

Course:

DEFENSE AND SECURITY ECONOMICS

Distance Support Material

TOPIC 2

ECONOMIC ASPECTS OF NATIONAL DEFENSE AND SECURITY PROVIDING

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Topic 2



Economic Aspects of National Defense and Security Providing

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LEARNING OUTPUTS

Students will know:

- basic concepts (key words) which are connected with relationship between economy and defense and security

Students will be able to:

- list main economic principles applicable for analysis of defense and security area

Students will capable of:

- explanation of character of defense and security from point of view of the theory of goods
- explanation of character of defense and security from point of view of the theory of needs

ECONOMIC ASPECTS OF NATIONAL DEFENSE AND SECURITY PROVIDING

KEY TERMS

National defense, national security, classification of goods, classification of needs, public good, private good, mixed good, Economic Causes of Public Sector Existence, Non-economic Causes of Public Sector Existence, Theory of Goods, Theory of Needs

TIME NEEDED FOR CHAPTER STUDY

3 hours

INTRODUCTION

National security underpins the system in which citizens live. National security is essential to an environment and geographical space in which people can reside without fear. It consists, first, of physical security on both the international and domestic sides. This includes protection from threats external to the country and safety in the homeland. These generally are accomplished through hard power and homeland security efforts. Second, it consists of economic security—the opportunity and means for people to provide for their own well-being under an economic system that is vibrant, growing, and accessible. Third, every country national security involves outreach through soft power in an attempt to win the “hearts and minds” of people across the globe. Soft power complements hard power, and, in cases, may substitute for it. Also, the myriad links between governments, businesses, and people across national borders means that national security increasingly depends on countries and activities in far flung places on the globe.

Traditionally, the economy entered into the national security debate through four issues: the defense industrial base, base closures and program cuts, international economic sanctions, and export controls. These issues still garner much of the attention from the vantage point of the military. From the point of view of the nation as a whole, however, economic security takes on a broader meaning.

1 BASIC CONCEPTS

1.1 Defense and security as public welfare

Defense, security – basic state functions, public government is crucially responsible for its securing.

Financial and economic demandingness of providing of these functions was increasing gradually.

Externality character of these functions, benefitness for all citizens, demands tax financing.

1.2 Defense, security and economy

Economy determines basic conditions for defense providing.

Defense is dependent on resources which are produced by economy (human, material, financial).

Defense influences economy structure (possibly economy performance).

1.3 Interconnection study of wars and economic theory

- Economy as a resources generator for defense and security;
- Macroeconomic effects of defense and security;
- Economic theory as explanatory tool for states behaviour;
- Economic Management within defense.

2 RELATION BETWEEN ECONOMY AND DEFENSE FROM HISTORICAL POINT OF VIEW

- **National Security as a public good in Adam Smith**
- **The Totality of War**
 - Manpower Mobilization
 - Mobilizing the Industrial-Technological Potencial
- **National Security and Economic Wealth in Economic Thought**
 - National Security and Economic Wealth: Complementary or Competing Goals?
 - National Security and Economic Wealldth: Reciprocal Influence
 - The Profit and Loss of Wars
 - Marxism and Economic Benefit of Wars
 - Macroeconomic Effects of Wars
- **National Security and Econmic Wealth: A Macro-Historical Perspectivce**

FOR BETTER UNDRSTANDING PROBLEM



To better understanding of topic see source:

YAACOV, Lifshitz. *Economics of Defence Producing*. Accessible on:

<http://books.google.cz/books?id=HlbnN3cVqC4C&pg=PA335&lpg=PA335&dq=YAACOV,+Lifshitz.+Economics+of+Defence+Producing&source=bl&ots=L9LWITZMrR&sig=IjGdUuamxYjUqVGII7uAxi8fPY4&hl=cs&sa=X&ei=iCR7VJeaPMngOMXRgLAF&ved=0CDAQ6AEwAg#v=onepage&q=YAACOV%2C%20Lifshitz.%20Economics%20of%20Defence%20Producing&f=false>

SMITH, Adam. *Wealth of Nation. Book V – About Ruller Expenditures*.

3 ECONOMIC PRINCIPLES PLAYING CRUCIAL ROLE WITHIN ECONOMIC ANALYSIS OF NATIONAL DEFENSE AND SECURITY

There is no universal agreement on what the principles of economics are suitable for applying for economic analysis of defence and security. The following would be among them:

3.1 The principle of opportunity cost.

To use limited resources in the face of unlimited wants necessarily implies that one needs to choose. To choose any one option from among the alternatives implies foregoing or sacrificing the benefits the other options would have yielded. A battalion applied to one segment of the front thus cannot be applied to another at the same time. Many a long passage in an account of military history can be summarized simply by the underlying principle that the actors in question had to choose how, where, and when to apply limited military resources to cover multiple objectives. The illustration of the operation of this principle could be a look at fortresses, castles, and siege warfare during the European Middle Ages (1000-1300).

