that would have allowed a detailed understanding of the financial resources allocated to outsourced support and the need to monitor the performance of the contracts awarded<sup>16</sup>. This indicates a reduced concern for the efficient use of available funds, with a high potential to generate waste.

The fact that American projects and programs in Afghanistan would generate an enormous waste of financial resources was reported in 2012, but recommendations for evaluating their sustainability by the Afghan government’s financial ability to continue or fund them were not respected<sup>17</sup>. Some data published in the middle of the mission showed that, in that year, the amount of waste associated with a single unsustainable project/program in Afghanistan exceeded \$11 billion<sup>18</sup>. Furthermore, estimates indicated that the Afghan government would not be able to support security spending “at least until 2023”<sup>19</sup>.

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<sup>12</sup> Special Inspector General for Afghanistan Reconstruction. *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*. [online]. 2021. SIGAR-21-46-LL. p. IV. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>>.

<sup>13</sup> Supreme Headquarters Allied Powers Europe. Allied Command Operations. *Comprehensive Operations Planning Directive COPD Interim V2.0*. [online]. Belgium: 2013. p. 1-9. viewed date: 10 April 2022]. Available from: <<https://www.cmdrcoe.org/download.cgf.php?id=9>>.

<sup>14</sup> Special Inspector General for Afghanistan Reconstruction. *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*. [online]. 2021. SIGAR-21-46-LL. p. 10. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>>.

<sup>15</sup> *Ibidem*, p. 5.

<sup>16</sup> *Ibidem*.

<sup>17</sup> Commission on Wartime Contracting in Iraq and Afghanistan. *CWC Special Report 5. Sustainability: Hidden Costs Risk New Waste*. [online]. 2011. p. 1. [viewed date: 10 April 2022]. Available from: <[https://www.academia.edu/8400564/Special\\_Report\\_5\\_Sustainability\\_hidden\\_costs\\_risk\\_new\\_waste](https://www.academia.edu/8400564/Special_Report_5_Sustainability_hidden_costs_risk_new_waste)>.

<sup>18</sup> *Ibidem*.

<sup>19</sup> *Ibidem*, p. 2

In this context, specialists recommended that “preparations for the withdrawal of forces took into account the inability of the local government to operate and maintain the projects and programs carried out”, an aspect that was not included in the plans developed in this regard, nor in those related to new initiatives<sup>20</sup>. This can be attributed to the decision of not extending the mission, as the Afghan government was, probably, too far from being able to handle the situation.

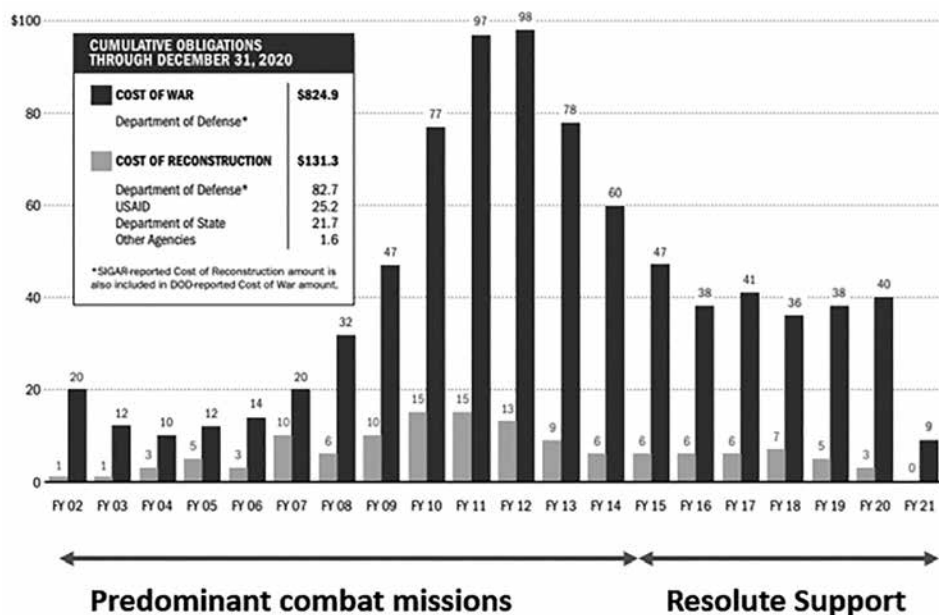
Continuing the analysis of the financial resources used by the US officials in Afghanistan, the published data show an amount of \$2.313 trillion, along 2001-2022<sup>21</sup>. Regarding the amounts actually spent by the US Department of Defense, the data below show a financial effort of \$902.6 billion, of which \$824.9 billion for military operations, and \$82.7 billion for reconstruction activities of the Afghan state<sup>22</sup>, with the military instrument accounting for about 63% of the total reconstruction expenditure. As the following figure shows, the funds dedicated to reconstruction during the Resolute Support Mission, between 2015-2021, amounted to \$33 billion, a quarter of the total sum for this destination, a smaller percentage than the one allocated between 2009-2013 (\$68 billion – 52%). This fact suggests that the largest reconstruction effort overlapped the combat one and was halved at the wrong time, when the specific of the mission changed and would have requested at least the same level of funds, without mentioning that no money was given to reconstruction in the last year of US presence. Moreover, during the Resolute Support Mission, the highest level of funds was still allocated to combat purposes, though a reversal between the two lines of financial effort should have been implemented.

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<sup>20</sup> *Ibidem*, p. 1

<sup>21</sup> Watson Institute. International & Public Affairs. Brown University. *Costs of War*. [online]. 2021. [viewed date: 10 April 2022]. Available from: <<https://watson.brown.edu/costsofwar/figures/2021/human-and-budgetary-costs-date-us-war-afghanistan-2001-2022>>.

<sup>22</sup> Special Inspector General for Afghanistan Reconstruction. *Quarterly Report to Congress*. [online]. Virginia: 2021. p. 34. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/quarterlyreports/2021-04-30qr.pdf>>.



**Figure 1:** US financial effort in Afghanistan (combat and reconstruction missions) - annual and total (2002-2021).

**Source:** *Apud* Special Inspector General for Afghanistan Reconstruction, Quarterly Report to Congress, Section 2, April 30, 2021, p. 34.

Analyzing another report issued several months later by the same institution, an increase in the amount related to the combat mission (\$837 billion<sup>23</sup>) could be noticed, which indicates the discovery of new sources of spending on this line. For these reasons, one can consider that the volume of financial resources involved by the US Department of Defense is not clearly established. This fact is also supported by the following detailed analysis of the funds allocated to reconstruction.

Thus, the first 2021 report shows that, overall, the US military managed three major programs out of the eight programs set up to fund reconstruction in Afghanistan<sup>24</sup>, namely:

- Afghanistan Security Forces Fund (ASFF) - \$82.90 billion;
- Commanders' Emergency Response Program (CERP) - \$3.71 billion;
- Drug Interdiction and Counter-Drug Activities (DICDA) - \$3.28 billion.

<sup>23</sup> *Idem*, *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*, p. 4.

<sup>24</sup> *Idem*, *Quarterly Report to Congress*, p. 31.



To these programs, some other sources of reconstruction financing were added, amounting to \$2.8 billion, the total value of this destination becoming \$92.69 billion<sup>25</sup>. Compared to that sum, the reconstruction amount specified on the other page (presented here in *Fig. 1*) reveals a difference of about \$10 billion, so that different financial data for the same destination can be identified in the same document.

Regarding the Afghan State Reconstruction Mission, the US Department of Defense has directed the available financial resources to the following major actions<sup>26</sup>: preparing and supporting the Afghan security system (military and police), the electoral system (including by supporting the establishment of political parties), the education system (with a focus on educating the female population), the social reintegration of armed fighters, the private sector development; reducing corruption among Afghan officials; discouraging poppy cultivation and reorienting farmers; providing services to the Afghan people to support the Afghan government; developing the necessary infrastructure of the medical system and training the Afghan government to be able to sustain all this effort after the withdrawal of the Americans.

Normally, a state has other power tools to deal with these issues. Moreover, the two financing mechanisms which were used, budgetary ("on-budget") and extra-budgetary ("off-budget"), but especially the preference for the second option, which involved the management of funds directly by external contributors, without the involvement of the Afghan state apparatus<sup>27</sup>, were factors that favored the unsustainability of the projects. This approach influenced the way other types of US military resources were connected to the allocated financial resources.

With respect to human resources, the experts concluded they were insufficient, did not have the necessary skills to solve all tasks<sup>28</sup>, or the available US military personnel were too involved in activities that should have been carried out by the Afghan military<sup>29</sup>. According to an official report, the availability of human resources was not taken into account when reconstruction programs were planned<sup>30</sup>. It could be argued that this approach generated all problematic aspects, especially in the field of defense resources.

Thus, in relation to the second reported problem, two American specialists who participated in the military operation in Afghanistan recommended, in 2014, that activities in the field of military logistics (supply) and those regarding recruitment and mentoring

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<sup>25</sup> *Ibidem*.

<sup>26</sup> *Idem*, *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*, p. 4.

<sup>27</sup> *Ibidem*, p. 44.

<sup>28</sup> *Ibidem*, p. XII.

<sup>29</sup> Douglas, M.A.; Ritschel, J. Air Advising in Afghanistan – Building an Organization in Flight. *Air & Space Power Journal*. [online]. 2018, p. 87. [viewed date: 10 April 2022]. Available from: <[https://www.airuniversity.af.edu/Portals/10/ASPI/journals/Volume-32\\_Issue-3/C-Douglas\\_Ritschel.pdf](https://www.airuniversity.af.edu/Portals/10/ASPI/journals/Volume-32_Issue-3/C-Douglas_Ritschel.pdf)>.

<sup>30</sup> Special Inspector General for Afghanistan Reconstruction. *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*. [online]. 2021. SIGAR-21-46-LL. p. 50. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>>.

were carried out by the Afghan Army in support of Afghan security forces<sup>31</sup>. Although at that time this solution seemed optimal, time has shown that the involvement of structures in activities that do not fall within their main object of activity can negatively influence the sustainability of the supported forces. In addition, the lack of skills also appeared as a result of relaxing the criteria necessary for employment, to cover the staff shortage<sup>32</sup>. It would appear that the mentioned aspects, respectively, the insufficiency of the staff and the lack of competencies for solving non-specific tasks, generated a real exodus of resignations, which deepened the problem of staff insufficiency.

Regarding the third issue, the documents attest the existence of situations in which the US military augmented the Afghan Army, the realized progress being based on a certain dose of unrealism<sup>33</sup>. The same lack of realism was manifested when it came to determining the level of human losses. For example, the casualties suffered by the US military structures in Afghanistan between October 2001 and August 2022 amounted to 6247 (of which: 2324 soldiers, 6 civilians and 3917 contractors)<sup>34</sup>. Other official documents show different figures, but admit that they might have been underestimated<sup>35</sup>.

In terms of material resources, the period dedicated to the reconstruction mission of Afghanistan meant for the US military a maximum extension of the logistics lines, the Afghan military and police structures dealing with shortfalls in providing vehicles, weapons, radio stations and ballistic protection equipment<sup>36</sup>. An example is the way in which logistic resource allocation refers to maintenance-related goods and services provided to support the successful completion of the mission to create a sustainable Afghan Air Force<sup>37</sup>. In this case, the 2008 decision of the US military management to spend \$549 million on the purchase of G222 transport aircraft, for which spare parts were no longer manufactured, proved unsustainable in just six years, when the equipment was sold as

<sup>31</sup> Glickstein, D., Spangler, M., *Op.cit.*, p.92.

<sup>32</sup> Special Inspector General for Afghanistan Reconstruction. *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*. [online]. 2021. SIGAR-21-46-LL. p. 50. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>>.

<sup>33</sup> *Ibidem*, p. 32.

<sup>34</sup> Watson Institute International & Public Affairs, Brown University, *Op.cit.*

<sup>35</sup> Special Inspector General for Afghanistan Reconstruction. *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*. [online]. 2021. SIGAR-21-46-LL. p. IV. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>>.

<sup>36</sup> United States Government Accountability Office. Report to Congressional Committees. *Afghanistan Security: Further Congressional Action May Be Needed to Ensure Completion of a Detailed Plan to Develop and Sustain Capable Afghan National Security Forces*. [online]. 2008. GAO-08-661. p. 2, [viewed date: 10 April 2022]. Available from: <<https://www.govinfo.gov/content/pkg/GAOREPORTS-GAO-08-661/pdf/GAOREPORTS-GAO-08-661.pdf>>.

<sup>37</sup> Douglas, M.A.; Ritschel, J., *Op.cit.*, pp. 86-87.

waste for a total of only \$40,257<sup>38</sup>. On the other hand, the provision of logistic equipment, for which the military did not have the proper knowledge to operate, accentuated the long-term dependence of the Afghans on external support<sup>39</sup>. Furthermore, in connection with the carried-out projects, specialists showed that logistical resources were also insufficient. Deficits, coupled with insufficient staff to assess and monitor project implementation, generated “redundancies” in the supply chain<sup>40</sup>.

The knowledge resource was also used insufficiently and not sustainably. Therefore, the participation of the US military in rebuilding and reforming the Afghan security system (police and military) is an eloquent example. Beyond the lack of strategy and doctrine underlying the Afghan training process, the involvement of special forces and retired military personnel who did not have adequate experience, as well as the unavailability of the necessary equipment<sup>41</sup>, were the premises for creating an underperforming Afghan security system. Furthermore, the participation of contractors, paid to train Afghan police and military on the basis of too short training programs, as well as the too frequent rotations of the instructors<sup>42</sup>, which did not ensure the continuity and fluency of the training, also contributed to this result.

Regarding information resources, the analyzed documents attest to the lack of feedback to ensure the US military decision-makers' connection to the reality on the ground. For example, they were accused of not understanding the Afghan context and not taking into account the culture of this nation, adopting measures that were difficult to adapt to the needs and possibilities of the population, often having an adverse effect<sup>43</sup>. In addition, strictly for the reconstruction mission, since 2008, the 427 audit missions have resulted in “191 reports on special projects, 52 quarterly reports and 10 reports with identified lessons”<sup>44</sup>, which highlights the fact that decision makers were nevertheless informed. For instance, in the latest report on the identified lessons, the issuer estimates that the reported problems could have been solved in a timely manner and that, at the same time, the convictions of the culprits generated savings of \$3.84 billion<sup>45</sup>, which can be considered beneficial, but of insufficient influence in relation to the total amount of expenditure.

<sup>38</sup> Special Inspector General for Afghanistan Reconstruction. *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*. [online]. 2021. SIGAR-21-46-LL. p. 46. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>>.

<sup>39</sup> *Ibidem*, p. 78.

<sup>40</sup> *Ibidem*, p. 53.

<sup>41</sup> Yasa, A.R., *Op.cit.*, pp. 101.

<sup>42</sup> *Ibidem*, pp. 101-102.

<sup>43</sup> Special Inspector General for Afghanistan Reconstruction. *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*. [online]. 2021. SIGAR-21-46-LL. pp. XII-XIII. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>>.

<sup>44</sup> *Ibidem*, p. IV.

<sup>45</sup> *Ibidem*, p. IX.

In order for the information resource to be available in full volume and also relevant, specialists pointed out the need for a greater emphasis on monitoring and evaluation activities<sup>46</sup>. In this regard, the inadequacy of specialized human resources was considered a dangerous factor in the objectives of the entire mission<sup>47</sup>. Thus, a suggestive image regarding the interdependence between these types of defense resources appears, respectively, on the way in which the insufficiency of human resources can create negative effects on the availability of the information resource.

The time available to the US military to carry out the assigned missions is also an important resource in this endeavor. The scale and non-military nature of the missions have widened the time horizon of the US military involvement in Afghanistan. In this context, the seemingly endless operation not only generated substantial costs, but also called into question the effectiveness of military action and fuelled unfriendly Taliban propaganda<sup>48</sup>. However, a mission to rebuild a state cannot be compared to a combat mission, so the twenty-year horizon may be reasonable in this context.

In fact, the published documents show that the time devoted to the reconstruction mission was insufficient and the necessary funds were not allocated from the beginning<sup>49</sup>. This has led to rapid spending of the available funds, which has resulted in increased corruption, reduced program efficiency, and increased pressure to demonstrate progress on the adoption of rapid projects that were not in line with the real Afghan ability to support in the long-term<sup>50</sup>. In addition to the lack of time allocated to projects, those involved in the planning activity were also pressured by the “imminent withdrawal”, which had been announced long before it actually took place<sup>51</sup>. These issues support the idea of a lack of strategy and inadequate planning timeframe, but also testify to the pressure of executing non-specific missions by the military, amid the compression of temporal resources.

In terms of energy resources, the involvement of the US military in Afghanistan has highlighted the need to diversify and reduce the consumption of these resources. Thus, considering the attacks of the Taliban on land supply lines, US officials have identified the need to reduce dependence on conventional fuels<sup>52</sup>. Apart from this beneficial conclusion, it appears that, in the long run, US military structures had an unsustainable involvement in Afghanistan when trying to increase the energy resources available to the

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<sup>46</sup> *Ibidem*, p. XIII.

<sup>47</sup> *Ibidem*.

<sup>48</sup> Yasa, A.R., *Op.cit.*, pp. 99.

<sup>49</sup> Special Inspector General for Afghanistan Reconstruction. *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*. [online]. 2021. SIGAR-21-46-LL. pp. X-XI. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>>.

<sup>50</sup> *Ibidem*, pp. X-XI.

<sup>51</sup> *Ibidem*, p. 25.

<sup>52</sup> Flaherty, C. 3D Vulnerability Analysis Solution to the Problem of Military Energy Security and Interposing Tactics. *Journal of Information Warfare* [online]. Terrorism Research Centre. Washington DC: 2014, 13 (1), p. 21. ISSN 1445-3347. [viewed date: 10 April 2022]. Available from: <<https://www.jstor.org/stable/26487008>>.

Afghan people. Studies show that the efforts of military decision-makers to build and refuel two generators in the city of Kandahar, as a partial solution to the entire need for infrastructure for this purpose, proved ineffective in just a few years, with the funds to ensure the necessary supplies being unavailable to the US Department of Defense since 2015<sup>53</sup>. This could be appreciated as a matter of certainty about the inability of the Afghan authorities to assume these responsibilities, given the fact that the US military structures faced the problem of insufficient financial resources.

### 3 THE UNSUSTAINABLE USE OF US DEFENSE RESOURCES IN AFGHANISTAN

The authors of some detailed studies show that the resources allocated to US military management in Afghanistan have not been used in a sustainable way, leading to waste. From their perspective, this key word for unsustainability was the result of the “inability to ensure specialized personnel, spare parts, fuel and maintenance”<sup>54</sup> of the executed projects. An eloquent example of the unsustainable use of defense financial resources in Afghanistan is the practice of directing a part of them to the Taliban, in exchange for maintaining a state of security that made possible the awarded contracts being put into effect<sup>55</sup>, as they were so necessary to support the participating forces. This was possible by making the necessary amounts available to purchasing structures in the “cash” format, a problem that was remedied in 2012, when electronic payment was introduced, leading to a 38% decrease in the amounts paid to contractors<sup>56</sup>.

Another example of the unsustainable use of US military resources in Afghanistan is the carrying out of costly infrastructure projects that led to large-scale future expenditures the Afghan state could not afford<sup>57</sup>. The \$800 million funds allocated by the US Army Corps of Engineers for a period of five years to maintain the 663 facilities designated to the security forces<sup>58</sup>, illustrate the high level of financial effort.

Furthermore, these projects did not take into account the real needs of the Afghan people and were not planned and coordinated with the participation of representatives

<sup>53</sup> Special Inspector General for Afghanistan Reconstruction. *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*. [online]. 2021. SIGAR-21-46-LL. p. 33. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>>.

<sup>54</sup> Commission on Wartime Contracting in Irak and Afghanistan, *Op.cit.*, p. 2.

<sup>55</sup> Schwartz, M.; Church, J. *Department of Defense's Use of Contractors to Support Military Operations: Background, Analysis, and Issues for Congress*. [online]. Congressional Research Service, 2013. R 43074, p. 8. [viewed date: 10 April 2022]. Available from: <<https://sgp.fas.org/crs/natsec/R43074.pdf>>.

<sup>56</sup> *Ibidem*, p. 10.

<sup>57</sup> Commission on Wartime Contracting in Irak and Afghanistan, *Op.cit.*, p. 4.

<sup>58</sup> *Ibidem*.

of this country<sup>59</sup>. This resulted in a lack of unity of effort, an essential principle in such military operations<sup>60</sup>, as well as a lack of cooperation and coordination, a basic principle of military logistics<sup>61</sup>. Failure to apply these principles led to fragmentation of vision, planning, and execution, with military commanders being asked to act uncoordinatedly to implement economic development projects for which they had not been prepared<sup>62</sup>.

According to some studies, the main negative result of the security sector reform was the increase in the level of corruption among Afghans operating in this field, generated by the high flow of funds for the expenditure of which the US military had not established clear monitoring mechanisms<sup>63</sup>. Poorly trained and equipped, Afghan security structures used to recruit and promote members based on other criteria than those related to actual skills<sup>64</sup>, which completed the picture of unsustainable practices in this sector.

Moreover, the analyzed literature shows that the US military involvement in the reconstruction activities of the Afghan state, the support of other allies, as well as its own disproportionate, oversized contribution to the entire financial effort, doubled by the existence of unpaid payment obligations by some coalition partners<sup>65</sup>, are real landmarks of the unsustainability of US military financial resources in Afghanistan. For example, because the bills for feeding services provided by contractors between January 2016 and September 2019 were not issued to the coalition partners, the US Department of Defense had to bear these costs, and in October 2019, only \$880,000 had been reimbursed, from a total of \$6.3 million<sup>66</sup>.

Concerning the effects of corruption, the practices of stealing fuel, issuing falsified bills, directing ammunition purchased by the US Department of Defense to the Taliban,

<sup>59</sup> Special Inspector General for Afghanistan Reconstruction. *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*. [online]. 2021. SIGAR-21-46-LL. p. 76. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>>.

<sup>60</sup> NATO Standardization Office, *AJP – 01, Allied Joint Doctrine*. [online]. Edition E, Version 1, 2017, p. 1-13. [viewed date: 10 April 2022]. Available from: <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/905877/20200728-doctrine\\_nato\\_allied\\_joint\\_doctrine\\_ajp\\_01.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/905877/20200728-doctrine_nato_allied_joint_doctrine_ajp_01.pdf)>.

<sup>61</sup> NATO Standardization Office, *AJP – 4, Allied Joint Doctrine for Logistics*. [online]. Edition B, Version 1, 2018, p. 1-2. [viewed date: 10 April 2022]. Available from: <[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/907825/doctrine\\_nato\\_logistics\\_ajp\\_4.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/907825/doctrine_nato_logistics_ajp_4.pdf)>.

<sup>62</sup> Schwartz, M. *Wartime Contracting in Afghanistan: Analysis and Issues for Congress*. [online]. Congressional Research Service, 2011, R 42084, p. 3. [viewed date: 10 April 2022]. Available from: <<https://sgp.fas.org/crs/natsec/R42084.pdf>>.

<sup>63</sup> Yasa, A. R., *Op.cit.*, pp. 99-105.

<sup>64</sup> *Ibidem*, p. 108.

<sup>65</sup> Inspector General, U.S. Department of Defense. *Audit of Coalition Partner Reimbursement of Dining Facility Services at Resolute Support Headquarters, Kabul, Afghanistan*. [online]. 2020. Report No. DODIG-2020-096. p. ii. [viewed date: 10 April 2022]. Available from: <<https://media.defense.gov/2020/Jun/26/2002321943/-1/-1/1/DODIG-2020-096.PDF>>.

<sup>66</sup> *Ibidem*.

and their infiltration among Afghan security forces<sup>67</sup> have led to disastrous effects, which can be classified as evidence of unsustainability. This image is completed by the inconsistency of US and EU views on Afghan police reform, with the two organizations oscillating between the militarized version and the civilian approach<sup>68</sup>.

Furthermore, the widespread involvement of US military logistic resources in Afghanistan had another undesirable effect in terms of sustainability. Experts showed that the continuous supply of equipment and maintenance services, coupled with the massive involvement of US military logisticians and mentors, led the Afghan Air Force to dependence<sup>69</sup>. This effect, generated by the implementation of fast, inefficient solutions on the long-term<sup>70</sup>, could represent a lesson that must be avoided by any military organization oriented towards sustainability.

From a gender perspective, the US military presence in Afghanistan had positive results. When faced with a full-scale development at that time, Afghanistan benefited from women's health programs<sup>71</sup>. In addition, through its membership in NATO and participation in the Resolute Support Mission, the US Department of Defense funded training programs for women soldiers in this country<sup>72</sup>. Despite this progress, the withdrawal of US troops and the return of the Taliban to power have nullified progress in this area. This aspect is evidenced by the discriminatory measures of the Taliban against women: disappearances among feminist activists<sup>73</sup>, conditions imposed on women's right to education<sup>74</sup>, restrictions on movement<sup>75</sup>, or even executions<sup>76</sup>.

Taking into account the stable climate, an important resource for the success of reconstruction efforts, experts blamed US officials for not initiating and reconciling relations

<sup>67</sup> Yasa, A. R., *Op.cit.*, pp. 108-112.

<sup>68</sup> *Ibidem*, p. 114.

<sup>69</sup> Douglas, M.A.; Ritschel, J., *Op.cit.*, p. 86.

<sup>70</sup> *Ibidem*, p. 87.

<sup>71</sup> Kitt, M.M. and others, *An Occupational Health Services Initiative at a Women's Hospital in Kabul, Afghanistan*. [online]. Public Health Reports, 2006, **121**, p. 650. [viewed date: 10 April 2022]. Available from: <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1781906/pdf/phr121000650.pdf>>.

<sup>72</sup> North Atlantic Treaty Organization. *The Secretary's General Annual Report*. [online]. 2019, pp. 70-71. [viewed date: 10 April 2022]. Available from: <[https://www.nato.int/nato\\_static\\_fl2014/assets/pdf/2020/3/pdf\\_publications/sgar19-en.pdf](https://www.nato.int/nato_static_fl2014/assets/pdf/2020/3/pdf_publications/sgar19-en.pdf)>.

<sup>73</sup> United Nations. *Six women's rights activists still missing in Afghanistan*. [online]. [viewed date: 10 April 2022]. Available from: <<https://news.un.org/en/story/2022/02/1111012>>. [viewed date: 10 April 2022].

<sup>74</sup> United Nations. *Taliban's backtracking on girls' education, 'deeply damaging'*. [online]. [viewed date: 10 April 2022]. Available from: <<https://news.un.org/en/story/2022/03/1114482>>.

<sup>75</sup> United Nations. *Afghanistan: 'Palpable' fear of 'brutal and systemic repression' of women grows*. [online]. [viewed date: 10 April 2022]. Available from: <<https://news.un.org/en/story/2021/09/1100562>>.

<sup>76</sup> United Nations. *Afghanistan women's rights are 'red line', UN rights chief tells States*. [online]. [viewed date: 10 April 2022]. Available from: <<https://news.un.org/en/story/2021/08/1098322>>.

with the Taliban<sup>77</sup>. However, in February 2020, there was an agreement between the US government and the Taliban based on reducing violence and closing ties with the Al-Qaeda terrorist group, but the expected effects did not materialize<sup>78</sup>. This is not surprising and the result completes the existing controversies, balancing the scales against such actions.

The aspects discussed in the first two parts of this article show a high potential for the US defense resources to have contributed to the inclusion of Afghanistan on the sustainable development path. Therefore, the efforts were not in vain; it was imperative that the mentioned unsustainable practices be avoided. The third part is dedicated to the recommendations issued by the American specialists, regarding the avoidance of unsustainable approaches in the future.

#### 4 SPECIALIST RECOMMENDATIONS FOR AVOIDING UNSUSTAINABLE US DEFENSE RESOURCES MANAGEMENT MEASURES

The documents reviewed in this case study have revealed a number of recommendations issued by specialists, which the US military management needs to consider in the future, if it is to engage in reconstruction missions. Although addressed to the US military and the US government, these recommendations have wide applicability and could be taken into account at the level of other decision-makers who choose to use the military instrument of power in reconstruction issues, but also in strategic military management, in relation to daily activities. It is the case of the last audit report that targeted the execution of the reconstruction mission, which identified the seven major problems summarized below<sup>79</sup>, remedial solutions exceeding the military and conflict domains:

- a strategy needed to achieve objectives;
- realistic definition of the time required to carry out a reconstruction mission, in order not to favor rapid spending of funds, corruption and inefficiency;
- creation of institutions and development of sustainable investment projects;
- implementation of productive personnel policies and practices;
- reduction in the level of insecurity, to favor the reconstruction effort;
- adaptation to the context and culture of the supported nation;
- continuous adaptation of effort by monitoring and evaluating results.

Although these formulations may seem familiar to those who studied and practiced management, experts point out that in Afghanistan, US officials did not take into account

<sup>77</sup> Special Inspector General for Afghanistan Reconstruction. *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*. [online]. 2021. SIGAR-21-46-LL. p. 18. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>>.

<sup>78</sup> *Ibidem*, p. 19.

<sup>79</sup> *Ibidem*, p. 2.



a planning horizon of more than one year<sup>80</sup>. In addition, the operational planning process was undermined by the inability of the US government to define the final state, modalities and means of fulfillment<sup>81</sup>, an essential condition for a constructive planning of military operations. However, this was explained by a lower availability of resources in the US government, compared to those allocated to the Department of Defense<sup>82</sup>. It could be argued that this is not a reason to involve the military instrument in actions that go beyond its competence and long-term possibilities. According to a study that examined, among other things, the issue of the sustainability of US-adopted solutions in Afghanistan, a reconstruction mission must be clearly differentiated from a humanitarian one, and the benefits targeted on the long-term<sup>83</sup>.

Another recommendation received from specialists who audited and analyzed the way the US mission in Afghanistan was fulfilled, is related to the implementation of the adopted policies in practice. Regarding the creation of these policies, experts pointed out the need that each US military project be analyzed and designed on the idea of sustainability<sup>84</sup>. This criterion should be decisive in setting military objectives that require a broad involvement of defense resources. In addition, the need for effective participation of beneficiaries, both in the planning phase and during actions, must be taken into account to create the foundation of the four pillars of sustainable development.

Carrying out an independent assessment of the sustainability of projects aimed at supporting other foreign soldiers is another recommendation received by the US military management in 2017<sup>85</sup>. Regarding the participation in the reconstruction of Afghanistan, the reports did not provide clear information on the existence of such assessments<sup>86</sup>. Furthermore, there was a recommendation on the information resource, the most recent audit report stating the need for early involvement of intelligence structures to gather information on the participation of host country officials in activities of corruption, crime, trafficking, and terrorism<sup>87</sup>, to identify obstacles to the implementation of reconstruction projects.

Referring to the considerable effort made by the US military management in Afghanistan, attested by the impressive volume of the allocated resources, as well as the low sustainability of the positive results, one cannot help wonder if there were also some benefits. The analyzed documents highlighted some beneficial aspects of NATO's presence

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<sup>80</sup> *Ibidem*, p. 7.

<sup>81</sup> *Ibidem*, p. 9.

<sup>82</sup> *Ibidem*, p. 11.

<sup>83</sup> *Ibidem*, p. 39.

<sup>84</sup> *Ibidem*, p. 40.

<sup>85</sup> *Ibidem*.

<sup>86</sup> Special Inspector General for Afghanistan Reconstruction. *The Risk of Doing the Wrong Thing Perfectly: Monitoring and Evaluation of Reconstruction Contracting in Afghanistan*. [online]. 2021. SIGAR-21-41-LL. pp. XVIII, 16. [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-41-LL.pdf>>.

