

NATIONAL DEFENSE AND SECURITY ECONOMICS

Defense Industrial Base (Defense Industry), its Importance and Ways of Financing

Defense Industrial Base, its Importance and Ways of Financing

Content of Topic

- Introduction
- Basic Concepts
- Theoretical Analysis of Defense industrial base
- Structure of Defense Industrial Base
- Models of Relationship Between State and DIB
- Resources of DIB financing
- DIB Development Influence Factors
- Conclusion

DEFENSE INDUSTRIAL BASE ITS IMPORTANCE AND FINANCING
RESOURCE

INTRODUCTION

Defense Industrial Base Its Importance And Financing Resource

Introduction

- **Aim of this topic** is definition and characterization of defense industrial base as integral part of national economy.
- **As partial aims of this topic**, we can see:
 - implementation of theoretical-economic analysis of defense industry,
 - clarification of defense industrial base structure,
 - demarcation of state-defense industry relation models and
 - specification and characterization of factor influencing defense industry shape and dynamics.

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BASIC CONCEPTS

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Basic Concepts

- Arms Industry, Defence industrial base, Defense technological and industrial base;
- Arms Procurement;
- Arms Production;
- Arms Producing Companies;
- Offsets.

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THEORETICAL ANALYSIS OF DEFENSE INDUSTRIAL BASE

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Theoretical analysis of defense industrial base

Price and benefit arms production

- National independence, autarky, ability to react in case crisis or war;
- Necessity to maintain the abilities;
- (In)dependence on foreign arms import;
- Leverage in foreign purchasing;
- Economic benefit for given country.

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Theoretical analysis of defense industrial base

Price and benefit arms production

- High price of arms production and further rise tendency;
- High costs of military research and development;
- Costs connected with undervaluing of development schemes (time and financial intensity);
- Crowding out effect existence and its impact of national economy.

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Theoretical analysis of defense industrial base

Factors Influencing arms production

Factors Influencing structure arms production and its acting within process of arms trading:

- character purchaser,
- research and development process,
- Price of armament does not play main role,
- Non-existence of co-partnership in conventional sense,
- Existence of business state ownership,
- Governmental guarantee,
- Business fusion.

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Theoretical analysis of defense industrial base

Demand Side - Characteristic

Department of Defence – to some extent monopsony
→ distinct deformation of market

The basic question is:

How can we consider and evaluate the position of department of defense on market?

Is it possible to see it as institution cost minimalizing or as a cartel manager of military industry?

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Theoretical analysis of defense industrial base

Demand Side - Characteristic

Arguments (Cartel manager):

- ministerial clerks often leave office and head towards positions of commercial agent of armament business,
- Extensive lobbying of armament suppliers (it influences decision-making process elasticity of DoD),
- Sale of local armament production abroad by DoD,
- DoD interfere in process of development and production of new weapons (realization of coordination function).

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Theoretical analysis of defense industrial base

Supply Side - Characteristic

- monopoly, oligopoly;
- high concentration of sellers final product;
- specific characteristic of production factors of defense industry:
 - manpower
 - natural resources
 - capital – capital investment.

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Theoretical analysis of defense industrial base

Supply Side - Characteristic

Condition of Entrance and Exit

- Problem of marketing
- Complexity of armament trade
- Inflexible demand
- High capital investment in production start (fixed capital)
- Loyalty to brand mark
- Long-term supplier are privileged
- Requirement of higher performance.

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Theoretical analysis of defense industrial base

Supply Side - Characteristic

Condition of Entrance and Exit

- Need of Capital
- Financial institutions do not borrow capital resources to infant-industry firms.
- Instability of demands
- Political Aspects
- Social mark

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Theoretical analysis of defense industrial base **Supply Side - Characteristic**

Condition of Entrance and Exit (interests)

- Financial reason
- Science and research support
- Part of capacity of defense firms are maintain by state finance in case of mobilisation
- Contract award
- Specialisation of work
- Emphasis on quality, preferring quality before quantity
- Foreign trade
- Patriotism

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STRUCTURE OF DEFENSE INDUSTRIAL BASE

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Structure Of Defense Industrial Base

Armaments firm is possible to typology by **next** **criteria**:

- **Production type**
- **The range of arms products**
- **Level dependence** on armament production
- **Position in production chain**

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Structure Of Defense Industrial Base

PRODUCTION TYPE

According to this typology armament producers is possible to classify:

- the aerospace industry,
- Industry producing weapons for ground forces
- Industry producing weapons and equipment for naval forces
- Industry for defence and military electronics.

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Structure Of Defense Industrial Base

THE RANGE OF ARMS PRODUCTS

Typically, aerospace companies were amongst the largest in the group, **supplying a range of defence products and equipment** such as aircraft, electronics, missiles and small arms (e.g. **BAE; EADS; Saab; Thales**). Their size and range of products suggests that such firms might be exploiting economies of scale, learning and scope.