3.2 The principle of expected marginal costs and expected marginal benefits

Ultimately, what guides one's choices? Economists answer that choice is driven by expected marginal costs and benefits: if the expected cost of an action outweighs its expected benefit, then do not engage in that action, and vice versa. For example, when resources available for defense (including technological and organizational capabilities) are too limited to effectively face a threat, it is best to decline to offer battle, or if already engaged in it, to withdraw or to surrender. This principle applies at all levels of decision-making. Of course, decision-makers may view expected costs and benefits differently. A ruler may decide to engage in battle, but the commander may decide not to. The ruler may then replace the commander, but individual soldiers may decide to decline battle and desert. We illustrate the operation of this principle by examining battles and manoeuvres of the Enlightenment centuries (1618-1814; the Thirty Year's War to Napoleon I's abdication).

3.3 The principle of substitution.

The principle of substitution says that if two goods yield comparable benefits users will drift toward the good with the lower relative price. This principle predicts increasing substitution of military labour with military capital if the price of capital falls relative to that of labor (including the perceived cost of war-casualties). We illustrate this with a look at France's substitution of strategic nuclear forces for increasingly expensive conventional forces during the Cold War years, 1945-1989.

There are of course other fundamental principles of economics.

3.4 The principle of diminishing returns

For example, the principle of diminishing returns states that applying more of any one input may, *ceteris paribus*, at first result in rising output but eventually must yield increasingly smaller increments of output for equal increments in input, i.e., diminishing returns.

3.5 The principle of incentives role

3.6 The principle of principal and agents relationship

3.7 The principle of economies of scale

Economic theory therefore predicts an intrinsic drive to go from a difference of degrees (more input of the same kind) to a difference in levels (change to inputs of a different kind), i.e., technological and strategic innovation in warfare. Other fundamental principles pertain to the role of incentives, principal-agent problems, and the importance of information in decision-making. Our claim is that military history can fruitfully be viewed through the lens of economic principles such as the ones delineated here, and that this lens provides a different and insightful analytical cut at probing that history.

4 NATIONAL DEFENSE AND SECURITY FROM THEORY OF GOODS AND NEEDS POINT OF VIEW

4.1 National Defense and the Theory of Needs

The theory of needs distinguishes two essential types of needs – production and final ones.¹ Production needs are connected with production of goods that serve for consumption in a process of further production of material goods and services. Provided that public sector “feels” certain production needs, theoretic as well as experimental analyses proved that there is no economic reason to satisfy these needs by the public sector itself. Their satisfaction is the privilege of profit-making sector (Figure 1).

Every human in the position of a consumer feels final needs. One can feel final needs as a society member or as an individual defined by his (her) genetic uniqueness. In the first case we speak of social needs, in the latter one of individual ones (see Table 1).

Social needs (e.g. protection of territorial integrity of a country, protection of citizens and their property, organized arrangement of its society etc.) are characterized by their intensity, which reflects social events that impact upon its individual members. These then immediately require satisfaction of these needs, eventually promise of their future satisfaction. Individual needs (e.g. needs of food, clothing, housing, transportation, health etc.) are much more linked to the existence of an individual than to the society itself, although society can also influence these needs.

¹ STRECKOVÁ, Y. *Veřejná ekonomie pro školu i praxi*. Praha: Business Books, Computer Press, 1998. 18 p.

