

# *“The Impact of Military Technological Development on NATO Cooperation”*

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# Definition of Terms:

- Exponential Capacity: Increase in output is proportionally more than increase in input
- Power: Physical power - military hardware and software
- Military Alliance: Group of states with common defensive or offensive interests
- Dynamics: Endurance and deepening
- Political Economy of military production: Interplay of political and economic factors influencing states to invest in the production of power



**Deepening does not necessarily mean increase, but can also imply increasing dependence**

# Theoretical goal of the study:

- To advance a contribution to the literature on power politics and alliance dynamics among states by demonstrating how the political economy of military production impacts:
  - a) military power, and,
  - b) alliance politics among states

Although, the study explores the effect of certain material variables on power and alliance politics, the idea is to add to the full account of factors. It does not deny the importance of ideational and other material variables; in fact, it should be understood as complimentary to them.

# Empirical goal of the study:

- To elucidate why NATO's most powerful members, (i.e., France, Germany, Great Britain, and the United States), continue and deepen their military cooperation in the absence of its original purpose: counterbalancing the Soviet Union's threat.

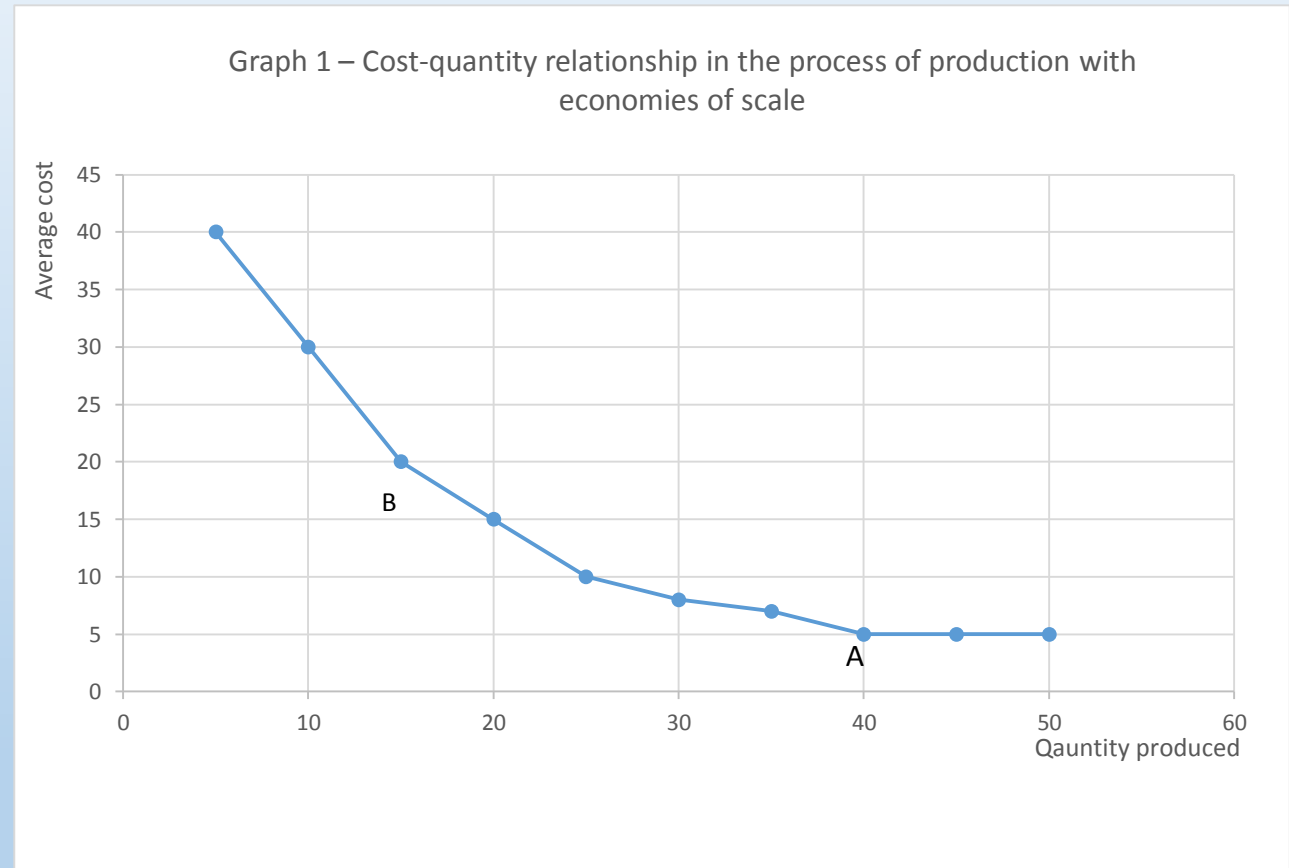
The number of cooperative military programs has steadily increased after the Cold War. Currently, the US and its allies are cooperating in over 20 programs. These are just a few programs costing over \$1.5 billion each: F-35 Joint Strike Fighter; NATO Medium Extended Air Defense System Design and Development, Production and Logistics; NATO Helicopter Design and Development, Production and Logistics and etc.

