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# Alternative Military Keynesianism as a Tool of Civil-Military Cooperation in the Framework of the EU Defence Policy

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## Abstract

During the last year the security threats to the European Union have increased dramatically under the influence of military crisis in eastern Ukraine and Islamic terrorist activities in Europe. Consequently the demand for defence in the member states of the European Union has become greater than in previous years. This situation leads to the dilemma when the high level of defence expenditure can hamper the financial support of other sectors of national economy. Therefore it is necessary to increase the efficiency of available financial resources that have been allocated for the defence without a significant increase in defence expenditure. In order to achieve this efficiency the concept of closer cooperation between military and civil sector can be the base for complex defence support measures that use the potential of national economy.

Having regard to the above mentioned, the purpose of this study is to introduce the concept of civil-military cooperation that utilizes the main task of military Keynesianism (to stimulate industrial development and economic growth) and functions within the framework of Common Security and Defence Policy of the European Union. In order to analyse the concept the following tasks were set: 1) to modify the standard concept of military Keynesianism by the analysis of different theoretical sources; 2) to identify the main advantages and deficiencies of the civil-military cooperation concept by the use of expert interview; 3) to set out the main conditions for the functioning of the civil-military cooperation concept by the use of cost-benefit analysis.

The following primary qualitative and quantitative methods have been used in this research: 1) literature analysis that incorporates the study of theoretical works, research articles, as well as policy and legal documents; 2) expert interview that has been conducted after the presentation of civil-military cooperation concept to the experts from the Ministry of Defence of the Republic of Latvia and Latvian National Armed Forces Joint Headquarters. 3) cost-benefit analysis of hypothetical implementation of the civil-military cooperation concept for ammunition manufacturing in the territory of the European Union.

The research shows that the negative impact of the identified deficiencies of the civil-military cooperation concept can be significantly reduced by the use of effective legal framework and simple proce-

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dures of implementation. Also the main conclusion of the research is that under the pressure of the high demand for defence the member states of the European Union, which defence industrial base is small or non-existent (Poland, Baltic states et al.), can use the civil-military cooperation concept in order to attract the foreign manufacturers of military or dual-use goods by implementation of tax relief, as well as use of state infrastructure objects at a reduced price.

**KEYWORDS:** national economy, public-private partnership, defence industry, Common Security and Defence Policy of the European Union, industrial clusters, military Keynesianism, military goods, tax relief.

The modern defence policy of the European Union can be described as budget gradual cuts, which applies to the defence budgets of the member states. According to the European Defence Agency's (EDA) data the total defence expenditure of the EU member states decreased. By the influence of the Global Financial Crisis and reduction of military personnel during the period from 2006 to 2011, it dropped by 21 billion euros or almost 10% and between 2011 and 2012 it reduced further by almost 3% ("European Defence Agency", 2013). While Stockholm International Peace Research Institute's (SIPRI) database shows the continuance of decrease of EU defence expenditure from 2012 to 2013 by 3,1% ("SIPRI Military Expenditure", 2014).

Simultaneously military tasks continue to become more complicated due to the necessity of rapid reaction under the influence of modern operational environment (non-linear battlefield and hybrid warfare). Therefore the demand for the expensive high-tech military equipment has increased. The existing economic situation can be described as high demand for defence in EU member states, which is determined by the threat of rather new forms of warfare and at the same time is limited by the lack of financial resources.

From 2006 to 2012 operational and maintenance costs of the military equipment, as well as equipment procurement together with Research and Development (R&D) costs had the average share of 43% in EU defence expenditures ("European Defence Agency", 2013). That means that the same 43% of EU defence expenditure are under the influence of civil<sup>1</sup> sector that combines the majority of military and dual-use good suppliers, as well as service providers. Therefore the interdependence between defence and civil sector becomes more obvious. The above mentioned trend was confirmed by the study "The Development of a European Defence Technological and Industrial Base (EDTIB)" that was requested by European Parliament's subcommittee on Security and Defence and was conducted in 2013 (Briani, *et. al.*, 2013). The latter as well as earlier studies on the effects of implementation of offsets in a European defence industry (Eriksson, *et. al.*, 2007), European Defence Equipment Market (Craig, *et. al.*, 2010) and European Defence Technological and Industrial Base (Bekkers, *et. al.*, 2009) highlights the necessity of closer cooperation between defence and civil sector, but at the same time their conclusions and recommendations are connected mostly with legal and political aspects. None of the studies offers the theoretical or practical concept of cooperation between defence and civil sector of the EU.