<sup>87</sup> *Ibidem*, p. 81.

in Afghanistan<sup>88</sup>, with applicability to the defense system of any participating member or partner country, and to the American one, as follows:

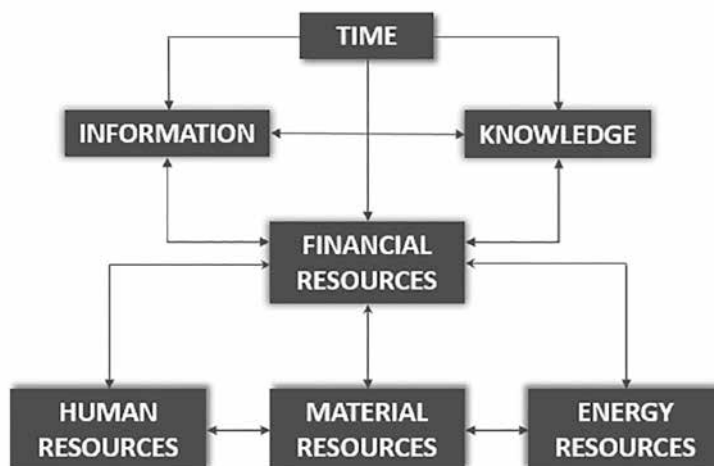
- opportunity to test cohesion, with outstanding results, especially in the fight against terrorism;
- awareness of the need to set realistic targets for the military instrument of power, aligned with the tasks entrusted to it, and to complement the military effort by actors from other instruments of power;
- improvement of combat capabilities and progress on interoperability and political integration;
- identification of the need to connect to the specifics of the host nation and to align with its ability to absorb the received support;
- demonstration of the ability to successfully carry out a non-combatant evacuation operation. As mentioned earlier, the validity of these results can be noticed at the level of all participating countries, but, at the same time, there is no communication of a benefit specific to the US military structures.

## 5 RESEARCH RESULTS

Analyzing the wide range of defense resources used by the US Department of Defense in Afghanistan, an hierarchical interdependence between the main types of such resources, schematized in the following figure, shows that: the allotted time can determine the level of information resource and of that represented by knowledge. Measures to reduce the time required to obtain these two types of resources can only result in low levels. Based on available information and knowledge, the need for financial resources can realistically be measured. In turn, they can influence both the level of information and knowledge resources, as well as the level of human, material and energy resources required.

Furthermore, the interdependence relationship also shows that resources at the bottom level can influence the resizing of those at higher levels. The main benefit is that their long-term availability can reduce the financial resources that could be redirected to obtain new information and knowledge resources. In this respect, for the analyzed case, it can be considered that a sustainable use of human, material and energy resources could have reduced the level of financial resources, which could have been directed towards key resources, like information and knowledge.

<sup>88</sup> North Atlantic Treaty Organization. *Afghanistan Lessons Learned Process*. [online]. 2021. p. 1. [viewed date: 10 April 2022]. Available from: <[https://www.nato.int/nato\\_static\\_fl2014/assets/pdf/2021/12/pdf/2112-factsheet-afgh-lessons-en.pdf](https://www.nato.int/nato_static_fl2014/assets/pdf/2021/12/pdf/2112-factsheet-afgh-lessons-en.pdf)>.



**Figure 2:** The interdependence between the main types of defense resources used by the US management in Afghanistan

In addition, this interdependency highlights the need for a comprehensive approach when managing the broad range of defense resources, the unsustainable practices adopted in the case of one type having a boomerang effect upon the others.

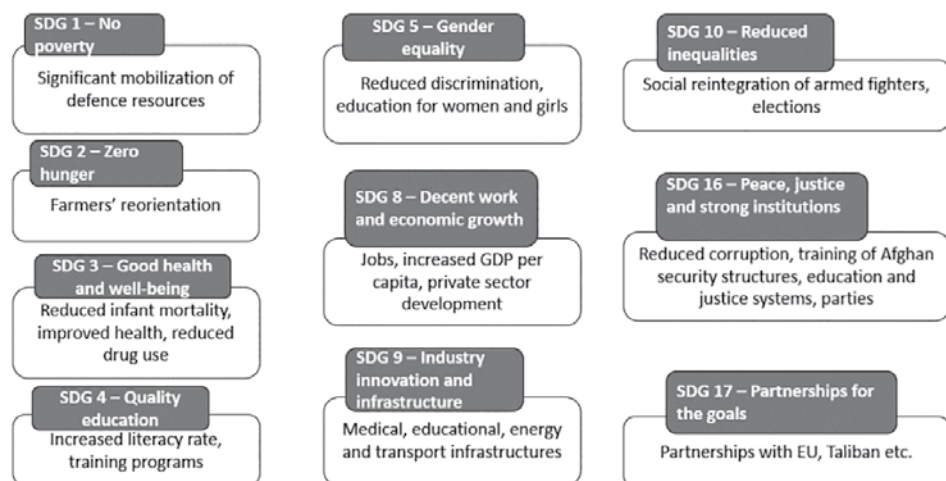
Contrary to the wide range of resources involved in Afghanistan, the positive results in state reconstruction were minor and at the same time important, consisting of: decreasing infant mortality rate, increasing the gross domestic product (GDP) per capita, increasing literacy rate, and improving health<sup>89</sup>. These achievements were largely undermined by the withdrawal of US troops from Afghanistan, with the ensuing events undoubtedly attesting to the unsustainability of the effort and to the fact that benefits were artificially obtained. An eloquent proof of this is the country's precarious situation, which now faces an unprecedented humanitarian crisis, with famine and disease affecting the Afghan population<sup>90</sup>.

Furthermore, analyzing the directions in which the presented defense resources were used, an outline of a trend towards sustainable development can be observed. Thus, of

<sup>89</sup> Special Inspector General for Afghanistan Reconstruction. *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*. [online]. 2021. SIGAR-21-46-LL. p. 33 [viewed date: 10 April 2022]. Available from: <<https://www.sigar.mil/pdf/lessonslearned/SIGAR-21-46-LL.pdf>>.

<sup>90</sup> United Nations. *Afghanistan: UN launches largest single country aid appeal ever*. [online]. [viewed date: 10 April 2022]. Available from: <<https://news.un.org/en/story/2022/01/1109492>>.

the seventeen sustainable development goals<sup>91</sup>, one can notice an orientation toward ten, obtaining an involvement of American defense resources of about 60% in this respect. The figure below resumes the correspondence between the projects in which the US defense resources were involved, and the sustainable development goals.



**Figure 3:** The correspondence between US military projects in Afghanistan and sustainable development goals (SDGs)

Because achieving these goals remains a long-term objective even for developed societies, the focus of US defense management on them in Afghanistan attests that a military organization could contribute to society's overall effort to achieve sustainable development. It should be noted that there were no programs oriented toward the environmental component of sustainable development. For example, goals no. 6 - "clean water and sanitation", no. 7 "affordable and clean energy", no. 11 - "sustainable cities and communities", no. 12 - "responsible consumption and production", no. 13 - "climate action", no. 14 - "life below water" and no. 15 - "life on land"<sup>92</sup> were not covered by the involved American defense resources. This can be considered an additional argument for the unsustainable use of US military defense resources in Afghanistan, as a country severely affected by conflict needs consistent environmental protection programs.

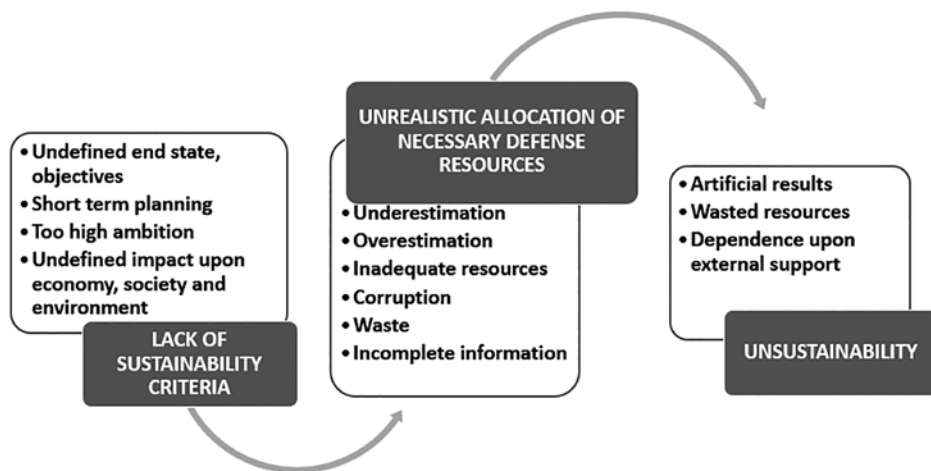
Corroborating the analyzed aspects with the recommendations formulated by the American auditors, and with the interdependence identified between the main types of US

<sup>91</sup> United Nations. *Transforming Our World: the 2030 Agenda for Sustainable Development*. [online]. New York, 2015,

pp. 14-28. [viewed date: 10 April 2022]. Available from: <<https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>>.

<sup>92</sup> *Ibidem*, p. 18.

defense resources used in Afghanistan, a model of unsustainability could be traced, that military decision-makers must know and avoid in the future. The following figure summarizes the most important elements of the unsustainability model emerging from the US military management actions in Afghanistan.



**Figure 4:** The model of unsustainable use of defense resources

For a sustainable military management, this model should also be perceived as a challenge to do things the other way around, to transpose each of its elements into actions that facilitate the sustainable use of defense resources, and to develop its good counterpart, namely, a model of sustainable use of defense resources. Moreover, to meet the sustainability goals, it is important that each element of the part dedicated to the allocation of necessary defense resources be analyzed in an integrative framework, that takes into consideration both the right level of each type of defense resources, and the benefits for economy, society, environment, and the military organization, in itself.

## CONCLUSIONS AND RECOMMENDATIONS

The military organization can allocate the available resources to contribute to the sustainable development of the society to which it belongs. In this respect, it is important that its efforts are integrated with those of other instruments of power to achieve long-lasting positive results, because the diversity of such instruments is not accidental. Additionally, realistic foresight of the involved defense resources is essential, as evidenced by the unsustainable results obtained by both underestimating and overestimating. To make this possible, defense management must adopt a rigorous long-term planning process, taking into account all actors involved, for the implementation of the

comprehensive approach and for the realistic definition of the desired military end state and objectives associated with it.

At the same time, the way defense resources are used can help achieve a sustainable military organization in itself. The case study highlighted the need to avoid unsustainable defense management practices, this measure having the potential to bring long-term benefits and avoid future inefficient solutions. From this perspective, the avoidance of rapid solutions, which artificially solve management problems related to all kinds of defense resources, could have a major contribution to the sustainability of positive effects.

Furthermore, the idea of analyzing every project that implies the usage of any kind of defense resources by sustainability criteria, should be adopted by any military organization, and their formulation should be a precondition for the implementation of any project, whether it is aimed at attracting the necessary resources, conducting administrative activities, or organizing, planning, and carrying out exercises and missions of any kind. The failure to regularly apply these criteria in day-to-day decisions, which do not involve the solving of a crisis situation, could lead to major difficulties in adapting optics to demanding situations. Therefore, the management of defense resources must practice in advance the orientation toward the durable benefits of its decisions, in order to avoid waste and insignificant results.

In this regard, ensuring conditions for the regeneration and retention of limited defense resources, correlating the assigned and assumed missions with the real possibilities of fulfillment, avoiding the overloading of military structures, their involvement in activities for which they were not trained and diminishing the dependence on external support, corroborated with an objective evaluation, could represent key factors for the existence and contribution of military organization to sustainable development.

To sum up, it should be noted that this case study has achieved its objectives. It revealed that defense resource management practices, despite their good intentions, could affect a nation's evolution toward sustainable development by not aiming at long-term beneficial results. In this sense, the proposed unsustainability model could lead to a more efficient management of defense resources. However, two main steps should be followed in the future through further research: validation and refinement of the proposed unsustainability model, and its consideration as a starting point for developing a sustainable use model of defense resources in the context of sustainable development. In this regard, more detailed studies and lessons identified from other military actions are needed to complete the framework for managing defense resources in a more efficient and responsible way.

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*Recenzovaný článek*

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## Ovlivňují ekonomické determinanty velikost vojenských výdajů?

### Do Economic Determinants Affect the Size of Military Spending?

Lenka Brizgalová, Vojtěch Müllner, Jakub Odehnal, Jiří Neubauer

**Abstrakt:** Cílem článku je identifikovat závislost vojenských výdajů a vybraných ekonomických determinantů na příkladu zemí V4, v letech 1999–2020. Jako ekonomické determinanty jsou vybrány: velikost hrubého domácího produktu, míra inflace, dluh a deficit vládního sektoru a nezaměstnanost. Korelační analýza prokázala očekávaný vztah mezi hrubým domácím produktem a vojenskými výdaji Maďarska a zejména Polska. Vztah mezi vojenskými výdaji a nezaměstnaností byl potvrzen u Polska, Maďarska a Slovenska, očekávaný vztah mezi vojenskými výdaji a vládním dluhem u České republiky. Lineárně regresní model potvrdil pozitivní vliv hrubého domácího produktu na vojenské výdaje v případě Polska, vliv nárůstu vojenských výdajů vlivem zvyšující se inflace u Maďarska a negativní vliv narůstající zadluženosti státu v případě České republiky.

**Abstract:** The article aims to identify the dependence of military expenditures and selected economic determinants on the example of the V4 countries in the years 1999–2020. Correlation analysis proved the expected relationship between the gross domestic product and the military expenditure of Hungary and especially Poland. The relationship between military spending and unemployment was confirmed for Poland, Hungary and Slovakia, the expected relationship between military spending and government debt for the Czech Republic. The linear regression model confirmed the positive effect of the gross domestic product on military expenditure in the case of Poland, the effect of the increase in military expenditure due to rising inflation in Hungary and the negative effect of increasing state indebtedness in the case of the Czech Republic.

**Klíčová slova:** vojenské výdaje; hrubý domácí produkt (HDP); harmonizovaný index spotřebitelských cen (HICP); dluh vládního sektoru; nezaměstnanost.

**Key words:** Military Expenditure; Gross Domestic Product (GDP); Harmonized Index of Consumer Prices (HICP); General Government Debt; Unemployment.



## ÚVOD

Vstup České republiky, Slovenska, Maďarska a Polska do Severoatlantické aliance přinesl novým členským zemím výhody kolektivní obrany spočívající především v možných zárukách plynoucích z článku 5 Washingtonské smlouvy. Současně však členství v alianci s sebou nese i náklady tohoto členství plynoucí mj. z článku 3 Washingtonské smlouvy, tak i z politického závazku aliančních zemí, který byl potvrzen na summitu ve Walesu v roce 2014<sup>1</sup>, vynakládat na obranu 2 % hrubého domácího produktu země. Schopnost většiny aliančních zemí plnit dlouhodobě takovýto závazek však vyžadoval výrazný nárůst vojenských výdajů, a to i v období charakterizovaném výraznými ekonomickými výkyvy jako byla například ekonomická krize, která měla své kořeny v roce 2008 v USA. Změna ekonomického vývoje charakterizovaného poklesem hrubého domácího produktu tak předznamenala výrazný tlak na pokles vojenských výdajů patrný u většiny zejména evropských aliančních zemí. Závěry summitu NATO ve Walesu a změna ve vnímání bezpečnostních hrozeb Ruské federace v roce 2014 vyvolaly intenzivní potřebu nárůstu vojenských výdajů. Ekonomické faktory však v případě České republiky, Slovenska a Maďarska, kdy zejména příchod koronavirové krize dále negativně působil na ekonomický vývoj, či stav veřejných financí stále působily jako jeden z hlavních determinantů vývoje vojenských výdajů. Až současná proměna v bezpečnostním prostředí a rusko–ukrajinský konflikt otevřel skutečnou debatu a zejména i politickou vůli vojenské výdaje navyšovat, kdy bezpečnostní determinanty namísto ekonomických určují skutečnou velikost vojenských výdajů. Článek se zabývá identifikací ekonomických determinantů vojenských výdajů, které jsou zkoumány u České republiky, Slovenska, Maďarska a Polska, které jsou si podobné z politického, historického a ekonomického hlediska. Autoři analyzují vývoj jednotlivých ekonomických determinantů charakterizovaných prostřednictvím vývoje hrubého domácího produktu země, míry inflace vyjádřenou harmonizovaným indexem spotřebitelských cen (HICP), míry nezaměstnanosti, vývoje deficitu vládního sektoru a zadluženosti země vyjádřenou dluhem vládního sektoru v období 1999 až 2020, tedy v období před současným rusko–ukrajinským konfliktem. Závěry však současně odhalují možné konsekvence a to především pro následující období, kdy bude ekonomický vývoj země a tedy i ekonomické determinanty určující pro vývoj vojenských výdajů.

Cílem článku je identifikovat závislost vojenských výdajů a vybraných ekonomických determinantů na příkladu zemí V4. Dílčím cílem článku je popsat vývoj vybraných ekonomických determinantů a vojenských výdajů v zemích V4 v období 1999–2020. Druhým dílčím cílem je zjistit, které ekonomické determinanty nejvíce ovlivňují velikost vojenských výdajů. V článku se snažíme ověřit hypotézu, která vychází ze závěrů výzkumu Nikolaidou, že u analyzovaných zemí s obdobným ekonomickým vývojem působí na vojenské výdaje shodné ekonomické determinanty a je možné tak hovořit o možné uniformitě faktorů ovlivňujících velikost vojenských výdajů.

<sup>1</sup> NATO. Wales Summit Declaration. [online], [cit. 2020-7-25] dostupné na: <[https://www.nato.int/cps/en/natohq/official\\_texts\\_112964.htm](https://www.nato.int/cps/en/natohq/official_texts_112964.htm)>.

Článek se zaměřuje na ověření vlivu vybraných makroekonomických determinantů na velikost vojenských výdajů u zemí V4, které byly zvoleny **z důvodu, že** se jedná o země velmi podobné z pohledu ekonomického, politického, kulturního a historického vývoje. Důležitá je také skutečnost, že vybrané země přistoupily k NATO po roce 1999 a zároveň jsou poměrně novými členskými státy EU. V rámci visegradské skupiny se tyto státy od roku 1991 hlásí k vzájemné ekonomické, politické a kulturní integraci.<sup>2</sup> Podobnost vybraných států umožňuje, alespoň částečně, zamezit vlivu ostatních faktorů na výsledky provedené analýzy. Článek je zpracován pomocí sběru dat, rešerše, komparace, korelační a regresní analýzy. Velikost vojenských výdajů je závislá nejen na ekonomických, ale i bezpečnostních a politických determinantech. Bezpečnostními a ani politickými determinanty se článek nezabývá.

Přínosem článku je ověření vlivu již dříve definovaných makroekonomických determinantů na velikost vojenských výdajů u států s podobnou historií a podobným politickým, kulturním a ekonomickým prostředím. Kromě obvyklých makroekonomických kritérií se článek snaží zjistit, zda na velikost vojenských výdajů mají či nemají vliv i vybraná fiskální kritéria. Pohled na tuto problematiku je komplexnější jelikož používá korelační i regresní analýzu.

## 1 DATA A POUŽITÉ METODY

K analýze vztahu mezi vojenskými výdaji a vybranými makroekonomickými ukazateli autoři použili data charakterizující vojenské výdaje zemí V4 (Česká republika, Slovensko, Polsko, Maďarsko) v letech 1999–2020, velikost hrubého domácího produktu (HDP), míru inflace vyjádřenou jako harmonizovaný index spotřebitelských cen v %, dluh vládního sektoru v % HDP, deficit vládního sektoru v % HDP a nezaměstnanost v %. Vybrané makroekonomické determinanty, u kterých autoři hledali vztah k velikosti vojenských výdajů, jsou základní ukazatele, které ukazují stav a zdraví národního hospodářství. Velikost vojenských výdajů a hrubého domácího produktu je uváděna v miliardách dolarů ve stálých cenách roku 2020. Data popisující vojenské výdaje jsou získána z databáze SIPRI (Stockholm International Peace Research Institute), data popisující vybrané makroekonomické ukazatele z databáze Organizace pro hospodářskou spolupráci a rozvoj (Organisation for Economic Co-operation and Development – OECD). Pro účely zjištění statistické vazby mezi vojenskými výdaji a zvolenými makroekonomickými ukazateli byly použity metody korelační a regresní analýzy.

Pro korelační analýzu byl zvolen Pearsonův korelační koeficient. Statistická významnost korelačních koeficientů v závěru je znázorněna pomocí symbolu \*, kdy \*\*\* značí, že korelační koeficient je statisticky významný na hladině 0,01, \*\* na hladině 0,05 a \* na

<sup>2</sup> VISEGRADGROUP. Deklarace o spolupráci České a Slovenské Federativní Republiky, Polské republiky a Maďarské republiky na cestě evropské integrace. [online], [cit. 2022-7-20] dostupné na: <<https://www.visegradgroup.eu/download.php?docID=56>>.

hladině významnosti 0,10. K analýze vojenských výdajů a jejich determinantů byl také použit lineární regresní model obsahující proměnné uvedené v tabulce 1.

**Tabulka č. 1:** Použité proměnné pro lineární regresní model

Makroekonomický ukazatel	Zkratka	Jednotka
Vojenské výdaje	VV	Miliarda USD
Hrubý domácí produkt	HDP	Miliarda USD
Harmonizovaný index spotřebitelských cen	HICP	Procento
Nezaměstnanost	Nez	Procento
Dluh vládního sektoru	Dluh	Procento HDP
Deficit vládního sektoru	Def	Procento HDP
Vojenské výdaje Ruska	VVR	Miliarda USD

**Zdroj:** Vlastní zpracování

Model navíc obsahuje i zpožděnou hodnotu vojenských výdajů, jejíž pomocí se výrazně zlepší statistické vlastnosti regresních modelů. Pro jednotlivé země V4 byl použit regresní model

$$VV_t = \beta_0 + \beta_1 VV_{t-1} + \beta_2 HDP_t + \beta_3 HICP_t + \beta_4 Nez_t + \beta_5 Dluh_t + \beta_6 Def_t + \beta_7 VVR_t + \epsilon_t$$

Uvedený model byl odhadnut pro každou zemi a následně byl redukován tzv. metodou „backward selection“<sup>3</sup>. Pro označení statistické významnosti odhadů parametrů modelu je použita stejná symbolika jako u korelačních koeficientů. Model současně umožnil použít i tzv. kontrolní proměnné, jež byly zvoleny jako zástupci ekonomických determinantů (zpožděná hodnota vojenských výdajů) a bezpečnostních determinantů (vojenské výdaje Ruska).

## 2 VYMEZENÍ EKONOMICKÝCH DETERMINANTŮ VOJENSKÝCH VÝDAJŮ

Ekonomické determinanty vojenských výdajů představují ekonomické faktory ovlivňující velikost vojenských výdajů země. Dle obecného přístupu vycházejícího z teorie poptávky po vojenských výdajích analyzované např. (Sezgin, Yildirim<sup>4</sup>, Dunne, Nikolai-

<sup>3</sup> HASTIE, T. J. and D. PREGIBON. Generalized Linear Models. In: Chambers, J. M. and T. J. Hastie, Eds., *Statistical Models in S*, Wadsworth & Brooks/Cole, Pacific Grove, Chapter 6, 1992

<sup>4</sup> SEZGIN, Y., YILDIRIM, J., 2002. The Demand for Turkish Defence Expenditure. *Defence and Peace Economics*. 13(2), 121–128.

dou<sup>5)</sup> autoři mezi ekonomické determinanty zpravidla řadí: velikost hrubého domácího produktu, tempo růstu hrubého domácího produktu, stav veřejných financí projevující se přebytkem nebo deficitem státního rozpočtu, míru zadluženosti ekonomiky, či mírou inflace.

Autor Nikolaidou<sup>6</sup> definuje jako potenciální determinanty vojenských výdajů faktory ekonomické, vojenské a politické. Za ekonomické faktory ovlivňující velikost vojenských výdajů považuje velikost hrubého domácího produktu země charakterizující ekonomikou výkonnost a míru cenové inflace (podrobněji o inflaci ve vojenských výdajích viz Holcner<sup>7</sup> et al.). Vojenské faktory představují proměnné, jež popisují velikost vojenských výdajů aliančních zemí, a velikost vojenských výdajů potenciálních znepřátelených zemí. Mezi politické proměnné Nikolaidou<sup>8</sup> řadí vliv obranné průmyslové základny a zájmových skupin na velikost vojenských výdajů a také vliv byrokratického aparátu na velikost rozpočtu. K vlastní analýze determinantů vojenských výdajů vybraných zemí Evropské unie v období 1961–2005 byl využit kointegrační model, jež neprokázal jednotnost ve faktorech ovlivňujících velikost vojenských výdajů analyzovaných evropských zemí. Statisticky významná závislost mezi např. velikostí hrubého domácího produktu a velikostí vojenských výdajů byla prokázána v případě Řecka, Portugalska, Holandska, Velké Británie, Itálie, Španělska a Rakouska. Nevýznamná vazba pak v případě Francie, Německa, Švédska, Belgie, Dánska, Finska, Lucemburska, Irska. Obdobné závěry o vlivu ekonomické výkonnosti na velikost vojenských výdajů analyzuje autor Solarin<sup>9</sup> prokazující pozitivní vazbu mezi analyzovanými proměnnými a to prostřednictvím modelu 82 zemí v období 1989 až 2012. Nikolaidou<sup>10</sup> současně analyzoval vztah mezi velikostí nevojenské části státního rozpočtu a velikostí vojenských výdajů identifikující možný tzv. vytěšňovací efekt vojenských výdajů. Negativní hodnota odhadnutého koeficientu v případě proměnné reprezentující nevojenskou část rozpočtu pouze v případě Lucemburska a Švédska potvrzuje, že nárůst nevojenské části rozpočtu určené např. pro potřeby vzdělávání či zdravotnictví snižuje vojenské výdaje Lucemburska a Švédska.

Autoři Sezgin, Yildirim<sup>11</sup> analyzují determinanty vojenských výdajů Turecka v období 1951–1998, kdy definují následující faktory determinující velikost vojenských výdajů:

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- 5 DUNNE, P., NIKOLAIDOU, E., 2001. Military expenditure and economic growth: A demand and supply model for Greece, 1960–1996, *Defence and Peace Economics*, 12 (1), 47–67.
  - 6 NIKOLAIDOU, E., 2008. The Demand for Military Spending: Evidence from the EU15 (1961–2005), *Defence and Peace Economics*, 19(4), 273–292.
  - 7 HOLCNER, V., AL-MADHAGI, G. Inflation ve výdajích na obranu: otevření diskuze. *Vojenské rozhledy*. 2006, č. 3, s. 47–55. ISSN 1210–3292.
  - 8 NIKOLAIDOU, E., 2008. The Demand for Military Spending: Evidence from the EU15 (1961–2005), *Defence and Peace Economics*, 19(4), 273–292.
  - 9 SOLARIN, S. K., 2018. Determinants of military expenditure and the role of globalisation in a cross-country analysis, *Defence and Peace Economics*, 29:7, 853–870.
  - 10 NIKOLAIDOU, E., 2008. The Demand for Military Spending: Evidence from the EU15 (1961–2005), *Defence and Peace Economics*, 19(4), 273–292.
  - 11 SEZGIN, Y., YILDIRIM, J., 2002. The Demand for Turkish Defence Expenditure. *Defence and Peace Economics*. 13(2), 121–128.

riziko externího konfliktu, požadavky na zajištění vnitřní bezpečnosti, rozpočtové faktory, politické faktory. Pro samotnou empirickou analýzu autoři Sezgin, Yildirim<sup>12</sup> analyzovali proměnné vymezené v práci autorů Dunne, Nikolaidou<sup>13</sup> charakterizující poptávku po vojenských výdajích Řecka determinovanou velikostí hrubého domácího produktu, velikostí populace, velikostí nevojenské části rozpočtu, otevřeností ekonomiky, velikostí tzv. spojeneckých vojenských výdajů a velikostí vojenských výdajů potenciálních nepřátelských zemí. Výsledky potvrzují, že vojenské výdaje byly v analyzovaném období závislé zejména na velikosti vojenských výdajů členů Aliance a na velikosti vojenských výdajů možných znepřátelených zemí. Výsledky analýzy potvrzují závěry předcházející práce autorů Chletsos, Kollias<sup>14</sup> identifikující velikost spojeneckých výdajů jako proměnnou s největším vlivem na turecké vojenské výdaje v analyzovaném období 1960–1992.

Autoři Abdelfattah et al.<sup>15</sup> na příkladu vývoje vojenských výdajů Egyptu v období 1960–2009 popisují vazbu mezi vojenskými výdaji a jejich velikostí v předcházejícím období, ekonomickou silou země měřenou prostřednictvím ukazatele HDP, velikostí vojenských výdajů sousedících zemí (Izrael, Jordánsko, Sýrie), velikostí populace, kvalitou demokracie a mírou ekonomické otevřenosti země měřené podílem čistého exportu na HDP země. Výsledek ekonometrického modelu odhaluje zejména pozitivní závislost vojenských výdajů na jejich velikosti v minulém období, negativní efekt velikosti HDP a čistého exportu. Úroveň zadluženosti země jako důsledek deficitu státního rozpočtu představuje jeden z fiskálních determinantů vojenských výdajů ovlivňujících jejich velikost. Autor Brzoska<sup>16</sup> na příkladu rozvojových ekonomik demonstroval masivní vliv vojenských výdajů na jejich zadluženost (předpokládal, že zahraniční zadluženost zemí je zapříčiněna z 30 % velikostí vojenských výdajů). Autoři Smyth, Narayan<sup>17</sup> analyzovali vliv vojenských výdajů na zahraniční zadluženost u Ománu, Sýrie, Jemenu, Bahrajnu, Iránu a Jordánska v období 1988 až 2002. Z výsledků panelové analýzy je patrné, že v dlouhém období vede 1% nárůst vojenských výdajů k prohloubení zadlužení země o téměř 1,6 % a v krátkém období o 0,2 %. Autoři však zároveň upozorňují, na omezený počet zemí Středního východu zahrnutý do analýzy zapříčiněný především dostupností odpovídajících datových souborů. Shodný efekt prokazující pozitivní vazbu mezi velikostí vojenských výdajů a úrovní zadluženosti ekonomiky je patrný i z výsledků analýzy autorů Dunne,

12 SEZGIN, Y., YILDIRIM, J., 2002. The Demand for Turkish Defence Expenditure. *Defence and Peace Economics*. 13(2), 121–128.

13 DUNNE, P., NIKOLAIDOU, E., 2001. Military expenditure and economic growth: A demand and supply model for Greece, 1960–1996, *Defence and Peace Economics*, 12 (1), 47–67.

14 CHLETOS, M., KOLLIAS, C., 1995. Defence Spending and Growth in Greece 1974–90: Some Preliminary Econometric Results, *Applied Economics* 27(9), 883–889.

15 ABDELFAH, Y., ABU-QARN, A., DUNNE, J., ZAHER, S., 2013. The Demand for Military Spending in Egypt: A panel analysis. *Defence and Peace Economics*, vol. 25(issue 3), pp. 231–245.

16 BRZOSKA, M. Research Communication: The Military Related External Debt of Third World Countries. *Journal of Peace Research*. 1983, 20(3):271–277.

17 SMYTH R, KUMAR NARAYAN P. A Panel Data Analysis of the Military Expenditure-External Debt Nexus: Evidence from Six Middle Eastern Countries. *Journal of Peace Research*. 2009;46(2):235–250.

Perlo-Freeman, Soydan<sup>18</sup> analyzující závislost prostřednictvím ARD modelu na příkladu ekonomiky Argentiny, Brazílie a Chile. Výsledky se shodují se závěry autorů Smyth, Narayan<sup>19</sup>, a prokazují tak shodně pozitivní vazbu mezi zkoumanými proměnnými.

