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### POSSIBILITIES OF DEFENSE SPENDING STABILIZATION

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**Abstract.** The aim of this paper is to identify, design and classify general instruments applicable to stabilize development in defense spending as one of the decisive prerequisites of a long-term maintenance and development of national defense capabilities. Based on analyses of approaches implemented in the former Czechoslovakia and later in the Czech Republic as well as in other selected European countries, the paper submits a set of measures leading to defense spending stabilization. To gather data regarding practice in individual countries a structured interviews and a questionnaire survey have been carried out, addressing subject matter experts in selected European countries. Result of this research have proven that in a number of countries the issue of defense spending stabilization has never been addressed. Based on experience of those countries that have implemented certain measures of defense spending stabilization, it seems that the optimum approach to defense spending stabilization consists of instruments that are anchored in national legislation and that enable an overall fixation (reservation of certain part of government incomes for the purpose of armed forces maintenance and modernization).

**Keywords:** defense spending, future spending level, stabilization, modernization, defense capabilities,

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**JEL Classifications:** H56, H68, H76

## 1. Introduction

During the NATO Summit, held in Wales in September 2014, member states have approved their commitment to stop any further cuts in defense expenditures and to launch process of their gradual increase in order to achieve a more balanced sharing of defense burden within the Alliance.

Those member states that have spent on defense at least 2 % of their national GDP, out of which at least 20 % represented investment expenditures have agreed not to fall below these thresholds. Those member states that have spent less than 2 % of their national GDP on defense have committed themselves to gradually increase their defense spending to achieve the level of GDP 2 % within the period of upcoming 10 years in order to fulfil NATO capability development goals and eliminate gaps in NATO capabilities. And finally, these member states that have allocated less than 20 % of their defense spending to investments have agreed to achieve this level again within the frame of 10 years. The overall defense burden at the level of GDP 2% with the 20 % of investment expenditures, represent a long-term recommendation of NATO towards its member states. In 2016 the recommendation (or commitment) has been fulfilled just by 5 member states, namely Estonia, France, Greece, Turkey, UK and USA (see the Figure 1).

