



## Mains Practice Question

Q. Analyze how data has emerged as the 'new factor of production' in India's economy. What challenges arise in terms of regulation, ownership, and privacy? (250 words)

10 Sep, 2025 GS Paper 3 Economy

### Approach :

- Introduce briefly about Data adding report/index
- Data as the new factor of production
- Challenges in terms of regulation, ownership, and privacy.
- Building a Trustworthy Data Economy
- Conclude suitably

### Introduction:

The **classical factors of production land, labour, and capital** shaped the industrial economy. In the **digital era, data** has emerged as the **"new factor of production"**, akin to oil in its economic value. Also, India's data center market is expected to exceed **USD 15 billion by 2030**.

### Body:

#### Data as the 'New Factor of Production':

- **Enabling Financial Inclusion and New Markets:** Data creates new ways to assess risk and offer services to populations previously outside the formal economy. It acts as a form of "digital capital" for those without traditional assets.
  - The **Unified Payments Interface (UPI)** generates vast amounts of transactional data.
  - Fintech companies like **Paytm and Bajaj Finserv** analyze this data to create a detailed financial footprint of individuals, even those without a formal credit history.
- **Hyper-Personalization in E-Commerce:** Online retailers use customer data browsing history, past purchases, and search queries to create highly personalized shopping experiences, which drives sales and customer loyalty.
  - **Flipkart and Myntra** use sophisticated AI and machine learning models to analyze user data.
  - This allows them to power their recommendation engines ("**Customers also bought...**"), customize the user's homepage with relevant products, and send targeted promotional offers.
- **Informing Public Policy and Governance:** Governments can now use large-scale data to design more effective policies, deliver services efficiently, and optimize the use of public funds.
  - The **Goods and Services Tax Network (GSTN)** is one of the world's largest repositories of business transaction data.
  - The Indian government analyzes this data to understand economic trends in real-time, forecast tax revenues with greater accuracy, and detect tax evasion.
- **Fueling the Platform Economy:** For many modern digital businesses, data isn't just a supporting asset, it is the core asset.

- These platforms create value by connecting different user groups and leveraging the data generated from their interactions.
- Logistics companies like **Delhivery** and food delivery platforms like **Zomato** and **Swiggy** have their entire business model built on data.

### Challenges of Regulation, Ownership, and Privacy

- **Regulatory Overlap and Compliance Issues:** Regulatory overlap across the IT Act, RBI norms, and the new Digital Personal Data Protection Act (2023) complicates compliance.
- **Ambiguity over Data Ownership:** Does it lie with individuals, platforms, or the state? is often confusing. This raises the risk of data colonisation by foreign corporations.
- **Privacy concerns:** Privacy concerns remain, with issues such as **consent fatigue**- **Consent fatigue** is the exhaustion and apathy users feel from constant, repetitive requests to provide consent for data collection and use, leading them to agree to terms without fully understanding them.
  - **Profiling**, and **state surveillance**. Furthermore, concentration of data among big technology firms risks deepening the digital divide
  - AI algorithms according to several studies cause addictive behavior and **mental health challenges like ADHD**.

### Building a Trustworthy Data Economy:

- **Reinforce Regulation: Enforce strict competition laws to check the dominance of Big Tech.**
  - Localise critical and sensitive data to protect national security and sovereignty.
- **Citizen-Centric Data Ownership:** Treat individuals as the rightful owners of personal data, with platforms acting as fiduciaries.
  - Expand frameworks like the Account Aggregator to enable consent-based, portable, and secure data sharing.
- **Robust Privacy and Regulatory Safeguards:** Ensure strict enforcement of the Digital Personal Data Protection Act, 2023 with an independent regulator.
  - Building upon the Supreme Court's Puttaswamy (2017) principle that privacy is a core of dignity and liberty.

### Conclusion:

As the **World Bank's World Development Report 2021: Data for Better Lives** observes, data is not just a by-product of activity, but a new form of capital. India's task is to convert this capital into a public good, **while upholding dignity, ensuring equity, and safeguarding sovereignty**. Only then can the data revolution (**Data as a new soil**) truly serve as the foundation for **inclusive and sustainable growth**.