**Tabulka č. 2:** Přehled zkoumaných ekonomických determinantů jednotlivými autory

Autor	Ekonomické determinanty
Nikolaïdou (2008) <sup>20</sup>	velikost HDP, velikost vládních výdajů (bez vojenských výdajů), podíl obchodní bilance na HDP země
Dunne, Nikolaïdou (2001) <sup>21</sup>	tempo růstu HDP, podíl úspor obyvatelstva na HDP, podíl obchodní bilance na HDP země, měnový kurz, míra inflace, velikost HDP na obyvatele, velikost pracovní síly
Solarin (2018) <sup>22</sup>	velikost HDP
Sezgin, Yildirim (2002) <sup>23</sup>	tempo růstu HDP, velikost exportu a importu, velikost vládních výdajů (bez vojenských výdajů)
Chletsos, Kollias (1995) <sup>24</sup>	tempo růstu HDP
Abdelfattah et al. (2013) <sup>25</sup>	velikost HDP, podíl obchodní bilance na HDP země
Brzoska (1983) <sup>26</sup>	velikost zahraničního zadlužení
Smyth, Narayan (2009) <sup>27</sup>	velikost HDP, inflace, velikost zahraničního zadlužení
Dunne, Perlo-Freeman, Soydan (2004) <sup>28</sup>	velikost dluhu jako podíl na HDP, velikost HDP, podíl exportu na HDP

Tabulka 2 uvádí přehled zkoumaných ekonomických determinantů jednotlivými autory. Na základě dříve provedených výzkumů a provedené rešerše se jako možné ekonomické determinanty vojenských výdajů ukazují velikost hrubého domácího produktu,

<sup>18</sup> DUNNE, P., PERLO-FREEMAN, S., SOYDAN, A., 2004. Military expenditure and debt in South America. *Defence and Peace Economics*, vol. 15(issue 2), pp. 173–187.

<sup>19</sup> SMYTH R, KUMAR NARAYAN P. A Panel Data Analysis of the Military Expenditure-External Debt Nexus: Evidence from Six Middle Eastern Countries. *Journal of Peace Research*. 2009;46(2):235–250.

<sup>20</sup> NIKOLAÏDOU, E., 2008. The Demand for Military Spending: Evidence from the EU15 (1961–2005), *Defence and Peace Economics*, 19(4), 273–292.

<sup>21</sup> DUNNE, P., NIKOLAÏDOU, E., 2001. Military expenditure and economic growth: A demand and supply model for Greece, 1960–1996, *Defence and Peace Economics*, 12 (1), 47–67.

<sup>22</sup> SOLARIN, S. K., 2018. Determinants of military expenditure and the role of globalisation in a cross-country analysis, *Defence and Peace Economics*, 29:7, 853–870.

<sup>23</sup> SEZGIN, Y., YILDRIM, J., 2002. The Demand for Turkish Defence Expenditure. *Defence and Peace Economics*. 13(2), 121–128.

<sup>24</sup> CHLETOS, M., KOLLIAS, C., 1995. Defence Spending and Growth in Greece 1974–90: Some Preliminary Econometric Results, *Applied Economics* 27(9), 883–889.

<sup>25</sup> ABDELATTAH, Y., ABU-QARN, A., DUNNE, J., ZAHAR, S., 2013. The Demand for Military Spending in Egypt: A panel analysis. *Defence and Peace Economics*, vol. 25(issue 3), pp. 231–245.

<sup>26</sup> BRZOSKA, M. Research Communication: The Military Related External Debt of Third World Countries. *Journal of Peace Research*. 1983, 20(3):271–277.

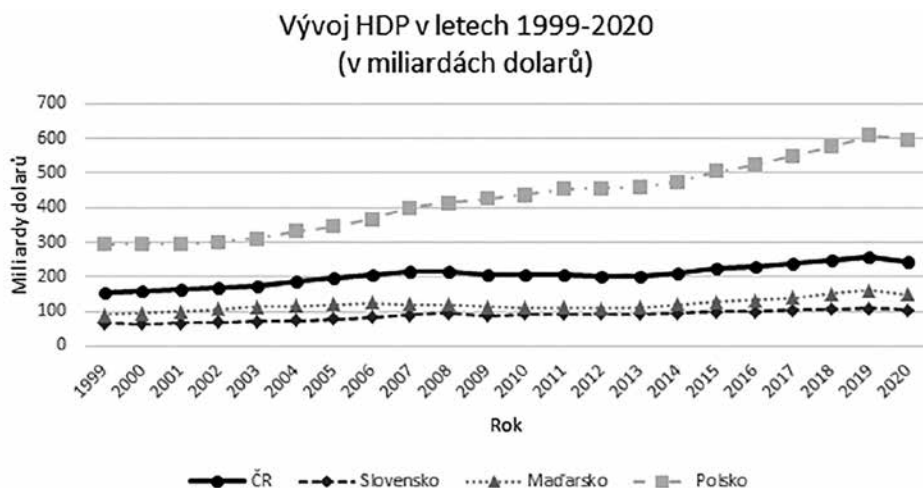
<sup>27</sup> SMYTH R, KUMAR NARAYAN P. A Panel Data Analysis of the Military Expenditure-External Debt Nexus: Evidence from Six Middle Eastern Countries. *Journal of Peace Research*. 2009;46(2):235–250.

<sup>28</sup> DUNNE, P., PERLO-FREEMAN, S., SOYDAN, A., 2004. Military expenditure and debt in South America. *Defence and Peace Economics*, vol. 15(issue 2), pp. 173–187.

tedy ekonomická výkonnost země, nezaměstnanost, míra inflace, ale také zadluženost země.

### 3 EKONOMICKÉ DETERMINANTY VOJENSKÝCH VÝDAJŮ A JEJICH VÝVOJ V LETECH 1999–2020

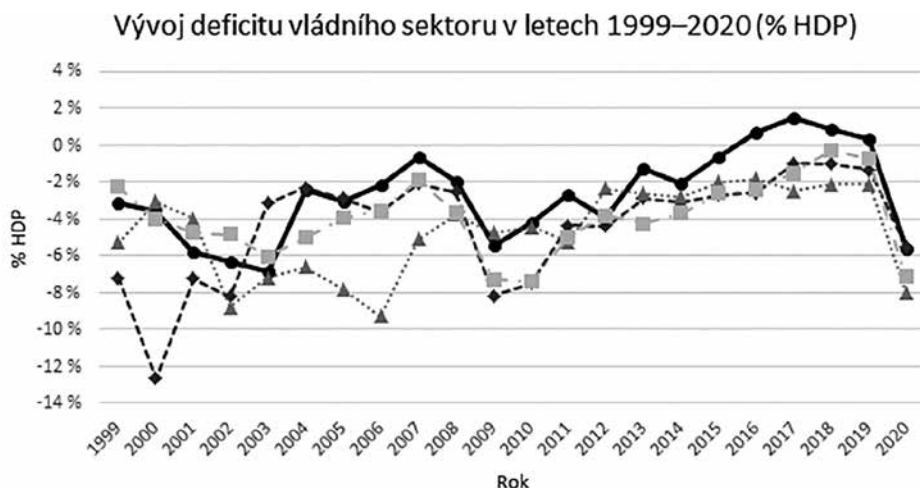
Hrubý domácí produkt představuje finální celkovou peněžní hodnotu statků a služeb, které jsou vyrobeny za určité časové období, většinou za rok. Aby bylo možné porovnávat objem jednotlivých výdajů v čase, byla velikost HDP jednotlivých zemí očištěna o změnu cenové hladiny, kdy jako základní rok počítáme rok 2020. Obrázek 1 ukazuje vývoj velikosti HDP u zemí V4 od roku 1999 do roku 2020. Z obrázku je zřejmé, že nejvýkonnější ekonomiku má Polsko, které v roce 2020 mělo HDP o velikosti 596,89 mld. USD. Druhou nejvýkonnější ekonomiku má Česká republika, které v roce 2020 mělo HDP o velikosti 245,32 mld. USD. Třetí nejvýkonnější ekonomiku má Maďarsko, které v roce 2020 mělo HDP o velikosti 149,26 a čtvrtou Slovensko, které mělo HDP o velikosti 104,96 mld. USD. U všech sledovaných zemí až na Polsko je mezi lety 2008 a 2009 zřejmý pokles výkonu národního hospodářství, který byl způsoben dopadem ekonomické krize, která začala v roce 2008 v USA a následně zasáhla i ostatní ekonomiky. Jen u již zmiňovaného Polska pozorujeme v čase trvalý růst velikosti HDP.



**Obrázek č. 1:** Vývoj HDP v letech 1999–2020 (v miliardách dolarů, ve stálých cenách roku 2020)  
Zdroj: Vlastní zpracování dle dat OECD<sup>29</sup>

<sup>29</sup> Gross domestic product (GDP)Total, Million US dollars, 1999–2021. [online], [cit. 2022-3-15] dostupné na: <<https://data.oecd.org/gdp/gross-domestic-product-gdp.htm>>.

Deficit vládního sektoru je ukazatel, který udává míru disproporce mezi příjmy a výdaji za období zpravidla jednoho roku. Aby bylo možné porovnávat deficity mezi jednotlivými zeměmi, je tento ukazatel uváděn jako procento HDP dané země. Obrázek 2 ukazuje vývoj ročních deficitů vládního sektoru v procentech HDP od roku 1999 do roku 2020. Ve sledovaném období jsou u všech zemí rozpočty vládního sektoru v deficitu, kdy jedinou výjimkou je Česká republika, která v letech 2016 až 2019 vykazovala přebytky rozpočtu. Od roku 2007 je zřejmý společný trend ve vývoji deficitů jednotlivých zemí, kdy se na velikosti deficitu významně projevuje ekonomická krize, která měla své kořeny v roce 2008. V letech následujících bezprostředně po vypuknutí krize se zvyšují deficity u všech zemí a na předkrizovou úroveň se vrací až v roce 2013. Další procentní růst deficitů vládního sektoru, můžeme sledovat v roce 2020, což lze odůvodnit dopady ekonomických distorzí, které byly způsobeny pandemií viru COVID-19.



**Obrázek č. 2:** Vývoj deficitu vládního sektoru v letech 1999–2020 (% HDP)

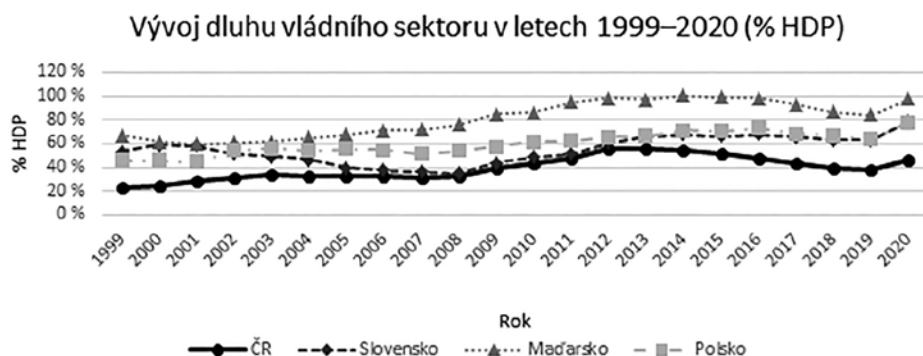
Zdroj: Vlastní zpracování dle dat OECD<sup>30</sup>

Kumulací deficitů jednotlivých let vzniká dluh vládního sektoru, který je udáván jako podíl na HDP. Obrázek 3 znázorňuje vývoj dluhu vládního sektoru od roku 1999 až do roku 2020 ve všech zkoumaných zemích. Zatímco u většiny států od roku 1999 do roku 2020 sledujeme nárůst vládního dluhu, Slovensko od roku 2001 do roku 2008 vládní dluh snižovalo až na 34,9 % HDP. V celém sledovaném období je nejméně zadluženou zemí Česká republika, které vzrostl vládní dluh z 23,7 % HDP v roce 1999 na 46,5 % HDP v roce 2020. Slovensku vzrostl vládní dluh z 53,1 % HDP v roce 1999 na 78,7 % HDP v roce 2020. Maďarsku vzrostl vládní dluh z 67,3 % HDP v roce 1999 na 98,1 % HDP v roce 2020 a Polsku vzrostl vládní dluh ze 45,9 % HDP v roce 1999 na 77,8 % HDP v roce

<sup>30</sup> General government deficitTotal, % of GDP, 1999–2020. [online], [cit. 2022-3-15] dostupné na: <<https://data.oecd.org/gga/general-government-deficit.htm#indicator-chart>>.



2020. I na velikosti vládního dluhu se negativně projevuje ekonomická krize z roku 2008 a ekonomické distorze z let 2019, které byly způsobeny pandemií viru COVID-19. V letech bezprostředně následujících po zmiňovaných milnících sledujeme poměrně strmý růst zadlužení u všech sledovaných zemí.



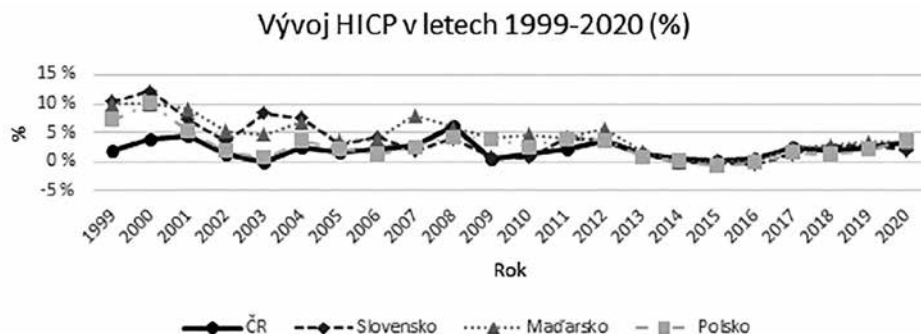
**Obrázek č. 3:** Vývoj dluhu vládního sektoru v letech 1999–2020 (%)

Zdroj: Vlastní zpracování dle dat OECD<sup>31</sup>

Harmonizovaný index spotřebitelských cen (HICP), je ukazatel meziroční změny cenové hladiny, který od roku 1996 používá Evropská centrální banka<sup>32</sup>. Obrázek 4 zobrazuje vývoj HICP od roku 1999 do roku 2000. Ve sledovaném období, jsou zřejmé značné rozdíly v meziročních změnách cenových hladin do roku 2012 a naopak jistý společný trend od tohoto období až do roku 2020. Nejvyšší inflaci zaznamenalo Slovensko a Polsko v roce 2000, kdy na Slovensku byla míra inflace 12,2 % a v Polsku 10,1 %. V Maďarsku byla nejvyšší inflace v letech 1999 a 2000 a to o velikosti 10 %. V České republice máme zaznamenanou nejvyšší míru inflace v roce 2008, kdy změna meziroční cenové hladiny dosahovala 6,3 %. Snížení cenové hladiny je pak možné sledovat na Slovensku v letech 2014 až 2016, v Polsku v letech 2015 a 2016 a v České republice v roce 2003.

<sup>31</sup> General government debt Total, % of GDP, 1999–2020. [online], [cit. 2022-3-14] dostupné na: <<https://data.oecd.org/gga/general-government-debt.htm#indicator-chart>>.

<sup>32</sup> Harmonised index of consumer prices. [online], [cit. 2022-3-20] dostupné na: <[https://ec.europa.eu/eurostat/cache/metadata/en/prc\\_hicp\\_esms.htm](https://ec.europa.eu/eurostat/cache/metadata/en/prc_hicp_esms.htm)>.



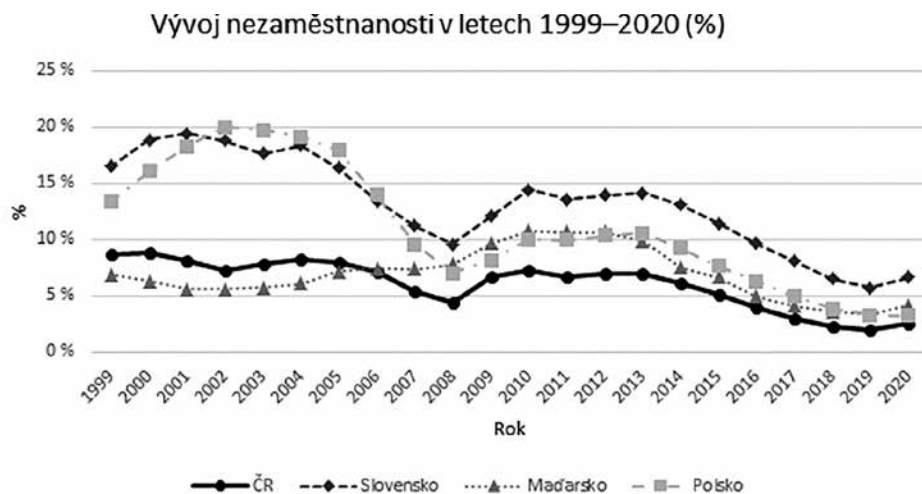
**Obrázek č. 4:** Vývoj HICP v letech 1999–2020 (%)

Zdroj: Vlastní zpracování dle dat OECD<sup>33</sup>

Obecná míra nezaměstnanosti je ukazatelem, který udává podíl počtu nezaměstnaných na celkové pracovní síle. Tento ukazatel vychází z doporučení Eurostatu a Mezinárodní organizace práce (ILO) a jeho standardizovaný výpočet umožňuje srovnávat tuto míru u jednotlivých států.<sup>34</sup> Na obrázku 5 je zaznamenán vývoj míry nezaměstnanosti v letech 1999 až 2020. Nejvyšší míru nezaměstnanosti ve sledovaném období dosahuje Česká republika v roce 2000 o velikosti 8,78 %, Polsko v roce 2002 o velikosti 20 %, Slovensko v roce 2001 o velikosti 19,4 % a Maďarsko v roce 2010 o velikosti 10,8 %. Nejnižší míru nezaměstnanosti sledujeme u většiny států v roce 2019, kdy v České republice činila míra nezaměstnanosti 2,02 %, na Slovensku 5,72 % a v Maďarsku 3,3 %. V Polsku pak nejnižší míru nezaměstnanosti sledujeme v roce 2020 a to o velikosti 3,22 %. Od roku 2008 je zřejmý podobný trend ve vývoji nezaměstnanosti u všech sledovaných států, naopak do roku 2008 se tento ukazatel rozdílně vyvíjel u České republiky a Maďarska, u kterých byla míra nezaměstnanosti poměrně nízká a konstantní a dále u Polska a Slovenska, kde nejprve míra nezaměstnanosti stoupala až k přibližně 20 % a pak postupně až do roku 2008 klesala.

<sup>33</sup> Harmonized index of consumer prices, %, 1999–2020. [online], [cit. 2022-3-14] dostupné na: <<https://stats.oecd.org/index.aspx?queryid=82187#>>.

<sup>34</sup> Nové ukazatele nezaměstnanosti. [online], [cit. 2022-3-23] dostupné na: <[https://www.czso.cz/csu/czso/fd002a259d#:~:text=Obecn%C3%A1%20m%C3%ADra%20nezam%C4%9Bstnanosti%20porovn%C3%A1v%C3%A1%20po%C4%8Det,ILO\)%20a%20je%20mezin%C3%A1rodn%C4%9B%20srovnateln%C3%BD](https://www.czso.cz/csu/czso/fd002a259d#:~:text=Obecn%C3%A1%20m%C3%ADra%20nezam%C4%9Bstnanosti%20porovn%C3%A1v%C3%A1%20po%C4%8Det,ILO)%20a%20je%20mezin%C3%A1rodn%C4%9B%20srovnateln%C3%BD)>.



**Obrázek č. 5 – Vývoj nezaměstnanosti v letech 1999–2020 (%)**

Zdroj: Vlastní zpracování dle dat OECD<sup>35</sup>

#### 4 VOJENSKÉ VÝDAJE A JEJICH VÝVOJ V LETECH 1999–2020

Vojenské výdaje jsou velmi frekventovaným pojmem, který však zahrnuje celou řadu problémů. Pro konzistentnost údajů a jejich možné srovnání používáme data získaná z databáze SIPRI. Vojenské výdaje, které jsou uvedeny do vztahu k makroekonomickým veličinám, mohou vyjádřit spotřebu vojenského sektoru. Vojenské výdaje jsou ovlivňovány vyspělostí ekonomiky dané země. Mezi faktory, které determinují velikost vojenských výdajů, patří velikost a struktura HDP, výkonnost národního hospodářství, politická rozhodnutí a také závazky vyplývající z členství v NATO.

Ze zkoumaných zemí přistoupily do NATO 12. března 1999 Česká republika, Maďarsko a Polsko. Slovensko přistoupilo v další vlně, 29. března 2004. Ve zkoumaném období se k přijatému závazku vynakládat 2 % HDP na vojenské výdaje přiblížila výší 1,9 % Česká republika v roce 1999, 2000 a 2003. Maďarsko závazek 2 % HDP nenaplnila ani v jednom ze zkoumaných let. Slovenská republika se hranici 2 % přiblížila v roce 2001, 2003 a 2020 velikostí vojenských výdajů ve výši 1,95 % HDP. Polsko vynakládá na vojenské výdaje nejvíce ze čtyř zkoumaných zemí. Svůj závazek naplnilo v roce 2007, 2008, 2015 vynakládalo 2,1 % a v roce 2020 2,3 %.

<sup>35</sup> Unemployment rate Total, % of labour force, 1999–2020. [online], [cit. 2022-3-14] dostupné na: <<https://data.oecd.org/unemp/unemployment-rate.htm>>.

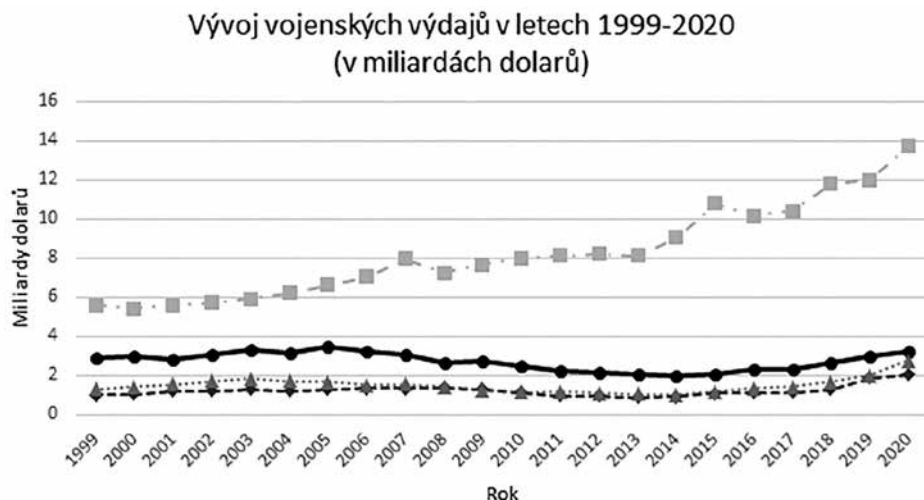
Země V4 od roku 1999 usilovaly o restrukturalizaci a redukcí svých ozbrojených sil. V roce 2000 byl světový průměr vojenských výdajů 130 dolarů na obyvatele, celkově se vydalo 798 miliard USD na vojenské výdaje. V porovnání se zeměmi V4 vynakládala ČR nejvíce vojenských výdajů na obyvatele ze zkoumaných zemí, jejich výše činila 112,5 dolarů na obyvatele v cenách daného roku, v celkovém vyjádření 2,971 mld. dolarů v cenách roku 2020. V roce 2001 světové vojenské výdaje činily 839 mld. USD, což představuje 2,6 % světového HDP a v průměru 137 dolarů na obyvatele. Ze zkoumaných zemí ani jedna tohoto průměru nedosahovala. Rok 2001 představoval období, kdy globálně začaly více růst vojenské výdaje a to především výdaje Spojených států amerických a to v důsledku teroristických útoků 11. září 2001. V období následujícím po tomto roku se i ve zkoumaných zemích projevil růst jejich vojenských výdajů.

Vojenské výdaje se v České republice v letech 2000 až 2005 pohybovaly kolem 3 mld. USD. Tento trend je možné pozorovat na obrázku 6. V roce 2003 dosáhly 3,314 mld. USD „Rok 2003 byl pro Českou republiku prvním rokem realizace transformace Armády České republiky, jejímž cílem bylo vytvořit profesionální armádu.“<sup>36</sup> Od roku 2005 do roku 2014 docházelo každý rok k poklesu vojenských výdajů ČR. K výraznému poklesu došlo v roce 2008 v důsledku ekonomické krize a tento trend ustal až v roce 2015. „Ekonomická krize v roce 2009 měla na světové vojenské výdaje jen malý dopad, protože většina velkých ekonomik zvýšila veřejné výdaje, aby čelila recesi. Celosvětově nedocházelo ke snižování vojenských výdajů. Ovšem některé menší ekonomiky, méně schopné udržet velké deficity však výdaje snížily“<sup>37</sup>, což byl případ všech námi zkoumaných ekonomik a to v období několika let. Od roku 2016 dochází k pozvolnému nárůstu vojenských výdajů v ČR, což může souviset se závěry Summitu ve Walesu, konaném v roce 2014. Tento trend se projevil v daném roce i v Maďarsku a na Slovensku. Vojenské výdaje ČR nedosahovaly ani v roce 2020 požadované 2 % HDP, ale s válkou na Ukrajině, která vypukla 24. února 2022 k tomuto zvýšení budeme jistě směřovat nejenom z politických, ale především z bezpečnostních důvodů.

<sup>36</sup> Resortní – fakta a trendy, 2003. [online], [cit. 2022-4-10] dostupné na: <<https://mocr.army.cz/assets/finance-a-zakazky/resortni-rozpocet/roz2003.pdf>>.)

<sup>37</sup> SIPRI. Military expenditure. [online], [cit. 2022-4-19] dostupné na:

<https://sipri.org/yearbook/2010/05>.



**Obrázek č. 6:** Vývoj vojenských výdajů v letech 1999–2020 (v miliardách dolarů ve stálých cenách roku 2020)

Zdroj: Vlastní zpracování dle dat SIPRI<sup>38</sup>

Slovensko v letech 1999 a 2000 zaznamenalo pokles vojenských výdajů na obyvatele. S očekáváním přijetí do Severoatlantické aliance docházelo v letech 2000 až 2008 k jejich každoročnímu růstu. Mírný pokles byl zaznamenán v roce 2004. V roce 2009, v souvislosti s ekonomickou krizí došlo k poklesu vojenských výdajů a tento trend trval až do roku 2013, kdy jejich velikost dosáhla výše 0,985 mld. USD. Od roku 2013 docházelo k postupnému růstu, který trval až do roku 2020, kdy velikost vojenských výdajů činila 2,047 mld. USD.

Maďarsko, které bylo v roce 1999 přijato do NATO, tak až do roku 2004 zvyšovalo své vojenské výdaje z částky 1,291 mld. USD na 1,708 mld. USD. Od roku 2004 docházelo k mírnému poklesu vojenských výdajů, který se prohloubil v roce 2008, kdy došlo k výraznému poklesu vojenských výdajů v důsledku ekonomické krize. Tento stav trval až do roku 2014, kdy částka vojenských výdajů dosáhla velikosti 1,032 mld. USD. Od tohoto roku se vojenské výdaje zvyšovaly až do zkoumaného roku 2020, kdy dosáhly velikosti 2,771 mld. dolarů. Od roku 2019 Maďarsko zvyšuje významně vojenské výdaje, což je v důsledku finančních stimulů v období pandemie Covid-19.

Polsko v letech 1999–2000 zaznamenalo pokles vojenských výdajů, jejich výše v roce 2000 dosahovala 5,598 mld. USD. Od roku 2000 až do roku 2007 docházelo k růstu vojenských výdajů, v roce 2008 se projevil mírný pokles na 7,258 mld. USD, který byl spojen s ekonomickou krizí. Od roku 2009, jak je vidět na obrázku 6 docházelo k růstu

<sup>38</sup> Military expenditure by country, in millions of US\$ at constant prices and exchange rates, 1949–2020 [online], [cit. 2022-7-26] dostupné na: <<https://milex.sipri.org/sipri>>.

vojenských výdajů s poklesem v roce 2011 až 2014 a v roce 2016. Od roku 2017 vojenské výdaje vykazují rostoucí tendenci. V roce 2020 dosáhly vojenské výdaje velikosti 13,718 mld. dolarů. Při porovnání velikosti vojenských výdajů ve zkoumaných zemích je patrné, že Polsko vynakládá nejvíce vojenských výdajů ve stálých cenách roku 2020, v přepočtu na obyvatele, ale také v procentuálním vyjádření HDP. Ve zkoumaném období se jejich výše pohybovala od 1,8 % až do 2,3 % vojenských výdajů na HDP. Polsko je netypickým případem v porovnání s ostatními zkoumanými zeměmi. V roce 2017 schválilo zákon o postupném růstu rozpočtu polského ministerstva obrany, který má závazně zvedat vojenské výdaje až na 2,5 % HDP v roce 2030.<sup>39</sup> V dubnu roku 2022 Parlament Polské republiky (Sejm) projednal novelu zákona O obraně vlasti (Ustawa o obronie Ojczyzny), kdy se schválilo zvýšení vojenských výdajů až na 3 % HDP. Podle nedávno přijatých plánů má dojít ke zvýšení vojenských výdajů na 2,3 % HDP v roce 2023 a na 2,5 % HDP v roce 2024.<sup>40</sup> Polsko v reakci na ruskou invazi na Ukrajinu zvýší v roce 2023 vojenské výdaje na 3 % HDP, což oznámil vicepremiér Jarosław Kaczyński<sup>41</sup>.

Dopad pandemie Covid-19 na vojenské výdaje bude jasnější až v následujících letech. Tento dopad v roce 2020 na vojenské výdaje je rozdílný, některé země (např. Angola, Brazílie, Chile, Kuvajt, Rusko a jih Korea) snížily či přeměrovaly vojenské výdaje na řešení pandemie. Na druhé straně, Maďarsko v roce 2020 zvýšilo vojenské výdaje jako součást finančních stimulů v reakci na pandemii. V tomto období vojenská zátěž ve většině zemí v roce 2020 vzrostla a to z důvodu, že využila vojenské prostředky, zejména personál k řešení pandemie Covid-19.<sup>42</sup>

## 5 VÝSLEDKY KORELAČNÍ A REGRESNÍ ANALÝZY VZTAHU MEZI VOJENSKÝMI VÝDAJÍ A EKONOMICKÝMI DETERMINANTY

K analýze vazby mezi vybranými determinanty vojenských výdajů a jejich velikostí autoři využili korelační a regresní analýzu s cílem prokázat závislost mezi analyzovanými proměnnými a významnost jednotlivých determinantů. Autoři se současně snažili i prokázat, zda u analyzovaných zemí s obdobným ekonomickým vývojem působí na vojenské výdaje shodné ekonomické determinanty a je možné tak hovořit o možné uniformitě

<sup>39</sup> Grohmann, Jan. Polsko v roce 2021 vydá na obranu 2,2 % HDP. [online], [cit. 2022-3-10] dostupné na:

<<https://www.armadninoviny.cz/polsko-pristi-rok-vyda-na-obranu-2-hdp.html>>.

<sup>40</sup> Litva a Polsko zvedají vojenské výdaje na 3 % HDP. [online], [cit. 2022-3-1] dostupné na:

<<https://www.armadninoviny.cz/litva-a-polsko-zvedaji-vojenske-vydaje-na-3-hdp.html>>.

<sup>41</sup> Polsko zvýší svoje obranné výdaje na 3 % HDP. [online], [cit. 2022-3-1] dostupné na: <[https://www.natoaktual.cz/v-mediich/polsko-investice-obrana-2-hdp-zvysi.A220304\\_145231\\_na\\_media\\_m02](https://www.natoaktual.cz/v-mediich/polsko-investice-obrana-2-hdp-zvysi.A220304_145231_na_media_m02)>.

