

Sixteenth Finance Commission – misses and concerns

Prelims: General Studies Paper - 1
Economic and Social Development-Sustainable Development, Poverty, Inclusion, Demographics, Social Sector Initiatives, etc.

Mains: General Studies - 3
Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.

1. Background

- The **Sixteenth Finance Commission (16th FC)** operated with greater autonomy, as its terms flowed directly from the Constitution rather than detailed central directives.
- Like earlier Commissions, it addressed **vertical devolution (Centre-State share)** and **horizontal devolution (distribution among States)**.

2. Vertical Devolution: Key Misses

- The **16th Finance Commission** retained States' share in the **divisible pool at 41%**, continuing the reduction from **42%** after the change in Jammu & Kashmir's status.
- It did not restrain the **Centre's increasing reliance on cesses and surcharges**, which shrink the shareable pool and **undermine fiscal federalism**.
- Instead of binding measures, it suggested a vague **"grand bargain"**-States accept a **smaller share of a larger pool** if cesses are merged.
- The Commission **discontinued revenue deficit grants** and avoided **State- or sector-specific grants**, reducing overall transfers compared to the 15th FC.
- **Effective transfers declined** from **34.4%** during the 15th FC period to **32.7%** in 2026-27.
- Projections may be **overstated** due to **optimistic GDP growth assumptions** and **unaccounted GST reforms** (September 2025).

3. Horizontal Devolution: Concerns

- A new **"contribution" criterion** was introduced using States' share in all- State **Gross State Domestic Product (GSDP)** to reflect efficiency.
- This **confuses production efficiency with fiscal efficiency**, since GSDP captures market-driven concentration of capital and labour, not States' fiscal effort.
- **GSDP was applied inconsistently** across criteria and later **diluted by using its square root**, suggesting ad hoc adjustments.
- The **removal of the tax effort/fiscal discipline criterion** contradicts the Commission's stated emphasis on efficiency.

4. Distributional Impact and Way Forward

- **Major loser States** compared to the 15th FC include **Uttar Pradesh, Bihar, Madhya Pradesh, West Bengal, Odisha, Chhattisgarh, Rajasthan**, and several north-eastern and small States.
- **Richer States gained unevenly**, intensifying inter-State disparities.
- The **lack of equalisation or revenue gap grants** limited support for States with higher needs and costs.
- **Article 275 need-based grants** could have **addressed inter-State disparities** while **retaining performance incentives**, particularly in **health and education**
- **Tax devolution alone is not enough; equalisation grants are necessary** for cooperative fiscal federalism.

Skill India as herculean challenges, Galgotian blunders

Prelims: General Studies Paper - 1
Economic and Social Development-Sustainable Development, Poverty, Inclusion, Demographics, Social Sector Initiatives, etc.

Mains: General Studies - 2
Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

1. Background

- India's **demographic dividend will end by 2040**, making skill development a time-bound national priority.

Demographic Dividend

It refers to the **economic growth potential** that arises when a country has a **larger working-age population** (15-64 years) compared to its **dependent population** (children and elderly).

- In the **European Union and China**, about **50%** of secondary students are in vocational education; in India, this is only **1.3%**.
- The **National Education Policy (NEP) 2020** aimed for **50% learner exposure to vocational education by 2025**, but funding and design gaps persist.
- Vocational education** receives about **2% of India's education budget**, compared to **11% in China and Germany**.

2. Key Gaps in the Current Skill System

- Skill financing is **fragmented, scheme-driven, and inconsistent** across Budgets.
- The Financial Year 2026 **internship scheme spent only 5% of allocated funds**, showing weak design and execution.
- Comptroller and Auditor General of India (CAG) audits of **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)** (2015–22) flagged serious issues:
 - ➡ **94.5% bank accounts invalid**
 - ➡ **Only 41% of short-term trainees placed**

- The system **prioritised quantity over quality**, with limited labour market outcomes and **weak accountability**.

3. Structural Problems

- Skills programmes remain **supply-driven and government-financed**, with weak employer ownership.
- Employer engagement is low** despite skills being closely tied to industry demand.
- India **lacks a real-time labour market information system**; periodic skill-gap studies are inadequate.

4. Way Forward

- Shift to skill loans:** Redirect part of PMKVY funds as loans to students, enabling choice, competition, and demand-driven training.
- Introduce skill vouchers:** Fund learners directly to promote lifelong learning, AI/digital/green skills, women's participation, and global employability.
- Adopt skill levies (Reimbursable Industry Contribution model):** Employers contribute based on payroll, as practiced in over 90 countries.
- Ensure industry ownership of skills:** Firms are reimbursed only after providing training, creating accountability and sustainable financing.
- Use real-time job market data:** Mandate job portals to share aggregated data for policy planning, hosted on the **National Career Service (NCS) portal**.

Why key to coconut cultivation today is sustainability, not productivity

Prelims: General Studies Paper - 1
Indian Polity and Governance-Constitution, Political System, Panchayati Raj, Public Policy, Rights Issues, etc.