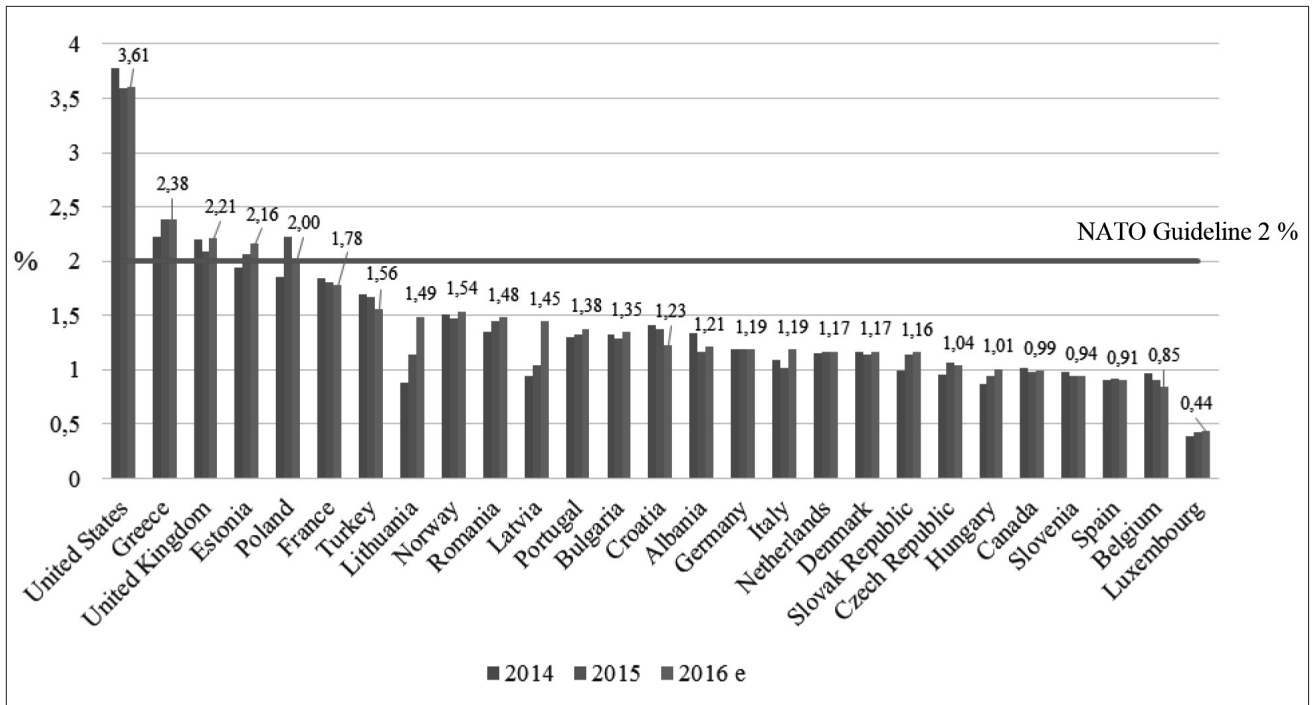


Fig. 1. Defense Spending of NATO Member Countries as a Share of GDP (%)

Source: Elaborated based on NATO, 2014.

So, the above mentioned commitment has not been fulfilled by app. 80 % of member states of the Alliance. This score is a result of a long-term cuts in defense expenditures mainly in European member states. Based on data for selected member states, the Figure 2 below indicates this development.

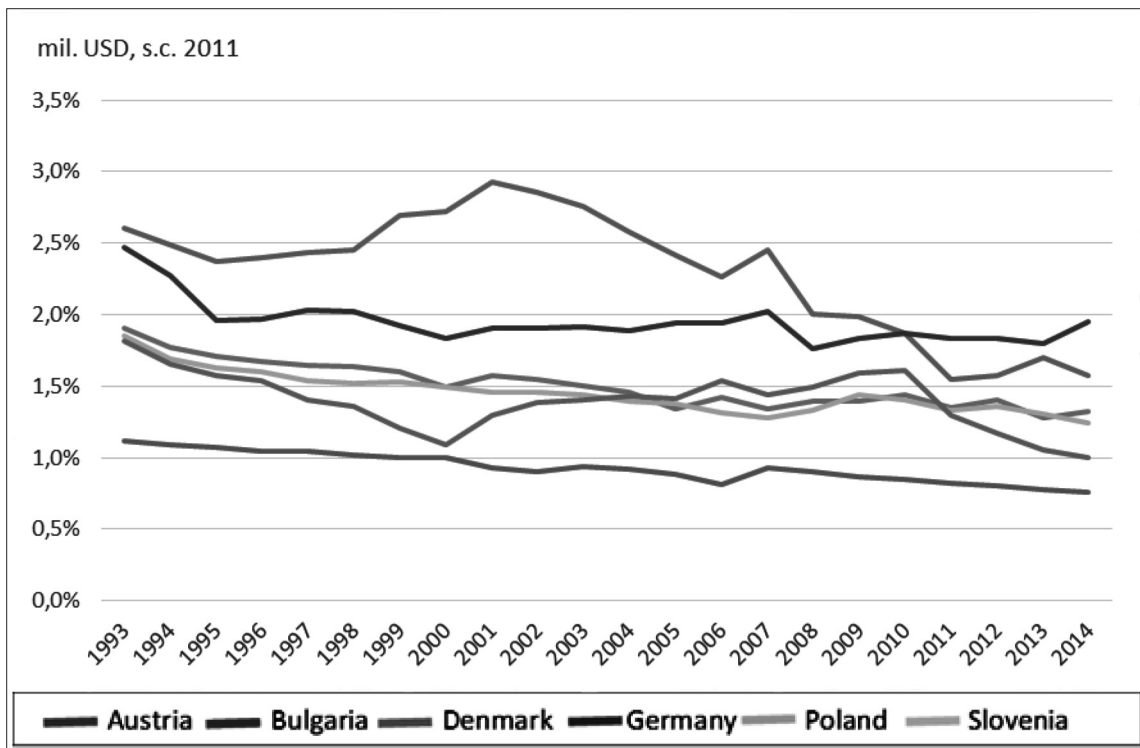


Fig. 2. Development of the Share of Defense Spending in GDP in Selected European Countries (%)

Source: Elaborated based on SIPRI, 2016.