<sup>42</sup> SIPRI, Military expenditure. [online]. [cit. 2022-4-29] dostupné na: <https://sipri.org/yearbook/2021/08>.

faktorů ovlivňujících velikost vojenských výdajů (viz závěry Nikolaidou<sup>43</sup>). Přirozené vazby definované např. v Nikolaidou, či autory Abdelfattah et al.<sup>44</sup> mezi velikostí hrubého domácího produktu jako ukazatele ekonomické síly země a velikostí vojenských výdajů, či mezi velikostí inflace a vojenskými výdaji, mírou nezaměstnanosti a následně i vybranými fiskálními determinanty a jejich vlivem na velikost vojenských výdajů v případě České republiky, Slovenska, Maďarska a Polska autoři testovali prostřednictvím korelační analýzy. Tabulka 3 uvádí velikosti korelačních koeficientů vztahu mezi vojenskými výdaji a ekonomickými determinanty. Je-li absolutní hodnota korelačního koeficientu ve vztahu mezi vojenskými výdaji dané země a vybraným ekonomickým determinantem větší jako 0,5, tak je možné hovořit o silné korelaci a jedná se o vzájemnou závislost zkoumaných veličin. Statistická významnost těchto koeficientů je v tabulce rovněž znázorněna a to na hladině významnosti 0,01, na hladině 0,05 a na hladině 0,10.

**Tabulka č. 3:** Korelační koeficienty vztahu mezi vojenskými výdaji a ekonomickými determinanty

	Vojenské výdaje ČR	Vojenské výdaje Slovensko	Vojenské výdaje Maďarsko	Vojenské výdaje Polsko
HDP	-0,26	0,34	0,50**	0,97***
HICP	0,16	-0,09	0,11	-0,45**
Nezaměstnanost	0,19	-0,51**	-0,66***	-0,87***
Vládní dluh	-0,77***	0,06	-0,25	0,85***
Vládní deficit	-0,40*	0,14	-0,48**	0,29

Pozn: \*p<0,1; \*\*p<0,05; \*\*\*p<0,01

Výsledky korelační analýzy prokazují, že očekávaná pozitivní vazba mezi velikostí hrubého domácího produktu a vojenskými výdaji je statisticky významná a současně i silná pouze v případě Maďarska a Polska, přičemž zejména v Polsku docházelo k dlouhodobému navyšování vojenských výdajů v analyzovaném období, ve kterém je možné pozorovat hospodářský růst polské ekonomiky. Překvapivě u žádné z analyzovaných zemí nedošlo k potvrzení očekávané pozitivní vazby mezi inflací a velikostí vojenských výdajů, kdy pro udržení reálné kupní síly vojenských výdajů lze očekávat jejich nárůst v období zvyšující se inflace. Současně je však nutné poznamenat, že po většinu analyzovaného období byly zkoumané ekonomiky vystaveny pouze tzv. mírné inflaci. V případě zkoumání vztahu mezi nezaměstnaností a vojenskými výdaji je možné pozorovat negativní vazbu v případě Slovenska, Maďarska a Polska, jež potvrzuje některé teoretické závěry o možném vlivu vojenských výdajů a jejich konsekvencí na domácím trhu práce. V případě

<sup>43</sup> NIKOLAIDOU, E., 2008. The Demand for Military Spending: Evidence from the EU15 (1961–2005), *Defence and Peace Economics*, 19(4), 273–292.

<sup>44</sup> ABDELFAH, Y., ABU-QARN, A., DUNNE, J., ZAHER, S., 2013. The Demand for Military Spending in Egypt: A panel analysis. *Defence and Peace Economics*, vol. 25(issue 3), pp. 231–245.

fiskálních determinantů vojenských výdajů analyzovaných prostředím vazby mezi velikostí vládního dluhu, velikostí deficitu (přebytku) státního rozpočtu a výší vojenských výdajů došlo k potvrzení očekávané vazby v případě České republiky (negativní vazba) směřující k závěru, že případný nárůst zadluženosti působí jako faktor snižující velikost vojenských výdajů. V případě ostatních analyzovaných ekonomik nebyly prokázány očekávané vazby mezi fiskálními determinanty. U Polska je možné pozorovat pozitivní korelaci mezi velikostí vládního dluhu a vojenskými výdaji a v případě Maďarska zápornou korelaci mezi vládním deficitem a velikostí vojenských výdajů.

K podrobnějšímu ověření závěrů o existenci vazby mezi vybranými determinanty a velikostí vojenských výdajů byl následně využit lineárně regresní model umožňující identifikovat statisticky významné determinanty a jejich vazby na velikost vojenských výdajů, což dokládá tabulka 4. Model současně umožnil použít i tzv. kontrolní proměnné, jež byly zvoleny jako zástupci ekonomických determinantů (zpožděná hodnota vojenských výdajů) a bezpečnostních determinantů (vojenské výdaje Ruska).

**Tabulka č. 4:** Lineárně regresní modely (Česká republika, Slovensko, Maďarsko, Polsko)

		Česká republika	Slovensko	Maďarsko	Polsko
Vojenské výdaje	$VV_{t-1}$	0,755***	0,789***	0,889***	0,393
(zpožděná) hodnota		(0,158)	(0,175)	(0,203)	(0,295)
HDP	$HDP_t$				0,016**
					(0,007)
HICP	$HICP_t$	-0,080**		0,053**	
		(0,028)		(0,019)	
Nezaměstnanost	$Nez_t$	-0,069**	-0,043***	-0,090***	
		(0,024)	(0,014)	(0,018)	
Vládní dluh	$Dluh_t$	-0,017**	0,007**	0,015***	0,068*
		(0,007)	(0,003)	(0,004)	(0,035)
Vládní deficit	$Def_t$	-0,038*		-0,047*	
		(0,021)		(0,022)	
Vojenské výdaje	$VVR_t$		-0,011**		-0,049*
Ruska			(0,004)		(0,024)
Konstanta		1,835**	0,964*	-0,837*	-3,741**
		(0,663)	(0,480)	(0,410)	(1,400)
Počet pozorování		21	21	21	21
$R^2$		0,897	0,837	0,929	0,956
Korigované $R^2$		0,863	0,796	0,906	0,945
Residuální sm. chyba		0,174	0,125	0,122	0,545
F Statistika		26,177***	20,534***	39,485***	86,506***

Pozn: \* $p < 0,1$ ; \*\* $p < 0,05$ ; \*\*\* $p < 0,01$



Odhadnuté parametry lineárně regresního modelu popsané v tabulce 4 značí, že v případě České republiky jsou vojenské výdaje ovlivněny velikostí vojenských výdajů v předcházejícím roce, velikostí inflace, nezaměstnaností a fiskálními determinanty vojenských výdajů. V případě Slovenska jsou vojenské výdaje ovlivněny proměnnou velikost vojenských výdajů v předcházejícím roce, nezaměstnaností, velikostí dluhu a vojenskými výdaji Ruska. V případě Maďarska pak velikostí vojenských výdajů v předcházejícím roce, velikostí inflace, nezaměstnaností a fiskálními determinanty vojenských výdajů. Pouze v případě Polska jsou vojenské výdaje ovlivněny velikostí HDP, dále jsou závislé na velikosti zadluženosti a velikosti vojenských výdajů Ruska.

Z hlediska očekávaných vazeb došlo k potvrzení očekávaného pozitivního vlivu hrubého domácího produktu na vojenské výdaje pouze v případě Polska, vlivu nárůstu vojenskými výdajů vlivem zvyšující se inflace u Maďarska a o negativním vlivu narůstající zadluženosti státu na vojenské výdaje v případě České republiky.

## DISKUSE A ZÁVĚR:

Cílem článku bylo identifikovat závislost vojenských výdajů a vybraných ekonomických determinantů na příkladu zemí V4. Autoři provedli korelační analýzu mezi vojenskými výdaji a vybranými ekonomickými determinanty, za které byly zvoleny HDP, míra inflace (HICP), nezaměstnanost, vládní dluh a vládní deficit. Na otázku, která je položena v názvu článku můžeme odpovědět ano, korelační analýza prokázala vztah mezi vojenskými výdaji a některými z vybraných ekonomických determinantů. Pro podrobnější popis závislosti mezi vybranými ekonomickými charakteristikami a vojenskými výdaji autoři zároveň využili lineární regresní model umožňující identifikovat významnost jednotlivých determinantů a vzájemnou vazbu.

Jako nejvýznamnější z ekonomických determinantů je dle provedené korelační analýzy velikost HDP, tedy ekonomická síla země a to především v případě Polska, kde hodnota korelačního koeficientu dosáhla hodnoty 0,97. Shodný závěr o vlivu HDP na polské vojenské výdaje potvrzuje i zkonstruovaný regresní model polské ekonomiky prokazující pozitivní vazbu mezi HDP a velikostí vojenských výdajů. Tento výsledek koresponduje s provedeným výzkumem autorů: Nikolaidou<sup>45</sup>, Solarin<sup>46</sup> i Abdelfattah et al.<sup>47</sup>, kteří popisovali vazbu mezi vojenskými výdaji a ekonomickou silou země měřenou prostřednictvím ukazatele HDP. Vztah mezi vojenskými výdaji a nezaměstnaností se pomocí korelační analýzy potvrdil ve zkoumaném období u Slovenska, Maďarska i Polska. Podrobnější analýza však prokázala, že na základě výsledků regresního modelu zvyšující se nezaměstnanost

<sup>45</sup> NIKOLAIDOU, E., 2008. The Demand for Military Spending: Evidence from the EU15 (1961–2005), *Defence and Peace Economics*, 19(4), 273–292.

<sup>46</sup> SOLARIN, S. K., 2018. Determinants of military expenditure and the

role of globalisation in a cross-country analysis, *Defence and Peace Economics*, 29:7, 853–870.

<sup>47</sup> ABDELFAH, Y., ABU-QARN, A., DUNNE, J., ZAHAR, S., 2013. The Demand for Military Spending in Egypt: A panel analysis. *Defence and Peace Economics*, vol. 25(issue 3), pp. 231–245.

sníží vojenské výdaje v případě České republiky, Slovenska a Polska, což však může být přirozeně způsobeno zvyšujícími se výdaji na sociální politiku země v období růstu nezaměstnanosti a možným přerozdělováním finančních prostředků spočívajícím ve snižování vojenských výdajů spojených se vznikem tzv. nákladů obětovaných příležitostí. Pouze v případě polské ekonomiky nebyl tento efekt prokázán, což však plně koresponduje s realizovanou obrannou politikou Polska postavenou na zvyšování vojenských výdajů jako jednou z dlouhodobých priorit polské vlády. Jako překvapivé se jeví ne příliš významný vliv inflace na vojenské výdaje, kdy v rámci regresní analýzy je pozitivní vliv prokázán pouze v případě Maďarska, obdobně i v případě fiskálních determinantů, kdy překvapivě očekávaná negativní vazba mezi rostoucí zadlužeností a velikostí vojenských výdajů je prokázána pouze v případě České republiky.

Analýza vybraných makroekonomických determinantů u zemí V4 v rámci období 1999–2020 ukazuje, že z ekonomických determinantů, které mají vliv na velikost vojenských výdajů, je možné považovat ekonomickou sílu země vyjádřenou velikostí HDP. Z uvedeného lze očekávat, že v době ekonomického růstu dochází i k navyšování vojenských výdajů. Závěry tak současně potvrzují i možný efekt zvyšující se nezaměstnanosti, která roste v období poklesu HDP a tedy i v období, kdy stát musí vynakládat finanční prostředky ze státního rozpočtu např. na sociální politiku země. Současně je možné na základě výsledků prokázat, že se na příkladu analýzy skupiny zemí tvořící tzv. V4 neprokázala hypotéza o možné uniformitě faktorů ovlivňujících velikost vojenských výdajů, čímž výsledek zároveň potvrzuje i závěry autora Nikolaidou.

V souvislosti se zjištěními z již dříve publikovaných studií, je však možné potvrdit, že jsou makroekonomické determinanty pouze jednou skupinou determinantů, které velikost vojenských výdajů ovlivňují. Nikolaidou<sup>48</sup> jako další potenciální determinanty uvádí vojenské a bezpečnostní faktory, které jak dokládá případová studie determinantů vojenských výdajů v Turecku od autorů Sezgin, Yildirim<sup>49</sup>, hrají ve velikosti vojenských výdajů velmi významnou roli. Analýza vlivu makroekonomických determinantů u států V4 nám tak ukazuje, že i když je velikost HDP jedním z potenciálních determinantů, faktory, jako riziko externího konfliktu, požadavky na zajištění vnitřní bezpečnosti a politické faktory hrají v rozhodování významnější roli. Významný vliv bezpečnostních hrozeb a politických faktorů, je možné ukázat na současném přístupu k výši výdajů na obranu, kdy i přes skutečnost, že z důvodů pandemie viru Covid-19 sledujeme v rámci EU od roku 2019 pokles růstu HDP<sup>50</sup>, invaze Ruska na Ukrajinu, která začala v únoru 2022, způsobila významný obrat ve výši výdajů alokovaných na obranu. Jako příklad pak můžeme uvést Německo, které skokově navyšuje výdaje na obranu a v budoucnu plánuje výdaje

<sup>48</sup> NIKOLAIDOU, E., 2008. The Demand for Military Spending: Evidence from the EU15 (1961-2005), *Defence and Peace Economics*, 19(4), 273–292.

<sup>49</sup> SEZGIN, Y., YILDIRIM, J., 2002. The Demand for Turkish Defence Expenditure. *Defence and Peace Economics*. 13(2), 121–128.

<sup>50</sup> World Bank national accounts data, and OECD National Accounts data files. [online], [cit. 2022-4-15] dostupné na: <[https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?name\\_desc=false&locations=DE-EU](https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?name_desc=false&locations=DE-EU)>.

přesahující spojenci vyžadovaný podíl 2 % na HDP<sup>51</sup> a také avizované navýšení vojenských výdajů Polska v roce 2023 až na 3 % HDP. V současné době je velikost vojenských výdajů především otázkou bezpečnosti a politických rozhodnutí.

Prezentovaná zjištění mohou posloužit, jako základ pro rozšíření výzkumu. Tento výzkum by se pak mohl zabývat například souvislostí mezi geografickou vzdáleností potenciálních bezpečnostních hrozeb na velikost vojenských výdajů, nebo vztahem mezi existencí bezpečnostní hrozby pro alianční partnery a velikostí vojenských výdajů zemí, které nejsou bezprostředně ohroženy. Nabízí se také rozšíření výzkumu, kdy do analýzy vztahu mezi velikostí vojenských výdajů a ekonomickými determinanty budou zahrnuty všechny země Evropské unie či Severoatlantické aliance. V obdobném kontextu by bylo možné provést analýzu v jednotlivých regionech světa, což by si zasloužilo i doplnění o politické a bezpečnostní hrozby, které s velikostí vojenských výdajů velmi úzce souvisí.

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<sup>51</sup> Explainer: The proposed hike in German military spending. [online], [cit. 2022-3-1] dostupné na: <[https://www.sipri.org/commentary/blog/2022/explainer-proposed-hike-german-military-spending#:~:text=He%20proposed%20the%20creation%20of,product%20\(GDP\)%20to%20defence](https://www.sipri.org/commentary/blog/2022/explainer-proposed-hike-german-military-spending#:~:text=He%20proposed%20the%20creation%20of,product%20(GDP)%20to%20defence)>.

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## Career Education Of Military Leaders in the Area of the Lessons Learned

### Kariérové vzdělávání vojenských leaderů v oblasti získávání poznatků a využívání zkušeností

Richard Saibert

**Abstract:** The paper is focused on the issue how to develop and strengthen the competencies of military leaders essential for management of the Lessons Learned process in the Czech Armed Forces. The analysis shows that the issue of lessons learned is sufficiently addressed in relevant military documents which provides a foundation for definition of relevant competencies. Questionnaire survey proves that most respondents apply identified competencies related primarily to analysis phase and the verification of lessons identified. The article further presents a study curriculum proposal that can be used as a comprehensive framework for study programs within career education currently provided by the Center for Security and Military Strategic Studies of the University of Defence and the Training Command - Military Academy.

**Abstrakt:** Článek je zaměřen na problematiku rozvoje a posilování kompetencí vojenských leaderů nezbytných pro řízení procesu Získávání poznatků a využívání zkušeností (ZPVZ) v AČR. Analýza ukazuje, že problematika ZPVZ je dostatečně řešena v příslušných vojenských dokumentech, které poskytují základ pro definici relevantních kompetencí. Dotazníkové šetření prokázalo, že většina respondentů uplatňuje identifikované kompetence související především s analytickou fází a fází ověřováním identifikovaných zkušeností. Článek dále přináší návrh studijního kurikula, které může být využito jako ucelený rámec pro studijní programy v rámci kariérového vzdělávání poskytovaného v současné době Centrem bezpečnostních a vojenskostrategických studií Univerzity obrany a Velitelstvím výcviku – Vojenskou akademií.

**Key words:** Lessons Learned; Competency; Curriculum.

**Klíčová slova:** Získávání poznatků a využívání zkušeností; kompetence; kurikulum.

## INTRODUCTION

*"Our lesson learning capability is an invaluable resource. We can and we must do more to make sure lessons are identified, learned and implemented so that the future leaders of our Alliance can draw upon the best advice and adequate resources should the need arise."<sup>1</sup>*

Lessons Learned process is a principal part of knowledge management and its primary goal is to transform an individual experience into organizational knowledge.

The article builds upon the results of previous research published in the journal Vojenské rozhledy no. 2/2018, which dealt with personnel development as a part of the Lessons Learned process optimization. Within that research, there were analyzed individual types of educational programs of military personnel in various educational organizations within the Ministry of Defence (MoD) focused on the learning content related to the issue of lessons learned. It was stated that for the successful implementation and exploitation of the Lessons Learned process, it is necessary to pay sufficient attention to the personnel training and education in this domain<sup>2</sup>.

Presented article deals with the issue of the development and strengthening the capabilities of the Czech Armed Forces (CAF) officer in the field of management and organization of the Lessons Learned process, verification and application of the Lessons Learned process outputs, especially in the stages of force preparation and deployment in joint operations. The research is based on the current theories related to competencies identification, as well as the taxonomy used in the European Core Curriculum for Military Officers (MILOF-CORE) development.<sup>3</sup>

## 1 BACKGROUND

Lessons Learned process is one of the most important tools to support commanders (military leaders) in their decision-making to correct and eliminate deficiencies and sharing best practices. For successful performance of the Lessons Learned process, it is necessary to positively motivate subordinates to actively participate in collecting of the observations and identification of experience with direct impact on the activities

<sup>1</sup> GEOANĂ, Mircea. Speech by NATO Deputy Secretary General, Mircea Geoană, at the NATO Lessons Learned conference. *NATO: North Atlantic Treaty Organization* [online]. Brusel: NATO, 2021, 16. 3. 2021 [cit. 2021-5-22]. Available at: <https://bit.ly/2S4pPnQ>

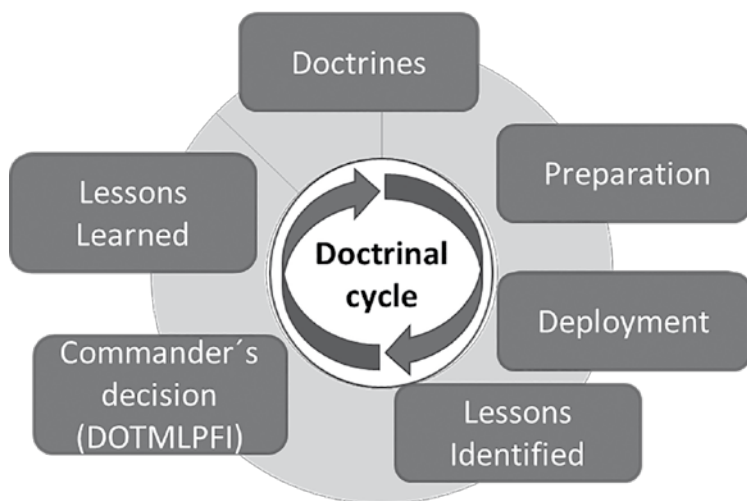
<sup>2</sup> KOLÁČNÁ KOSECOVÁ, Janka, SAIBERT, Richard. *Optimalizace procesu získávání poznatků a využívání zkušeností a význam přípravy personálu v této oblasti*. Vojenské rozhledy. (Czech Military Review.), 2018, 27(59)(2), 33-52. ISSN 1210-3292

<sup>3</sup> SAIBERT, Richard. *European Sectoral Qualifications Framework for Military Officer Profession from the Perspective of the Czech Republic*. VOJENSKÉ ROZHLEDY-CZECH MILITARY REVIEW, 2021, 30(3), 59-74. ISSN 1210-3292

of the CAF<sup>4</sup>. Experience gained from real military operations and from the training as well as accessible knowledge have a significant influence on the further preparation and deployment of the units and staffs<sup>5</sup>.

Lessons Learned process is a key part of knowledge management, in which new knowledge and new lessons are gained through direct action or evaluation after the activity. This requires a transition from the traditional perception of consequences to identifying the root of causes, and above all the prediction of further developments and all possible subsequent events. From an individual perspective it is about the ability to see connections outside the scope of one's own job role. It is being talked about the ability to apply critical and abstract thinking and synthesize ideas (know-why)<sup>6</sup>.

Lessons Learned process can actually be seen as a subprocess that is a part of a continuous capability development of the armed forces. Picture 1 illustrates so called "doctrinal cycle" where implemented experience and knowledge captured in doctrines are those necessary for changes in the further activities of an armed forces.



**Picture 1:** Utilization of the Lessons Learned process output in the framework of capability development

<sup>4</sup> KOSECOVÁ, Janka; KUBEŠA, Milan; GRMELA, František. Místo a role procesu získávání poznatků a využívání zkušeností v Armádě České republiky. *Vojenské rozhledy. (Czech Military Review.)*, 2015, sv. 24(56), č. 1, s. 7285. ISSN 12103292

<sup>5</sup> Nařízení NGŠ AČR k realizaci a rozvoji procesu ZPVZ v AČR. 2017. Praha. Čj. MO 72925/2017-1122

<sup>6</sup> SENGE, Peter M. *The Fifth Discipline: The Art & Practice of the Learning Organization*. Praha: Management Press, s.r.o, 2009. ISBN 978-80-7261-162-1

Source: KOSECOVÁ, Janka. *Proces získávání poznatků a využívání zkušeností jako součást procesního řízení v resortu Ministerstva obrany. Vojenské rozhledy. (Czech Military Review.)*, 2016, sv. 25(57), č. 3, s. 4660. ISSN 12103292, str. 113.

Sometimes the Lessons Learned process is understood as a means of internal control to verify the state of compliance with laws and internal regulations, or being associated with control activities as such. This is a completely misunderstanding of the purpose of this process and its mechanism, which naturally leads to its degradation<sup>7</sup>. Further identified shortcomings include low support for the use of the process by top management of the MoD and individual commanders, failure to build an appropriate organizational structure including associated service posts. Lessons learned are often used in an occasional way and the individual commanders are approaching the Lessons Learned process at their own discretion<sup>8</sup>.

Recent research dealing with the adequate use of knowledge gained from previous evaluations of operational preparation proven that there is not given a sufficient attention to those lesson learned. It was stated that the Lessons Learned process is still insufficiently implemented and used in the CAF conditions in that respect<sup>9</sup>.

### 1.1 Lessons Learned capabilities development

From the perspective of the armed forces as such, the term of capability can be understood as a set of necessary characteristics of an individual, organizational unit, task force or system characteristics (eg weapon) to create the desired effect<sup>10</sup>. Talking about capability of an individual it needs to be referred to the CAF commanders especially with regards to increasing their awareness about the lessons learned and its importance for improvement of the armed forces capabilities.

The way how to continuously strengthen their skills to use lessons learned in their own activities can be represented by a comprehensive and unified system of military personnel preparation. The just proposed improvement in the training of the CAF officers in the field of lessons learned was one of the recommendations presented in

<sup>7</sup> KOSECOVÁ, Janka; KUBEŠA, Milan; GRMELA, František. Místo a role procesu získávání poznatků a využívání zkušeností v Armádě České republiky. *Vojenské rozhledy. (Czech Military Review.)*, 2015, sv. 24(56), č. 1, s. 7285. ISSN 12103292

<sup>8</sup> KOSECOVÁ, Janka and Richard SAIBERT. *Optimalizace procesu získávání poznatků a využívání zkušeností a význam přípravy personálu v této oblasti. Vojenské rozhledy*. 2018, 27 (2), 33-52. ISSN 1210-3292 (print), 2336-2995 (on-line).

<sup>9</sup> SLÍVA, Petr a Tomáš ŠPOK. Využití evaluačních nástrojů nato pro hodnocení připravenosti pozemních a vzdušných sil AČR. *Vojenské rozhledy*. 2022, 31 (2), 017-033. ISSN 1210-3292 (print), 2336-2995 (on-line). Available at: [www.vojenskerozhledy.cz](http://www.vojenskerozhledy.cz).

<sup>10</sup> KUBEŠA, Milan a DUBEC Radek. 2013. "K teorii schopností ozbrojených sil.". *Vojenské rozhledy* 22 (3): 41-51. <https://doi.org/10.3849/2336-2995.22.2013.03.041-051>.



previous researches<sup>11,12</sup>. In that respect a competency-based approach to education was recognized as a possible method for the CAF personnel development based on the defined competency requirements. The established competencies related to lessons learned should be supported within the framework of education by knowledge and skills as the learning outcomes in relevant study programs. The scope and content of identified competencies would depend on the officer's position held within the CAF, resp. according to the given military rank. An important aspect should be the continuity in terms of long-term strengthening and development of these competencies in lifelong learning.

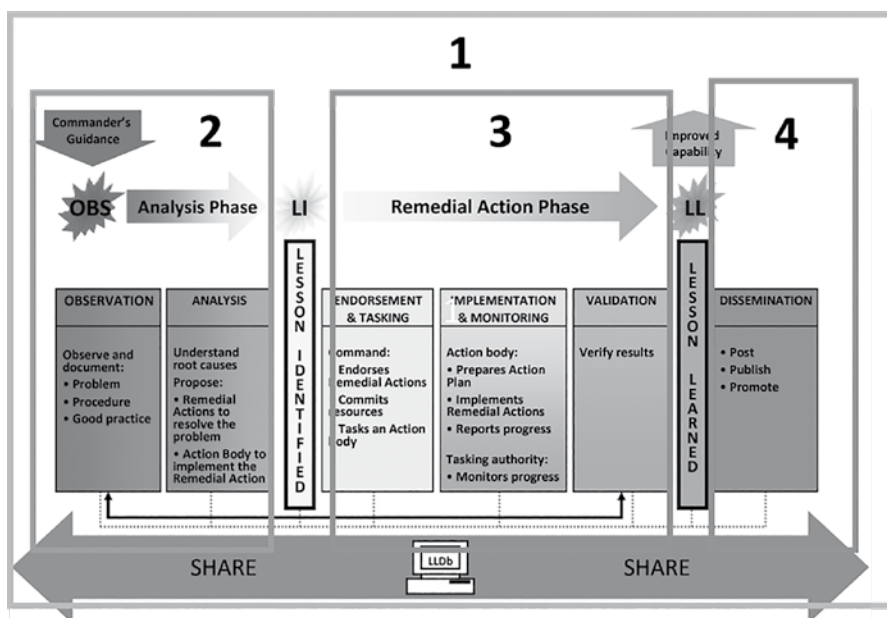
Given the fact that the Lesson Learned process implemented in the CAF is based on the NATO Lessons Learned process without any modification to national conditions, the examined areas of application of the Lesson Learned process will be identical to those in the NATO process. Assumed fact that the Lesson Learned process is one of the mechanisms for continuous improvement of the organization, it is necessary to define the overall overarching area, which is the leadership of the entire process. Thus, it necessitates to define both competencies necessary for the management of the whole process and the skills applied within the individual phases of the process. The following areas of competencies were formulated:

1. Lesson Learned Management/Leadership
2. Lesson Learned Analysis Phase
3. Lesson Learned Remedial Action Phase/ Verification
4. Lesson Learned Dissemination Phase/ Application

Overall framework of the above mentioned areas of competencies within the Lessons Learned process can be demonstrated in Figure 2.

<sup>11</sup>KOŠECOVÁ, Janka. Proces získávání poznatků a využívání zkušeností jako součást procesního řízení v resortu Ministerstva obrany. *Vojenské rozhledy. (Czech Military Review.)*, 2016, sv. 25(57), č. 3, s. 4660. ISSN 12103292.

<sup>12</sup>KOLÁČNÁ KOŠECOVÁ, Janka, SAIBERT, Richard. *Optimalizace procesu získávání poznatků a využívání zkušeností a význam přípravy personálu v této oblasti. Vojenské rozhledy. (Czech Military Review.)*, 2018, 27(59)(2), 33-52. ISSN 1210-3292



**Picture 2:** Areas of competencies within the Lessons Learned process

Source: THE NATO JOINT ANALYSIS AND LESSONS LEARNED CENTRE. *The NATO Lessons Learned Handbook*. 3rd ed. Monsanto, Portugal: NATO's Joint Analysis & Lessons Learned Centre (JALLC), 2016. ISBN 978-92-845-0188-5.

## 1.2 Learning Competencies

The concept of competence will be explained for the needs of the article in the context of professional military education (PME). In this case, it is a so-called educational competence describing the required learning outcome within the study programs, in accordance with expected level of command and control or military career. Learning outcomes, sometimes learning objectives, are described in the following categories:

- knowledge - theoretical and factual knowledge in the field or learning area (eg student / graduate can discuss, define, describe, explain, analyze);
- skills - practical and functional skills that the student / graduate can use in practice (eg what he / she can design, create, implement, solve, improve);
- competence - (*autonomy and responsibility*) - general competencies, where the student / graduate is able to use knowledge and skills in a certain context (degree of independence, responsibility, degree of complexity of the environment).

Defined learning outcomes (educational competencies) should be generally based on the competency profile of the organization and support development of the required competencies for the service position as well.

One of the approaches to formulate the learning outcomes in the field of utilization of lessons learned in the CAF provides a methodology applied in the MILOF-CORE development as an integral part of the European Sectoral Qualifications Framework for Military Officer Profession (SQF-MILOF). *“The SQF-MILOF captures the whole range of operational engagement required of officers. It covers all levels and categories of personnel across all services. The main value of the SQF-MILOF from our perspective lies in providing a comprehensive taxonomy of descriptors in the areas of knowledge, skills and competences”*<sup>13</sup>.

## 2 METHODOLOGY

The aim of the research was to develop a proposal of study curriculum for military leaders supporting the development and strengthening key competencies in the area of utilization of the Lessons Learned process. To identify the relevant competencies a combination of various approaches was employed.

Firstly, the borrowed-and-tailored approach was used where the SQF-MILOF model was applied in with regard to the formation of competencies covering different levels of command and control valid across all military services. Secondly, the process-driven approach was utilized within the process of investigating the work duties, task, responsibilities, roles, etc<sup>14</sup>. The description of those obligations laid down in the Czech military regulations and doctrines. For the identification of the requirements for commanders in the area of lessons learned the content analysis of relevant documents was used. To verify the relevance of verbalized competencies a questionnaire survey was conducted among participants of the Senior Officer Course (SOC).

Hereafter, the follow-up process of the development of the learning outcomes descriptors is based on the revised Bloom's taxonomy of educational objectives<sup>15</sup>. Development of a proposal of study curriculum was built upon a comprehensive classification in the areas of knowledge, skills and autonomy & responsibility (competence) used for the MILOF-CORE. Those learning outcomes reflect complexity and difficulty according to the European Qualification Framework (EQF)<sup>16</sup>.

<sup>13</sup>European External Action Service: *Sectoral qualifications framework for the military officer profession : SQF-MILOF. Volume 2*, Publications Office, 2021, Available at: <https://data.europa.eu/doi/10.2871/989318>

<sup>14</sup>ROTHWELL, William. *Career planning and succession management: developing your organization's talent for today and tomorrow*. Westport, Ct.: Praeger Publishers, 2005. ISBN 02-759-8359-5

<sup>15</sup>ANDERSON, Lorin a David KRATHWOHL. *A taxonomy for learning, teaching, and assessing: a revision of Bloom's taxonomy of educational objectives*. Complete ed. New York: Longman, 2001. ISBN 0-321-08405-5.