The novelty of this research is the development of the concept of cooperation between defence and civil sector in theoretical (modification of standard military Keynesianism concept) as well as in quantitative dimension (cost-benefit analysis of the hypothetical attraction of foreign manufacturer of military goods in the territory of EU member state without a developed defence industrial base). In order to address the issue that was caused by the growing demand for defence and regular decrease in defence expenditure of the EU member states it is necessary to increase the efficiency of available defence budget without significant increase in defence expenditure by the use of cooperation between defence and civil sector of the EU. Therefore, the hypothesis of this study can be formulated as follows: *the closer cooperation between defence and civil sector attracts foreign*

<sup>1</sup> Includes private and government non-military entities

or domestic producers of defence-related goods to allocate their production in defence industrial clusters as well as promotes defence budget economy.

Taking into consideration the hypothesis mentioned above, authors have formulated the purpose of the study, which is: to introduce the concept of civil-military cooperation that utilizes the main task of military Keynesianism (to stimulate industrial development and economic growth) and functions within the framework of Common Security and Defence Policy of the EU.

In order to analyse the viability of the concept of civil-military cooperation the following tasks were set: 1) to modify the standard concept of military Keynesianism by the analysis of different theoretical sources; 2) to identify the main advantages and deficiencies of the civil-military cooperation concept by the use of expert interview; 3) to set out the main conditions for the functioning of the civil-military cooperation concept by the use of cost-benefit analysis.

The research methodology is based upon: 1) literature analysis that incorporates the study of theoretical works, research articles, as well as policy and legal documents; 2) expert interview that has been conducted after the presentation of civil-military cooperation concept to the experts from the Ministry of Defence of the Republic of Latvia and Latvian National Armed Forces Joint Headquarters. 3) cost-benefit analysis of hypothetical implementation of the civil-military cooperation concept for ammunition manufacturing in the territory of the European Union.

The research shows that the negative impact of the identified deficiencies of the civil-military cooperation concept can be significantly reduced by the use of effective legal framework and simple procedures of implementation. Also the main conclusion of the research is that under the pressure of the high demand for defence the member states of the European Union, which defence industrial base is small or non-existent (Poland, Baltic states *et. al.*), can use the civil-military cooperation concept in order to attract the foreign manufacturers of military or dual-use goods by implementation of tax relief, as well as use of state infrastructure objects at a reduced price. Also this concept can be used for the creation of the mobilization materiel reserves.

## Theoretical modification of the military Keynesianism concept

The development of military Keynesianism as a concept for official defence policy began in the USA during the Cold War. The basis for this policy can be found in the publication of John Maynard Keynes "The General Theory of Employment, Interest and Money". According to the Keynesian theory, the main target of the government in the condition of economic crisis or recession is the stimulation of employment. To achieve this target government should concentrate its economic policy on: 1) Stimulation of consumption; 2) Increase of government investments; 3) Regulation of the rate of interest (Keynes, 1936). Another economic concept, which has stimulated the evolution of military Keynesianism and Keynesian theory itself, is the concept of economic (business) cycle. The development of this concept was stimulated by two major world economic depressions in XIX and XX century, i.e. the Long Depression (1873 – 1896) (Rosenberg, 1943) and the Great depression (1929 – 1939) (Bernstein, 1989). By the long-term analysis of world economic data many economists such as Kitchin (1923); Kondratieff & Stolper (1935); Keynes (1936) came to the conclusion that world economy's development fluctuates between periods of relatively rapid economic growth, and periods of relative stagnation or decline. Therefore according to the concept the economic depressions are inevitable. In its turn the Keynesian theory states that government can mitigate the consequences of economic downturn by involvement into some economic processes. Considering the defence sector dependence on public funds, this involvement can be frequently performed in a dimension of state defence activities.

The idea of the military Keynesianism was formulated by Polish economist Michal Kalecki who has paid attention to the development of business in Nazi Germany (Custers, 2010, p. 80). Although the concept itself was formulated by Kalecki (1935) before "The General Theory of Employment, Inter-

est and Money” the main economic principles were introduced by Keynes (1936). It is very important to mention that John Maynard Keynes has never advocated the increase of defence expenditure as the prime source of stimulation of consumption or government investments. Because of his moral principles he considered that increase of war expenditures “...has only been allowed to serve the purposes of war and destruction” (Keynes, 1933, para. 8). Although cases of implementation and effects of military Keynesianism are discussed in a broad range of papers some of which will be mentioned below, there is no unified and generally accepted definition of the concept. Therefore authors will use the definition of military Keynesianism concept given by Muthuchidambaram in 1992: “a deliberate public policy applied by a state, through the use of a military budget as a purported tool to counteract cyclical unemployment, to stimulate industries that suffer from the impact of the economic recession and to support R&D and technological innovation and simultaneously to achieve national security” (Muthuchidambaram, 1992, p. 2).