# IR Theories behind my theory:

- Neorealist scholars have offered three distinct theories expounding the motivations of states to engage in alliance politics—balance of power, balance-of-threat, and balance-of-interests theories.
- Alliances as “power-management tools” - Meant to control the strategies of allies. Stable among asymmetric powers.
- However, none of the above-mentioned theories explain why alliance members would cooperate, and, critically important, deepen their military cooperation such as, for instance, in military production, in times of peace and in the absence of a clear and immediate external threat or an objective.

# PE Theories behind my theory:

- John Stuart Mill's *Principles of Political Economy* notes, "The larger the scale on which manufacturing operations are carried on, more cheaply they can in general be performed." – More is cheaper = **Economies of Scale**



# More PE:

- Under economies of scope, decrease in average costs stems from the variety of production:

Diversification of product base is only possible if the producer makes frequent use of some knowledge/expertise or even a particular asset

- Learning-by-doing decreases average costs by achieving efficiency through practice and perfection

Companies and workers learn to use their equipment and apply their knowledge better

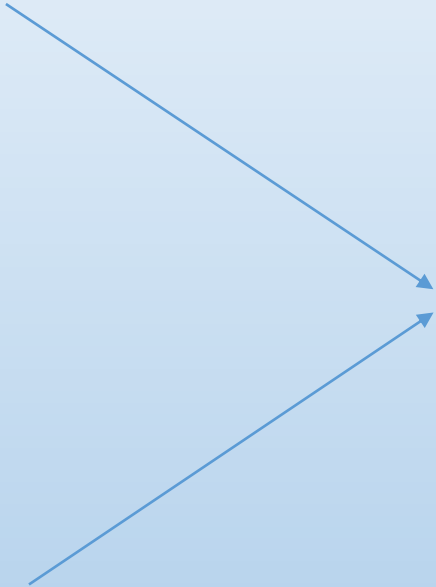
# And even more PE: Augustine vs Moore

- Pugh calculates that military production costs will double every 7 years. Military Research & Development costs are rising too fast for a unit of output produced. What currently is enough to develop and produce 200 units of battleships is unlikely to be sufficient to complete the development of its successor.
- Costs escalations are of about 10% per year
- Augustine wins – Computers are to blame



# How does PE of production relates to power?

- Large scale of production
- Variety of Production
- Learning in Production
- Sharing inflationary costs



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graph LR; A[Large scale of production] --> D[Cut down military costs per unit of production. The military now has either more resources or more military hardware and software – that is, more power.]; B[Variety of Production] --> D; C[Learning in Production] --> D; D[Sharing inflationary costs] --> D;
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Cut down military costs per unit of production. The military now has either more resources or more military hardware and software – that is, more power.

# How does PE of production relates to alliances?

- Alliances can exist for many reasons – to defend, to offend, to protect the Capitalist system, to protect the Kantian union of liberal republics, to defend the Constructivist union of friendly states and etc.
- But none of these theories consider PE of military production as a variable influencing alliance decisions of states.
- States will want to stay in the alliance to have an access to contemporary military technology at a cheap cost.

# Conclusion:

Findings suggest:

- The military power has a unique quality. It has a capacity to increase exponentially in ratio to inputs. This is important because states might decide to cooperate in the creation of this power by pulling their resources together.
- Political economy of military production can influence the military cooperation and coalitions between great powers in times of peace.
- On the larger scale, the study demonstrates that the incorporation of *political economic variables* enriches and complements the international relations *theory of military alliances*.