<sup>16</sup>SAIBERT, Richard. European Sectoral Qualifications Framework for Military Officer Profession from the Perspective of the Czech Republic. *VOJENSKÉ ROZHLEDY-CZECH MILITARY REVIEW*, 2021, 30(3), 59-74. ISSN 1210-3292

### 3 ANALYSIS

The main goal of the content analysis was to extract wording principally related to the application of the Lessons Learned process in terms of the process settings and its management. Second principle was focused on the real application of lessons learned within preparation, training and deployment of the CAF. Language was drawn from relevant military regulations, procedures and doctrines.

Relevant activities and responsibilities quoted from the examined documents were categorized according to the criteria regarding the management/leadership of the whole process as a 1<sup>st</sup> criterion, furtherly according to the individual phases of the Lessons Learned process as the criteria 2<sup>nd</sup> to 4<sup>th</sup>. The Lessons Learned process applied in the CAF is fully in line with NATO Lessons Learned process, therefore there is mentioned no NATO norm nor regulation. In some cases, wording overlap between criteria because they dealt with the same or very similar issues. The table 1 indicates where chosen duties and obligations of those military authorities responsible for the application of the Lessons Learned process come from.

**Table 1:** Document analysis

Name of the regulations or procedures	Type of the regulations or procedures	criteria			
		1. Lesson Learned Management/Leadership	2. Lesson Learned Analysis Phase	3. Lesson Learned Remedial Action Phase/ Verification	4. Lesson Learned Dissemination Phase/ Application
Vševojsk-1-1 Mission and tasks of military authorities of the CAF departments and units, 2021	Regulation	X			
Pub-54-01-01 Lessons Learned in the CAF, 2015	Doctrine	X	X	X	X
Pub-54-01-02 Principles and method of organization of the Lessons Learned in the CAF, 2016	Publication	X	X	X	X
Directive of the Chief of the General Staff of the CAF on the implementation and development of the process of Lessons Learned in the CAF, 2017	Directive	X			X
Directive of the Chief of the General Staff of the CAF on the implementation of measures to reduce the administrative burden at the company level, 2019	Directive	X			
Oper-1-5 Deployment of forces and resources of the MoD in foreign operations, 2014	Regulation	X			X

Vševosjk-20-1 Preparation and approval of military publications	Regulation				X
Preparatory study of the lifelong learning program, Senior Officer Course, CSMSS University of Defence, Brno 2021	Curriculum				X
Pub-70-02-01 Military Doctrine. Operational preparation of the CAF	Doctrine		X		X

Content analysis results of the language with regards to the duties and obligations according to established criteria are described in the following text.

### 1. Lesson Learned Management/Leadership

The main focus in the first criterion was put on the role of responsible commander to manage, lead, organize and conduct the Lessons Learned process. The core responsibilities were aimed at the implementation the Lessons Learned process within own unit/organization, particularly the way how to apply this process including the development of the standard operating procedures as well. The emphasis was placed on the utilization of lessons learned during the deployment in operations and the setting of the analysis and remedial phases. It includes among the others the system of the observations collection, analysis as well as establishing the lessons identified verification procedure. Commanders are also required to appoint an authorized officer as a specialist responsible for the Lessons learned matters.

### 2. Lesson Learned Analysis Phase

Second area was concentrated on the analysis phase. Generally, it supposed that the most of the captain/major rank officers should have an experience with this stage as those who are the lessons learned specialist or staff member of operational, planning or similar group providing analytical support in this process as such. Selected competencies will be principally related to the organization of collection of observations in identified areas, usage of the analytical and other supporting tools or methodology within the solving problem cycle. Officers should be able to identify gaps and areas for improvement with own unit as well as to provide commanders with solid recommendations regarding the importance of gained observations and their impact on the unit performance.

### 3. Lesson Learned Remedial Action Phase/ Verification

Third criterion was correlated to the remedial phase. Despite the fact, that this stage is more about the validation of lessons identified, it needs to be understood that this phase can be considered to the large extent as crucial for the implementation of best practices, experiences and analyzed knowledge. Therefore, there was identified an overlap with the phase of the Lessons Learned management. Above that, those lessons identified should be verified during activities of own unit particularly in all functional areas (DOTMLPFI).

### 4. Lesson Learned Dissemination Phase/ Application

Last area was associated with the dissemination of lessons learned. The main attention was paid to the mid to long term horizon where competencies were sought in terms

of development and revision military doctrines and publications. Those documents provide a fundamental source of information, knowledge, experience and recommendations for the use of forces, military branches and services in joint operations (so called "JOITNESS").

Results of the content analysis of relating regulations, doctrines and other relevant documents create a foundation for an identification of competencies.

### 3.1 Building the Competencies

Within the chosen methodology, a formulation of key competencies for military leaders regarding the utilization of lessons learned is founded on the process-driven approach where identified duties, task, responsibilities, roles to be exploited.

To formulate the competencies the following criteria were set down<sup>17</sup>:

- to have a definition of competency in line with circumscribed theories, approaches and terminology;
- competency must relate to the management, organization and conducting the Lessons Learned process;
- competency must relate especially to the use of lessons learned, best practice during preparation, training and deployment of the CAF;
- competency must be generic in relation to whatever military service;
- competency to be formulated according to the conformity of key terms referring to the Lessons Learned process.

Within the overall approach to the creation of competencies, following criteria based on the recommendations of authors dealing with the issue of competencies in education were set <sup>18</sup>:

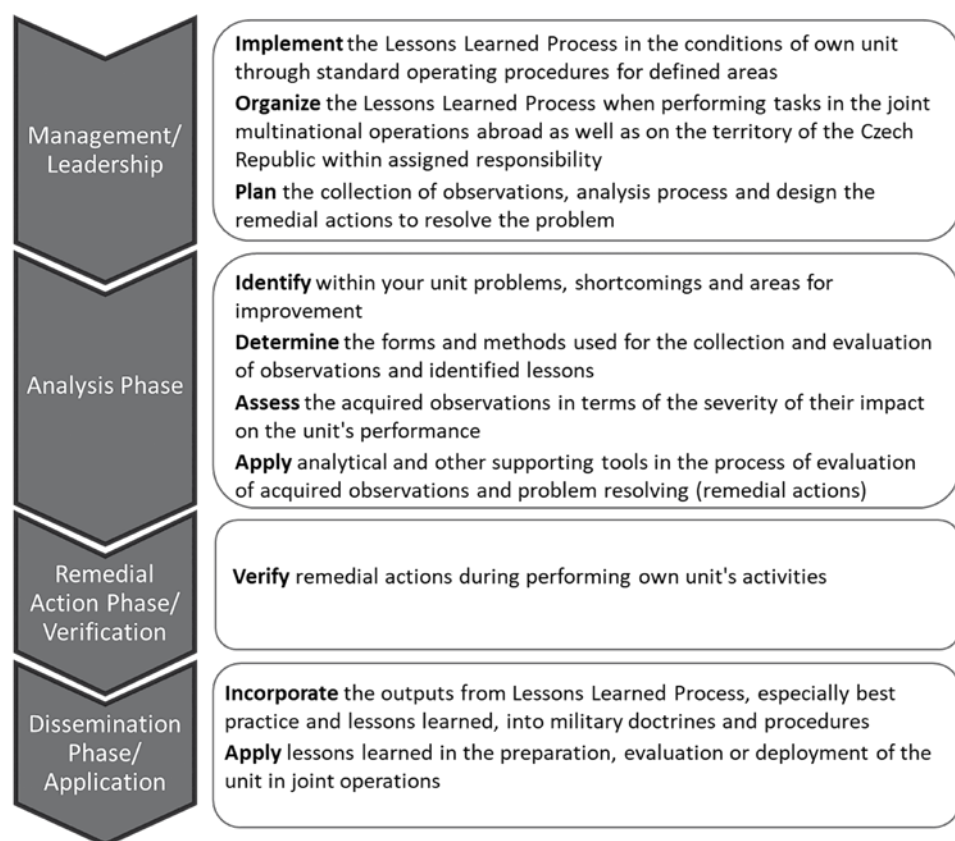
- **Contextualization** - competence is set in a certain environment (uncertain, dynamically changing, stable) or a specific situation.
- **Multidimensionality** - competence contains various resources (information, knowledge, skills, attitudes, etc.); which are linked to the basic dimensions of human behavior.
- **Assessment standard** - the level of competence mastery is determined by a set of performance criteria (criteria or standards) so that its mastery is measurable and evaluable. In this case, the evaluation criterion can be determined only for the area of described learning outcomes.
- **Development potential** - competence is acquired and gradually developed in the process of lifelong learning. For this reason, it must initially be based on input (source)

<sup>17</sup>ŠTĚPÁNEK, Přemysl and Richard SAIBERT. Officer's Competencies. Vojenské rozhledy. 2020, 29 (1), 051-070. ISSN 1210-3292 (print), 2336-2995 (online).

<sup>18</sup>VETEŠKA, Jaroslav a Michaela TURECKIOVÁ. *Kompetence ve vzdělávání*. Vyd. 1. Praha: Grada, 2008. Pedagogika (Grada). ISBN 978-80-247-1770-8.

factors in terms of acquiring and developing competencies. The development of a given competence within a military career (lifelong learning) will be set by individual categories of learning objectives.

According to above mentioned criteria, 10 key competencies related to the Lessons learned process were formulated according to the given areas. Picture 3 demonstrates the division of these competencies.



**Picture 3:** List of key lessons learned competencies

The verb apply was used in two competencies. Although these are competencies in different areas of the Lessons learned process, in terms of Bloom's taxonomy of educational objectives they represent an intermediate level of complexity. Therefore, the learning outcomes described by verb apply will be directed in the study curriculum proposal as the responsibility and autonomy within Young/Lessons Learned Specialist and Senior Officer courses.

### 3.2 Questionnaire survey

The questionnaire survey was conducted in order to verify the formulated competencies and their relevance in terms of their application at the given level of command and control corresponding to the rank of captain and partly major. Another aspect was to find out to what extent the participants apply these competencies in their daily activities.

The research sample of respondents was selected by the method of random selection using the quota selection technique<sup>19</sup>. Interviewed group was recruited from participants of senior officer's career courses (SOC) provided by the Centre for Security and Military Strategic Studies (CSMSS), University of Defence. The main defined criterium for the survey was the level of respondents' military carrier. Most of the course's participants were in the rank of captain corresponding to the tactical level of command and control.

In the online questionnaire survey, 150 respondents were addressed, 106 respondents (71%) responded. The questionnaire contained 10 question focused on surveying the respondents' opinion whether they have been applied in their current duty assignment formulated key competencies. The answers were evaluated on a fivepoint rating scale (Agree; Mostly agree; Neutral; Mostly disagree; Disagree).

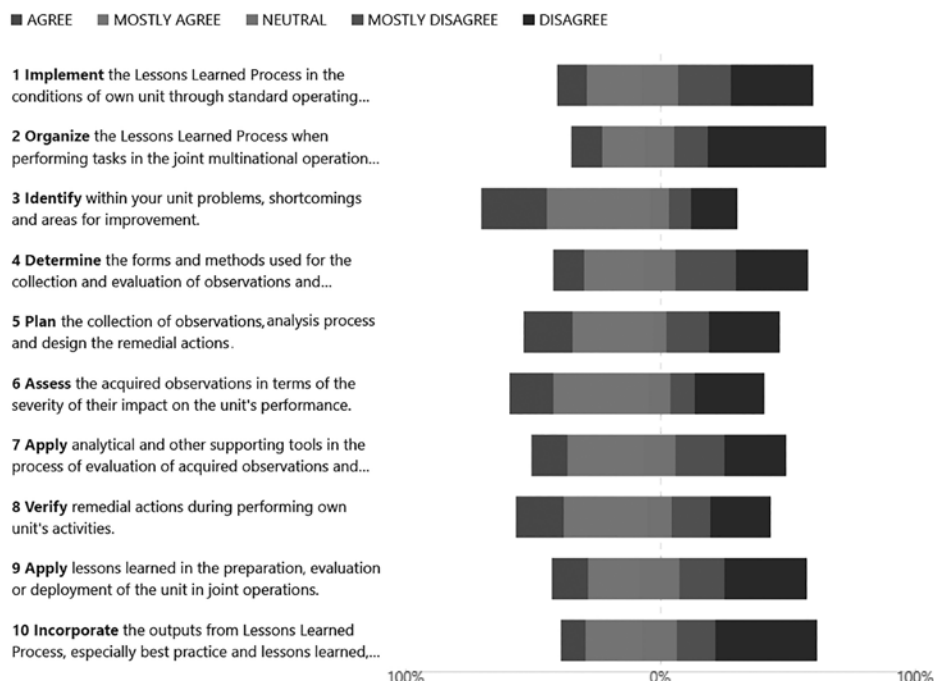
The evaluation of the respondents' answers in the questionnaire survey was carried out by statistical evaluation of the frequency of occurrence of individual answers, including the indication of the relative frequency in percent. The answers "Agree" and "Mostly agree" were considered as a consent and "Disagree" and "Mostly disagree" were disapproving. The answer "Neutral" was not assigned to either option. The respondent's final answer to the question was determined based on the relative frequency of consent or disagreement. Picture 4 shows a graphical representation of the evaluation of the questionnaire survey.

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<sup>19</sup>Quota selection is an unlikely selection in which we do not select at random, but try to meet predetermined quotas (eg age, gender, completed education or place of residence). A prerequisite for quota selection is knowledge of the distribution of these traits in the population, resp. in the given career courses.



### Within my current duty assignment, I apply the following competencies in the area of Lessons Learned:



Picture 4: Questionnaire survey results

Questions were asked according to the importance of their application in the process of preparation and deployment of the unit in the operation. The evaluation of the questionnaire survey clearly shows that respondents identify to some extent themselves with the chosen competencies in all surveyed areas. The consent rate for individual questions oscillates between 29 -66 %.

The highest level of agreement with applying listed competencies was achieved in questions nr. 3 (66 %), 5 (51 %), 6 (55 %) and 8 (52 %). The highest rate of disagreement was recorded in questions 1 (53 %), 2 (59 %), 4 (52 %) 9 (50 %) and 10 (55 %). Number in brackets indicate percentage of respondents answered positively, respectively negatively. The extent of neutral answer ranges from 4.7 to 15.1 %.

## 4 DISCUSSION

The content analysis of relevant military documents showed that the issue of lessons learned is sufficiently embedded in the assessed military regulation, publications and

doctrines. It provides a solid basis for a clear and precise definition of the responsibilities and duties of the officers in the Lessons Learned process. In particular, the doctrine related to lessons learned supplemented by military publication provide detailed guidance and recommendations for the organization and performance of the Lessons Learned process.

Results from questionnaire needs to be discussed from the perspective of current career of the survey's respondents as the participants of the SOC. Career course as a lifelong learning program offers professional educational platform for the members of the CAF supposed to be promoted to the rank of major. These officers are eligible for command positions at the level of battalion, division and squadron, staff position within force components, agencies, general staff and managerial position as a head of the department at the levels of brigade, regiment, wing, force components, agency and general staff.

Questionnaire outcomes predominantly demonstrate, that the questions focused on management, leadership, organization and application of the Lessons Learned process are these with the highest rate of disagreement. Only one third of respondents agreed with question 1, 2, 4 a 9. The core argument can be found in two aspects.

Firstly, nearly half of the respondents are assigned to a position, typically as a senior officer/specialist within subordinated departments and sections of MoD. These occupations mostly deal with the issues regarding logistic support, communication and information, human resources management, information security, etc. Despite the fact, that the use of forms and methods of the Lessons Learned process, particularly recording and sharing relevant procedures should be the responsibility of all commanders, military authorities and staff members at all levels of command and control, no directive nor regulation provide responsibilities for above mentioned position regarding management or leadership of the Lessons Learned process. Accordingly, survey respondents largely have no experience with these activities related to the Lessons Learned management and leadership.

Second aspects should be seen from the perspective of the CAF deployment to joint military operations. Particularly, the rest of the survey participants were assigned to ground and air forces units, headquarters and military police. Particularly question 2 was formulated to examine to what extent participants organize the Lessons Learned process in multinational operations abroad as well as on the territory of the Czech Republic. Specifically, it is assumed with a high probability that positively answer only those who were in the lead of Task Forces in foreign operations or those responsible for training and preparation of units for the deployment to the operations. Due to the fact that SOC graduates are prepared for positions in the rank of major, later lieutenant colonel, for which are established responsibilities with regard to the management of the Lessons Learned process, this issue is highly relevant for the career education.

On the contrary, the answers to the questions 3, 5, 6 and 8 indicate that many respondents are involved in the Lessons Learned process in a practical way. It can be quantified that the survey showed that many participants act either as the lessons learned specialists or members of analytical teams or they are involved in other activities related to the Lessons Learned process. This confirmed the original assumption that most respondents have practical experience, especially with the analysis or verification phases.

Surprisingly, one third of research participants agreed with question 10 referring to the utilization of lessons learned into military documents. It can be supported by the fact that some of them are to some extent involved in the doctrinal process. By the same token, question 3 shows that respondents are striving to improve organization by at least identifying areas to be enhanced.

## 5 STUDY CURRICULUM PROPOSAL

As was stated in the background chapter, a competency-based approach to education was recognized as a possible method for the CAF personnel development in the area of lessons learned. The development and strengthening of formulated competencies related to lessons learned should be supported in study curricula by knowledge and skills as the learning outcomes in relevant study programs.

In the process of defining learning outcomes, it is necessary to differentiate learning objectives in terms of difficulty. In this case, the level of qualification is decisive, with the higher the grade, the more complex the learning objectives are set. A number of approaches can be used to define and especially distinguish learning outcomes. One of them is based on the so-called revised Bloom's taxonomy of educational goals<sup>20</sup>, ie a taxonomy for learning, teaching and evaluation of educational goals.

When defining learning goals, it is possible to recommend the use of Bloom's taxonomy of educational goals with the following assumption<sup>21</sup>:

- define learning objectives by means of descriptors, which will make it possible to set the assessment criteria necessary for the measurability of a given knowledge or skill;
- the described learning outcomes must support the established competence in the set of competence requirements within the defined educational level.

Table 2 illustrates a proposal of study curriculum within learning area dedicated to utilization of lessons learned.

<sup>20</sup>ANDERSON, Lorin a David KRATHWOHL. *A taxonomy for learning, teaching, and assessing: a revision of Bloom's taxonomy of educational objectives*. Complete ed. New York: Longman, 2001. ISBN 0-321-08405-5.

<sup>21</sup>SAIBERT, Richard. *Strategické přístupy k přípravě vojenských profesionálů pro budoucí operace*. [disertation]. Brno: Univerzita obrany v Brně, 2019, 151 s.

Table 2: Curriculum proposal

Learning descriptors	Young Officer Course/ Lessons Learned Specialist Course	Senior Officer Course	General Staff Course
Learning Area: Utilization of Lessons Learned in the CAF			
Knowledge	<p><b>Discuss</b> the organization of the Lessons Learned Process in the Czech Armed Forces</p> <p><b>Explain</b> the key terms used within the Lessons Learned Process</p> <p><b>Distinguish</b> between individual phases of the Lessons Learned Process</p>	<p><b>Investigate</b> the dimension and <b>discuss</b> context and scope of main principles and methods of the Lessons Learned Process and its impact on the preparation and deployment in joint operations</p> <p><b>Define and interpret</b> the range and nature of possible finding during deployment in joint operations in terms of the collection of observation planning</p>	<p><b>Critically evaluate</b> the correlation between military regulations, publication and doctrines</p>
Skills	<p><b>Recognise and exercise</b> different tools and specific method for observations' analysis</p> <p><b>Structure and provide</b> written report on evaluation of an observation, including a proposal to commander</p> <p><b>Demonstrate capacity to organize</b> the process of analysis including corrective measures proposals</p> <p><b>Promote and demonstrate</b> ability to transfer personal knowledge based on the experience from deployment in joint operation</p>	<p><b>Develop</b> a design of the standard operating procedure (SOP) for the Lessons Learned Process based on relevant regulations</p> <p><b>Take the initiative to execute</b> the Lessons Learned Process under own responsibility and those deriving from the higher commander's intent under conditions of deployment in joint operation</p> <p><b>Develop and implement</b> logical, fluent, accurate and convincing written report on the lessons learned <b>and critically assess</b> the impact of these lessons learned on the preparation and evaluation of armed force's branches</p> <p><b>Apply</b> a broad range of principles and method (techniques) for verification of the observations and lessons identified according to functional areas (DOTMLPFI)</p>	<p><b>Innovatively adapt</b> the Lessons Learned Process to relevant conditions of the Czech Armed Forces/ Ministry of Defence</p> <p><b>Appraise</b> circumstances that require changes and new provisions in order to best facilitate the lessons learned in doctrine architecture</p> <p><b>Conceptualise</b> new knowledge, processes and methodologies for developing the Czech Armed Forces' doctrinal framework</p>
Responsibility and autonomy <sup>22</sup>	<p><b>Identify</b> within your unit problems, shortcomings and areas for improvement</p> <p><b>Apply</b> analytical and other supporting tools in the process of evaluation of acquired observations and problem resolving (remedial actions)</p> <p><b>Determine</b> the forms and methods used for the collection and evaluation of observations and identified lessons</p>	<p><b>Implement</b> the Lessons Learned Process in the conditions of own unit through standard operating procedures for defined areas</p> <p><b>Organize</b> the Lessons Learned Process when performing tasks in the joint multinational operations abroad as well as on the territory of the Czech Republic within assigned responsibility</p> <p><b>Plan</b> the collection of observations, analysis process and design the remedial actions to resolve the problem</p> <p><b>Assess</b> the acquired observations in terms of the severity of their impact on the unit's performance</p> <p><b>Apply</b> lessons learned in the preparation, evaluation or deployment of the unit in joint operations</p> <p><b>Verify</b> remedial actions during performing own unit's activities</p>	<p><b>Incorporate</b> the outputs from Lessons Learned Process, especially best practice and lessons learned, into military doctrines and procedures</p>

<sup>22</sup>Learning descriptors related to responsibility and autonomy are those formulated competencies verified in survey.

This study curriculum proposal can be used as a comprehensive framework for study programs within career education currently provided by the Center for Security and Military Strategic Studies of the University of Defence and the Training Command - Military Academy.

## CONCLUSION

Paper conveys many arguments why learning area focused on the Lessons Learned application is relevant for career education. Building a comprehensive and interconnected study programs within the PME necessitates further development of proposed curriculum into individual learning topics respecting interconnectedness between individual career courses.

Questionnaire survey primary purpose was not to examine the use of a specific competence in a given position, but rather to obtain an overall picture of the use of the Lessons Learned process within the CAF. It proves that most participants apply competencies related primarily to analysis phase and the verification of lessons identified. Thus, it can be quantified that these knowledge and skills represent a solid base for further development of competencies related to the organization and management of the Lessons Learned process.

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## Relevance of Transactional Leadership in Czech Armed Forces: Case of Military Students

### Relevance transakčního leadershipu v ozbrojených silách České republiky: Příklad studentů vojenství

Jakub Stříbrný, František Milichovský, Veronika Kolečáková, Lenka Čadová

**Abstract:** Leadership and its styles have been in the spotlight for many years. The changing military environment and demands on army readiness bring new questions and perspectives to leadership. Leaders now face constant changes and specifications of the new modern era. Concerning these changes and transformations in society and the Army, there are new demands on soldiers and leaders at all levels of the Army of the Czech Republic. This paper provides insight and muse about both transactional and transformational leadership styles and investigates an approach to these styles by Czech military students. This paper aims to identify what leadership style Czech military students prefer at the University of Defence. This research focused on evaluating the personal characteristics required for a leadership position. To verify the relevance of the gained results, we employed paired t-test.

**Abstrakt:** Leadership a jeho styly jsou v centru pozornosti již mnoho let. Mění se vojenské prostředí a požadavky na připravenost armády přinášejí nové otázky a pohledy i do vedení. Lídři nyní více než kdy jindy čelí neustálým změnám a specifikacím moderní doby. V souvislosti s těmito změnami a proměnami ve společnosti a v armádě vznikají nové požadavky jak na vojáky, tak na velitele na všech úrovních Armády České republiky. Tento článek poskytuje pohled a úvahy o transakčním i transformačním stylu leadershipu a zkoumá přístup českých studentů vojenských oborů k těmto stylům. Příspěvek si klade za cíl zjistit, jaký styl vedení preferují čeští studenti na Univerzitě obrany. Výzkum byl zaměřen na hodnocení osobnostních charakteristik, požadovaných pro vedoucí pozici. Pro ověření relevance získaných výsledků jsme použili párový t-test.

**Key words:** Transformational Approach; Leadership; Factor Analysis; Leader Development; Soldiers.

**Klíčová slova:** transformační přístup; leadership; faktorová analýza; rozvoj vůdce; vojáci.

## INTRODUCTION

At the beginning of the 21st century, there has been conducted a significant change in combat operations. Currently, there is a transition from the massive deployments of troops on one battlefield to the flexible deployments of smaller specialised units, anytime and anywhere. These conflicts are usually characterised by intensive battle dynamics, high mobility, by the usage of new ways of tactical troop's application. Furthermore, the number of deployed direct participants in the fight is decreasing due to the massively expanding information technology, with a decisive impact on the local population. All these changes place new demands on both soldiers and leaders at all levels of the Army of the Czech Republic. Conducting operations in small units' shifts responsibility from the strategic and operational levels to the tactical level. The lowest commanders, platoon or team commanders, become crucial in achieving the operation's goal. The importance of leadership has grown for all soldiers. For this reason, leadership is based on deep-rooted values, the soldier's moral foundation and abilities<sup>1</sup>.

There are many ways to interpret the meaning of leadership. It can be described as "getting others to follow" or "getting people to do things willingly", possibly more specifically "use an authority in decision making"<sup>2,3</sup>. From a general point of view, leadership is considered a part of management<sup>4</sup>, the ability to persuade others to strive to achieve set goals enthusiastically. On the one hand, management is primarily a way of directing the flow of events to specific destinations. On the other hand, the term leadership is used to set goals that we should achieve and, possibly, to gain people's support for these goals. Leadership focuses on the essential resource or value, which is people. It is a process of creating and communicating a vision of the future, motivating people and gaining their devotion and commitment, whether inside or outside the military. The pillar of the army is a soldier, and the soldier is the person, a human being. A spectrum of tasks is expanding, and therefore increasing the flexibility and adaptability of units will be needed more than before. Change in the military and global environment must be reflected in the preparation of the military personnel. Due to the constant changes resulting from new tasks, the demands on the capabilities of military commanders are also increasing. Military leaders, seen traditionally as a part of the moral component of the military fighting power, are, along with the conceptual and physical features, one of the pillars of an effective and efficient military organisation. The military organisation needs to satisfy new demands different from the historical military leadership practices,

1 FM 6-22, 2015. *Army leadership*. Washington D.C.: Headquarters Department of the Army. [accessed on 16.04.2021]. Retrieved from [https://www.milsci.ucsb.edu/sites/secure.lsit.ucsb.edu.milid7/files/sitefiles/fm6\\_22.pdf](https://www.milsci.ucsb.edu/sites/secure.lsit.ucsb.edu.milid7/files/sitefiles/fm6_22.pdf)

2 CEJTHAMR, V., and J. DĚDINA, 2010. *Management a organizační chování*. 2. aktualiz. a rozš. vyd. Praha: Grada Publishing.

3 MAŠLEJ, M., 2010. Styly vedení a chyby mladých velitelů-manažerů po nástupu do praxe. *Vojenské rozhledy*, 19(51), 3, 135-140, ISSN 1210-3292

4 VODÁČEK, L., and O. VODÁČKOVÁ. *Management :teorie a praxe 80. a 90. let*. 1. vyd. Praha: Management Press, 1994. 257 s. ISBN 80-85603-55-1.

and performing with excellence will require the advanced and sustained development of military leaders<sup>5,6</sup>. The doctrine ACR states that leadership (ability to lead) is the ability of a commander to motivate, persuade, and recruit people in their surroundings to engage as actively as possible to accomplish tasks ahead every day, predetermined or expected<sup>7</sup>. The art of leadership is one of the essential qualities that every commander must have if they are to command successfully.

## 1 RESEARCH OBJECTIVE, METHODOLOGY AND DATA

The main aim of the paper is to identify what leadership style Czech military students prefer at the University of Defence. From defined parameters, we want to define key indicators of individual personal leadership, evaluated by individual student (self-evaluation) and evaluation by other person. To verify the set research goals, a two-way questionnaire survey was used, which allow studying impulsivity, behaviour and personality. These students were chosen because they are trained and thought to one day be leaders of units themselves. Students were paired with others they know the most, their friends, roommates and classmates. They evaluated themselves and their chosen partner. This particular setup shows the level they know each other. The research objective reflects commanders' requirements in leadership development as prevention of stressful environments and decision-making. The two-way questionnaire survey was used to verify the set research goals, which allowed for studying impulsivity, behaviour and personality. The behavioural approach focused on measuring the narrower aspects of impulsivity while allowing better control of variables, accurate performance measurement, and subsequent comparison of results. The chosen personality approach works with impulsivity as a set of traits, assuming that the resulting level of these traits forms the overall level of impulsivity. Therefore, a self-assessment questionnaire administered online was chosen as the primary method<sup>8,9</sup>.

<sup>5</sup> ANDERSON, D., L. ACKERMAN ANDERSON, 2010. *Beyond change management: how to achieve breakthrough results through conscious change leadership*. San Francisco: Pfeiffer.

<sup>6</sup> SMILJANIC, D., 2016. Transformational Military Leadership –Requirements, Characteristics and Development. *Vojenské rozhledy – Czech Military Review*, 25(extra issue), 18-48. 10.3849/2336- 2995.25.2016.05.018-048.

<sup>7</sup> ARMY CZECH REPUBLIC. 2004. *Doctrine ACR*. [accessed on 16.04.2021]. Retrieved from [https://www.unob.cz/fvz/struktura/k302/Documents/Doktrina\\_ACR.pdf](https://www.unob.cz/fvz/struktura/k302/Documents/Doktrina_ACR.pdf)

<sup>8</sup> SHARMA, L., K. E. MARKON, and L. A. CLARK, 2014. Toward a theory of distinct types of “impulsive” behaviours: A meta-analysis of self-report and behavioural measures. *Psychological Bulletin*, 140(2), 374-408. 10.1037/a0034418

<sup>9</sup> UM, M., A. R., HERSHBERGER, Z. T. WHITT, and M. A. CYDERS, 2018. Recommendations for applying a multi-dimensional model of impulsive personality to diagnosis and treatment. *Borderline Personality Disorder and Emotion Dysregulation*, 5(1), 1-17. 10.1186/s40479-018-0084-x



### 1.1 Variable definition

This paper's main part introduces primary research data focused on leadership style preference at the University of Defence in the Czech Republic. Nowadays, there are several approaches how to approach evaluation of leadership. One of the most commonly used in the Czech environment is based on Bělohlávek<sup>10</sup>, who defined relevant and specific information about individual personal leadership characteristics based on various research methods (usually questionnaire surveys). In the survey, selected personal leadership characteristics are defined as research variables:

- C – Charisma,
- E – Encouragement,
- Pe – Personal respect,
- I – Intellectual stimulation,
- Pr – Promised reward,
- Im – Immanent punishment.

### 1.2 Sample specification

The research group consisted of students in the Economics and Management program at the University of Defence in the Czech Republic. At the time, there were 654 students in the Economics and Management program from all grades. The research sample included 247 respondents from the whole (37.77 %). All data were collected during the period from November 2019 to December 2020. All data was gained by proband, which make blind evaluation of the results. Therefore, it is not possible to make connection to individual person.

### 1.3 Research method

To verify the defined research goal, a mixed research design was used. It includes the employment of an experiment supplemented with the support of a one-time questionnaire survey. Chosen research method became a Transactional and Transformational leadership style test. This test is taken from Bělohlávek<sup>11</sup>, who compiled it according to the test created by Bass<sup>12</sup>. The Transactional and Transformational leadership style test is like the well-known Multifactor Leadership Questionnaire (MLQ) developed by Bass.