Similar unfavorable trend has been detected when analyzing data for investment expenditures. On average, NATO member states allocate app. 14 % of their defense spending to investments (Mičánek, Holcner, Odehnal, Olejníček, Šulc 2014). Remaining 86 % percent aim at operational and personnel expenditures. Figure 3 below illustrates the situation in investment expenditures. The overall misbalance is even strengthened by the fact that in the long term the USA have spent app. 25 % of their defense expenditures on investments (SIPRI 2016). In 2016 the highest shares of investments in overall national defense spending have been recorded in Luxembourg, Lithuania; the lowest then Slovenia and Belgium (NATO 2016).

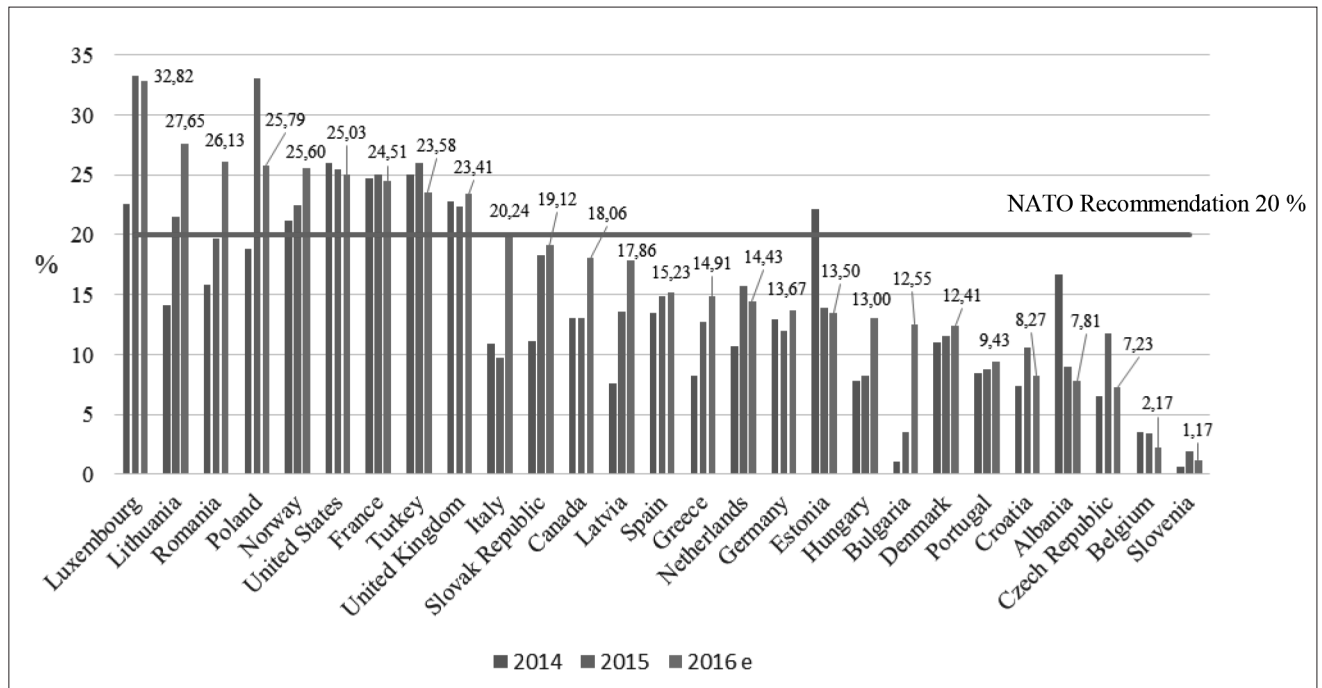


Fig. 3. Investment Expenditures of NATO Member States as a Share of Overall Defense Spending (%)

Source: Adapted, based on NATO. 2016.

The question is if the NATO member states who are expected to increase their defense spending will really comply with their commitments. On one hand, the period of 10 years might be viewed as a sufficient time frame to gradually increase defense expenditures without crating inadequate fiscal tension in other government spending areas. On the other hand, the period of 10 years might allow to postpone the action of respective national governments, making fulfilling of the commitment unfeasible at later stage. Another question is if the countries in question will be able to maintain (stabilize) the recommended/committed levels of defense spending, i.e. stabilize them. By using the term “stabilize” we mean mainly setting a predictable levels of future spending. So, stabilization does not mean no changes or just a way of fixation of spending levels. Besides others, planning and developing defense capabilities requires the already mentioned predictability.