Mains: General Studies - 3
Major crops-cropping patterns in various parts of the country, - different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.

1. Coconut Promotion Scheme – Context & Rationale

- The **2026–27 Union Budget** announced a **Coconut Promotion Scheme**.
- Aim:
 - ➔ Rejuvenate old, non-productive gardens
 - ➔ Promote **high-yielding varieties**
 - ➔ Establish **new coastal plantations**
- The **Coconut Development Board (CDB)** already runs a similar programme.
- Expansion into **non-traditional areas** (Gujarat, Assam, etc.) helped offset losses in **Kerala and Tamil Nadu**.
- India remains the **world's largest producer and consumer** of coconuts.

2. Emerging Threats: Climate Change & Disease

- **Climate changes and diseases** are now a bigger concern than productivity.
- **Central Plantation Crops Research Institute (CPCRI) projections:**
 - ➔ Temperature rise of **1.6-2.1°C by 2050**
 - ➔ Up to **3.2°C by 2070**
- Consequences:
 - ➔ Higher **vapour pressure deficit (VPD)**
 - ↘ VPD is calculated as the **difference between the amount of moisture that's actually in the air and the amount of moisture that air could hold at saturation**.
 - ➔ Increased **drought stress**
 - ➔ Reduced suitability in parts of **Karnataka, Andhra Pradesh, Tamil Nadu**
- **Root wilt disease** has devastated traditional regions like **Alappuzha and Pollachi**.

3. What the Scheme Should Prioritise

- Focus on:
 - ➔ **Climate-resilient varieties**
 - ➔ **Wilt-tolerant varieties**
 - ➔ **Heat- and drought-resistant genotypes**
- Use State land to establish **mother palm gardens**.
- Strengthen research institutions like:

- ➔ **CPCRI**

- ➔ **Tamil Nadu Agricultural University**

- Enable **Farmer Producer Organisations (FPOs), cooperatives,** and **reliable private nurseries** to undertake the **large-scale production of climate-resilient seedlings**.
- Replace poor-quality input distribution with **Direct Benefit Transfers (DBT)**.
- Trust farmers to decide on:
 - ➔ **Irrigation**
 - ➔ **Soil amendments**
 - ➔ **Labour for rejuvenation**

4. Value Addition & Policy Lessons

- Domestic prices have **tripled since 2024**, production barely meets demand.
- **Cluster Development Programme by the National Horticulture Board (NHB)** failed due to:
 - ➔ **High investment barriers**
 - ➔ **Excessive compliance requirements**
 - ➔ **Low private participation**
- The **Coconut Development Board (CDB)** is already running schemes that provide a **25% capital subsidy** to industries engaged in **coconut processing and value addition**.
- Suggestion:
 - ➔ Implement **smaller pilot models**
 - ➔ Partner with experienced **FMCG players (e.g., Amul, ITC)**
 - ➔ Focus on specific clusters like:
 - ↘ **Tiptur (ball copra)**
 - ↘ **Anaimalai (tender coconut)**
 - ↘ **Pollachi (coconut oil)**
- Emphasise **honest evaluation** and **ground realities**.

Missile interceptors in U.S.-Iran war

Prelims: General Studies Paper - 1
Current events of national and international importance

Mains: General Studies - 2
Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

1. Integrated Air Defence in the New Conflict

- Fresh hostilities between the **U.S.-led coalition (U.S., Israel, UAE)** and **Iran** have activated a more **integrated regional air defence network**.
- The earlier **12-day war (2025)** tested the **Integrated Air and Missile Defence (IAMD)** system.
- Iran launched:
 - ➔ **500+ ballistic missiles**
 - ➔ **Over 1,000 suicide drones**
- The UAE deployed:
 - ➔ South Korea's **Cheongung II**
 - ➔ U.S. systems like **THAAD** and **Patriot**
- New systems are advanced but must be **rationed** due to **high costs** and limited stockpiles.

2. How Missile Defence & Interceptors Work

- **Missile defence** systems detect and destroy incoming missiles before impact.
- Components:
 - ➔ **Satellites and ground radars** (detection)
 - ➔ **Command centres & computers** (threat calculation)
 - ➔ **Interceptors** (counter-missiles)
- Example: **Patriot system**
 - ➔ Uses **radar tracking and target lock**
 - ➔ **Fires interceptors guided by ground radar.**
- Purpose:
 - ➔ Protect lives and assets
 - ➔ Provide strategic **deterrence**

3. Effectiveness & Cost Challenges

Effectiveness varies by system:

- **Iron Dome (Israel):**
 - ➔ 80-97% success against short-range rockets.
- **Patriot (U.S.):**
 - ➔ Mixed results against hypersonic and ballistic missiles.
- **GMD (Ground-based Midcourse Defence):**
 - ➔ Only 55% success in controlled tests.