<sup>10</sup> BĚLOHLÁVEK, F., 2000. *Jak řídit a vést lidi*. 2. doplněné vyd. Praha: Computer Press.

<sup>11</sup> *ibid*

<sup>12</sup> BASS, B. M., 1985. *Leadership and performance beyond expectations*. New York: Free Press.

This method was chosen because, in the army, the commander's success depends not only on the leader's own performance but, above all, on the success and cooperation of the whole unit. The motivation of the unit members to strive for more demanding goals and better innovative solutions to the task plays a significant role. Transformational leaders take such an approach, and this test shows the extent to which students (future commanders) use transformation and transaction leadership styles. This test determines the preference of the tools used for leadership. The choice of these tools depends on the leader's personality, values and the level of subordinate employees. Students were asked to perform a self-assessment and choose how they perceived themselves. For the purposes of the questionnaire, was used a scale where students described each statement on a scale from 1 (not at all) to 5 (almost always).

Furthermore, each student, who completed the self-evaluation was evaluated by their close colleague, who knows them well and cooperates with them daily. By this approach, every student received two evaluations (self-evaluation and evaluation of others). The test consists of 42 questions representing six factors, which are: (1) Charisma; (2) Encouragement; (3) Personal respect; (4) Intellectual stimulation; (5) Promised reward; (6) Imminent punishment.

#### 1.4 Data collection

All data were collected during the period from November 2019 to December 2020. Data collection for research took place within the subject Preparation for Combat. Participation in the study was voluntary. Each participant received an identification code, ensuring all participants' anonymity. A trained person performed the data collection, participants were instructed on the course and ethics of the research, the methods, procedures used, and the risks associated with them. In conclusion of the introduction, probands confirmed informed consent to voluntary participation in the study in which no members of disadvantaged groups participated. For processing collected data, we used IBM SPSS Statistics 25 by applying paired t-tests and factor analysis.

#### 1.5 Employment of statistics methods

The research was focused on the evaluation of personal characteristics required for leadership. However, there are partly problems within the evaluation because of the potential subjective points of view. Therefore, we used two different ways of a leader characterisation. One consists of self-evaluation, and the second includes an opinion of another person in the group. To verify the relevance of the gained results, we employed paired t-test.

For testing two measured characters on the same participant two-sample t-test was used. It helps to compare expected values  $\mu_1$  a  $\mu_2$ . Argument X and argument Y have average distribution  $N(\mu; \sigma^2)$ , and they are independent of each other. The basic

requirements of a two-sample t-test are normality of both analysed samples, equal variance and mutual independence of arguments<sup>13,14</sup>. Mentioned expectations of variance equality must be validated by F-test, which compares equality if the individual variance in both samples<sup>15</sup>.

Factor analysis was used to process the collected data, which helps define key composite indicators. Compute method in factor analysis; Varimax rotation was applied. Two relevant tests verify the applicability of factor analysis. The first test is the Kaiser-Meier-Olkin coefficient (KMO). This coefficient has values in interval  $(0;1)$  and is defined as the rate of correlation coefficient and the sum of squares of correlations within the partial coefficient. The second test is Bartlett's sphericity test, which evaluates the null hypothesis within the identity matrix<sup>16,17</sup>.

Results of factor analysis are verified by application of Cronbach's alpha rate. This rate refers to a level of consistency and reliability of all items in defining factors in the context of dimensionality as part of exploratory factor analysis. The value of Cronbach's alpha refers to the inter-correlation among the items<sup>18,19</sup>. This rate refers to the relevant reliability of factor analysis with a close connection to the correlation coefficient. This rate includes interim  $(0;1)$ , where a value close to zero refers to a situation without correlation of variable to others. Vice versa, if the value is close to one, there is a strong correlation between the variable to others. When the value is under 0.5, the internal consistency signifies a bad level. In the case of a value level close to 0.7, the defining factor should be considered acceptable and very significant. Values close to 1.0 are excellent. Application of Cronbach's alpha rate such confirmation of measuring a latent construct of factor<sup>20,21</sup>. In the requirement of evaluation factors, relevant formulas must be defined by calculating factor loadings of variables at the input. The values of factor loadings were taken from the component matrix, and they are changed on value proportion with an equal sum to 1.

<sup>13</sup> ŘEZANKOVÁ, H., 2010. *Analýza dat z dotazníkových šetření*. 2.vyd. Praha: Professional Publishing.

<sup>14</sup> KUNDEROVÁ, P., 2004. *Úvod do teorie pravděpodobnosti a matematické statistiky*. 2.vyd. Olomouc: Universita Palackého.

<sup>15</sup> BUDÍKOVÁ, M., M. KRÁLOVÁ, and B. MAROŠ, 2010. *Průvodce základními statistickými metodami*. Praha: Grada Publishing.

<sup>16</sup> TARNANIDIS, T., N. OWUSU-FRIMPONG, S. NWANKWO, and M. OMAR, 2015. A confirmatory factor analysis of consumer styles inventory: Evidence from Greece. *Journal of Retailing and Consumer Services*, 22, 164-177. 10.1016/j.jretconser.2014.07.001

<sup>17</sup> CONTI, G., S. FRÜHWIRTH-SCHNATTER, J. J. HECKMAN, and R. PIATEK, 2014. Bayesian exploratory factor analysis. *Journal of Econometrics*, 183(1), 31-57. 10.1016/j.jeconom.2014.06.008

<sup>18</sup> HRACH, K., and J. MIHOLA, 2006. Metodické přístupy ke konstrukci souhrnných ukazatelů. *Statistika*, 86, 398-418.

<sup>19</sup> ŘEHÁK, J., and O. BROM, 2016. *SPSS: Praktická příručka*. Brno: Computer Press.

<sup>20</sup> CRONBACH, L. J., 1951. Coefficient alpha and the internal structure of tests. *Psychometrika*, 1951, 16(3), 297-334. 10.1007/BF02310555

<sup>21</sup> HINTON, P. R., I. McMURRAY, and C. BROWNLOW, 2004. *SPSS explained*. London: Routledge.

## 2 THEORETICAL BACKGROUND

### 2.1 Development of leadership

Many theories deal with and distinguish between different leadership styles, from Classical Leadership Theory, which lists three main types of leadership: authoritarian, democratic, and laissez-faire<sup>22,23</sup> to conflicting leadership styles<sup>24,25</sup>. Where charismatic leaders rely on their personality and inspirational qualities, these charismatic leaders are usually called visionary leaders. Non-charismatic leaders rely on their knowledge, silent control, and analytical approach. Autocratic leaders enforce and use their decisions and their position to force people to do what they want from them. Democratic leaders encourage people to participate in decision-making. Enablers inspire people with their vision of the future. Inspectors manipulate people so that they gain their willingness to satisfy them<sup>26,27,28</sup>.

Many theories of leadership lack consideration of the emotional aspect of leading people. Burns's<sup>29</sup> heroic leadership describes a leader who excites and 'transforms' his followers. Later, Burns expanded his opinion and showed that the 'transformational leader' is the person who manifests or creates charismatic, inspirational leadership. The transformational leadership theory is currently one of the most researched leadership theories, which is in the focus of experts since the late 1980s. Its approach is unique and focuses on the highest human needs and the transformation of the current situation. Some authors use the terms transformational leadership as well as 'charismatic' leadership with no difference, probably because the author House published the theory of charismatic leadership at almost the same time as Burns his transformational leadership.

<sup>22</sup> FRIES, A., N. KAMMERLANDER, and M. LEITTERSTORF, 2021. Leadership styles and leadership behaviors in family firms: A systematic literature review. *Journal of Family Business Strategy*, 12(1), 1-16. 10.1016/j.jfbs.2020.100374

<sup>23</sup> SORENSON, R. L., 2000. The contribution of leadership style and practices to family and business success. *Family Business Review*, 13(3), 183-200. 10.1111/j.1741-6248.2000.00183.x

<sup>24</sup> ANGUS-LEPPAN, T., L. METCALF, and S. BENN, 2009. Leadership Styles and CSR Practice: An Examination of Sense making, Institutional Drivers and CSR Leadership. *Journal of Business Ethics*, 93, 189-213. 10.1007/s10551-009-0221-y

<sup>25</sup> CHANGAR, M. and T. ATAN, 2021. The role of transformational and transactional leadership approaches on environmental and ethical aspects of CSR. *Sustainability*, 13(3), 1411. 10.3390/su13031411

<sup>26</sup> ARMSTRONG, M., T. STEPHENS, 2008. *Management a leadership*. Praha: Grada publishing.

<sup>27</sup> DU, S., V. SWAEN, A. LINDGREEN, and S. SEN, 2013. The roles of leadership styles in corporate social responsibility. *Journal of Business Ethics*, 114, 155-169. 10.1007/s10551-012-1333-3

<sup>28</sup> MESSICK, D. M., et al., 2004. *The psychology of leadership: New perspectives and research*. Psychology Press.

<sup>29</sup> BURNS, J. M., 2012. *Leadership*. Open Road Media.

They were used until the mid-1980s almost as synonyms<sup>30,31</sup>. Until Bass introduced a comprehensive concept of transformational leadership, he included charisma as necessary, not a sufficient condition for transformational leadership and thus integrated House's theory into transformational leadership. Over the years, charismatic leadership has disappeared from researched articles<sup>32,33</sup>.

Transformational leadership focuses on developing leaders and followers, internal motivation and a shared vision. Charisma, emotions and morality or ideas that can be shared play a significant role here<sup>34</sup>. According to Bass<sup>35</sup>, transformational leadership is aimed at a performance that exceeds expectations. Bass presents that the transformation leader realises the achievement of such a result in three points. The first involves raising the follower's awareness of the importance and value of group goals that it idealises. Secondly, they try to get followers to overcome their selfish interests and try to act to help the whole group. Thirdly, it seeks to create a need for followers to address higher-level needs, for example, self-updating. In later works, Bass distinguishes four transformation factors. They are charisma, inspiration, intellectual stimulation and individual attention<sup>36</sup>.

The leader's charisma leads his followers to perceive him as their role model and strive to imitate him. It gives followers a vision, and followers perceive it as a personality with high ethical and moral standards. It is possible to observe two components here; the first is the attributive component, and the second is the behavioural one. The attribution part includes properties attributed to a leader by his followers, while behavioural signifies followers' attention to the leader's behaviour. This part in Bass's conception thus conceives of charismatic leadership. Inspiration is the factor that is most associated with encouraging follower motivation. The leader communicates to his followers their high expectations, which are based on trust in the abilities of followers. For example, the

<sup>30</sup> NORTHOUSE, P. G., 2013. *Leadership: theory and practice*. 6th ed. Thousand Oaks: SAGE.

<sup>31</sup> STEIGAUF, S., 2011. *Vůdcovství, aneb, Co vás na Harvardu nenaučí*. Praha: Grada publishing.

<sup>32</sup> REAVE, L., 2005. Spiritual values and practices related to leadership effectiveness. *The Leadership Quarterly*, 16(5), 655-687. 10.1016/j.leaqua.2005.07.003

<sup>33</sup> BASS, B. M., 1990 From Transactional to Transformational Leadership: Learning to Share the Vision. *Organizational Dynamics*, 18(3), 19-31. 10.1016/0090-2616(90)90061-S

<sup>34</sup> CONGER, J. A. and R. N. KANUNGO, 1994. Charismatic leadership in organizations: Perceived behavioral attributes and their measurement. *Journal of Organizational Behavior*, 15(5), 439-452. 10.1002/job.4030150508

<sup>35</sup> BASS, B. M., 2006. *Transformational leadership*. 2nd ed. New York: Psychology Press.

<sup>36</sup> MARQUES, J., 2015. The changed leadership landscape: what matters today. *Journal of Management Development*, 34(10), 1310-1322. 10.1108/JMD-02-2015-0010

importance of the task is also displayed to followers, who are encouraged to take part in task responsibilities<sup>37,38,39</sup>.

Intellectual stimulation deals with supporting followers in search and finding innovative problem-solving techniques. Followers are supported in independent problem-solving when dealing with organisational problems; this process is bi-directional. The leader stimulates followers to question the established paths of thought and then influences them retroactively with new impulses. The individual attention of a leader is an essential part of transformational leadership. A leader creates a supportive atmosphere for followers and listens to their individual needs. They act as a coach or advisor whose goal is the most significant possible development of the follower.

On the contrary transformational leadership, which deals mainly with a mutually beneficial relationship in which followers are provided with an appropriate reward<sup>40</sup> when the work is done, is a transactional approach. Transactional leadership tends to accomplish what is expected and is based on legitimate authority within a bureaucratic organisation. Emphasis is placed on clarifying goals and objectives, work tasks and outputs, as well as organisational rewards and penalties. This style is also based on a relationship of interdependence and an exchange process between a leader and followers. Thus, the transaction leader works with expectations and rewards for completing the task or sanctions for not fulfilling it<sup>41,42</sup>, and is in no way motivated to perform beyond expectations. According to Bass<sup>43</sup>, transactional leadership is based on monitoring and controlling followers and rewarding desirable behaviour. Transactional leadership leads followers to meet the leader's expectations and achieve the desired goal, but not to exceed expectations and devote extra effort to their work. The attributes of transactional leadership are Contingency Reward and Management by Exception, Active and Passive.

There are also new approaches to Leadership like Leadership 4.0 and other concepts highlighting that leaders today need different capabilities to face a world where production, governance and management systems are being transformed. The World Economic Forum described, "We stand on the brink of a technological revolution that will

37 BANKS, G. C., ENGEMANN, K. N., WILLIAMS, C. E., GOOTY, J., MCCAULEY, K. D., and M. R. MEDAUGH, 2017. A meta-analytic review and future research agenda of charismatic leadership. *The Leadership Quarterly*, 28(4), 508-529. 10.1016/j.leaqua.2016.12.003

38 LOVELACE, J. B., B. H. NEELY, J. B. ALLEN, and S. T. HUNTER, 2019. Charismatic, ideological, & pragmatic (CIP) model of leadership: A critical review and agenda for future research. *The Leadership Quarterly*, 30(1), 96-110. 10.1016/j.leaqua.2018.08.001

39 DAI, Y.-D., Y.-Y. DAI, K.-Y. CHEN, and H.-CH. WU, 2013. Transformational vs transactional leadership: which is better? A study on employees of international tourist hotels in Taipei City. *International Journal of Contemporary Hospitality Management*, 25(5), 760-778. 10.5176/2251-3426\_THoR1249

40 NORTHOUSE, P. G., 2013. Leadership: theory and practice. 6th ed. Thousand Oaks: SAGE.

41 AWAMLEH, R., J. EVANS, and A. MAHATE, 2005. A test of transformational and transactional leadership styles on employees' satisfaction and performance in the UAE banking sector. *Journal of Comparative International Management*, 8(1), 3-19.

42 VAN WART, M., and N. KAPUCU, 2011. Crisis management competencies: The case of emergency managers in the USA. *Public Management Review*, 13(4), 489-511. 10.1080/14719037.2010.525034

43 BASS, B. M., 1990 From Transactional to Transformational Leadership: Learning to Share the Vision. *Organizational Dynamics*, 18(3), 19-31. 10.1016/0090-2616(90)90061-S

fundamentally alter how we live, work, and relate to one another. In its scale, scope, and complexity, the transformation will be unlike anything humankind has experienced before<sup>44</sup>. Typical are constant changes and uncertainty<sup>45</sup> where leaders cannot describe the characteristics of their situations. Past approaches to problems may not be relevant, and the consequences of their actions are not predictable. What does it mean for leaders in general? According to the abovementioned questions, Stokes and Dopson<sup>46</sup> described that not all leadership topics had to change under the Fourth Industrial Revolution conditions. However, both technology and economic changes are considered key early drivers of fundamental social change. This social change requires a new set of leadership capabilities. They describe five key capabilities:

1. Shape the conversation - Leading is a conversation. Leadership 4.0 is as much about facilitating and enabling as directing. Crafting a story about who we are, where we are going, why we are doing this, and who we are doing it for is a more effective form of influence than hierarchical authority.
2. Cultivate collective intelligence - Diverse groups produce better solutions than homogenous groups. Leadership is less about providing the answer and more about releasing and connecting the existing knowledge.
3. Nudge the context - Leaders must influence and persuade without relying on formal authority. By regularly making links between the everyday actions of individuals and teams with the overall strategy and purpose of the organisation, leaders can create the right conditions for success and fill the void left by an absence of hierarchical power.
4. Co-create structure - Structures must respond to changing situations. Responding to an uncertain and fast-changing world requires agility. Formalized and overly rigid structures create sources of conservatism and risk becoming a constraint in a volatile world. The idea of the perfect structure is misleading. Structures should be shaped by the desired outcomes and collaboration with those involved.
5. Pluralize participation - Leaders must actively work with the plurality in their organisations and actively encourage collaboration and debate by creating the psychological safety needed for new voices to speak up without fear of criticism or ridicule.

When considering these changes and challenges of the 'modern age', is military leadership ready to face it? It seems that military readiness will be in the spotlight in today's environment of threats, not covering just a leadership question. As per the article

<sup>44</sup> SCHVAB, K., 2016. *The Fourth Industrial Revolution: what it means, how to respond*. World Economic Forum. [accessed on 16.04.2021]. Retrieved from <https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>

<sup>45</sup> KOLEŇÁK, J., ULLRICH, D., AMBROZOVÁ, E., POKORNÝ, V., 2019. Critical thinking and leadership in industry 4.0 environment. In: *International Business Information Management Association Conference*, 1826-1836.

<sup>46</sup> STOKES, J. and S. DOPSON, 2020. *The five capabilities of Leadership 4.0*. [accessed on 16.04.2021]. Retrieved from <https://www.sbs.ox.ac.uk/oxford-answers/five-capabilities-leadership-40>

Military readiness: How emerging technologies can transform defence capabilities<sup>47</sup> - military advantage does not typically come from new technologies but rather from how technologies, processes, and people all work together. Industry 4.0 readiness is about redefining those relationships<sup>48</sup>. In the light of these findings and descriptions of Leadership 4.0, it seems that transformational leadership is still relevant and able to keep the military moving toward new challenges of the modern era. It has also been argued by Koh et al.<sup>49</sup> that "transformational leaders have charismatic leadership behaviour whereby they attempt to inspire their followers in return to faith and respect. They also have a clear sense of mission that they attempt to convey to their followers. It's further evidenced that such leaders also tend to have superior debating, technical, and persuasive skills". This theory has criticised the difficulty of training others to be transformational leaders. Nevertheless, the supporting team of this theory agreed and supported the idea too<sup>50</sup>.

Transformational leadership style represents factors of Charisma, Encouragement, Personal Respect, and Intellectual stimulation. Bělohlávek<sup>51</sup> explains these factors:

- Charisma is a strong emotional relationship that gives the leader extra respect, recognition, admiration, love, and trust. It is an unquestioned belief in the correctness of what the leader also does in the leader himself. Charismatic leaders, by their actions, give subordinates an example to follow. A charismatic leader gladly and enthusiastically talks about future work tasks, devotes maximum energy to achieving goals and does not think about personal gain, not to be discouraged or surprised with what he can sacrifice to accomplish the task. He openly acknowledges the obstacles and dangers waiting on the way to the goal and is ready to fight them.
- Encouragement uses emotional means and slogans: "The leader talked about how important and demanding the new contract is. He said he trusted us. He said we were the best group he had ever worked with. He is sure that our result will surpass everyone."
- The encouraging behaviour of the leader stimulates subordinates' enthusiasm for work, and the encouraging speech of the manager creates confidence in employees in their ability to complete tasks and achieve group goals successfully.

<sup>47</sup> SCHULTZ, D., J. MARIANI, I. JENKINS, and L. RAYMOND, 2018. *Military readiness: How emerging technologies can transform defense capabilities*. Deloitte Insights. [accessed on 16.04.2021]. Retrieved from [https://www2.deloitte.com/content/dam/insights/us/articles/4645\\_Military-readiness/DI\\_Military-readiness.pdf](https://www2.deloitte.com/content/dam/insights/us/articles/4645_Military-readiness/DI_Military-readiness.pdf)

<sup>48</sup> DVOŘÁKOVÁ, L., J. HORÁK, Z. CAHA, V. MACHOVÁ, S. HAŠKOVÁ, Z. ROWLAND, and T. KRULICKÝ, 2021. Adaptation of small and medium-sized enterprises in the service sector to the conditions of Industry 4.0 and Society 4.0: Evidence from the Czech Republic. *Economic Annals-XXI*, 191(7-8(1)), 67-87. 10.21003/ea.v191-06

<sup>49</sup> KOH, W. L., R. M. STEERS, and J. R. TERBORG, 1995. The effects of transformational leadership of teacher attitudes and student performance in Singapore. *Journal of Organizational Behavior*, 16(4), 319-333. 10.1002/job.4030160404

<sup>50</sup> AVOLIO, B. J. and W. L. GARDNER, 2005. Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*, 16, 315-338. 10.1016/j.leaqua.2005.03.001

<sup>51</sup> BĚLOHLÁVEK, F., 2000. *Jak řídit a vést lidi*. 2. doplněné vyd. Praha: Computer Press.



- Personal respect - transformational leaders often act as the fathers of their subordinates. They tend to be friendly, informal and confidential; they shall be treated as equals despite considerable differences in status and experience. They dedicate special attention to neglected members, deal with each of the subordinates individually, and do not forget to comment appreciatively on each job well done. They assign demanding tasks to employees that boost their self-confidence.
- Intellectual stimulation - is the ability to imagine a non-existent future state and, at the same time, an ability to pass it on to other people. "His ideas make me look at my own opinions anew, things I never doubted", "let me think about old problems in a new way", "gives me a new perspective on the facts that for me used to be a mystery"- these are some characteristics of intellectual stimulation of transformation leaders. Intellectual stimulation is significant when the group solves a complex and unclear task.

## 2.2 Application of transactional and transformational leadership styles as part of the military area

The transactional leadership style represents rewards and punishments. If workers deviate from the required standard, do not meet the specified requirements or commit offences against the principles of work discipline, the leader implements exceptional measures such as reassignment of a worker, deployment of additional workers or punishment. The reward lies in the opportunity to motivate employees by promising benefits if they achieve good results. These advantages may be of a financial, objective nature - cell phone or business car- but they can also be a better job or position – the clearer the relationship between work results and advantage, the stronger the conditional remuneration. The effective leadership and the effectiveness of a leader reflect, as the most vital factor, the degree of his transformational approach, which influences the objectively measured performance of the led group. In the connection to the transformational approach uses four tools charismatic behaviour (sometimes called idealised influence), inspiring followers (or inspiring motivation), intellectual stimulation, and a personal approach. Charismatic behaviour includes moral, consistent behaviour, as well as behaviour that implies that the leader believes in himself. Inspiration of followers is focused on energising and motivating subordinates. It includes setting an attractive vision and goals by which the leader dignifies future progress and makes sense for the further direction of the group. The inspiring leader shows faith in fulfilling goals and vision and acts optimistically. An intellectually stimulating leader requires their subordinates' ideas. He engages his followers, leads them to seek new ways, and encourages them to think

unconventionally<sup>52,53,54</sup>. As part of a personal approach, the leader expresses interest in his followers and knows and takes into account their strengths, reserves, and needs, thus creating in them a feeling that they are essential<sup>55,56,57</sup>.

A leader's transformational approach is manifested by observable, measurable behaviour and can be developed. This makes the transformational approach a suitable criterion for evaluating leaders (e.g. through 360° feedback or a Development Center) and a suitable target for development programs. Although the transformational approach consists primarily of behaviour that can be learned and developed, there are relatively lasting personality characteristics of leaders that partially influence whether and how much the leader will apply the transformational approach. These can be suitable criteria for selecting new candidates for managerial positions<sup>58,59</sup>.

In addition to the emphasis on the ability to act synergistically and synchronise the functions and activities of systems in a changing environment, the importance of capabilities related to the issue of asymmetric action is constantly growing. The asymmetric approach is related to proactivity, the symmetrical (linear) approach to reactivity, and the effectiveness of action during the development of the conflict<sup>60</sup>. For the environment of contemporary military operations emphasising proactivity, asymmetry, and the characteristics mentioned above, it is not enough, just mental and physical resilience or condition<sup>61</sup> or the will and motivation of the individual. In terms of training people, asymmetric action is related to the requirements for such qualities of military professionals

- 52 SALAHUDDIN, M. M., 2010. Generational differences impact on leadership style and organizational success. *Journal of Diversity Management*, 5(2), 1-6. 10.19030/jdm.v5i2.805
- 53 KIRKBRIDE, P., 2006. Developing transformational leaders: the full range leadership model in action. *Industrial and Commercial Training*, 38(1), 23-32. 10.1108/00197850610646016
- 54 LIEVENS, P., P. VAN GEIT, and P. COETSIER, 1997. Identification of transformational leadership qualities: An examination of potential biases. *European Journal of Work and Organizational Psychology*, 6(4), 415-430. 10.1080/135943297399015
- 55 AVOLIO, B. J. and B. M. BASS, 2004. *Multifactor Leadership Questionnaire*. Redwood City: Mind Garden.
- 56 OXARART, R. A. and J. D. HOUGHTON, 2021. Spoonful of sugar: Gamification as means for enhancing employee self-leadership and self-concordance at work. *Administrative Sciences*, 11(2), 1-16. 10.3390/admsci11020035
- 57 DARTEY-BAAH, K., 2015. Resilient leadership: A transformational-transactional leadership mix. *Journal of Global Responsibility*, 6(1), 99-112. 10.1108/JGR-07-2014-0026
- 58 PROCHÁZKA, J., M. VACULÍK, and P. SMUTNÝ, 2013. *Psychologie efektivního leadershipu*. Praha: Grada Publishing.
- 59 GRABO, A., B. R. SPISAK, and M. VAN VUGT, 2017. Charisma as a signal: An evolutionary perspective on charismatic leadership. *The Leadership Quarterly*, 28(4): 473-485. 10.1016/j.leaqua.2017.05.001
- 60 MAYKRANTZ, S. A., L. A. LANGLINAIS, J. D. HOUGHTON, and CH. P. NECK, 2021. Self-Leadership and Psychological Capital as Key Cognitive Resources for Shaping Health-Protective Behaviors during the COVID-19 Pandemic. *Administrative Sciences*, 11(2), 1-14. 10.3390/admsci11020041
- 61 ULLRICH, D., AMBROZOVÁ, E., SEKANINA, J., 2020. Psychophysical fitness as one of the prerequisites for future commanders - Leaders in the security environment. In *Vision 2020: Sustainable Economic Development and Application of Innovation Management from Regional expansion to Global Growth*, 1824-1830.

and commanders, such as critical<sup>62</sup> and creative thinking, mental condition, and other attributes<sup>63,64</sup>. One possible way to create and improve the ability of professionals and commanders to perform and manage asymmetric operations is the concept of “Janus” thinking or the concept of the Cognitive Continuum for reasoning in stress<sup>65,66,67</sup>. All of the mentioned approaches could be employed in connection to military leadership.

Military leadership is currently subject to high demands associated with the ability to handle both the maintenance and defence of peace, often in the context of long-term mentally demanding conditions. Professional soldiers are repeatedly exposed to situations that place high demands in preparation and later in an actual deployment, especially on their resistance to stress, attention, and decision-making processes. In the context of recruitment, training, selection, and subsequent training of military leaders, the demands on the efficiency and quality of the decision-making process in the context of risk adequacy considerations increase<sup>68</sup>, as military leadership inevitably includes the need to make quick or risky decisions that may have unnecessary negative consequences in the case of their impulsive basis. Of course, a certain degree of acceptable risk has a natural place within the military. It is inevitably essential to deal with the complex and uncertain situations typical of many military operations. However, the systematic effort of modern armies to minimise these risks and the simultaneous security in the areas of leadership is significant. In this context, impulsive and ill-considered decisions should not have room in the military<sup>69</sup>. Therefore the current goal of military efforts in the area is to prevent impulsive military behaviour and decision-making from military leaders as much as possible in their selection and training<sup>70</sup>.

<sup>62</sup> ULLRICH, D., POKORNÝ, V. AMBROZOVÁ, E., 2020. Leadership, Situational and Systemic Critical Thinking. *Vision 2020: Sustainable Economic Development and Application of Innovation Management from Regional expansion to Global Growth*, 1323-1332.

<sup>63</sup> SALIGER, R., V. POKORNÝ, and E. PINDEŠOVÁ, 2010. *Kognitivní management*. Brno: Univerzita obrany.

<sup>64</sup> TOMKINS, L., J. HARTLEY, and A. BRISTOW, 2020. Asymmetries of leadership: Agency, response and reason. *Leadership*, 16(1), 87-106. 10.1177/1742715019885768

<sup>65</sup> PAPARONE, CH. R., and J. A. CRUPI, 2002. Janusian Thinking and Acting. *Military Review*, (1), 38-47.

<sup>66</sup> KOSTROŇ, L., 1997. *Psychologie usuzování – teorie a metodologie Egona Brunswika, K.R. Hammonda a jejich následovníků*. Brno: Masarykova univerzita.

<sup>67</sup> HAMMOND, R. K., 2000. *Judgments under stress*. New York: Oxford University Press.

<sup>68</sup> LESCHER, W. K., 2008. Taking risks-An uncertain strategic environment demands thoughtful risk-taking. *Armed Forces Journal*, 27.

<sup>69</sup> BÖRJESSON, M., J. ÖSTERBERG, and A. ENANDER, 2015. Risk propensity within the military: a study of Swedish officers and soldiers. *Journal of Risk Research*, 18(1), 55-68. 10.1080/13669877.2013.879489

<sup>70</sup> SCHWEIGER, S., B. MÜLLER, and W. H. GÜTTEL, 2020. Barriers to leadership development: Why is it so difficult to abandon the hero? *Leadership*, 16(4), 411-433. 10.1177/1742715020935742

### 3 RESULTS

In the research, we focus on evaluating personal leadership characteristics in subjective self-evaluation and evaluation of another person in the group. This is why we have two sets of answers connected to one sample. Whereas we got two sets of answers, we employed paired t-test to verify the identity of variances of each set. The basic requirement is the usage of the F-test as a way of evaluating variances of two samples. By applying F-test, we can say that the variance of the samples should be considered equal. According to the observed critical region of gained t-test values, alternative hypotheses  $H_1$  are accepted except in the case of promised reward for which the alternative hypothesis is rejected (accept  $H_0$ ). The specific results of the application t-test on both samples of the variables are present in Table 1.

**Table 1:** Results of paired t-test

	95 % confidence level		t	Significance	F	
	Lower	Upper				
Charisma (self-evaluation) – Charisma (other)	-5.05465	-3.72673	-13.025	0.000	2.576263	H1
Encouragement (S) – Encouragement (O)	-3.47934	-2.11580	-8.082	0.000	0.412142	H1
Personal respect (S) – Personal respect (O)	1.81938	2.77981	9.432	0.000	0.602719	H1
Intellectual stimulation (S) – Intellectual stimulation (O)	-1.59524	-0.63148	-4.551	0.000	1.330338	H1
Promised reward (S) – Promised reward (O)	-1.07065	0.12329	-1.563	0.119	8.355983	H0
Immanent punishment (S) – Immanent punishment (O)	-1.51225	-0.46346	-3.710	0.000	0.78444	H1

All parts of leadership could be considered necessary. However, we focused on the choice of the identification of essential items by the application of factor analysis. The main core for the application of factor analysis is getting a correlation matrix of all individual six elements. Logically, from the application of factor analyses is rational to expect a situation when input variables are reduced to a better set of variables according to possible dimensions. The factor analyses were in exploratory form with the application of Varimax rotation, which reduces the count of variables for a relevant explanation of marketing activities. The evaluation process in the exploratory factor analysis requires defining several vital criteria and interpreting the relevance of application factor analysis. There were applied to the variance explained (value must be equal to or higher than

0.50), the factor loading (value must be equal to or higher than 0.50), and the internal consistency of gained factor due to Cronbach's alpha rate<sup>71,72</sup>.