## 2. Literature Research and Methodology

The issue of defense spending belongs to the key subjects of research by (Benoit 1973; Smith, Smith 1983, De Haan 1987; Ram 1995). Most often, authors deal with issues of the amounts of expenditures, their impact of economy or determinants influencing their development. The question what is the optimum amount of defense spending evokes controversies but still, the need to set an acceptable level of defense spending seems to be generally accepted. Development of real levels of defense expenditures in European does not correspond with their generally accepted importance (Perlo-Freeman, Fleurant, Wezeman 2016). A series of reasons can be identified, starting with theoretically defined preconditions connected with the public nature of the defense “goods” (Holcner, Olejníček, Horák, Musil 2012) up to empirically tested evidences of the fact that the amount of funds, which governments can allocate to defense depends mainly on the intensity of economic (Odehnal, Neubauer 2015), security

and political determinants (Hartley, Sandler 1990; Gadea et al. 2004; Nikolaidou 2008). During the financial and economic crisis, the often discussed issues related to cuts in defense spending and their impacts, restraining not only defense capabilities but affecting also the economy as a whole or individual industries (NAM 2012). These impacts include limited purchase power of households, decrease in the number of job opportunities or sales issues for arms industry and related subcontractors (Zycher 2012; ACD 2011). Another point of view is the question how the governments try to precede negative changes in their defense budgets and how they try to enhance foreseeability and long-term sustainability of defense burden. Partially, this issue has been analyzed by certain studies (Marrone, France, Fattibene 2015; Marrone, France, Fattibene 2016), in detail, it has been captured by a study focused on approach of individual NATO member states to impacts of economic crisis and how it affected their defense expenditures (STO/NATO 2016). However so far, this issue has not been studied and analyzed in a complex.

Due to the lack of empirical data related to defense expenditures stabilization, methods of qualitative research, based on results of questionnaire surveys and semi-structured interviews, represent a valuable asset for further research in this area.

Initially, the questionnaire survey has aimed at NATO countries via permanent national representations to NATO. Due to a relatively low involvement of countries in the survey other European experts engaged in defense resources management have been contacted to participate in the survey. The survey consisted of eight questions divided into two parts. The first part of the survey (four questions) aimed at rather subjective view of given expert on amount of defense expenditures and individual main spending categories, allocated to defense in given country in relation to real needs of defense capabilities maintenance and development. The second part of the questionnaire (four questions again) focused on identification of potential existence and nature of instruments that have been implemented in given country in order to stabilize defense expenditures. The questions aimed at overall defense expenditures as well as their main categories, i.e. personnel, investment and operational expenditures.

The semi-structured interviews have been oriented to answer the same questions contained in the questionnaire, incl. the issue of potential recommendations and related procedural issues. So, the interviews have complemented and verified data gathered throughout the questionnaire survey.

The survey and interview have enabled to sufficiently describe the situation in eight European countries, namely in Austria, Bulgaria, Czech Republic, Denmark, Germany, Poland, Romania and Slovenia. In spite of the relatively low number of these countries, a sample of eight different approaches enables to identify potential solutions and recommendations regarding defense expenditures stabilization. Therefore, based on the inductive and deductive approach and analogy, the synthetic part of this paper summarizes, interprets and classifies the gathered data in a form further applicable with regards of practice of decision-making bodies when managing development of defense sectors.

### **3. Potentialities of Defense Expenditures Stabilization**

By stabilizing expenditures, this paper understands implementation of mechanisms (e.g. legal or administrative) that ensure at least medium-term predictability of future amounts of defense spending in relation to given defense capabilities development plan. So, stabilization in this sense does not mean just fixation of certain absolute or relative amount of spending. It is any instrument, implementation of which supports predictability and guarantee of future expenditures. Defense expenditures stabilization is important mainly in relation to the process of planning and implementing development and maintenance of defense capabilities.