Authors can divide the evolution of military Keynesianism into three periods: 1) *initial government activities without integration of military Keynesianism in government defense policy*; 2) *the official defense policy during the Cold War*; 3) *the undeclared defense policy of military Keynesianism*.

**1 Initial government activities without integration of military Keynesianism in government defense policy.** The evolution of military Keynesianism concept began in interwar period of the XX century. In the 1930s German government supported enterprises that were involved in production of military material and equipment, using the financial resources of defence budget and work supply bills. Central and local government agencies used these bills to pay the firms involved in different public projects. M. Kalecki (1935) stated that in this way additional purchasing power was created, effective demand was increased and production rose (Kalecki, 1935, p. 199-200). As a result the strong military industrial base was created to support the future warfare.

During the same time US producers of military goods didn't get the notable support directly from government. Nevertheless US government maintained the minimum capacity of its defence industry for the future mobilization by such means as: 1) the initial standardization of military equipment and allocation of the production between different contractors; 2) notification of contractors about the planned scale of production for the future mobilization; 3) implementation of simplified contracting procedures during the mobilization process. All these activities have led to the success of mobilization process in the USA during the World War II (Nagle, 1999, p. 379). By 1944 US military expenditure reached almost 40% of GDP and averaged 20% of GDP during the 1940s, which coincided with a massive economic boom (Nitzan & Bichler, 2006, p. 6).

**2 The official defense policy during the Cold War.** After the World War II the concept of military Keynesianism has been integrated into the official US defence policy (NSC-68, 1950) to stimulate consumption and increase government investments in order to create additional jobs and reduce the possibility of economic downturn that could be caused by the process of demobilization within which US government terminated \$20 billion in military contracts (Nagle, 1999, p. 442). US government has realized that significant reduction in defence expenditure may cause unemployment as well as decrease in the scale of production. In their turn these processes may become a cause of a new depression. Therefore it has been planned to increase defence expenditure on an annual basis to counter the threats of the Cold War and stimulate economic development (“NSC-68”, 1950). The only positive evidence of the implementation of the concept of military Keynesianism by US government could be observed during the Korean War. As a result of government activities defence expenditure tripled, unemployment decreased and Federal budget revenues increased (Fusfeld, 1998, p. 507).

Except the USA other countries of the world never officially used military Keynesianism as a part

of their defence policy. For instance at the end of the Cold War (1988-1991) the average defence expenditure of the Western European Union member states<sup>2</sup> was 2,6% of GDP with the tendency of average annual decrease by 1% pp (SIPRI, 2014). At the same period of time US average defence expenditure was 5,4% of GDP with average annual decrease of 0,3% pp (Table 14.5-Total Government Expenditures..., n.d.). In its turn the increase in military expenditure of USSR as well as countries of Warsaw Pact during the Cold War can't be defined as a policy based on principles of military Keynesianism, because the economy behind the Iron Curtain was strongly centralized. In this case the increase in military expenditure doesn't need to have any subordinate economic goals. The end of the Cold War has stimulated the notable decrease in world defence expenditure (Conetta & Knight, 1997). For instance, in five years US defence expenditure fell by 9% from 1989 to 1995 ("SIPRI Military Expenditure", 2014). Therefore the official US policy based on principles of military Keynesianism was discontinued in 1990s.

**3 The undeclared defense policy of military Keynesianism.** After terrorist attacks on September 11, 2001 the coalition led by the USA declared the War on Terror. Since year 2001 US government increased the level of defence expenditure on a regular basis till 2012. For instance, the US defence expenditure increased by 18% from 2000 to 2002 ("SIPRI Military Expenditure", 2014). In 2008 the US defence expenditure reached 621 billion dollars, but during and after the Global Financial Crisis the US defence expenditure continued to rise ("SIPRI Military Expenditure", 2014). Although the increase of the US defence expenditure hasn't stimulated rapid economic growth as it was during Korean War, Nitzan & Bichler (2006); Custers (2010) have recognized the features of military Keynesianism in the modern defence policy of the US government. On the other hand from 2001 to 2006 the average increase of defence expenditure in the 15 "old" member states of the European Union was 3% (Chao *et. al.*, 2008, p. 7). Despite previous increase, under the influence of the Global Financial Crisis from 2008 to 2009 the total defence expenditure of the European Union decreased by 3,5% (European Defence Agency, 2010), marking a downward trend. In a similar way after US government decision on defence budget cuts in fiscal years 2013-2017 ("Defence Budget Priorities", 2012) defence expenditure decreased by 10% from 2012 to 2014 ("Table 14.5-Total Government", n.d.). This marks the interruption of implementation of the features of standard military Keynesianism concept in the EU and the USA defence policy.