The result of the Kaiser–Meyer–Olkin (KMO) index of sampling adequacy is above the recommended cut-off point of 0.50. The significance of factor analysis is declared by Bartlett's test within the .000 value, confirming adequate usage. KMO value for self-evaluation is 0.624 and for evaluation of others is 0.745. Bartlett's test for both areas (self-evaluation and evaluation of others) is 0.000. These KMO values corroborate the possibility of applying analysis on chosen indicators, followed by verifying values in Bartlett's test. We confirm the relevance of extracted factors by applying Cronbach's alpha representing individual input variables. According to all defined areas, there were stated individual factors and their Cronbach's alpha rates<sup>73,74</sup>.

Factor analysis results for self-evaluation provide one factor, which has an acceptable value of Cronbach's alpha. This rate reaches an acceptable value within 0.691 (over 0.500 and could be expressed as relatively strong). From defined items, only four items are saturating the factor. In the case of factor analysis for other evaluations, one aspect is gained, which has an acceptable value of Cronbach's alpha. This rate reaches a sufficient value within 0.672 (it is over 0.500, and it could be expressed as relatively strong). From defined items, only four items are saturating each factor (saturating items are highlighted in Table 2).

**Table 2:** The component matrix for items in the evaluation

	Self-evaluation	Other evaluation
Charisma	0.772	0.837
Encouragement	0.862	0.816
Personal respect	0.506	0.455
Intellectual stimulation	0.526	0.619
Promised reward	0.611	0.831
Menacing recourse	0.646	0.480

These factors provide a possibility to evaluate personal leadership characteristics in a fast way. For this purpose, there must be defined formulas for observed factors. The process of defining formulas is due to calculating acceptable factors that need the

<sup>71</sup> TARNANIDIS, T., N. OWUSU-FRIMPONG, S. NWANKWO, and M. OMAR, 2015. A confirmatory factor analysis of consumer styles inventory: Evidence from Greece. *Journal of Retailing and Consumer Services*, 22, 164-177. 10.1016/j.jretconser.2014.07.001

<sup>72</sup> CONTI, G., S. FRÜHWIRTH-SCHNATTER, J. J. HECKMAN, and R. PIATEK, 2014. Bayesian exploratory factor analysis. *Journal of Econometrics*, 183(1), 31-57. 10.1016/j.jeconom.2014.06.008

<sup>73</sup> CRONBACH, L. J., 1951. Coefficient alpha and the internal structure of tests. *Psychometrika*, 1951, 16(3), 297-334. 10.1007/BF02310555

<sup>74</sup> ŘEHÁK, J., and O. BROM, 2016. *SPSS: Praktická příručka*. Brno: Computer Press.

transformation of individual coefficients. These coefficients express the significance of the used elements in the factor, and their total sum must be 1. Individual formulas for observed factors are as follow:

$$F_{\text{self-evaluation}} = 0.27512 \times C_{\text{self}} + 0.30720 \times E_{\text{self}} + 0.18746 \times I_{\text{self}} + 0.23022 \times M_{\text{self}} \quad (1)$$

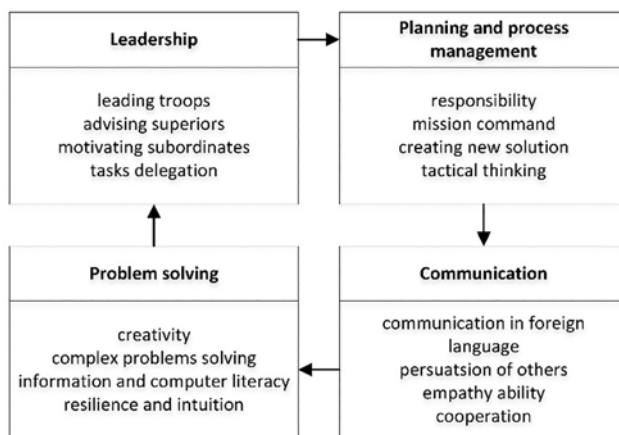
$$F_{\text{other evaluation}} = 0.26974 \times C_{\text{other}} + 0.26297 \times E_{\text{other}} + 0.19948 \times I_{\text{other}} + 0.26781 \times PR_{\text{other}} \quad (2)$$

These formulas can be defined for each military student who looks to become a commander and leader. All factors reflect the requirements for effective leadership in the context of transformational leadership. Factor analysis helps define key elements supporting analysed areas and reduces redundant input variables. Both factors are necessary to identify key leadership parameters for each person in military services. According to the stated coefficients in both formulas, we can say that charisma is essential mainly for others compared to self-evaluation; the lowest significance of variables is intellectual stimulation. Vice versa, encouragement plays the most significant role in self-evaluation; the lowest weight has intellectual stimulation. Nevertheless, leaders must evaluate themselves in various ways, and similar processes must do somebody else to reach objectivity in leadership evaluation. Factors can determine important business variables, playing a key role in achieving the set of objectives.

## 4 DISCUSSION

The application of military leadership in armed force requires personal liability of each soldier in connection to parameters of leaders (charisma, encouragement, personal respect, intellectual stimulation, promised reward, imminent punishment). Leadership itself is close part of commander's competency set, which is base of military personal development and combine vary areas. The set of competencies process provides parameters of personal responsibility in military actions and potential of creativity and kind of freedom to deal with specific situations. The personal development of new commanding leaders reflects leading activities such usage of examples (best practices), leading others, widen non-formal commanding way. To reach these parameters, each person have to cooperate in tasks' solution as support of positive environment and as base for self-development<sup>75</sup>.

<sup>75</sup> SAIBERT, R., ŠTĚPÁNEK, P. 2020. Officer's competencies. *Vojenské rozhledy*, 29(1), 51-70.



**Figure 1:** Set of commander's competencies<sup>76</sup>

It is possible to compare evaluation of leading in two lines, self-evaluated and other-evaluated. The reason is that each person has different view perspective on own personality traits. According to our results, there is difference on individual parameters. In self-evaluation, respondents focus on own encouragement, charisma of the leader, imminent punishment, and potential intellectual stimulation (parameters are sorted by their weights). If the commander's leading abilities are evaluated by other, charisma of the person is considered as the most important, then is key area of promised reward, third place take encouragement, and last weight has intellectual stimulation. Parameter of personal respect is important, especially connection to empathy, but the relevance was not provided by the application of factor analysis.

## CONCLUSIONS

The range of tasks and demands needed to manage is expanding. Therefore, increasing the flexibility and adaptability of soldiers, those who lead and whole units will be needed more than before. Change in the global military environment must be reflected in the preparation of the military personnel. In the light of 'the new era' and new demands, it seems that transformational leadership is still relevant and able to keep the military moving towards new challenges of the modern era. This work aimed to analyse the leadership style preferred among military students studying at the University of Defence in Brno, Czech Republic.

<sup>76</sup> CENTER FOR ARMY LEADERSHIP. 2013. *Commander's handbook for unit leader development*.

The theoretical part focuses on transitional and transformational leadership and presents it in the light of the concept of Leadership 4.0. To verify the defined research goal, a mixed research design was used. It includes the employment of an experiment supplemented with support of a one-time questionnaire survey, specifically a test taken from Bělohlávek<sup>77</sup>, who compiled it according to the test created by Bass. This method was chosen because, in the army, the commander's success depends not only on the leader's own performance but, above all, on the success and cooperation of the whole unit. Students were asked to perform a self-assessment and choose how they perceived themselves. Furthermore, each student of the military programme would become a commander who completed self-evaluation and was evaluated by their colleague too. The test consisted of 42 questions representing six factors: Charisma, Encouragement, Personal respect, Intellectual stimulation, Promised reward and Imminent punishment. According to the observed critical region of gained t-test values, alternative hypotheses  $H_1$  are accepted except in the case of promised reward for which the alternative hypothesis is rejected (accept  $H_0$ ).

Developing cognitive skills helps soldiers prepare for various combat missions, where the tactical soldier level is required. Also, this requirement puts soldiers under intensive stress pressure influencing their leading abilities, respecting defined factors.

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<sup>77</sup> BĚLOHLÁVEK, F., 2000. *Jak řídit a vést lidi*. 2. doplněné vyd. Praha: Computer Press.



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## **Bloody years of the Jewish Insurgency in British Mandatory Palestine 1939-1948: From the White Paper to the State of Israel**

### **Krvavá léta židovského povstání v britské mandátní Palestině 1939-1948: Od Bílé knihy ke Státu Izrael**

**Ľubomír Zvada, Jiří Lach**

**Abstract:** This review article focuses on Jewish insurgency under the British mandate for Palestine from 1939 to 1948. The Jewish guerrilla campaign represents a successful case study in the field of the research on small wars and insurgency, proxy wars. The authors analyze the early phase of the British Mandate in 1918-1939, referred to as the prelude to the subsequent Jewish uprising; a period when Jewish paramilitary groups including the Haganah, Irgun, and Lehi emerged and developed, emphasizing their ideological underpinnings, operational and tactical strategies of warfare, and the material capacities that these organizations possessed. The authors primarily emphasize the period from the initiation of the White Paper in 1939 until the establishment of the State of Israel in May 1948. British restrictions on Jewish immigration and the beginning of the Second World War stimulated the Jewish forces to a massive terrorist campaign against the British resulting in an unprecedented Zionist victory.

**Abstrakt:** Tato přehledová studie se zaměřuje na židovské povstání v rámci britského mandátu pro Palestinu v letech 1939 až 1948. Židovská guerillová kampaň představuje úspěšnou případovou studii v oblasti výzkumu malých válek a povstání, tzv. proxy wars. Autoři analyzují ranou fázi britského mandátu v letech 1918-1939 označovanou jako předeheru následného židovského povstání; období, kdy vznikaly a rozvíjely se židovské polo-vojenské skupiny včetně Hagany, Irgunu a Lehi, přičemž autoři akcentují především ideologická východiska, operační a taktické strategie vedení boje, či materiální kapacity, kterými tyto organizace disponovaly. Autoři kladou důraz především na období od iniciace Bílé knihy v roce 1939 do vzniku Státu Izrael v květnu 1948.

**Keywords:** British Mandatory Palestine; Jewish Insurgency; Irgun; Lehi; Haganah.

**Klíčová slova:** Britský mandát Palestina; židovské povstání; Irgun, Lechi, Hagana.

## INTRODUCTION

Prime Minister Benjamin Netanyahu emphasized in his 2018 speech commemorating 70<sup>th</sup> anniversary the birth of the State of Israel: “the Declaration of Independence was neither carved on a scroll nor written in ink. It was written in the blood of our sons and daughters and in the bravery of the defenders of our nation from 1948 until today.”<sup>1</sup> B. Netanyahu did not forget to mention David Ben Gurion, the father of modern Israel, when he evaluated his willingness to announce the birth of Israel, even though he had known that it would have brought a war and uncertain future for Israelites.<sup>2</sup> Symbolically, Netanyahu’s words of thanks and respect were dedicated to soldiers of Israel Defense Forces (IDF). He advocated at the Mount Herzl, one of Jerusalem’s hills named after Theodore Herzl, one of the fathers of modern Zionism.<sup>3</sup>

The questions concerning the relationship between a nation and its (military) history represent complex discussion depending on historical narratives serving to define shared identity of a given nation. Since the 1970s and 1980s, Israel has been going through heated debate between the traditional ‘Zionists historiography’ versus so-called ‘Post-Zionism’, or revisionist’s approaches, proposed by the Post-Zionists, a new generation of Israeli historians and a group of critical sociologists.<sup>4</sup> The relationship between nation and history in Israel is more complicated than in the other cases given “mixed political-religious character.”<sup>5</sup> Already Martin Buber, a well-known Jewish philosopher and proponent of spiritual Zionism, described Zionism as a national concept “which differentiates it from all other national concepts” because “[zionism] was named after a place

1 PRIME MINISTER OFFICE. Address by PM Netanyahu Israel’s 70<sup>th</sup> anniversary Torch -Lightning Ceremony. Available from: [https://www.gov.il/en/departments/news/speech\\_masuot180418](https://www.gov.il/en/departments/news/speech_masuot180418). Accessed April 18, 2021. See also for instance BACHNER, Michael. On 70th anniversary, Netanyahu says Israel’s light will beat enemies’ ‘darkness’. *The Times of Israel*. Available from: <https://www.timesofisrael.com/on-70th-anniversary-netanyahu-says-israels-light-will-beat-enemies-darkness/>. Accessed April 18, 2018.

2 PRIME MINISTER OFFICE, ref. 2.

3 Term *Zionism* includes many interpretations. The common sign for all definitions is fact that Zionism is a Jewish national movement trying to connect Jews all over the world to establish the state entity in a Land of Israel (see above). Zionism as a national movement was, and still is, a very heterogeneous. There are various wings of Zionism such as *Labor Zionism*, *Revisionist Zionism*, *Cultural Zionism*, *Liberal Zionism*, *Green Zionism* or *Religious Zionism*. Terms such as *Neo-Zionism*, or *Post-Zionism* respectively, also entered the discourse during the second half of 20<sup>th</sup> century and at the beginning of the new millennia. To the issues related with the most influential thinkers and practitioners of Zionism see ELON, Amos. *The Israelis: Founders and Sons*. New York: Bantam Books, 1972. AVINERI, Shlomo. *The Making of Modern Zionism: The Intellectual Origins of the Jewish State*. New York: Basic Books, 198. WINER, Gershon. *Founding Fathers of Israel*. New York: Bloch Publishing Company, 2001.

4 GELBER, Yoav. *Nation and History: Israeli Historiography between Zionism and Post-Zionism*, 2011, pp. vii-xiv. SHAPIRA, Anita – PENSLAR, Derek J. (eds.). *Israeli Historical Revisionism: From Left to Right*. London: Frank Cass, 2003.

5 WALZER, Michael. History and National Liberation. In SHAPIRA, Anita – PENSLAR, Derek J. (eds.). *Israeli Historical Revisionism: From Left to Right*. London: Frank Cass, 2003, pp. 1-9.

and not, like the others, after a people, which indicates that it is not so much question of a particular people as such but of in association with a particular land, its native land.”<sup>6</sup>

The importance of the Jewish fight for Israeli freedom in Israeli history is embodied in statement of Menachem Begin, one of the main figures of Jewish resistance and insurgency against the British in Palestine and Irgun commander. Begin wrote in his guerilla manifest *Revolt*: “whatever position I may hold, It will never be comparable to the national and human importance of what my friends and I did in the underground during our fight for the liberation of our people.”<sup>7</sup> He added: “there was no other way. If we did not fight, we should be destroyed. To fight was the only to salvation.”<sup>8</sup> The Jewish insurgency in the British Mandate and the fight for liberation is an inherent part of Jewish modern history; the history of *Yishuv*<sup>9</sup>, and became an undivided subject of the Israeli history as such.<sup>10</sup> Also some Czech or Slovak authors have dealt with the former or modern Czech-Israel relations,<sup>11</sup> military aspects of Israel’s security,<sup>12</sup> however, the period of Jewish insurgency is still on the margin of the research interest.

The main purpose of this review article is to deliver, albeit in a limited length, a discussion of how the Jewish insurgency and guerilla campaign had been led against the British administration in Palestine. The core of the analysis focuses on the period from the

<sup>6</sup> BUBER, Martin. *On Zion: The history of an idea*. New York: Schocken, 1973, p. xvii.

<sup>7</sup> BEGIN, Menachem. *Revolt*. New York: Dell Publishing, 1978, pp. 8-9.

<sup>8</sup> *Ibid.*, p. 86.

<sup>9</sup> *Yishuv* is a Hebrew term for a Land of Israel during the British Mandatory Palestine. *Yishuv* represented a pre-state entity for Jews before the State of Israel was established.

<sup>10</sup> See a comprehensive history books by SEGEV, Tom. *One Palestine, Complete: Jews and Arabs Under the British*. New York: Holt Paperbacks, 2000. SHAPIRA, Anita. *Israel: A history*. Brandeis University Press, 2012, pp. 67-133. SCHINDLER, Colin. *A History of Modern Israel*. Cambridge: Cambridge University Press, 2013, chapters 1-2; PAPPÉ, Ilan. *A History of Modern Palestine*, Cambridge: Cambridge University Press, 2006, chapter 3. ZADKA Saul. *Blood in Zion: How the Jewish Guerillas Drove the British Out of Palestine*. London: Brassey's, 1995. CHARTERS, David. British intelligence in the Palestine campaign, 1945-1947. *Intelligence and National Security*, 1991, Vol. 6, No.1, pp. 115-140. CHARTERS, David. *The British Army and Jewish Insurgency in Palestine*. London: Palgrave Macmillan, 1989. HELLER, Joseph. *The Stern Gang: Ideology, Politics and Terror 1940-1949*. Oxon: Routledge, 1995. YAHIEL, Ido. Jewish resistance movement in Mandatory Palestine. *Israel Affairs*, 2018, Vol. 24, No. 2, pp. 318-331. HOFFMAN, Bruce. The rationality of terrorism and other forms of political violence. *Small Wars & Insurgencies*, 2011, Vol. 22, No. 2, pp. 258-272. CESARANI, David. British counterinsurgency in Palestine 1945-1947 and the 'Farran Affair'. *Small Wars & Insurgencies*, 2012, Vol. 23, No. 4-5, pp. 648-670. SHPIRO, Shlomo. The Intellectual Foundations of Jewish National Terrorism: Avraham Stern and the Lehi. *Terrorism and Political Violence*, 2013, Vol. 25, No.4, pp. 602-620.

<sup>11</sup> TATEROVÁ, Eva. Československá zahraniční politika vůči Izraeli v první polovině padesátých let 20. století. *Mezinárodní vztahy*. 2016, Vol. 51, No. 3, pp. 52-72. TATEROVÁ, Eva. Proměny přístupu československé diplomacie k arabsko-izraelskému konfliktu v letech 1948-1967. *Mezinárodní vztahy*. 2022, Vol. 57, No. 1, pp. 43-77. ČEJKA, Marek. The narrative of the Czech-Israeli strategic relations in the European context. *Central European Journal of International and Security Studies*. 2017, Vol. 11, No. 4, pp. 24-43.

<sup>12</sup> KULHÁNEK Ladislav. Modely proliferace raketové techniky hybridních aktérů středního východu. *Vojenské rozhledy*. 2019, Vol. 28, No. 1, pp. 73-84.; TICHÝ, Lukáš. Energetika jako strategický nástroj hnutí Hizballáh v konfrontaci s Izraelem. *Vojenské rozhledy*, 2017, Vol. 26, No. 3, pp. 14-30. KUTĚJ, Libor. Bezpečnostní rozměr izraelské námořní hranice. *Vojenské rozhledy*, 2014, Vol. 23, No. 2, pp. 53-64. KUTĚJ, Libor. Sinajské bezpečnostní souvislosti. *Vojenské rozhledy*, 2013, Vol. 22, No. 4, pp. 58-70.

White Paper ratification in 1939 until the founding of Israel in May 1948. Even though the main period of Jewish violence is falling to the period of the WWII and post-war years of 1945–1948, the first part of the paper will scrutiny the early years at the beginning of the British Mandate where are the roots of the conflict. The authors will depict the problematic relations in the British-Jews-Arabs triangle. The motivation beyond ideology of the main Jewish paramilitary underground groups fighting the British, the impact of the most violent Jewish actions against them, and the impact of liberation fighting for the future of the State of Israel, its society, and politics will be characterized.

Finally, we argue that some historical parallels from the Jewish guerilla campaign against the British Mandate (but with different interpretations) could be seen after the foundation of the State of Israel during the Cold war, especially in the First and Second Intifada, respectively it should be seen in current Israeli's security challenges related to the West Bank and Gaza Strip, or Lebanon and Syria after the Arab spring.

## 1 BRITISH MANDATE 1920-1939: FROM SAN REMO TO WHITE PAPER

Several attractive promises were given to the Jews and Arabs by the British in the course of the World War One in order to defeat the Ottoman Empire. During the McMahon-Husain correspondence between July 1915 to March 1916, Arab independence in Palestine was promised by the British.<sup>13</sup> Yet the Balfour Declaration<sup>14</sup> from November 1917 recognized a connection between the Jewish people and Palestine, which *de facto* meant that the Jewish people had the right to rebuild its National Home in *Eretz Israel*.<sup>15</sup>

The British gave the same promise to Arabs through cooperation with France in Sykes-Picot Agreement aiming to divide the Middle East into British and French spheres of influence. At the closing of the Paris Peace Conference the borders of the Middle East were redrawn and discussed. This was further cemented by the San Remo conference, held in 1920, where Palestine was placed under British Mandate.<sup>16</sup> What might be seen as an honest promise to the Jews and Arabs to support their independence during the war was to morph into a false pledge in the light of post-war considerations. This reality

<sup>13</sup> SEGEV, ref. 11, p. 46; KEDOURIE, Elie. *In the Anglo-Arab Labyrinth: The McMahon-Husayn Correspondence and its Interpretations 1914-1939*. Cambridge: Cambridge University Press, 1976, p. 17.

<sup>14</sup> For a full version of the Balfour Declaration see e.g., RABINOVICH, I. – REINHARZ, J. (eds.). *Israel in the Middle East: Documents and Readings on Society, Politics, and Foreign Relations: Pre-1948 to the Present*. Hanover: Brandeis University Press, 2008, p. 29.

<sup>15</sup> Eretz Israel is the term from modern Hebrew; associated in English such a *Holy Land*, *Land of Israel*, or *Promised Land*. Geographically included historical and biblical region Levant, Southern Levant, Canaan, and Palestine. See e.g., MAZUR, Yosef. *Zionism, Post-Zionism & Arab Problem: A Compendium of Opinions About the Jewish State*. Bloomington: WestBow Press. 2012, p. 2; SHAPIRA, ref. 11, pp. 70-73.

<sup>16</sup> SHAPIRA, ref. 11, pp. 75-76; SEGEV, ref. 11, pp. 142-144; MAZUR, ref. 15, p. 33. FROMKIN, David. *A Peace to End All Peace: The Fall of the Ottoman Empire and the Creation of the Modern Middle East*. New York: Owl, 1989, p. 286, p. 288.

complicated the British administration in Palestine for the entire existence of the British Mandate. The British found themselves confronted with “conflicting commitments” that were irreconcilable.<sup>17</sup> On the one hand, the Balfour Declaration meant some kind of “salvation” for the Jews, but on the other hand, for the British, according to Elizabeth Monroe it represented “one of the greatest mistakes in its imperial history.”<sup>18</sup>

The first Higher Commander of the British Mandate for Palestine, Herbert Samuel, wrote in his memoirs of the moment he arrived in Palestine. He clarified his strategy as an “administer of the country, not for the benefit of one section of the population only, but for all; not commissioned by the Zionists but in the name of the King.”<sup>19</sup> In his work dedicated to Herbert Samuel, Bernard Wasserstein remarked about Samuel’s approach toward rebuilding the Jewish National Home that “he pursued a deliberately passive policy, believing that the government was to facilitate rather than actively encourage or direct Jewish immigration and settlement.”<sup>20</sup> Towards the Arabs, Samuel noted that it is “a clear duty of the mandatory power to promote the well-being of the Arab population, in the same way as a British Administration would regard it as its duty to promote the welfare of the local population in any part of the Empire.”<sup>21</sup>

For the British cabinets and administration in Palestine, the existence of the Mandate represented a permanent conflict with the Jewish and Arab leaders. For Samuel and for all his successors, it was one of the biggest challenges within the policy-agenda, especially when considering the increasing numbers of Jewish immigrants to the Holy Land (see Table 1 below).

**Table 1:** The Evolution of the Jewish Immigrants

Aliyah	Years	Jewish Immigrants
First	1882-1903	35,000
Second	1904-1914	40,000
Third	1919-1923	40,000
Fourth	1924-1929	82,000
Fifth	1929-1939	250,000

**Source:** Based on the Jewish Virtual Library

The acceptance of Jewish immigration to Palestine, accompanying very effective purchasing land by Jewish National Fund (*Keren Hakayemet*) gave rise to a feeling of British betrayal of Arab leaders. The growing pressure that had been caused by the Jewish

<sup>17</sup> CHARTERS, ref. 11, p. 12.

<sup>18</sup> MONROE, Elizabeth. *Britain's Moment in the Middle East, 1914–7*. London: Vintage, 1981, p. 43.

<sup>19</sup> SAMUEL, Herbert Viscount. *Memoirs*. London: Cresset Press, 1945, p. 168.

<sup>20</sup> WASSERSTEIN, Bernard. Herbert Samuel and the Palestine Problem. *The English Historical Review*, 1976, Vol. 91, no. 360, p. 763.

<sup>21</sup> *Ibid.*, p. 764.

immigration was also confirmed by the Haycraft Commission established in reaction to Jaffa riots in May 1921. After the investigation of the bloodshed between Jews and Arabs, final report approved that it was based on “the Arab discontent due to the political and economic causes linked to the Jewish immigration.”<sup>22</sup> This early restlessness was following by another one in the end of 1920s stressing the religious issues over the Western Wall in Jerusalem, respectively the violence in Hebron. The dynamics of Jewish population inflow had increased with Nazi seizure of power in 1933. Arabs in Holy Land held the British authorities responsible for this trend and responded with a massive rebellion against the British and Jews during the Arab Revolt 1936–1939. Even though, as we demonstrate in Table 2, Arabs have had a comfortable majority throughout the British Mandate, the numbers of Jewish immigrants to Palestine had continuously increased since the end of the First World War.

**Table 2:** Total numbers of Jews and Arabs lived in Yishuv

Year	Jews	Arabs	Others
1915	83,000	590,000	17,000
1922	83,794	590,890	82,498
1945	553,600	1,061,270	149,650

**Source:** Based on the Jewish Virtual Library

The result of insurgence mentioned above has brought a change in the British policy toward the Jews in Palestine. The British restricted Jewish migration to Palestine up to 75,000 within five years period and called as well for bi-national solution of Jewish-Arabs problems, *ergo*, it pursued the establishment of the Jewish national home within an independent state of Palestine.<sup>23</sup> Jewish leaders in *Yishuv* were in conflict with the British administration on many instances, mainly regarding the issues related to (a) the Jewish rights to immigrate to Palestine (b) the Jewish acquisition, import and storage of arms and (c) the training of Jewish self-defense forces.<sup>24</sup>

Moreover, there were significant differences within the Jewish community and the struggle between the old settlers in *Yishuv* and newcomers, between the left and right represented mainly by D. Ben Gurion's socialist's policy and V. Jabotinsky's rightwing ideology. Although the Jewish leaders such as D. Ben Gurion, Ch. Weizmann, and V. Jabotinsky realized that any form of alliance with the British is the one and only solution how to reach for a Jewish state. Yet among the Jewish elites, there was no strict consensus over the British false promises and “vague political rhetoric and soft political action,” and

<sup>22</sup> ARCHIVE.ORG. Haycraft Commission Transcript. *Archive.org*. Available from: <http://www.archive.org/stream/palestinedisturb00grearich#page/58/mode/2up>. Accessed November 13, 2021.

<sup>23</sup> SEGEV, ref. 11. See also SHAPIRA, ref. 11, p. 87.

<sup>24</sup> HOFFMAN, ref. 11, p. 260.

some of them, called *Porshim* (separatists), preferred an “active and violent struggle” against the British.<sup>25</sup>

## 2 JEWISH PARA-MILITARY FORCES: HAGANAH, IRGUN, LEHI

The Jewish para-military groups in Palestine had already been formed in the Ottoman Empire, and they had experienced many splits until 1948. Generally, the main Jewish insurgency against the Arabs and then the British included three main resistance actors: Haganah, Irgun, and Lehi.<sup>26</sup> These three Jewish para-military groups came from different Zionists backgrounds of *Yishuv*, they had various organization structure as well as dissimilar combat strategies and willingness to fight against British.

Haganah was established by the leftist, socialists – Zionists leaders and members of the *Achduth Ha'Avodah* party that did not rely on the British administration or Jewish security issues. Haganah followed the legacy of its predecessors, the organization of *Bar-Giora*,<sup>27</sup> established by Yitzhak Ben Zvi in 1907 or *Hashomer* founded in 1909.<sup>28</sup> The self-defense of the Jewish *kibbutzim*<sup>29</sup> after the 1920s Arab riots, like in Jaffa in 1921, was the key motivation for setting up Haganah. As the Y. Bauer quoted, Haganah was not based on any intention “to aspire a political role [...] Hagana’s aims was not to become a military wing of a political body.”<sup>30</sup> This position stands in contradiction to some representatives of *Histadrut* (Workers union) who planned that Haganah should “develop into a real military force in a future.”<sup>31</sup> Haganah was organized as a “territorial militia” from the beginning, and its goals were formulated in the *Havlagah* (The Restraint) doctrine based strictly on defense operations. Haganah denied providing revenge against innocent Arabs after the Jewish settlement was attacked by them.<sup>32</sup> This approach changed dramatically since 1929 Arab riots when a process of Haganah’s reorganization

<sup>25</sup> SHPIRO. ref. 11, p. 201.

<sup>26</sup> *Haganah* in Hebrew means „The Defence“; *Irgun* (Organization) is a shortened version of *Irgun Zvai Leumi* (National Military Organization). Very often is also used Hebrew acronym *Etzel*; *Lehi* is a shortened version of *Lohamei Herut Israel*, it is means „Fighters for the Freedom of Israel.“ By British very often named as „Stern gang.“

<sup>27</sup> *Bar-Giora* was named after the Simon Bar Giora one of the Jewish leaders fought in uprising against the Romans.

<sup>28</sup> HAGANAH. Prior to the Haganah. *Irgoon-Haagana.co.il*. Available from: [http://www.irgon-haagana.co.il/show\\_item.asp?levelid=61005&itemid=49695&itemtype=3&prm=t=4](http://www.irgon-haagana.co.il/show_item.asp?levelid=61005&itemid=49695&itemtype=3&prm=t=4). Accessed July 7, 2021. BAUER, Yehuda. From Cooperation to Resistance: The Haganah 1938-1946. *Middle Eastern Studies*, Vol. 2, No. 3, 1966, p. 182.

<sup>29</sup> Hebrew term for the Jewish settlers.

<sup>30</sup> BAUER, ref. 28, pp. 183-184.

<sup>31</sup> Ibid.

<sup>32</sup> CHARTERS, David. *The British Army and Jewish Insurgency in Palestine*. London: Palgrave Macmillan, 1989, p. 44.



had begun and the National command was established as well as after the Arab revolt 1936-1939 continued with the outbreak of the World War Two when new combat forces were established.<sup>33</sup> A shift from defense to offensive was the main change in military approach, a strategy brought by Orde Charles Wingate, known also as 'Lawrence of the Jews'. Special Night Squads under the Wingate's command targeted Arab terrorists in the middle of the night. There are various estimates of Haganah's membership numbers, but it was the largest and most principal Jewish paramilitary group in *Yishuv* without a doubt. According to Bauer "[...] in 1937, Haganah was comprised of 17,000 men, 4,000 women, 4,500 rifles, 10,000 small arms, and 230 light machine guns, meanwhile in the half of 1942, the number of combatants was estimated between 30,000-100,000. Then, on the eve of the War of Independence, Haganah consisted of 46,000 combatants."<sup>34</sup>

Irgun, another Jewish para-military organization, possessed much lesser military power than Haganah, even though Irgun's terrorist activities against the British were the most substantial during the insurgency in comparison with other three Jewish paramilitary groups. While Haganah was succumbed to the Labor Zionism's left-oriented influence, Irgun followed a right-leaning orientation in his legacy which was a revisionist stamp on Zionism of its political leader Vladimir Ze'ev Jabotinsky. From a military angle, it was David Raziel. Menachem Begin, future Prime Minister of Israel, became Irgun commander after Jabotinsky's death. Begin symbolized a true wing of resistance opposing the British, and thus representing one of main persons fighting for freedom. Irgun was founded in 1937 and consisted predominantly of members of Beitar, a youth movement, meaning mostly non-Labor Jews. The ideological inspiration may be seen in Pilsudski's Poland and other national emancipation or resistance movements such as Mazzini's Young Italy, the anti-Nazi movement in France, the *Maquis*, or the Irish and Greek rebellious groups.<sup>35</sup>

The crucial aspect that differentiates Irgun from Haganah is a strong willingness to fight and carry out the attacks. Main objective of the group illustrates that: "[they] wanted a military organization that would have initiated attacks on both Arab and British targets."<sup>36</sup> Menachem Begin noted in one interview that "Irgun resumed warfare with 338 members, but during the war of liberation, the numbers grew and reached thousands."<sup>37</sup>

According to the evidence of Ben-Yehuda, Zadka or Charter, the estimated size of Irgun's membership varied from 300 at the beginning to 600 men and women, of whom only 200 were combat fighters in early 1944, respectively, about the 1,500 combatants in 1945.<sup>38</sup> J. Bowyer Bell characterized Irgun members as "part-time insurgents leading

<sup>33</sup> Since this time was established e.g., *Hish* – Field Combat Corps, *Chim* – Home Guard, *Gadna* – Youth Corps, *Palmach* – Hagana Mobile Striking Forces, *Shai* – Hagana's National Information Service.