Figure 1: Theory of Needs

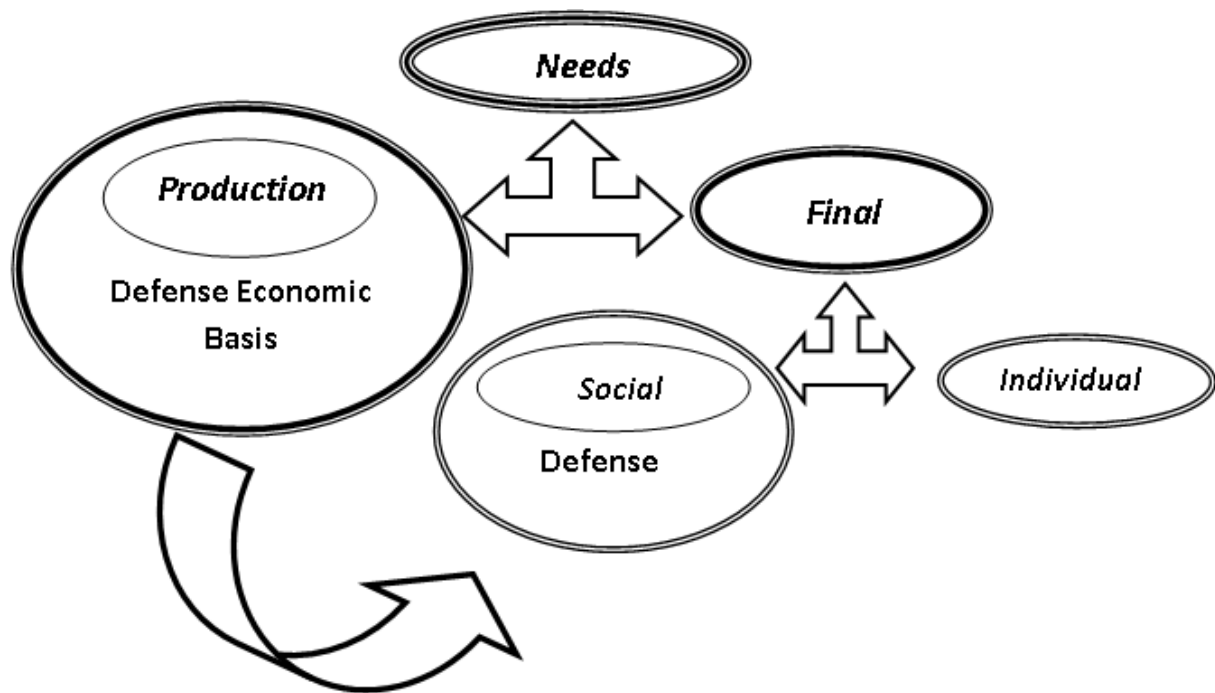


Table 1: Fundamental Characteristics of Production and Final Needs

| Type of Needs | | Fundamental Characteristics | Definition Features | | | |
|------------------|--|--|--|-----------------------------|--|------------|
| | | | Source | Intensity | Duration | |
| Production Needs | | Felt by every individual - producer. Goods intended for consumption in a process of further goods production satisfy them. | Profit Making | - | - | |
| Final Needs | | Do not serve for production of further goods. Felt by every individual as final consumers. | - | | | |
| | | Social | Felt by human as members of a society. | Existence of a society. | Fluctuating (from zero up to maximum intensity). | Short-term |
| | | Individual | Felt by human as a genetic species; they are indigenous. | Existence of an individual. | Intense, permanent. | Long-term |

Protection of territorial integrity of a nation is a social need. It is the Defense Department, which is responsible for satisfaction of this need; the Army of the Czech Republic represents the national implementer.

Social needs are characterized mainly by the fact that citizens feel them very intensively however, only in the case of a threat impeding territorial integrity of a state, lives, property or rights of its citizens. Intensity of the feeling to necessarily satisfy this need decreases as this threat dies out. Such a decrease of the interest of citizens in this need has its economic dependencies. This fact causes difficulties in subsequent allocation of funds to defense.

4.2 National Defense and the Theory of Goods

Specificity of the need of national territory integrity is augmented by the nature of the goods that satisfies it. The need of national territory integrity is satisfied through production of the goods that is generally known as national defense. Theory of goods defines three basic criteria (see Table 2), based on which goods can be classified.

Table 2: Goods Typology

| Goods Classification Criterion | Distinctive Criterion | Context | Goods Classification |
|---|--|--|---|
| Economical | Meeting certain characteristics of consumption (rivalry and non-rivalry, excludability and inexcludability, divisibility and indivisibility) | Gives evidence of the mode of consumption (consumption availability). | Purely public (national defense and security) Mixed Purely private |
| Institutional | Presence of market prices | Gives evidence of the way of goods distribution (public distribution and production, private production). | Non-market (national defense and security) Semi-market Market |
| Way of decisioning on production and consumption | Collective decisioning related to the issue of distribution equity, individual decision related to utility maximization. | Gives evidence of the way of decisioning on resource allocation. It corresponds with the potentiality, necessity and involvement of individuals or entire society. | Public (national defense and security) Private |

For the needs of public economics, the most important criterion is the so-called **economic criterion**, when the goods typology is mainly based on the degree of consumption privatization for given goods. Based on rivalry/non-rivalry, excludability/in excludability and consumption divisibility/indivisibility pairs, goods are classified as purely private, mixed and purely public ones.