In order to identify the effects of military Keynesianism concept it is necessary to look at the effects of defence expenditure, which is the main tool of the concept. The effects of defence expenditure may have not only positive, but also negative impact on the economic growth and development. Despite many studies of the defence expenditure and the concept of military Keynesianism itself during the second half of the 20<sup>th</sup> century: Nincic & Cusack (1979); Dunne & Smith (1990); Hooker & Knetter (1997) there is no unambiguous proof of positive or negative effects of the implementation of the concept through the increase of military budget available funds.

Sandler & Hartley (1995) analyzed the results of 25 researches that were conducted from 1970 to 1993 and reflected all the possible impacts of defence expenditure, i.e. positive, negative or unclear impact. In general, these researches haven't confirmed persuasively positive or negative impact of defence expenditure. Finally after the analysis of 103 researches Dunne & Uye (2009) came to the conclusion that most likely serious increase in defence expenditure would have negative or unclear impact on national economy (Dunne & Uye, 2009, p. 12).

In accordance with all mentioned above, authors have concluded that modern researches of defence expenditure effects can't prove convincingly positive or negative impact on national economy. Therefore the integration of standard military Keynesianism (based on increase in defence

<sup>2</sup> Belgium, France, Germany, Greece, Italy, Luxembourg, Netherlands, Portugal, Spain and the Great Britain

expenditure) in the defence policy of a state is unpredictable. On the other hand there is a possibility to achieve the main target of military Keynesianism (to stimulate industrial development and economic growth) without significant increase in defence expenditure.

Despite the evolution of military Keynesianism during World War II and the Cold War when defence policy was based on conventional warfare and increase of defence expenditure, the modern warfare is influenced by permanent military threats (terrorism, asymmetric and hybrid warfare) as well as by serious cuts in defence budgets of the USA and the member states of the EU. Therefore it is necessary to increase the efficiency of available defence budget without implementation of standard military Keynesianism, i.e. increase in defence expenditure. Instead of significant increase of government expenditure authors offer to use the policy of cooperation between military and civil sector which can be the base for alternative military Keynesianism. The concept of alternative military Keynesianism can be used as a combination of state defence and social policy by utilizing such defence and socio economic goals: 1) to release the military personnel from secondary functions which are not connected with their primary duties (maintenance of infrastructure, catering, field services, etc.); 2) to concentrate the resources of military sector for combat missions by involvement of civil sector into the logistics process during peace time and low intensity conflicts, i.e. peacekeeping; 3) to reduce the costs and increase the quality of functions that were taken by the civil sector, using free competition and economy of scale; 4) to develop the mobilization capacity of the civil sector; 5) to stimulate the regional development; 6) to support of domestic manufacturers of military and dual use goods; 7) to increase employment.

In addition the further implementation of this concept will allow governments to utilise not only the financial resources of defence budget, but also another sources of state finances (for instance, government investments into regional development). This will increase the financial capacity of the defence sector without direct involvement of state defence budgetary funds, and also will support the second part of the hypothesis (defence budget economy). The new definition of the alternative military Keynesianism could be formulated by exclusion of "military budget" from the definition given by Muthuchidambaram (1992) and inclusion of "the closer cooperation between defence and civil sector", so the new definition could be as follows: "alternative military Keynesianism is a deliberate public policy applied by a state, through the use of *the closer cooperation between defence and civil sector* as a purported tool to counteract cyclical unemployment, to stimulate industries that suffer from the impact of the economic recession and to support R&D and technological innovation and simultaneously to achieve national security".

The exclusion of defence expenditure (military budget) from the definition gave more flexibility to the concept. As it is shown in Figure 1 the concentration on the socio economic goals broadened this policy from the defence sector to the whole national economy of a state and at the same time shifted the paradigm of the concept from purely Keynesian to the neo-liberal economic dimension using entrepreneurship as active element, which, in its turn, sup-

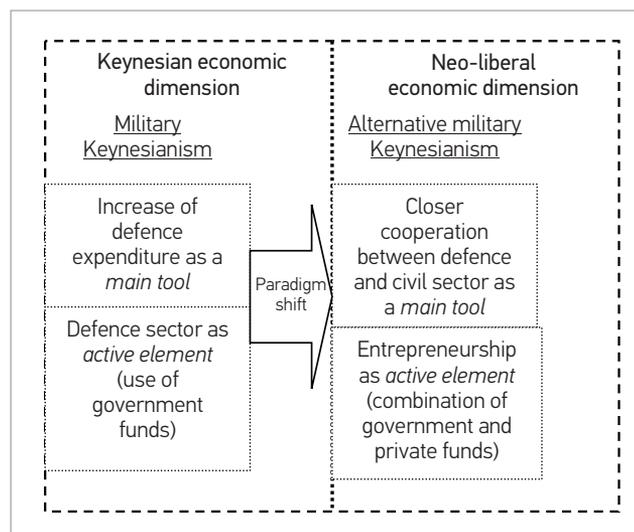


Figure 1

Theoretical modification of military Keynesianism (Authors')

ports the first part of the hypothesis (attraction of foreign or domestic producers of defence-related goods).