Stabilization of defense expenditures is based on possibilities of stabilization of the entire spectrum of public spending. Public spending is determined by public choice. For defense spending competes with other direction of public spending, stable and sustainable public finance represents one of the prerequisites for defense spending stabilization. Defense expenditures stabilization might mean stabilizing the entire defense spending or just one of its components, e.g. investment expenditures, personnel expenditures etc.

To stabilize future public spending a variety of instruments and approaches can be used. From the point of view of future spending amounts, the following approaches can be differentiated:

- Setting absolute spending levels when there is a decision regarding future spending amounts, often infl. expected development of future prices (inflation).
- Setting relative spending levels when there is a decision to link future spending with development of certain indicator, e.g. number of people, economic performance, growth of salaries etc.
- Ensuring future incomes for given spending program when there a decision that certain part of future public incomes will be used only for certain purpose. This can include direct tax assignation or appropriation of certain category of public incomes (Peková 2008).

Mechanisms of future spending amounts guarantee can be classified as:

- Legislative, which are legally binding and enforceable. Changes in given spending commitment requires the same level of public choice, which was applied during its initial setting. This group of legally binding mechanisms includes also commitments resulting from ratified international agreements.
- Political, which are not legally binding and represent a declaration of certain group (e.g. political party, government coalition, opposition etc.) with regards to future spending amounts of given category of public expenditures. This not binding group of stabilization mechanisms includes e.g. declaration at international level within ad hoc groupings of states or permanent alliances.

Particular way of stabilization of certain spending program can represent a combination of the above outlined approaches and mechanisms (see Table 1).

**Table 1.** Combination of approaches to setting future spending levels and mechanism of future spending amounts guarantee

Mechanism of future sending amounts guarantee	Approaches to setting future spending levels		
	Legally binding setting of an absolute spending amount.	Legally binding setting of a relative spending amount.	Legally binding assurance of future incomes for given spending program.
Legally not binding setting of an absolute spending amount.	Legally not binding setting of a relative spending amount.	Legally not binding assurance of future incomes for given spending program.	

Source: Own.

#### 4. Defense Expenditures Stabilization in Selected European Countries

This part of the paper submits and overview of approaches implemented with regards of defense spending stabilization in eight European countries

##### 4.1 Defense Expenditures Stabilization in the Czech Republic

Stabilization of defense expenditures in the Czech Republic has been primarily connected with the ambition of the country to become NATO member (1990's) and subsequent membership in the Alliance (since 1999). Within its accession procedure, the Czech Republic declared its will to gradually increase defense expenditure by GDP 0.1 % to achieve the level of GDP 2.0 % in 2000 (The Czech Government 1998). In 1999, by approving the *Concept of Development of the Defense Department* the Czech Government has declared even the commitment to spend GDP 2.2 % on Defense until 2004. This commitment was confirmed in 2002 by approving the *Concept of Development of the Professional Army of the Czech Republic and Czech Armed Forces Mobilization* (The Czech Government 2002).

These commitments were reflected in real spending levels only partially. The commitment to spend on defense at least GDP 2.0 % has been fulfilled just in the years 2000, 2003 a 2005. The level of at least GDP 2.2 % resulting from the Government commitment in 1999 and 2002 has not been reached at all. A transition to the

effort of defense spending stabilization by absolute future spending amounts has come with the *Concept of the Professional Army of the Czech Republic Development and Czech Armed Forces Mobilization, Reviewed to a Changed Resources Framework (Czech Republic Ministry of Defense, 2003)*. This concept has set fixed amounts of future defense expenditures for the years 2004 – 2010. However, these spending commitments were reflected in real spending levels only in the first two years after the Concept approval. Failure to fulfill the Government commitments influenced implementation of defense capabilities development plans but also evoked negative reactions from NATO.

In response to changed development in international security environment, changed perception of security threats, especially after the Ukrainian crisis in 2014, the Czech political representation opened a debate on stabilization of future defense expenditures. On the occasion of the 15<sup>th</sup> anniversary of the Czech membership in NATO, a declaration of the heads of political parties on Czech Republic defense has been signed. Besides others, this declaration includes an intent to conclude an agreement across political parties on future approach to defense sector (Babiš, Sobotka, Bělobrádek, Fiala, 2014). Finally, the agreement has been made only among the heads of actual Government coalition parties. The aim of the agreement is to stabilize defense expenditures in a prospective of future 10 years, specifying the threshold value of GDP 1.4 % in 2020 and no decline until 2024 (Babiš, Sobotka, Bělobrádek 2014). However, in reality, the development of defense burden indicated rather a decrease than the declared increase (GDP 1.08 % in and GDP 1.04 % in 2015 (Czech Republic Ministry of Defense, 2016).