National defense represents purely public goods with non-rival consumption. Nature of these goods causes that, when provided, everybody benefits the same way even in a situation when certain individuals do not contribute to production of given goods. In this context, we also speak of zero marginal costs of additional unit of consumption, i.e. when production of given goods is once provided, consumption by additional consumers does not increase costs of this production. Another important feature is the fact that it is rather problematic to exclude anybody from consumption of these goods. A concurrence of these characteristics then results in a situation when individuals are unwilling to demonstrate their preferences, they are unwilling to contribute to production of these goods – they try to behave as free riders. They rely on benefiting from consumption of those individuals who are willing to pay. National defense is also non-market (institutional criterion) and public goods (criterion of the way of decisioning on goods production and consumption – Buchanan).

Specific institutions of public sector belonging to the Defense Department are producers of national defense. Private companies do not supply this service for if they did so, they would require certain price for this service (assuming that it would be demanded by public). However, nature of the “goods” of national defense enables that any citizen can benefit from defense services regardless of paying for them or not. This causes that citizens will not pay for production of these goods voluntarily. Private market cannot provide purely public goods because individuals cannot be excluded from their consumption. One of the main reasons why governments provide public goods instead of private sector is the free rider phenomenon. People believe that purely public goods can be consumed without paying for their production. That is why purely public goods and therefore also national defense are to be funded from tax revenues within a system of public budgets.

The nature of social needs, of consumption of purely public goods and the way of their production funding cause that citizens' interest in these issues (in national defense in our case) might fluctuate substantially, which can result in a weaker enforcement of useful value of the goods provided due to an extremely high degree of intermediation between the moment of payment and the relevant consumption phase. Public interest in national defense in a democratic society should be clearly demonstrated in statements of policy as well as in interests of political parties that subsequently act as executors of public choice deciding on the extent and efficiency of defense spending. The level of concern or unconcern for deeper analyses of economic bases in defense becomes one of the reasons for inclinations to inefficiency.

FOR BETTER UNDERSTANDING PROBLEM



There are below next source for deeper study of economic basement defense as a public goods. The some authors have the contrary opinion as the authors belongs to economic mainstream:

GUNNING, J. Patrick *Is National Defense a Public Good* Accessible on:
<http://www.constitution.org/pd/gunning/issues/econ/topics/ndpubgd.htm>

COWEN, Tyler. *Public Goods.* Accessible on:
<http://www.econlib.org/library/Enc/PublicGoods.html>

WOOLLEY, Frances. *Defence may be a public good. Military spending isn't.* Accessible on:
http://worthwhile.typepad.com/worthwhile_canadian_initi/2012/05/defence-may-be-a-public-good-military-spending-isnt.html

Public Goods. Accessible on:
<http://are.berkeley.edu/courses/EEP101/spring05/Chapter07.pdf>

ZYCHER, Benjamin. *Defense.* Accessible on:
<http://www.econlib.org/library/Enc/Defense.html>

CONCLUSION

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TASKS FOR SELFSTUDY



1. Try to explain terms defense economy and defense economics. Are these terms synonyms or do they have different meaning?
2. How can we understand a defense from economic point of view? What type of good is defense? What type of need is accommodated (satisfied) by defense? What can we see as the main problem of economic securing of defense?
3. Think about defense importance for a society, state, business, citizens and so on. How can the defense be beneficial to our national economy? What are the costs of defense ensuring?
4. Try to explain, when and why does defense became economic problem? Show some examples, which support your statement and opinion.
5. How “big” is defense sector in your country (Employment, Budget, Defense of military expenditures /absolutely or relatively as a share of GDP/ and suchlike).

REFERENCES



1. HITCH, Ch. J., McKEAN, R.N. The Economics of Defense in the Nuclear Age. New York: 1960,
2. HARTLEY, K., SANDLER, T., Handbook of Defense Economics. York: Elsevier, 1995.
3. LIFSHITZ Y., The Economics of Producing Defense (Illustrated by The Israeli Case). Norwell, Massachusetts: Kluwer Academic Publisher Group, 2003. ISBN 1-4020-7515-4

ADDITIONAL STUDY RESOURCES



1. WOOLLEY, Frances. Defence may be a public good. Military spending isn't. Accessible on:
http://worthwhile.typepad.com/worthwhile_canadian_initi/2012/05/defence-may-be-a-public-good-military-spending-isnt.html
2. GUNNING, J. Patrick Is National Defense a Public Good Accessible on:
<http://www.constitution.org/pd/gunning/issues/econ/topics/ndpubgd.htm>