Finally this concept can be implemented not only by the biggest military spenders such as the USA, but also by smaller states even without properly developed defence industrial base. In order to illustrate the applicability of the alternative military Keynesianism further authors will offer the concept of civil-military cooperation.

## Civil-military cooperation concept

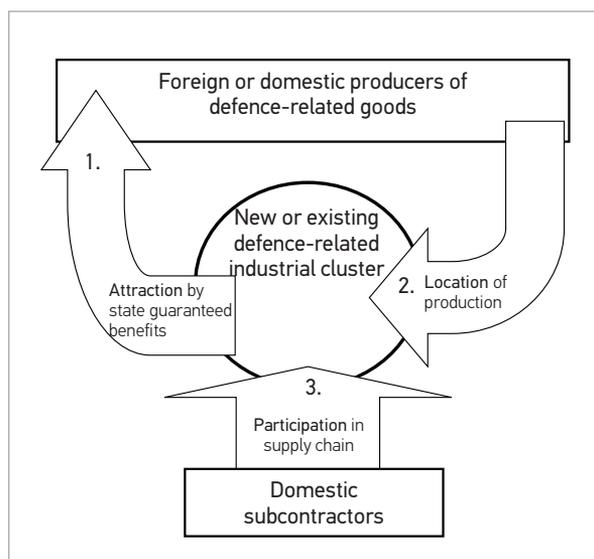
There is a unique process of the integration of the defense sector in the EU despite the wish of some member states to retain control over national defence industrial base. The need of this integration can be illustrated with simple comparison of military expenditures of US, which is the biggest spender of military expenditure in the world, and the EU. In 2011 the total defence expenditures of US were 503 billion EUR, but EU expenditures were 193 billion. In this case US defence expenditure exceeded EU defence expenditure significantly (by 260,6%) ("EU-US Defence", 2013). In this situation, the demand for defense in US is greater than in the European countries. Consequently, using the government orders for the military goods and services, US corporations have an opportunity to increase their production and reach the economy of scale faster than European defense firms. That will result in less competitive capacity of European defense industry. To minimize the negative effect of this scenario, European countries should integrate their defense policies. That is why EU has made the significant step towards the creation of the single European defense market by the creation of the European Defence Agency in 2004 to help EU Member States develop their defence capabilities for crisis-management operations under the Common Security and Defence Policy of the European Union. Together with the standard functions of the centralized procurement agency, one of the main functions of the European Defence Agency is to create a competitive European Defence Equipment Market and strengthening the European Defence Technological and Industrial Base ("EDA Mission", n.d.).

In accordance with European Defence Equipment Market and European Defence Technological and Industrial Base development policy the EU can concentrate its defence manufacturing in one or in several member states, using the defence-related industrial clusters as it is shown in Figure 2. The basis for this program can be the exception to the Treaty on Functioning of the European Union, which is formulated in section 3 (b) of Article 107: "The following may be considered to be compatible with the common market: aid to promote the execution of an important project of common European interest..." ("Consolidated Versions of the Treaty", 2010). In this case the possibility of creation of defence industrial clusters and implementation of state guaranteed benefits for producers of military or dual use goods (further – defence-related goods) should be negotiated with the European Commission and European Defence Agency, considering the existing military threats.

Taking into consideration the hypothesis of the study the aim of the civil-military cooperation concept is to attract foreign or domestic producers of defence-related goods to locate their production in certain defence-re-

**Figure 2**

Functional scheme of civil-military cooperation concept (Authors')



lated industrial clusters, which are located in the territory of the EU member states, in order to stimulate the development and competitiveness of the European Defence Technological and Industrial Base as well as to support the regional development. This aim can be achieved by the concentration of production of defence-related goods, economy of scale and the reduction of transaction costs.

The cooperation between civil and military or defence sector within defence-related industrial clusters will be determined by the principles of Public-Private Partnership. Therefore the responsibility of the project (including funding) will be possibly divided between defence and civil sector. Also within the concept there is a possibility to combine the development of the defence sector with the regional development (use more than one ministry budget).