To sum up, during its relative short independent history, the Czech Republic experienced five attempts to stabilize its defense expenditures. The first three attempts meant setting of future relative spending levels (in relation to GDP). In spite of applying the mechanism of Government decrees, effects of these attempts remained invisible.<sup>1</sup> The fourth attempt consisted of a set amounts of absolute future defense expenditures but again, with very little real effect. The last of these attempts has been constructed on a legally not-binding declaratory mechanism of setting relative future spending levels (just for 2015, there was a set fixed spending amount).

#### ***4.2 Stabilization of Defense Expenditures in Poland***

Poland has stabilized its defense expenditures since 2011, when the Polish Parliament set a minimum threshold for defense spending at the level of GDP 1.95 %. In relation to the NATO Summit in Wales, Poland has increased this threshold to GDP 2.0 % starting from 2016. Defense represents the only public sector in Poland with such a legally binding stabilization mechanism. The approach enables for a high predictability of future defense spending. In addition, since 2009, the national budgetary system applies a quadrennial plan of the Government, setting fiscal priorities in relation to expected macroeconomic development.

In addition, since 2006, Poland has applied a law determining the share of capital expenditures in the overall defense spending at the minimum of 20 %. Since 2014, another law guarantees that at least 2.5 % of the overall defense expenditure has to be allocated to defense related research and development. There are no limits or thresholds set for personnel and operational expenditures.

In 2001, a supplementary source of funding the armed forces modernization has been installed, indicated as the Fund of the Armed Forces Modernization. Nearly 93 % of incomes of this fund consist of earnings of a national agency responsible for military property administration (especially revenues resulting from sales and rentals of unused property), further incomes represent earnings related from the host nation support activities and conventional fines and penalties collected within the Ministry of Defense.

Stabilization measures implemented in Poland enable to comply with the Long-Term Plan of the Armed Forces Modernization, which is annually reflected on defense budget and also subject of annual assessment by the Polish Parliament.

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<sup>1</sup> Note: Government decrees as internal acts of the executive power are binding for all government administration bodies, incl. the Ministry of Finance and the Ministry of Defence, responsible for preparation of annual draft budgets of the the Ministry of Defence (i.e. defense expenditures).

### ***4.3 Stabilization of Defense Expenditures in Denmark***

Danish defense expenditures are set within political “Agreements on Defense of the Danish Kingdom”, normally covering periods of five years. The current agreement covers the years 2013 through 2017. This stabilization process includes proportions or frameworks of capital, personnel and operational expenditures. The limits of capital expenditures, included in these agreements, are annually corrected by inflation (according to the Annual Financial Act). Similarly, the limits of personnel expenditures are subjects to annual corrections following the wage level growth.

The Agreements on Defense of the Danish Kingdom enable to conduct the process of defense planning in all aspects of defense spending categories. However, political majority can easily enforce revisions of these agreements.

### ***4.4 Stabilization of Defense Expenditures in Germany***

In relation to defense expenditures in the Federal Republic of Germany, no stabilization mechanisms have been introduced. In spite of this fact, development of German defense expenditures has been, when compared with other countries analyzed in this paper, relatively stable (although indicated gradual decrease, especially when expressed as a share of national GDP or overall government spending). This applies to main spending components of capital, personnel and operational expenditures as well.

### ***4.5 Stabilization of Defense Expenditures in Slovenia***

In the past the Slovenian Parliament has adopted several commitments related to the amount of defense expenditures. The commitment dated 1998 set that until 2004, the Slovenian defense expenditures will reach the level of GDP 2 %. In 2003, a new commitment has been adopted, setting that the level of GDP 2 % is to be reached in the year 2008. Immediately after adopting these commitments, defense expenditures in Slovenia tended to grow, however, never reached the declared level. The most recent commitment from the year 2015, sets that in 2016 the relative share of defense expenditures shall remain unchanged at the level of GDP 0.96 % GDP and that it shall increase by 0.04 % in 2017.

