

# Project Theme – 2

## Dynamics in Global Military Expenditure

### Theme 2: Dynamics in Global Military Expenditure – Implications for India

Global military spending is at its highest level in 2024–25. The main reasons are rising geopolitical tensions, fast technological growth, and new security challenges. Countries like the US, China, Russia, and India are increasing their defense budgets to modernize forces, develop technologies such as AI, drones, hypersonic missiles, and cyber systems, and to secure their regions.

India is the **5th largest military spender** in the world. India's focus is on:

- **Modernization of armed forces** (new aircraft, submarines, missiles, AI systems).
- **Indigenous manufacturing** under “Make in India.”
- **Research & Development** to become self-reliant.
- **Strategic partnerships** with nations like the US, France, Russia, and Israel.

This theme covers:

1. Global defense spending trends.
2. Shifts in military technology.
3. Development cycles of new equipment.
4. Comparative threat analysis between nations.

**For India, the implications are:**

- Stronger defense policy to face China and Pakistan.
- Growth in the defense manufacturing sector.
- Focus on cyber, AI, and space warfare for the future.
- A bigger role in global and regional security.

## Deliverables

### 1. Analytical Report / Presentation (8–10 Slides or Pages)

- **Overview:** Explain global defense spending trends and India's role.
  - **Visualizations:** Line charts, bar graphs, regional maps comparing expenditure.
  - **Technology Analysis:** AI, drones, cyber warfare, hypersonic missiles.
  - **Threat Assessment:** Compare USA, China, Russia, Pakistan, and India.
  - **Policy Recommendations:** What India should do for modernization, R&D, and partnerships.
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### 2. Code Notebooks / Scripts

- **Data Cleaning:** Prepare datasets (global + India's defense budgets, R&D, manufacturing).
  - **Visualization:** Charts for spending trends, heatmaps for regional comparisons, bar graphs for technology focus.
  - **Analysis:** Any comparative metrics (e.g., % of GDP spent on defense, year-on-year growth).
  - **Documentation:** Clear explanations and comments in the code.
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### 3. Summary and Insights

- **Executive Summary:** One-page overview of key findings (global trends + India's position).
- **Insights:**
  - Rising global spending = India needs to keep pace.
  - Technology is shifting toward AI, cyber, drones.
  - India must balance between imports and indigenous production.

- **Recommendations:**

- Invest more in defense R&D.
  - Strengthen manufacturing (Make in India).
  - Train manpower for cyber/AI warfare.
  - Build strong strategic partnerships.
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## **Suggested Approach**

### **1. Understand the Data**

- Collect datasets on global military spending (SIPRI data, World Bank, Govt. reports).
- Include India's defense budget, R&D, and manufacturing stats.

### **2. Explore Trends**

- Show global military spending growth (last 10 years).
- Highlight India as the **5th largest spender**.

### **3. Analyze Technology Focus**

- Identify how much is invested in AI, cyber, drones, missiles, space warfare.
- Compare India's investments with USA, China, Russia.

### **4. Comparative Threat Analysis**

- Profile major players (USA, China, Russia, Pakistan).
- Compare defense budgets, active forces, modern equipment.

### **5. Synthesize Policy Implications for India**

- How India should align policies with global shifts.
- Self-reliance (Atmanirbhar Bharat) in defense manufacturing.

### **6. Visualize Clearly**

- Use charts, heatmaps, and comparative tables.
- Example: Line chart for trends, pie chart for budget share, heatmap for regional security.

## **7. Draft Recommendations**

- Focus on modernization, innovation, cyber and AI readiness, defense exports, and stronger global partnerships.

## **Questions for Theme 2: Dynamics in Global Military Expenditure – Implications for India**

### **1. Context and Setup**

- What are the main reasons behind the rise of global military expenditure in 2024–25?
  - Where does India stand in global defense spending compared to the USA, China, and Russia?
  - Why is defense spending important in the current geopolitical climate?
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### **2. Challenge or Conflict**

- What security challenges are driving India's military spending?
  - How does the technological race (AI, cyber, drones, hypersonic missiles) influence global defense budgets?
  - Between Pakistan and China, which poses a greater challenge for India, and why?
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### **3. Journey (Analysis Process)**

- What trends can you observe from global defense spending over the last 10 years?
- How has India's defense budget changed in the last decade?

- Which emerging technologies are India investing in, and how does it compare with the USA or China?
  - What percentage of GDP do India and other major powers spend on defense?
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#### **4. Climax – Core Insight**

- What is the most significant insight about India's position in global defense expenditure?
  - In which areas is India ahead, and in which areas is it lagging behind other global powers?
  - How does India's focus on indigenous manufacturing change its strategic position?
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#### **5. Resolution and Recommendations**

- What policy steps should India take to strengthen its defense sector?
- How can India balance between imports and indigenous manufacturing?
- Which technologies (AI, cyber, drones, space systems) should India prioritize for the next decade?
- What kind of global partnerships should India focus on to stay competitive?