Few aerospace companies **specialized in one arms product** and these included Rolls-Royce (engines); Dassault in aircraft; AgustaWestland and Eurocopter in helicopters (being subsidiaries of Finmeccanica and EADS, respectively).

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Structure Of Defense Industrial Base

LEVEL DEPENDENCE ON ARMAMENT PRODUCTION

Armament firms is possible divided into:

- **Fully Dependent** on defence production (100 % share of military production),
- **Medium Dependent** on defence production (from 90 - 50% share of military production),
- **Minimally Dependent on defence production** (less then 50 % military production).

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Structure Of Defense Industrial Base

POSITION IN PRODUCTION CHAIN

- *Prime contractors*
- Tier 1 contractor
- Tier 2 contractor
- Tier 3 contractor

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MODELS OF RELATIONSHIP BETWEEN STATE AND DEFENSE INDUSTRIAL BASE

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Models of Relationship Between State and Defense industrial base

- Government as a **Investor**
- Government as a **Planner**
- Government as a **Customer**
- Government as a **Supporter of Industry**
- Government as a **Regulator**

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RESOURCES OF DEFENSE INDUSTRIAL BASE FINANCING

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Resources Of Defense Industrial Base Financing

► OWN RESOURCES

- funds received from realization of own production (retained profit)

► OUTSIDE RESOURCES

- *PRIVATE*
- *PUBLIC*

Defense Industrial Base Its Importance And Financing Resource

Resources Of Defense Industrial Base Financing

► OWN RESOURCES

- funds received from realization of own production (retained profit)

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Resources Of Defense Industrial Base Financing

▶ OUTSIDE RESOURCES

▶ PRIVATE

▶ Resources from capital market

- ▶ short-term credits
- ▶ long-term credits

▶ PUBLIC

▶ investment means mainly come from budgetary resources

- ▶ Direct subventions (government loans, irretrievable aids, government grants)
- ▶ Indirect subventions (tax impetus, tax relief)
- ▶ Indirect subventions by acceptance credits guarantees by state

▶ Another forms of support

- ▶ national assistance through placing of unnecessary orders
- ▶ national assistance of export (looking for business partners, lobbying, support of export activities /credit, insurance, guarantees/),
- ▶ compensation of defense trade embargos

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DIB DEVELOPMENT DRIVING FACTORS

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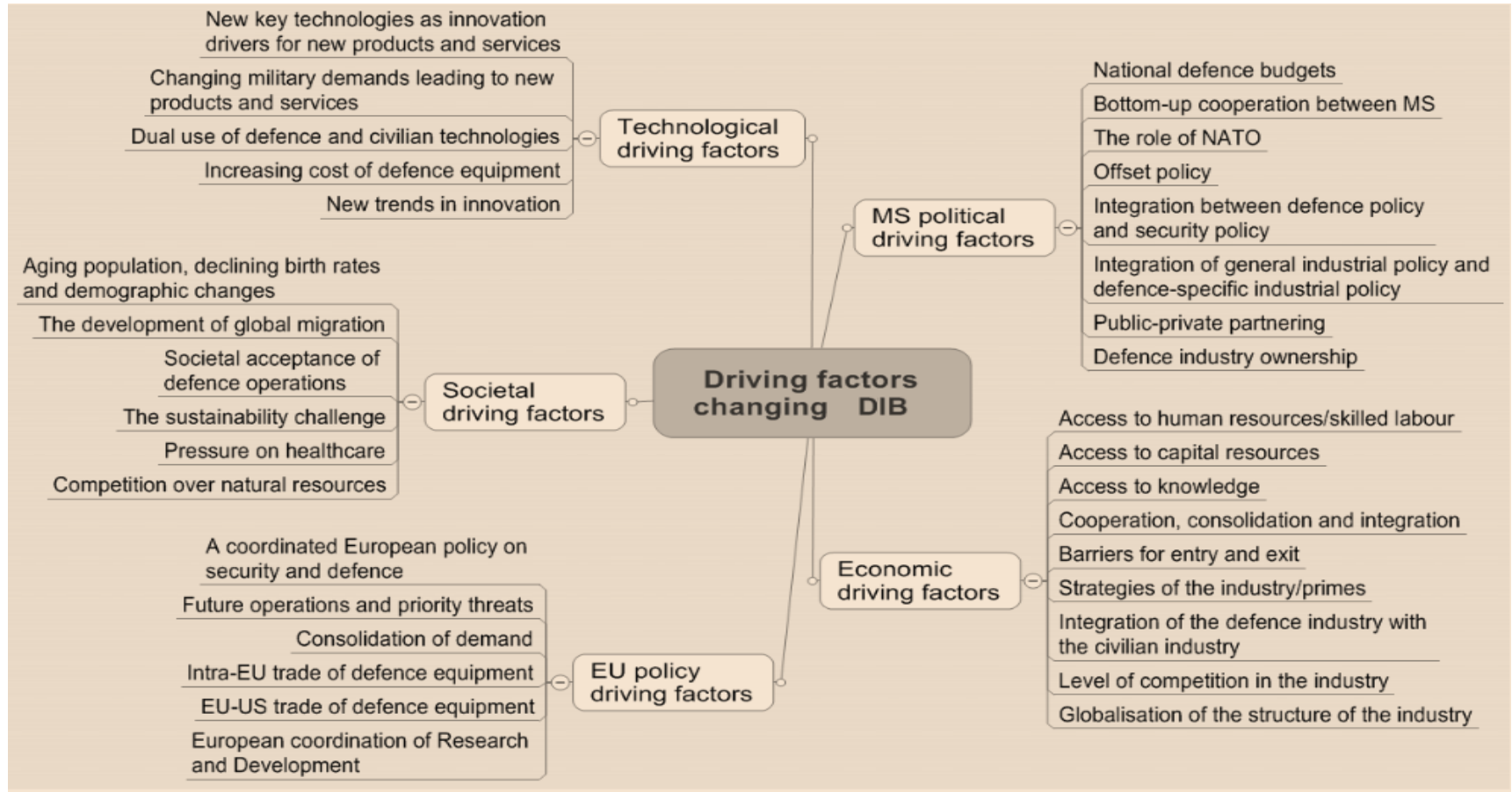
DIB Development Influence Factors