Besides the defense budget, a special law had introduced (and in 2001 extended) the so called Program of Fundamental Development. The aim of this Program was to complement “normal” defense expenditures with additional funds dedicated to acquisitions of armaments and other military equipment in the period of 1994 through 2007. In general, aims of this Program were fulfilled. In 2008 a new Program of Fundamental Development was approved however, due to lack of financial resources it had never been executed.

The example of Slovenia consists of both legally unbinding declaratory measures, generally covering overall defense expenditures, and legally binding predetermination of funds to cover costs of armaments procurement. While the declaratory measure seem to be ineffective, the legally binding predetermination of capital expenditures was effective until 2007. After that, due to impacts of financial crisis and subsequent political decision, this instrument has become ineffective as well.

### ***4.6 Stabilization of Defense Expenditures in Austria***

Development of defense expenditures in Austria reflects historical events, mainly during and after the World War II. Austria has never introduced any instrument enabling to stabilize defense expenditures although the national employment program of the Austrian Government can be viewed as a certain form of stabilization in the category of personnel expenditures. Besides others, this program determines numbers of soldiers and civilian employees in the Ministry of Defense. In spite of the absence of any other stabilization measures, the Austrian defense spending has been relatively stable, especially when measured in relation to GDP and overall government expenditures.

#### 4.7 Stabilization of Defense Expenditures in Bulgaria

Bulgaria has introduced no specific instruments aimed at stabilization of future defense spending levels. The process of allocating funds towards defense sector follows the normally used budgetary process. To certain extent, it should consider strategic and conceptual documents approved in the defense sector (2010 Defense White Paper, 2015 Defense Capabilities Development Program and the Ministry of Defense Investment Plan until 2020).

#### 4.8 Stabilization of Defense Expenditures in Romania

Development of Romanian defense expenditures has rather expressed the necessity to respond to actual state of the armed forces than any systematic approach to establishment of a long-term adequate framework of resources allocated to defense. Between 1997 and 2002, the inadequacy of the overall level of defense expenditures was characterized by the share of up to 70 % of personnel expenditures and the lowest defense spending per capita in NATO. An official declaration of the Government can be viewed as an attempt to stabilize the situation, aiming at reorganization and restructuring of military garrisons and the plan to increase defense expenditures between the years 2004 and 2007 to the level of GDP 2.38 % HDP. Nevertheless, this plan has never been executed. At present, Romania has applied a declaratory approach to defense expenditures stabilization, represented by the so-called National Political Agreements on Increase in Defense Funding. This documents states that starting from 2017, defense expenditures shall reach the level of GDP 2.0 %.

### 5. Discussion of Approaches to Defense Expenditures Stabilization in Selected European Countries

Approaches to planning and stabilizing defense expenditures in the above mentioned European countries differ significantly. However, in some cases, analogical intents as well as effects can be identified. Let us compare and analyze the approaches in the context of actual absolute and relative levels of defense expenditures. Out of the range eight countries included in the analysis, five countries have attempted to stabilize their defense spending, namely Czech Republic, Poland, Slovenia, Romania and Denmark. For the remaining three countries, the survey results contain no indication of these mechanisms (Bulgaria, Germany and Austria). The Table 2 bellow show an overview of the approaches to defense expenditures stabilization in these countries.

**Table 2** Summary of Approaches to Defense Expenditures Stabilization in Selected European Countries

Country	Overall defense expenditures stabilization instrument(s) implemented.	Capital expenditures stabilization instrument(s) implemented	Legally binding mechanism implemented.	Political declaratory mechanism implemented.	Fixation of absolute amounts of future spending set.	Fixation of reactive levels of future spending set.	Future revenues predetermined for given purpose (spending).
Czech R.	YES	NO	NO	YES	YES	YES	NO
Poland	YES	YES	YES	NO	NO	YES	YES
Denmark	YES	YES	NO	YES	YES	NO	NO
Germany	NO	NO	NO	NO	NO	NO	NO
Slovenia	YES	NO	PARTIALLY	YES	NO	YES	YES
Austria	NO	NO	NO	NO	NO	NO	NO
Romania	NO	NO	NO	YES	NO	YES	YES
Bulgaria	NO	NO	NO	NO	NO	NO	NO

Source: Own.