There are three phases of the concept implementation:

**1 Attraction.** Using the system of guaranteed benefits, government attracts foreign or domestic producers of defence-related goods to locate their production in existing or newly established defence-related industrial clusters. In this case government can offer such benefits to the producers: a) direct or/and indirect tax relief; b) use of existing public owned infrastructure free of charge.

**2 Location.** In order to utilize state guaranteed benefits, foreign or domestic producers of defence-related goods locate their production in certain defence-related industrial cluster. In this case government can impose such conditions on producers of defence-related goods: a) use the certain percent of the local labour force; b) inclusion of domestic enterprises in the supply chain; c) creation of the mobilization materiel reserves.

**3 Participation.** Domestic suppliers and service providers can act as subcontractors for the producers of defence-related goods. In this case subcontractors will take part in the supply chain of the defence-related industrial cluster. It means that the influence of the cluster will spread to other sectors of the national economy.

In order to identify the main advantages and deficiencies of the civil-military cooperation concept, the expert interview was conducted in the Republic of Latvia in the summer of 2012. In total 9 experts of the Ministry of Defence (MoD) and National Armed Forces Joint Headquarters (JHQ) were interviewed.

The main criterion of the expert selection was *the experience in coordination of the cooperation between defence and civil sector*. Therefore the expert representation included:

- \_ Two high level officials from the MoD Department of Logistics Policy, whose main functions are: a) coordination and management of the defence procurement policy; b) cooperation with the private sector enterprises;
- \_ Three high level officials from the MoD Crises Response Department, whose main function is interagency cooperation in the field of mobilization and Host Nation Support;
- \_ Four medium level financial planning experts from JHQ, who directly participate in the defence budgeting process and coordinate the cooperation with civil sector in the field of finance.

The choice of the institutions has been influenced by the specifics of the concept implementation. The creation of defence-related industrial clusters in the territory of the Republic of Latvia will be coordinated by the MoD in cooperation with experts of National Armed Forces and other public authorities. The leadership of the MoD is authorized by the defence logistics policy-setting and mobilization management tasks that are included in the regulations of the Cabinet of Ministers ("Aizsardzības ministrijas", 2003).

Before completing the interview form respondents have been given 10 minute presentation about the civil-military cooperation concept. Then respondents have been asked to complete the table consisting of two columns "advantages" and "deficiencies" using separate words or simple sentences in

order to get objective results. The results of the expert interview are summarized in Table 1.

During the analysis of the interview results authors have noticed that in the column “deficiencies” the answers could be interpreted as the obstacles for the implementation of the civil-military

**Table 1**  
The Results of the  
Expert Interview

Advantages	Number of repetitions		Deficiencies/obstacles	Number of repetitions		Mitigation of the effect of deficiencies/obstacles
	MoD	JHQ		MoD	JHQ	
Promotion of Latvian economic competitiveness	4	2	Unclear implementation of tax relief policy	2	2	<ul style="list-style-type: none"> <li>– Development of the policy of tax relief (MoD in cooperation with Economic and financial ministries)</li> <li>– Changes in legal documents and determination the amount of Tax and Customs Fees relief.</li> </ul>
Stimulation of the regional development	4	2	The lack of qualified employees	2	2	<ul style="list-style-type: none"> <li>– Improvement of qualification courses for unemployed in accordance with the requirements of producers of defence-related goods.</li> <li>– Training of local employees in cooperation with national educational institutions.</li> </ul>
Possible increase in employment	3	1	Political obstacles (support measures for military industrial complex in other country)	3	0	Closer cooperation with EU and NATO in order to develop common policy for the implementation of the civil-military cooperation concept.
Attraction of investments	3	1	The threat of corruption	0	2	Creation of the administration board of the defence-related industrial cluster which consists of all stakeholders' representatives and provides mutual control.
Export promotion	2	1				
Development of the new technologies	2	0				
Education and training of the employees	2	0				

Source: Authors'.

cooperation concept. The main criterion of data analysis was the number of repetitions of the similar answers. Considering the number of repetition of the respondent answers, the main advantages of the civil-military cooperation concept are “promotion of Latvian economic competitiveness” and “Stimulation of the regional development” that are similar to the aim of the concept. Contrary the main deficiencies/obstacles of the civil-military cooperation concept are “unclear implementation of tax relief policy” and “the lack of qualified employees”. In addition, one respondent has mentioned “unclear mechanism of subcontractor involvement” as a deficiency/obstacle of the concept. This deficiency/obstacle can be mitigated by the establishment of clear legal relationships between the producers of defence-related goods and subcontractors supported by development of contracts or mutual agreements.

