DEFENCE ECONOMICS

CHALLENGES & ACHIEVEMENTS

'Redacted'

OUTLINE

- **Questions**
- **Definitions**
- **History**
- **Examples**
- **Challenges**

DEFENCE ECONOMICS

- **DEFINITIONS**

- 1. Economics of WAR & PEACE

- 2. Economics of Defence, Security, Disarmament, Conflict and Peace

DEFENCE ECONOMICS: HISTORY

- **WWII**
- Selecting targets for strategic bombing
- Aircraft plants; tanks factories; ball bearing factories; oil fields
- German economy adjusted/responded:
  Rapid repair; factories moved underground and to remote locations
  Limited knowledge of German economy: alternative suppliers; stocks; imports
- Increase costs of bombing
- Arrange diversions

DEFENCE ECONOMICS: HISTORY

Pioneering contribution: Hitch and McKean
Economics of Defense in Nuclear Age (1960)

Other early 1960s contributions:
Alliances; Weapons Acquisition Process;
AVF

HISTORY

JOURNAL: 1990: Defence Economics: 4 issues pa ;
Mainly US economists

Later: Defence & Peace Economics: 6 issues pa
Now: world-wide economists

30th Anniversary

TOPICS

Range of topics

Arms Races; Alliances; Determinants of defence spending; Impacts on Growth; Equipment Procurement; Personnel; Defence industries; Military Outsourcing;
Disarmament; Conversion; Peace: peace/defence as public goods; Conflict; Terrorism

EXAMPLES

1. **Economics and Armed Forces**
   Military Production Function: Q = f(Inputs)
   Limited Budgets: Choices cannot be avoided
   Opportunity costs – alternatives

Problem: games with small numbers: Buggins Turn

EXAMPLES

2. SUBSTITUTION PRINCIPLE

UAVs v manned combat aircraft v maritime patrol aircraft

Nuclear v conventional forces

Impact of technical progress –manned aircraft

Affects traditional monopoly property rights of Services: SAMs operated by Army v fighter aircraft by RAF

EXAMPLES

3. Collaboration

Ideal Case: Equal sharing of R&D and lower unit production costs from greater output

Reality is different:

R&D costs higher due to duplication and sharing of high technology

Production costs higher due to duplication of assembly lines

EXAMPLES

4. Defence Markets are Different

Public good = incentives to free ride
Single buyer = powerful
No market prices
Domestic monopolies
Armed Forces = no profit motive; no capital market

EXAMPLES

5. Conflict and Markets

Conflict destroys markets
Military force allocates resources
Conflict creates disequilibrium
Result is chaos and destructive power

EXAMPLES

6. *Terrorism: choices for terrorists*

Peaceful v terrorist activities: substitutes

Make peace more attractive

Attack methods: assassinations v kidnaps v hijacking airliners: make skyjacking more expensive= less skyjacking but more kidnapping

EXAMPLES

7. Prosperity agenda: secondary economic benefits:

Jobs, exports, technology/spin-offs

There are measures for these: GDP; employment numbers; export sales; R&D spending and patents

But no single measure of prosperity
And none which can be given money values

CHALLENGES

- 1. **MEASURING DEFENCE OUTPUT**

  Definitions: peace/protection/security:

  But no money values for peace, etc

  Traditional solution: Inputs = Outputs

  More recent solution: ***military capabilities***

  Elsewhere in public sector: Health QALYS (PALYS); value of life studies for transport

CHALLENGES

- **Maintaining the research base in defence economics**

  Management consultancies; think tanks (RAND; SIPRI); Government Economics Departments = quick/applied research

  Problem: lack of long-term research: expanding the frontiers of defence economics – its theoretical base

  Universities not helping

CHALLENGES

- **Augustine Rising Costs**

  Spitfire upc (airframe costs): £219K (2018 prices)

  Meteor upc (airframe): £530K (2018 prices)

  Typhoon upc: £98mn (2019 prices)

Impacts on Armed Forces and Defence Industry:

smaller equipment numbers

CHALLENGES

- **Current Defence Review: applying defence economics**

- Assess benefits and costs of UK world military role
- Apply ***SUBSTITUTION PRINCIPLE***
- ***Examples:*** *Reserves for Regulars (eg RAF)*
- *RAF Maritime Patrol Aircraft replacing RN frigates*
- *Strategic nuclear deterrent replacing conventional forces*