Poland represents the country with highest activity when stabilizing its future defense spending, implementing a legally binding mechanism of setting future relative level of the overall defense expenditures, complemented with fixation of the share of capital expenditures and expenditures dedicated to defense research and development in particular. In addition, Poland has predetermined a part of the revenues of the Ministry of Defense for the purpose of capital development of the armed forces. When analyzing development of real amounts as well as relative indicators of Polish defense spending, the mix of stabilization instruments implemented in Poland seems to be effective.

Approaches of the Czech Republic, Slovenia and Romania are very similar. All the countries have repeatedly declared a legally unbinding commitment of a minimum relative level of the overall defense expenditures (as a share of GDP). However, these commitments have never been fulfilled. Unlike the Czech Republic, Slovenia had implemented also a predetermination of future revenues in favor of investment development of armed forces, effective before the financial crisis in 2008.

From the point of view of combining legally binding or declarative – legally unbinding mechanisms and the extent and methods of fixation of future spending amounts or levels, the survey has indicated no dependence. Similarly, the survey has indicated no relation between the particular approach selected and the effectiveness of stabilization efforts.

Approaches implemented in Poland and Denmark can be assessed as effective, while Poland has implemented legally binding mechanisms and Denmark has followed unbinding declaratory mechanisms. Poland stabilization approach is based fixing future spending levels in relation to GDP. Denmark sets actual spending amounts for future five years. Besides stabilization of the overall defense expenditures, both of the countries particularly stabilize capital expenditures as well. Denmark similarly stabilizes also other spending components - personnel and operational expenditures, Poland stabilizes also its defense related research and development expenditures.

## **Conclusions**

Based on the survey of approaches to defense spending stabilization in eight European countries and analysis of effectiveness of implemented measures and instruments, a set of following recommendations can be deduced:

1. Set the mechanism of defense expenditures stabilization as legally binding, at the level of a law, approved by national parliament. Legal enforceability and more complicated future changes of the mechanism create an environment tending to future higher stability therefore higher effectiveness.
2. Translate international commitments to a legally binding mechanism of defense spending stabilization. If a country adopts a commitment it should be – if meant seriously – reflected in binding measures guaranteeing future fulfillment of the commitment(s) adopted (especially within defense alliances the tendency to fulfillment of common commitments might become a measure of perception of the given country as more or less reliable partner).
3. Combine setting of relative future defense spending levels (e.g. for NATO members reflecting commitments resulting from the NATO Summit in Wales) with setting absolute amounts of future defense spending in the area of capital expenditures, reflecting medium and long-term plans of defense capabilities development.
4. Combine approaches to overall setting future relative spending levels (in relation to GDP) with particular approaches to setting future capital expenditures levels. For NATO members reflecting the commitments after the NATO Summit in Wales.
5. Separate funds allocated to common operation of the armed forces (personnel and operational expenditures) and funds allocated to investment development of the armed forces (capital expenditures allocated to development of set defense capabilities). Separating expenditures for operation and development of the armed forces enables for higher transparency when monitoring and managing the process of defense capabilities development (and maintenance).

6. Stabilization of defense expenditures understand not just as a possibility how to guarantee future spending levels but also – and mainly – as an instrument enhancing transparency of the use of resources allocated to defense, enabling to set such a level of defense expenditures that – in long term – corresponds with approved intent of defense capabilities development.

7. Enable predetermination of the use of certain public revenues in favor of capital development of the armed forces. A good example of these predetermined revenues could be earnings resulting from sales and rentals of property within the ministry of defense etc.

Actual solution and selection of a mix of particular stabilization mechanisms and approaches to setting future spending levels will be always a result of a political decision. However, to achieve prosperity and effectiveness of national defense sector, to express own reliability within defense alliances, it is worth to consider the above indicated lessons learned.

Results of the survey and subsequent analysis indicate that effectiveness of defense spending stabilization is not directly connected with particular sort of stabilization mechanism or selected approach to setting future spending levels. Much more, it reflects the level of responsibility of the political representation and executive sphere in relation to own commitments and in relation to national defense as one of the key function of any state. Nevertheless, implementation or just consideration of the recommendations outlined above can contribute to more stable and therefore predictable environment necessary for effective development of defense capabilities of any country.

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