The measures for the mitigation of each deficiency/obstacle mentioned by experts are included in Table 1. The majority of the deficiencies/obstacles can be overcome by the implementation of effective legal framework as well as initiation of political consultation with EU and NATO for the

concept initiation. In order to prove the viability of the concept, authors will conduct cost-benefit analysis of hypothetical implementation of the civil-military cooperation concept for ammunition manufacturing in the territory of the Republic of Latvia.

For the cost-benefit analysis authors have selected the hypothetical pattern of the civil-military cooperation concept implementation in the territory of the Republic of Latvia for attraction of the manufacturer of ammunition.

Considering the results of the analysis of purchase orders awarded by NATO Support Agency (NSPA) with a value of EUR 76 800 and above ("NSPA Contract Awards", n.d.), which are depicted in Table 2, authors have concluded that the biggest share of NSPA procurements is formed by "Equipment supply (including spare parts and ammo)". Therefore the foreign producer of cartridges for the small arms (further – the producer) has been selected. The following conditions and limitations have been used in calculations for the cost-benefit analysis:

- 1 The producer establishes new production line;
- 2 The producer has all necessary documentation (licenses and authorizations) for production of cartridges for the small arms in the territory of the Republic of Latvia;
- 3 The producer opens subsidiary, which is taxpayer (the majority of employees are non-residents);
- 4 Customs fees and costs of equipment transportation won't be taken into account during the calculations, because the demand for ammunition in other countries is unknown.
- 5 The producer produces only 9x19mm NATO standard ammunition for pistols.

Suppose that number of professional military personnel in the National Armed Forces of the Republic of Latvia is 6000 and the number of the National Guard personnel is 8000. The hypothetical individual ammunition daily consumption rate is 8 pistol cartridges per person<sup>3</sup> considering the standard capacity of pistol magazine. It means that annual hypothetical consumption rate is 40,88 million cartridges. Furthermore, hypothetical mobilization reserve is a half of the annual consumption which is 20,44 million cartridges. In addition, mobilization reserve should be renewed once in five years.

In order to attract the producer to locate his production in the defence-related industrial cluster in the territory of the Republic of Latvia, government has guaranteed such benefits during the first 2 years of business activity:

- 100% Enterprise Income Tax and Immovable Property Tax relief;
- 50% Value Added Tax Relief;
- Use of existing public owned infrastructure free of charge.

<sup>3</sup> The information on real consumption rate is for official use only; therefore authors have used the hypothetical consumption rate.

## Cost-benefit analysis of the hypothetical implementation of the civil-military cooperation concept

Purpose of the Purchase Order	% of Total		
	2011	2012	2013
Equipment supply (including spare parts and ammo)	72	60	57
Maintenance	6	13	25
IT services and communication	10	11	6
Other services (catering, transportation, brokerage)	8	12	8
Construction and infrastructure	4	4	4
TOTAL:	100	100	100

Source: Authors' calculations based on NSPA Contract Awards.

**Table 2**

Purchase Orders awarded by NSPA with a value of 76,800 EUR and above (2011-2013)

The producer has such characteristics (Offer of Entire Production line):

- \_ The ammunition production line is managed by 150 employees (including support staff);
- \_ The capacity of ammunition production line is 30 000 pistol cartridges per hour.

The government has imposed such condition on the producer:

- \_ Use of local labour force (not less than 20% of employees);
- \_ Creation and storage of the mobilization reserves for the next five years (50% of the market price is financed by the government, Value Added Tax not applicable);

Considering above mentioned information, it is possible to summarize all costs and benefits of the concept in Table 3.

The costs of the producer consist of:

- 1 The establishing of the new production line – EUR 2,9 million including the raw materials for the production (“Offer of Entire Production”, n.d.);
- 2 The total labour cost of 30 local employees (in accordance with the imposed conditions) – EUR 286 560 per year (“Eurostat Labour Costs”, n.d.), including taxes –167 121,79 per year (“Nodokļu un nodevu”, 2010)

Hence, the total costs for the producer are EUR 3 186 560.

The production line is capable to produce 63,36 million cartridges per year, which exceeds the demand of National Armed Forces and National Guard (including the creation of the mobilization reserve) by 2,04 million cartridges. The tax relief allows the producer to sell ammunition with the profit rate 10% from each pistol cartridge to the Latvian government by 30% cheaper than the market price. It means that the producer is capable to reach economy of scale and sell his production at a price EUR 0,07 when the average market price is USD 0,13 or EUR 0,10 (“Munitions Acquisition Cost”, n.d.).

In its turn, in order to fulfil government’s requirement, the mobilization reserve of 20,44 millions cartridges will be created for five years with the price EUR 0,05 per cartridge (50% of the market price).