Cost problem:

- **PAC-3 MSE interceptor** costs \$4 million per missile.
- Iran launches **large numbers of cheap missiles** to use up the enemy's **expensive interceptor missiles**.
- New solutions:
 - ➔ **Indirect Fire Protection Capability**
 - ↳ It helps **reduce the use of Patriot missiles**.
 - ➔ **SM-6 dual-use missiles**
 - ➔ Israel's **Iron Beam laser system** (cost-effective against drones)

4. Layered Defence During the 12-Day War & Production Challenges

First line of defence :

- **Arrow 3 (Israel)** and **U.S. Navy destroyers with SM-3 missiles**
- Intercepted **ballistic missiles in space**
- Heavy use quickly **depleted stockpiles**

Second layer :

- **THAAD (U.S.)**
- **Arrow 2 (Israel)**

Third layer:

- **David's Sling**
- **Patriot system** as the last line of defence

Against suicide drones:

- **Iron Dome (Tamir interceptors)**
- **Iron Beam laser system**
- Support from **U.S., UK, and French fighter aircraft**

Production Constraints and Replenishment Delays

- **Slow production rates**
- **Replenishing Terminal High Altitude Area Defence (THAAD) stocks** may take **1.5 years**
- U.S. manufacturing not scaled for **high-intensity war**

5. Iran's Missile Defence Systems

- Iran's most advanced interceptor is the **Bavar-373** with the **Sayyad-4B missile**, capable of targeting threats beyond **300 km**.
- It has also introduced the **Arman Ballistic Missile Defence system**, designed to intercept **short- and medium-range missiles** with **360° radar coverage**.

12 Day War - The Iran–Israel war (13 – 24 June 2025), also known as the Twelve-Day War, was an armed conflict in the Middle East.

KEYWORDS

National Horticulture Board (NHB)

- The **National Horticulture Board (NHB)** was established by the **Government of India in 1984** as an **autonomous organisation** under the administrative control of the **Ministry of Agriculture and Farmers Welfare**.
- It is registered as a society under the **Societies Registration Act** and has its headquarters in **Gurugram**.
- The Board's broad objectives include:
 - ➔ Developing **production clusters and hubs** for **integrated hi-tech commercial horticulture**
 - ➔ Promoting **post-harvest management** and **cold chain infrastructure**
 - ➔ Ensuring the availability of **quality planting material**
 - ➔ Encouraging adoption of **modern technologies, tools, and techniques**

- Overall, the NHB aims to ensure the **integrated development of the horticulture sector** and to strengthen coordination in the **production and processing of fruits and vegetables**.

Article 275 of the Indian Constitution

- Article 275 provides for **grants-in-aid from the Consolidated Fund of India to States** in need of financial assistance, as **determined by Parliament**.
- These grants support **general revenue needs** and approved development schemes.
- Special provision exists for **welfare of Scheduled Tribes** and for raising administrative standards in **Scheduled Areas**.
- **Assam** receives **additional grants** for administration and development of Sixth Schedule tribal areas.
- After the formation of an autonomous State under **Article 244A**, **grants are payable directly to that autonomous State**.
- Until Parliament legislates, the **President may provide grants by order**, after considering **Finance Commission** recommendations.

Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

- PMKVY was launched on **15 July 2015** under the **Skill India Mission** by the **Ministry of Skill Development and Entrepreneurship (MSDE)**.
- It provides **short-term, industry-relevant skill training** to youth to enhance employability.
- The scheme focuses on **skill training, re-skilling, up-skilling, and Recognition of Prior Learning (RPL)**.
- It offers **free training and certification**, along with **monetary incentives** for successful candidates.
- PMKVY has been implemented in multiple phases (**PMKVY 1.0 to 4.0**), expanding coverage across sectors and regions.
- **PMKVY 4.0** (under the restructured Skill India Programme, **2022-26**) emphasizes **career pathways, digital integration, and future-ready skills**.

- The **Skill India Digital Hub (SIDH)** links skilling with **education, employment, and entrepreneurship**.
- Training spans **manufacturing, construction, healthcare, information technology (IT), electronics, and retail**.
- It also covers emerging areas such as **Artificial Intelligence (AI), drones, robotics, and the Internet of Things (IoT)**

Petroleum and Explosives Safety Organization (PESO)

- PESO was established on **5 September 1898**, earlier known as the **Department of Explosives**.
- It functions under the **Ministry of Commerce and Industry**.
- PESO is the **nodal authority for regulating safety of explosives**, petroleum products, and compressed gases in India.
- It administers the **Explosives Act, 1884 and the Petroleum Act, 1934**, along with rules made under them.
- PESO ensures safety in the **manufacture, storage, transport, handling, import, export, possession, and use of hazardous substances**.
- Its **regulatory scope** includes
 - Explosives, Liquefied Petroleum Gas (**LPG**), Compressed Natural Gas (**CNG**), Liquefied Natural Gas (**LNG**)
 - Auto Liquefied Petroleum Gas (Auto LPG), Compressed Bio Gas (CBG); ammonium nitrate, pressure vessels and pipeline
- It is recognized as a **centre of excellence** in industrial and energy safety.
- Historically, PESO also supported **national security**, including **improvised explosives devices (IED) disposal** and anti-sabotage operations