<sup>34</sup> BAUER, ref. 28, p. 183.

<sup>35</sup> KAPLAN, Eran. *The Jewish Radical Right*. Wisconsin: Wisconsin University Press, 2005, p. 9.; ZADKA, ref. 11, p. 22. For Israeli revisionism see also WEITZ, Yechiam. The Revisionist Movement and Democracy. *Journal of Modern Jewish Studies*, 2011, Vol. 10, No.2, pp. 185–204.

<sup>36</sup> *Ibid.*, p. 10.

<sup>37</sup> Begin's interview in ZADKA, ref. 11, p. 196.

<sup>38</sup> BEN-YEHUDA, Nachman. Conflict resolution in an underground group: The Shamir-Giladi Clash. *Terrorism*, 1989, Vol. 12, No. 3, p. 202. CHARTERS, ref. 32, p. 46.

secret life from parents, friends, and children.”<sup>39</sup> The tactics, methods and operations by Irgun grew from four sources: surprise factor, duration and the withdrawal of the operation, intelligence information gathering and providing different military methods.<sup>40</sup> From this point of view, Irgun represented a “new form of guerilla organization – cross between a large terrorist group and small army (...) made its strongest impact through ‘hit and run’ activities.”<sup>41</sup> Despite the fact that Irgun’s terrorist activities plotting against the British were coming from all of the three Jewish paramilitary groups, shortly after the Irgun’s genesis, there was no anti-British agenda as such.

The last paramilitary organization, Lehi, nicknamed ‘Stern gang’ by the British, was the smallest, though the most radical operating unit in Palestine. As Shlomo Shpiro claimed in his study, for Avraham Stern, the main figure of Lehi<sup>42</sup>, was the “armed struggle the only natural way to achieve independence and national liberation.”<sup>43</sup> Stern linked the history of Jewish wars and revolts essentially to religious elements and he saw the Jewish nation as a “unique creation with a special role to history.”<sup>44</sup> The Stern gang, consisting of 200 members approximately, did not share the same opinion about cooperation with the British against Nazi Germany.<sup>45</sup> Subsequently, owing to a dispute with Commander Raziell, the gang seceded from Irgun in 1940. The original name National Military Organization in Israel was transformed to Lehi in September 1940. Afterwards, Stern and his gang called themselves terrorists and they openly emphasized and justified the violent practice as a legitimate instrument to free the Jewish nation.<sup>46</sup> Nazi Germany or fascist Italy had been then perceived as a possible ally whose power could have helped the Jews in their fight against the British oppression. As the only organization in liberation fights, Lehi employed a religious ethos through mixed Stern’s religious-philosophical approach. After becoming the commander-in-chief, Stern issued the first ideological manifesto of Lehi fighters, the *18 Principles of Rebirth*. Stern stressed, besides other issues, the Jewish eternal right to the Palestinian land or even mentioned the creation of the “third Jewish Temple.”<sup>47</sup> Lehi specified this issue as a secular motif with respect to the terrorist attacks committed by Haganah and Irgun. Ben-Yehuda notes that

<sup>39</sup> BELL, B. John. *Terror Out of Zion: Fight for Israeli Independence 1929-1949* New Jersey: Transaction Publishers, 2009, p. 109.

<sup>40</sup> ZADKA, ref. 11, p. 65.

<sup>41</sup> Ibid., p. 26.

<sup>42</sup> Yitzhak Shamir, Boaz Evron, Binyamin Zeroni, Yitzhak Tzelnik, Avraham Vilenchik, Eliyahu Giladi were other later well-known commanders or members of Lehi.

<sup>43</sup> SHPIRO, ref. 11, pp. 609-610.

<sup>44</sup> Ibid.

<sup>45</sup> BEN-YEHUDA, ref. 38, p. 203.

<sup>46</sup> BEN-YEHUDA, Nachman. *The Masada Myth: Collective Memory and Mythmaking in Israel*. Wisconsin: Wisconsin Uni Press, 1995, p. 322. ROSENFELD, Jean. *Terrorism, Identity, and Legitimacy: The Four Waves Theory and Political Violence*. London: Routledge, 2011, p. 161.

<sup>47</sup> BEN-YEHUDA, ref. 38, p. 203.

Lehi had transformed into a “small, unique type of organization, almost a sect” after departing from Irgun.<sup>48</sup>

As David Charters mentions correctly “the Jewish underground was divided on the issues of methods and legitimacy of violent rebellion. These divisions were reflected in the different organizational structures, strategies, and tactics of the three ‘illegal armies’ (...) these different approaches to rebellion exerted a significant influence on the course of the insurgency.”<sup>49</sup>

### 3 METHODS OF JEWISH INSURGENCY AGAINST BRITISH 1939-1945

*Yishuv* and Jewish leaders were in a state of permanent conflict with the British administration over many cases since the White Paper ratification and the beginning of the Second World War. Except for the Jewish land purchase, the reason was rooted mainly in the issues related to the (a) Jewish rights to immigrate to Palestine (b) acquisition, import and storage of arms by Jews (c) the training of Jewish self-defense forces.<sup>50</sup> With the outbreak of the Second World War, the Jewish separatist groups had dramatically changed and radicalized their position towards the British administration.

Haganah was unwilling to cooperate with Irgun and Lehi in their military actions against the British even after the plans to annihilate the Jews were revealed. However, Haganah's greatest power was concentrated in the Palmach troops that were helping the British during the Second World War. Consequently, it was the most striking unit fighting against the British, and moreover, they even fought against the members of Irgun and Lehi to keep a pragmatically beneficial relationship with the British. Under the patronage of the Jewish Agency, Haganah concentrated on fighting against the British after the White Paper had been published aiming to carry out illegal Jewish immigration operations.

Organization contributed to the growth of the Jewish population in Palestine to save the European Jewry and to increase the Jewish population and protect this population during the settlement activities in the Palestinian territory.<sup>51</sup> Haganah's attacks were frequently aimed at various military targets of the British administration, for instance, the “roads and bridges, patrol boats and naval vessels, police stations, radar stations and airfields.”<sup>52</sup> Sabotage against the *Patria* ship in 1940 is the best known Haganah's action. *Patria* was tasked with deporting 1,800 Jews from Palestine to Mauritius. Even though the initial plan was to prevent the ship from leaving the Port of Haifa, Haganah planted

<sup>48</sup> Ibid.

<sup>49</sup> CHARTERS, ref. 32, p. 41.

<sup>50</sup> RABINOVICH, I. – REINHARZ, J. (eds.), ref. 15, pp. 48-53; HOFFMAN ref. 11, p. 260.

<sup>51</sup> CHARTERS, ref. 32, p. 45.

<sup>52</sup> Ibid., p. 45.

a bomb causing a mass killing of more than 260 people, 170 were wounded, and the ship sank.<sup>53</sup>

After the outbreak of the war, Irgun under Jabotinsky's leadership forced some members to leave the organization and return to Haganah or join more radical Lehi. Irgun's members were helping the British in fighting against the Nazis not only after Jabotinsky's death but until the official declaration of the open rebellion of Irgun against the British. This was announced by the new commander-in-chief Menachem Begin<sup>54</sup> on February 1, 1944, since he did not wish to accept Haganah's passive attitude anymore, nor the consequences resulting from the acceptance of the White paper. One of Irgun's initial attacks on immigration offices in Haifa, Jaffa, and Jerusalem on February 12, 1944, was an embodiment of this attitude. Number of similar actions against the British administration occurred throughout 1944: assaults on the Inland revenue offices in Tel Aviv on February 27, the bomb attacks on Criminal Intelligence Department (CID) centers in Jerusalem, Jaffa, and Haifa on March 23.<sup>55</sup> Although there were not many casualties in these assaults, they were of a great symbolic value. Quoting Begin: "we would not tolerate an office which kept Jews out of Palestine at the time when our brothers were being dragged to death in Europe".<sup>56</sup>

A far more extremist mode of attacks against the British appeared among the representatives of Lehi, the smallest and most radical group. As Brenner wrote: "this very small organization could not hope to achieve its objectives (...) the Lehi's strategy contributed to the deterioration of the security situation in Palestine, to what one author called the 'dialectic of repression, resistance, terror and reprisal'."<sup>57</sup> Stern's vision, known as the 'individual terrorism', had been based on the fact that the "assassination of key individuals was supposed to bring down the whole government structure."<sup>58</sup> The 1944 terrorist attacks committed by members of Lehi on the British military and civilian services were financed through to bank robberies especially.<sup>59</sup> The most serious action took place on November 6 when they murdered Lord Moyne in Cairo, Egypt, who had served as the British Minister of State in the Middle East.<sup>60</sup> A resolute answer from the British came in cooperation with Haganah.

Joint effort of Haganah and the British against a growing number of terrorist actions represents so-called *The Saison* <sup>61</sup>, the period between November 1944 to March 1945.

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<sup>53</sup> BAUER, Yehuda, *From Diplomacy to Resistance: A History of Jewish Palestine*. Varda Books, 2001, pp.108-109.

<sup>54</sup> ZADKA, ref. 11, p. 28.

<sup>55</sup> Ibid., p. 191.

<sup>56</sup> Ibid., p. 28.

<sup>57</sup> BRENNER, Y. S. The Stern Gang, 1940-48. *Middle Eastern Studies*. Vol. 2, No. 1, 1965, p. 20.

<sup>58</sup> CHARTERS, ref. 32, p. 51.

<sup>59</sup> BEN-YEHUDA, ref. 38, p. 203.

<sup>60</sup> Assassination is carrying out to Lehi members Eliyahu Hakim and Eliyahu Bet-Zuri. For detailed info see e.g., PEDAHZUR, Ami – PERLIGER, Arie. *Jewish Terrorism in Israel*. New York: Columbia University Press, 2011, pp. 18-22.

<sup>61</sup> Also mean as a 'Hunting season'.

Yishuv, led by Ben Gurion, implemented a new policy approach against Irgun and Lehi. It consisted of four main aspects: expel any supporter of those gangs; deprive them of any shelter or hiding places; resist their threats and intimidation; inform the authorities about their whereabouts.<sup>62</sup> The British administration remarked in the end of this action in March 1945 however: "(...) unfortunately, the Jewish Agency's lists of so-called terrorists continues to include numerous people who have no terror connections, but politically speaking are undesirable to the Jewish Agency".<sup>63</sup> By the end of *Saison*, Haganah and the British had arrested a total of "830 suspects, of whom 337 have been located and detained so far. Of these, 241 are being held under the Emergency Regulations."<sup>64</sup> Nevertheless, it is necessary to mention that the final say of the commander-in-chief Begin not to intervene in case of Haganah and thus not to employ violent actions after member of Irgun and Lehi had been captured, helped the troops of Palmach and Shair in their operations.<sup>65</sup>

In the context of following events, the Jewish insurgency in Palestine was influenced by domestic development in Britain, the end of the war in 1945, and worsened relations between the British and Jewish leadership. The victory of Labor Party and the fact that Ernest Bevin, one of the great nemeses for the Jews<sup>66</sup> became the Minister of Foreign Affairs, made the relations between Great Britain and the Jewish leader in *Yishuv* even worse, especially when Bevin questioned the Jewish claims about their national homeland based on the Balfour declaration.

#### 4 JEWISH INSURGENCY AGAINST THE BRITISH IN 1945-1947: FROM THE JEWISH RESISTANCE MOVEMENT TO ITS DISSOLUTION

Development discussed above brought certain level of disillusionment among the *Yishuv* leaders, so they rather accelerated negotiations on creating so-called Jewish Resistance Movement (JRM). As Zadka clarified, "it was the first time that *Yishuv* leadership had been prepared to take up arms."<sup>67</sup> The Jewish elite found itself in a paradoxical situation. While a year before, representatives of Haganah had assisted the British in capturing Irgun and Lehi leaders, for this moment Haganah's commanders such as Sneh and Gilali requested further cooperation with Begin's Irgun and Stern's followers from Lehi. Representatives of all the three paramilitary groups operating in Mandatory Palestine finally agreed to coordinate their actions on the basis of separate guerilla activities,

<sup>62</sup> ZADKA, ref. 11, p. 54.

<sup>63</sup> LAPIDOT, Yehuda. The Hunting Season. *Jewish Virtual Library*. Available from: <https://www.jewishvirtuallibrary.org/the-ldquo-hunting-season-rdquo>. Accessed December 15, 2021.

<sup>64</sup> Ibid.

<sup>65</sup> BAUER, ref. 53, p. 333.

<sup>66</sup> SEGEV, ref. 11, p. 483.

<sup>67</sup> Ibid., p. 57. See also YAHIEL, ref. 11, p. 8.

excluding confiscations of arms and money.<sup>68</sup> Actions were subject to mutual approvals, and every organization had its leader in the command board: Yitzhak Sadeh (Palmach), Yaakov Eliav (Lehi), and Eitan Livni (Irgun).

Despite the fact that Haganah joined fighting against the British for the first time, the strategy accepted by the leaders of Haganah with the Jewish Agency, known as *constructive warfare* “was supposed to satisfy both the militant elements in the Haganah and the Zionist movement, who wanted to take action against the British, and the moderates, who were opposed in principle to the use of terrorism.”<sup>69</sup> Moreover, “Haganah and the Palmach were directly involved in eight military operations, meanwhile The Irgun and the Lehi together carried out more than 30 during the same period.”<sup>70</sup> On June 16, the JRM, led by the Haganah forces, launched attacks on 11 bridges in the country in order to block the British troops from entering the area. This action became known as the Night of Bridges or Operation Markolet and created two critical problems. First, an escalation of tensions among the fighting groups, and secondly, it forecast the breakdown of the JRM because Haganah and the representatives in *Yishuv*, similarly as the World Zionist Organization reflected the success of Anglo-American Commission that allowed 100,000 Holocaust survivors to move to Palestine.

Operation Agatha, also known as Black Sabbath, was the British reaction following the coordinated violence. Meantime, the British forces compromised of 17,000 soldiers captured around 2,700 members of JRM. Subsequently, this step paralyzed next activities because a vast majority of members were of Haganah origin or former Palmach troop fighters.<sup>71</sup> British attack against the JRM and *Yishuv* leaders was unprecedented. Counterattack from Irgun and other organizations brought the most violent incident of the Jewish Insurgency in the entire existence of the Mandate of Palestine. This took place at the King David Hotel in Jerusalem on July 26 which was selected because it used to be the headquarters of the British administration for Palestine.<sup>72</sup>

While members of Haganah and representatives of *Yishuv* accepted the UN's endeavors to solve the situation in Palestine after the UNSCOP<sup>73</sup> was formed, and thus they and tried to eliminate Irgun and Lehi's operations, the Jewish resistance continued even after this dissolution. Open fire actions did not cease, and furthermore, their resistance crossed the borders after an attack on the British embassy in Rome. The peak of violence came in 1947 when the member of Irgun took part in liberating fellow combatants in the Acre Prison Break. Both Irgun and Lehi kept bomb attacks as the main instrument for fighting against the British. These attacks then occurred in public areas, streets, and cafés and even in front of the Damascus gate.<sup>74</sup> Shortly before the British has left Pa-

<sup>68</sup> ZADKA, ref. 11, p. 59.

<sup>69</sup> CHARTERS, ref. 32, p. 44.

<sup>70</sup> Ibid., p. 48.

<sup>71</sup> PEDAHzUR–PERLIGER, ref. 61, pp. 23-24.

<sup>72</sup> YAHIEL, ref. 11, p. 10; ZADKA, ref. 11, chapter 5, pp. 86-100.

<sup>73</sup> United Nation Special Committee on Palestine.

<sup>74</sup> For detail list of attacks by Jewish paramilitary forces see Appendix 3 in CHARTERS, ref. 32, pp. 182-196.

lestine and the UN decided and recommended that two independent states would be created, members of Lehi still tried to kill higher British representatives but failed. The letter bomb sent to British Major Roy Faran was opened by his brother, who was killed instead of him.<sup>75</sup>

## CONCLUSION: OUTCOMES OF JEWISH INSURGENCY AND IMPLICATIONS FOR THE STATE OF ISRAEL

The Jewish Insurgency campaign of which it had aimed to form a new state in the territory of Palestine represent a par excellence example of successful guerilla fighting in a history. Jewish fights for liberation against the British had to leave the area after the pressure from Jewish paramilitary groups, and it even forecast the decline of the British Empire in the Suez crisis a couple years later.

To summarize the Jewish rebellion, it is necessary to illustrate some data concerning the Jewish Insurgency in some data findings. In this period, when the Second World War was nearly over, at least 363 documented instances of violence took place (17.2 attacks per month). The most violent phase lasted from June 1946 to July 1947.<sup>76</sup> Operations in the name of the Jewish resistance appeared throughout the territory of Palestine, and among the most frequent tactics of this guerilla fight, there were mostly mining incidents (119), bombings (87) in minor raids and mortar attacks (54), shooting incidents (31) or assassinations (21). Predominantly, the assault operations were directed at Security Forces (212), or eventually logistic areas, such as railways (61) and oil refinery (12).<sup>77</sup> As demonstrated by the findings of the High Commissioner to the British Embassy, which Charters presented in his study, the violent period between August 1945 and August 1947 also meant 616 British casualties, out of which 141 were killed, 475 were wounded, whereas “just” 40 Jewish insurgents were killed and 23 were wounded.<sup>78</sup>

The era of liberation fighting against the British left its legacy to the State of Israel in several ways. To consider implications for Israeli politics, despite the huge Irgun's impact on expelling the British, it was leftist Yishuv representatives led by Ben Gurion, and Haganah who dominated Israeli politics after the 1948, and Begin's Likud took power just in 1977. However, since this time, the revisionist vision of Zionism, led by Likud and politicians like M. Begin, Y. Shamir, or B. Netanyahu, has dominated Israeli politics. These politicians favored and enforced Jabotinsky's vision of *Eretz Israel* undermining any attempts to solve the Israeli-Palestinian conflict. Moreover, Begin, a leading figure of the anti-British underwent a metamorphosis into a “peacemaker” and was honored Nobel

<sup>75</sup> CESARANI, David. *Major Farran's Hat: Murder, Scandal and Britain's War against Jewish Terrorism 1945–1948*. London: Vintage Books, 2010.

<sup>76</sup> CHARTERS, ref. 32, p. 196.

<sup>77</sup> Ibid., p. 197–198.

<sup>78</sup> Ibid., p. 205.

Peace Prize for so-called “cold peace” with Egypt, or Y. Shamir, a former Lehi commander, served as Prime Minister during the Madrid peace conference, held in 1991. Finally, Jewish fight for liberation and against Arabs inspired also a several extremist activities such as *Gush Emunim*’s settlement actions based on Rabbi Kahane’s ideology, or the incidents at the Cave of Patriarchs massacre in Hebron committed by Baruch Goldstein, Kahane’s sympathizer, or Yigal Amir’s **assassination** on Prime Minister Rabin, also inspired by radical Jewish religious elements.

G. Aran and R. Hassner reflected figures of Jewish political violence between 1932 and 1977 and compared them with the period of 1978 and 2008. Between 1932-1977, there were overall 150 recorded incidents, and a vast majority of these cases were part of the national liberation struggle in *Yishuv*. They were represented by the Zionist underground movements in Palestine against the British namely, but also against the Arabs. Thus, secular terrorism had prevailed in that period. In the second period, after the 1977, from out of 170 terrorist attacks only 3 per cent accounted for secular terrorism. An increase appeared in the Jewish religious terrorism.<sup>79</sup> The Jewish guerrilla fighting, especially the Irgun’s terrorist campaign embarked “an evolution and development of modern, contemporary terrorism”<sup>80</sup> because the ability of Irgun mobilized tendencies of sympathy and support for Jewish statehood across the world, especially in places where the Jewish diaspora was settled.

Finally, we would like to highlight two closing thoughts yet. First, in the Czechoslovak context, not only the Czechoslovak weapons delivered to Israel have helped to newly established state to survive, but it is necessary to emphasize that also Jews born in the present-day territory of the Czech and Slovak Republics contributed significantly to Jewish guerilla warfare. There is a well-known Hugo Marom’s story; however, there are a few overlooked stories of the two important figures, Yaakov Weiss, an Irgun member born in Nové Zámky, and Mordechai Schwarcz, Palestine Police Forces and Haganah member, born in Komárno. Both were executed in Acre prison at different times; Schwarz in 1938, Weiss in 1947 after the Irgun’s operation, Acre prison break, and both became members of *Olei Hagardom*<sup>81</sup>, a group of Irgun and Lehi’s fighters who are broadly commemorated in Israel as national heroes for their pre-state military activities in *Yishuv*.<sup>82</sup>

Second, we consider that some historical parallels from the Jewish guerilla campaign against the British Mandate (but with different interpretations) could be seen after the

<sup>79</sup> ARAN, Gideon – HASSNER, Ron. Religious Violence in Judaism: Past and Present. *Terrorism and Political Violence*. Vol. 25, No. 3, 2013, p. 357.

<sup>80</sup> HOFFMAN, ref. 11, p. 267.

<sup>81</sup> Originally a group of 12 Irgun and Lehi’s members (Mordechai Alkahi, Moshe Barazani, Shlomo Ben-Yosef, Eliyahu Bet-Zuri, Dov Gruner, Yehiel Dresner, Eliezer Kashani, Avshalom Haviv, Meir Feinstein, Meir Nakar, Eliyahu Hakim, Yaakov Weiss) which were expanded about the four others (Eli Cohen, Mordechai Schwarcz, Yosef Lishansky, Naaman Belkind) after the former Irgun commander, Menachem Begin, became a Prime minister of the State of Israel.

<sup>82</sup> see SHELEG, Jair. The Good Jailer. *Haaretz*. Available from: <https://www.haaretz.com/2007-04-07/ty-article/the-good-jailer/0000017f-e225-d75c-a7ff-feaddde60000>. Accessed August 10, 2022; see also LAPIDOT, Yehuda. Yaakov Weiss. *Etzel.org.il*, Available from: <https://etzel.org.il/english/people/weiss.htm>. Accessed August 10, 2022.



founding of the State of Israel during Cold War, or later in the First and Second Intifada, respectively it should be seen in current Israeli's security challenges related to the West Bank, Gaza Strip, Lebanon, and Syria after the Arab Spring uprisings. Israel has recently experienced a similar situation as the British when serving as the governing authority of Mandatory Palestine. Thus, Israel has to face a constant rise of conflicts and attacks from the Palestinians, who are fighting against the occupation forces of Israel, in the same manner as Haganah, Irgun, and Lehi had fought against the British in Mandatory Palestine.

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Vážení čtenáři,  
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MUDr. FRANT. TICHÝ:

*Z historie vojenského zdravotnictví za války třicetileté.*

Taktická studie Haumerova o bitvě na Bílé hoře povzbudila mne, abych upozornil v krátkém článku na zdravotnictví vojenské ve válce třicetileté.

Je jistě zajímavým zjevem, že se přes dlouhé trvání této války zachovalo poměrně velmi málo zpráv o zdravotních zařízeních v tehdejších armádách. Básník německý Frid. Schiller, jenž, jak známo, napsal obšírné dějiny třicetileté války, byl lékařem, přesto však se v celých svých dějinách o zdravotnictví zmiňuje velmi málo.

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Čekali bychom mnohem více již proto, že Schiller sám po nějaký čas byl i lékařem vojenským — sloužil po několik let, počínaje r. 1780, u granátnického pluku, jenž ležel ve Stuttgartě — a pak i proto, poněvadž i jeho otec dlouhá leta sloužil v německém vojsku jako lékař. Přesto se, vyjímaje zmínky o moru, o ztrátách lidských životů, nikde v Schillerovi nedočteme o vlastním válečném zdravotnictví. A přece již tehdy vojenské zdravotnictví existovalo; na př. brandeburský kurfiřt Jiří Vilém měl ve svém vojsku známého své doby chirurga Matěje Bohumíra Purmanna, jenž měl čtyři pomocníky. Tehdejší zdravotnictví bylo — jako celé lékařství vůbec — značně primitivní. Všimněme si na příklad, jak se odvádělo. Vévoda Valdštýn se vůbec nedíval na velikost a sílu, soudě, že prý slabí stejně za čas zahynou a tak zdravé jádro armády zůstane zachováno. Jiné náhledy byly ve vojsku švédském. Švédové odváděli jen muže 18—30leté, hledíce k tomu, aby byli zdraví a silní.

Platy vojenských lékařů za války třicetileté byly bídné; Valdštýn dával 3½ tolaru měsíčně. Ve vojsku císařském měli u generálního štábu již tenkrát generálního felčara. Jinak řadili vojenské lékaře mezi poddůstojníky, obyčejně asi tak mezi písaře a kováře. V armádě švédské zařazen byl lékař mezi auditory a písaře. Když r. 1618 táhli císařští na Čechy, mělo vojsko jejich i ošetřovatelky raněných, jež byly vybrány z žen, provázejících vojáky, jak tehdy bylo všeobecným zvykem. Švédové měli již polní vojenské nemocnice, o jejichž výstroj se prý znamenitě starala jejich královna Kristina.

Jako byly zvláštní poměry mezi tehdejšími vojáky, (chlubivali se, že, než roztrhali jedny boty, změnili třeba šest potentátů), tak podivuhodné byly poměry i náhledy v lékařství. Slavný své doby lékař Raymund Minderer ve své knize „Medicina militaris“ (Augsburg 1620) varuje před pitím z kalužin. Ještě dnes bychom musili radu Mindererovu doporučit, zvláště pro možnost nákazy tyfem, ale on to radil z jiného důvodu: aby člověk—voják nevypil žábu nebo její zárodky. V Bavořích prý se to, jak píše, stalo, a on sám vypudil pak z jednoho vojáka léky 254 žab a z jednoho vojenského kuchaře, jenž vypil s vodou hadí vajíčka, řadu malých hádat a jednoho hada loket dlouhého.

Bouřlivý život prožívali tehdejší vojenští lékaři, a byli mezi nimi i Čechové, tak na př. známý exulant český a pozdější proslavený lékař v Brémách Jan Sophronius Kozák z Práchně. Typ českého vzdělaného lékaře, český bratr, muž hrdý na svou národnost. Málokdo dnes u nás o tomto muži ví. Sloužil ve vojsku Mansfeldově, zúčastnil se obléhání Magdeburku ve vojsku Kristiana Braniborského. Přišel se Sasy do Prahy, byl v bitvě u Lipska, Norimberku i u Lützen, zde již jako lékař maršálka Boemera. Popsal z pobytu svého v Praze horečnaté nemoci a vředy, jež se tu tenkrát houfně objevovaly, a r. 1636 opustil vojsko, usadil se v Brémách a zde působil téměř 50 let jako všeobecně oblíbený lékař. Syn jeho byl rovněž lékařem a sloužil ve vojsku brunšvickém v Uhrách.

Kozák zastupoval již moderní směr v lékařství vojenském, jež bylo ve válce třicetileté ještě ubohé. Mnoho se spoléhali i lékaři na kouzla. Proti krvácení sami lékaři doporučovali nositi na těle cedulku, na níž bylo napsáno „oipolum“. Kozák věřil také ještě v moc amuletů, ale jen proti nemocem nakažlivým, jež tenkrát kosily tisíce životů. Roku 1620 ztratili jen Bavoři skvrnitým tyfem 20.000

mužů. Po bitvě na Bílé hoře nařídil magistrát mnichovský, aby nebyly do Mnichova zavlečeny nakažlivé choroby, úplné uzavření města všem transportům z Čech, hlavně však transportům raněných. Vojska zavlekla nakažlivé choroby všude; v Třeboni, jak napsal Mareš, r. 1640 vymřelo téměř všechno obyvatelstvo a z 8 praporů polského vojska zůstaly jen jejich prapory, jež byly pak z města odneseny.

Co se týče ošetřování raněných, střelné rány byly léčeny, hlavně díky činnosti proslaveného francouzského chirurga Ambr. Parého (1510–1590), již zcela jinak, než ještě nedávno před tím, kdy vrcholem léčby střelných ran bylo vypáliti je rozžhaveným železem a naliti do nich vřelého oleje. Uvedený již Minderer — polní vojenský lékař císaře Matyáše — doporučuje střelné rány vymývatí vínem nebo čistou vodou a obvazovati čistým plátnem.

O ošetřování raněných v bitvách války třicetileté možno si učiniti aspoň částečně obraz z paměti pana Kristiana mladšího z Anhaltu, jenž se vyznamenal, jak známo, v čele svých jezdců v Litvě na Bílé hoře. Princ — podle tradice tichý zbožňovatel krásné zimní královny — byl na Bílé hoře dvakrát zraněn, jednou byl střelen z pistole pod pravé paždí, po druhé ho střelil nepřátelský mušketýr pod kyrys. Po této ráně klesl mladý hrdina s koně a byl zajat. V zachovaném deníku líčí, jak byl ošetřován. Jeden z ranhojičů mu vyšetřoval rány jakýmsi nástrojem tak dlouho, až protrhl svalstvo mezi oběma ranami, což ovšem celý stav zraněného zhoršilo tak, že se u něho vystřídal čtyři, nebo jak sám praví, pět lékařů za noc. Každý byl jiné národnosti: Neapolec, Němec, Francouz a Valoni.

Ráno odvezli prince do Prahy a zde ho léčil šest týdnů lékař Dr. Just, tělesný a osobní lékař starého pána z Anhaltu. Potom odvezli prince do Brna a konečně do zajetí do Vídně. Z následků rány se potom léčil ještě v Karlových Varech a v Itálii. Zde ho léčili fargem.

O zdravotních zařízeních ve vojsku ligistickém za války třicetileté se zachovalo náhodou dosti zpráv; tak na př. víme, že bylo na polní nemocnici, na lékáře, lékárníky, léky atd. vydáno 248.228 zl. a že byli lékaři ligističtí pro své znalosti dosti chváleni. V čele celého zdravotnictví stál mnichovský lékař Tobiaš Geiger, jenž vypracoval zvláštní řady pro armádu, zařídil dva špitály: jeden při vojsku, druhý v zápolí. Důkladné instrukce žádaly, aby se v den bitvy celý lékařský personál odebral k vojsku. Pro lékaře byl určen i zvláštní vůz s dvěma koni. Obvazistě bylo chráněno četou vojska před nepřátelským přepadem. Lékárna, vezená ligistickým vojskem do Čech, stála 1440 zl., a měli v ní za bitvy na Bílé hoře 12 druhů pibuek, 19 electuarií, 3 druhy spiritusu, condita a decorta trojí, 16 druhů olejů atd. Bohatě bylo vypraveno instrumentarium, obsahující různé odstraňovače kostí, píly, nůžky, přístroje trepanační, dlahy, jehly, lancety, sdestatek obvazů a i zvláštní instrumentář k provádění pítvy.

Armáda ligistická byla, jak viděti, vypravena po stránce zdravotní na svou dobu jistě velmi dobře. Škoda, že se mně nepodařilo dotud zjistiti, jak byli opatřeni naši. Soudím však, že jako byli špatně zásobeni, špatně placeni, špatného ducha i nálady, tak že asi jistě neměli ani mnoho lékařů, natož léků a obvazů.



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