Considering above mentioned information, there are such benefits for the producer:

- \_ Income from the fulfilment of National Armed Forces and National Guard orders (40,88 millions cartridges with the price EUR 0,07 per cartridge) – EUR 2 861 600, subtracting the Value Added Tax (21%) with 50% relief the net income is EUR 2 561 132;
- \_ Income from creation of mobilization reserve – EUR 1 022 000;
- \_ Export sales of 2,04 cartridges with the price EUR 0,10 per cartridge – EUR 204 000.

**Table 3**  
Total costs and benefits  
of the concept

The producer	
Benefits (EUR)	Costs (EUR)
3 787 132,00	3 186 560,00
Benefits of the producer that are connected with business activity in the territory of Latvia (EUR): <b>600 572,00</b>	
State budget (taxes)	
Benefits (EUR)	Costs (EUR)
467 589,79	300 468,00
<i>Subtotal - state budget benefits from the labour force taxes (EUR):</i> 167 121,79	
State defence budget (economy of scale)	
Benefits (EUR)	Costs (EUR)
Saved 50% of ammunition mobilisation reserves' price (EUR)	
1 022 000,00	0
Saved 30% of ammunition procurement price (EUR)	
1 226 400,00	0
<i>Subtotal – State defence budget economy (EUR):</i> 2 248 400,00	
<b>Total State budget benefits (EUR): 2 415 521,79</b>	

Source: Authors’.

Hence the total benefit of the producer is EUR 3 186 560.

The benefits of the government and the defence sector consist of defence budget savings from the economy of scale and labour tax payments from the producer. The total benefit for the state budget is EUR 2 415 521.

The above mentioned concept shows that the cooperation between civil and military sector is beneficial for the both parties involved and results in benefits of the entrepreneur as well as budget economy. This confirms the hypothesis of the study. Although the calculations are based upon the hypothetical assumptions, they mark the trend for future development of civil-military cooperation within the defence policy of the EU and allow member states to minimise the expenditure of their defence budgets.

In accordance with the authors' research it is possible to draw the following conclusions:

- Considering the trend of the EU defence expenditure decrease, it is necessary to increase the efficiency of available defence budget without significant increase in defence expenditure.
- Beginning from the interwar period of the twentieth century the new defence threats were addressed mainly by the increase of defence expenditure that marked the trend of implementation of the concept of Military Keynesianism.
- Modern researches of defence expenditure and Military Keynesianism effects can't prove convincingly positive or negative impact on national economy, therefore the integration of standard military Keynesianism (based on increase in defence expenditure) in the defence policy of a state is unpredictable.
- Instead of significant increase of government expenditure authors offer to use the policy of cooperation between military and civil sector which can be the base for alternative military Keynesianism.
- The concentration on the socio economic goals broadened alternative military Keynesianism from the defence sector to the whole national economy of a state and at the same time shifted the paradigm of the concept from purely Keynesian to the neo-liberal economic dimension using entrepreneurship as active element, which, in its turn, supports the first part of the hypothesis (attraction of foreign or domestic producers of defence-related goods).
- The implementation of alternative military Keynesianism will allow governments to utilise not only the financial resources of defence budget, but also another sources of state finances (for instance, government investments into regional development). This will increase the financial capacity of the defence sector without direct involvement of state defence budgetary funds and also will support the second part of the hypothesis (defence budget economy).
- In accordance with European Defence Equipment Market and European Defence Technological and Industrial Base development policy the EU can concentrate its defence manufacturing in one or in several member states, using the defence-related industrial clusters.
- The aim of the civil-military cooperation concept is to attract foreign or domestic producers of defence-related goods to locate their production in certain defence-related industrial clusters, which are located in the territory of the EU member states, in order to stimulate the development and competitiveness of the European Defence Technological and Industrial Base as well as to support the regional development.
- As a result of expert interview the main advantages of the civil-military cooperation concept are "promotion of Latvian economic competitiveness" and "Stimulation of the regional development", which confirm the aim of the concept formulated in accordance with the hypothesis of the study. Contrary the main deficiencies/obstacles

## Conclusions

of the civil-military cooperation concept are “unclear implementation of tax relief policy” and “the lack of qualified employees”.

- The majority of the civil-military cooperation concept deficiencies/obstacles can be overcome by the implementation of effective legal framework as well as initiation of political consultation with EU and NATO for the concept initiation.
- The cost-benefit analysis of the hypothetical implementation of the civil-military cooperation concept confirms the hypothesis of

the study and shows that the cooperation between civil and military sector is beneficial for the both parties involved that results in benefits of the entrepreneur as well as budget economy. Although the calculations are based upon the hypothetical assumptions, they mark the trend for future development of civil-military cooperation within the defence policy of the EU and allow member states to assess the minimisation of the expenditure of their defence budgets through the use of civil-military cooperation concept.

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