The DIB operates in a certain regime, within a specific socio-economic context. This regime is subjected to important drivers for change that will alter the nature of the DIB, and its development. These factors are:

- **Political driving factors**
 - EU policy driving factors
 - National (Member States) political driving factors
- **Economic driving factors**
- **Societal driving factors**
- **Technological driving factors**

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DIB Development Influence Factors



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FACTORS INFLUENCING DECISION ABOUT WEAPONS PURCHASE

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Factors influencing decision about weapons purchase

Pressures from having to trade-off defence spending with other national investments (e.g. health care, environment) and rising equipment and services costs mean that government policy-makers cannot avoid the need for some difficult choices. Procurement of defence equipment involves government in a set of complex choices in a world of uncertainty. Typically, procurement decisions involve the following choices:

- **WHICH WEAPONS SYSTEM TO BUY?**
- **WHO TO BUY FROM WEAPONS SYSTEM ?**
- **HOW TO BUY WEAPONS SYSTEM ?**
- **HOW TO REALISE THE FINAL CONTRACT ON NEW WEAPON SYSTÉM /PRICE GUARANTEE/?**
- **WHICH FACTORS TO CONSIDER WITHIN CONTRACT REALIZATION ?KTERÉ FAKTORY PŘI NÁKUPU ZOHLEDNIT (MILITARY-ONLY VS. WIDER GOVERNMENT POLICY OBJECTIVES)?**

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Factors influencing decision about weapons purchase

PROCUREMENT STRATEGY CHOICES

Technical & Operation Specification



National Production

NO



Possibility of National Development

NO



Possibility of Multinational Collaboration/Development

NO



Negotiation of a Foreign Purchase

Direct Purchase/Offsets

YES



Procure from Domestic Industry

YES



National Development

YES



Multinational Development



Co-production/Other Offsets



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CONCLUSION

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Conclusion

- Defense industrial base is part of national economy with high level of dynamics.
- To expect this dynamics will be influenced by ability of develop high-tech technology.
- This development will be limited by budgetary conditions, expected forms of future armed conflicts and effort to defend human life the most (own but adversary soldiers).

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STUDY RESOURCES

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Study Resources

- SKÖNS, Elisabeth., DUNNE, John. P. Arms Production, Economics of defense industrial base
- F. Bekkers, M. Butter, E. Anders Eriksson, E. Frinking, K. Hartley. Development of a European Defence Technological and Industrial Base *Annex report*
- F. Bekkers, M. Butter, E. Anders Eriksson, E. Frinking, K. Hartley. Development of a European Defence Technological and Industrial Base *Main report*
- Ron Kane. National Governments And Their Defence Industrial Bases: A Comparative Assessment Of Selected Countries
- Deficits, Defense, and the Industrial Base – What's Next? Accessible on: <http://csis.org/files/attachments/Deficits&Defense%20Transcript.pdf>
- Center for strategic and International Studies. Accessible on: <http://csis.org/program/defense-industrial-base-and-acquisition>
- European Commission – Defence Industries. Accessible on: http://ec.europa.eu/enterprise/sectors/defence/index_en.htm
- [Development of a European Defence Technological Industrial Base](http://ec.europa.eu/enterprise/sectors/defence/documents/index_en.htm) + Annex (Study); http://ec.europa.eu/enterprise/sectors/defence/documents/index_en.htm
- European Defense Industry Future. Accessible on: <http://www.eurofound.europa.eu/emcc/content/source/eu06019a.htm>

THANK YOU FOR YOUR ATTENTION !!!

IN CASE OF QUESTIONS, CONTACT ME ON

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