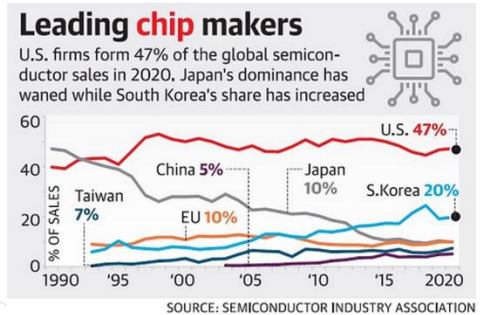


25 JULY

SEMICONDUCTORS

ABOUT SEMICONDUCTORS:

- **Definition of Semiconductors:** Semiconductors are substances with conductivity levels falling between conductors and insulators. They include pure elements like silicon or germanium, as well as compounds like gallium arsenide or cadmium selenide.
- **Importance of Semiconductor Chips:** Semiconductor chips act as fundamental components, serving as the central processing units and data processors in modern electronic devices and communication technologies.
- **Diverse Applications:** Semiconductor chips are now essential components in various everyday items such as automobiles, household appliances, and critical medical equipment like ECG machines.



WHY DO WE NEED TO PROMOTE SEMICONDUCTOR INDUSTRY & WHERE DOES INDIA STAND?

SIGNIFICANCE:

- **Economic Growth and Employment:**
 - The Indian semiconductor market is projected to reach USD 32.35 billion by 2025, growing at a CAGR of 10.1% during 2020-2025. (Source: Mordor Intelligence)
 - The semiconductor industry in India employs thousands of skilled professionals and offers job prospects in design, manufacturing, research, and development.
- **Information and Communication Technology (ICT) Advancements:**
 - The rising adoption of smartphones in India has led to significant growth in the semiconductor industry. By 2023, India is projected to have over 1.1 billion mobile phone users. (Source: Statista)
- **Electronics Manufacturing and Exports:**
 - The "Make in India" initiative aims to boost domestic electronics manufacturing, including semiconductor components.
 - India's electronics exports are estimated to be USD 16.8 billion during 2020-21, a significant portion of which includes semiconductor devices. (Source: Electronics & Computer Software Export Promotion Council)
- **Space and Défense Technologies:** contributing to India's strategic capabilities.
- **Driving Automotive Revolution:** India's electric vehicle market is projected to reach 6.34 million units by 2027, highlighting the increasing demand for semiconductor-based technologies. (Source: Allied Market Research)

INDIA'S POSITION:

- At present, India imports all chips, and the market is projected to reach \$100 billion by 2025, up from \$24 billion currently. Despite this, India is working towards developing domestic semiconductor chip manufacturing capabilities.

INITIATIVES LAUNCHED:

- India has initiated the **Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS)** to boost the production of electronic components and semiconductors within the country.
- In 2021, the Ministry of Electronics and Information Technology (MeitY) introduced the **Design Linked Incentive (DLI) Scheme** with the aim of supporting at least 20 domestic semiconductor design companies and helping them achieve a turnover of over Rs. 1500 Crore in the next 5 years.

CHALLENGES FOR INDIA:

- Semiconductor manufacturing requires **significant capital investment**, involves high risk, and has lengthy gestation and payback periods.
- The government's fiscal support for the industry is insufficient considering the substantial investments needed in various sub-sectors of semiconductor manufacturing.
- Although India has skilled chip design talent, it **lacks indigenous chip fab capacity**, with existing foundries primarily serving ISRO and DRDO's requirements and not being as advanced as international facilities.
- India has only one old semiconductor fab in Mohali, Punjab.
- Establishing a semiconductor fabrication facility can be extremely expensive, with costs reaching billions of dollars and potential technological lag.
- Chip fabs demand abundant clean water, stable power supply, vast land areas, and a highly skilled workforce.

INDIA SEMICONDUCTOR MISSION:

ABOUT:

- Launched in 2021, the ISM has a financial outlay of Rs76,000 crore and operates under the Ministry of Electronics and IT (MeitY).
- The main objective of the program is to offer financial assistance to companies involved in semiconductors, display manufacturing, and design ecosystem.
- Led by global experts in the semiconductor and display industry, the ISM will act as the central agency to ensure efficient and coherent implementation of the schemes.

COMPONENTS:

Scheme for Semiconductor Fabs:

- Provides fiscal support to eligible applicants aiming to establish semiconductor wafer fabrication facilities in India.
- Aims to attract significant investments for setting up these facilities in the country.

Scheme for Display Fabs:

- Provides fiscal support to eligible applicants intending to establish TFT LCD / AMOLED based display fabrication facilities in India.
- Aims to attract substantial investments for setting up display fabs in the country.

Scheme for Compound Semiconductors / Silicon Photonics / Sensors Fab and Semiconductor Assembly, Testing, Marking and Packaging (ATMP) / OSAT facilities:

- Offers fiscal support of 30% of the Capital Expenditure to eligible applicants establishing Compound Semiconductors / Silicon Photonics (SiPh) / Sensors Fab and Semiconductor ATMP / OSAT facilities in India.

Design Linked Incentive (DLI) Scheme:

- Provides financial incentives and design infrastructure support for semiconductor design at various stages of development and deployment.
- Covers Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores, and semiconductor linked design.

WAY FORWARD:

- Semiconductors and displays are crucial for modern electronics, powering the digital transformation in **Industry 4.0**.
- **India's Public Sector Enterprises (PSEs)**, like Bharat Electronics Ltd and Hindustan Aeronautics Ltd, could **collaborate with global majors** to establish semiconductor fab foundries.
- The **India Semiconductor Mission's** recent move to offer subsidies to global small and medium-sized enterprises in the upstream supply chain is commendable, especially for existing facilities like the SCL.
- To achieve the goals in the next five years, the SCL requires a full-time director with prior experience in "**More than Moore**" foundries, rather than a career scientist from the Department of Space, as is the current situation.
- This is because the semiconductor market requires a multifaceted approach to be effectively served.

INDIA'S 1ST GIG WORKERS'S RIGHTS BILL – by Rajasthan Govt.


WHY IN NEWS?

The Rajasthan government has made a groundbreaking move to protect gig workers by passing the Rajasthan Gig Workers Bill, 2023. This pioneering legislation aims to create a Welfare Board and dedicated welfare fund to provide social security to platform-based gig workers in the state.

ABOUT GIG WORKERS:

Gig workers in India are independent contractors or freelancers engaged through digital platforms to perform short-term tasks or services. According to a report by the International Labour Organization (ILO), **India has over 15 million gig workers as of 2021**, and this number is expected to grow in the coming years. Despite their growing presence in the economy, gig workers often face challenges related to job security, lack of social security benefits, and legal protections.

GIG, A NEW-AGE ECONOMY

BENEFITS	DOWNSIDE	CHALLENGES FOR GOVT
<ul style="list-style-type: none">■ Creation of jobs on mass scale■ Freedom and flexibility of work■ Easy access to services■ Price advantage for consumers	<ul style="list-style-type: none">■ Inconsistency in services■ Partners arm-twisted by service providers■ Difficult to trust a service provider without a recommendation from someone you trust	<ul style="list-style-type: none">■ Highly unregulated■ Lack of policies on job structure, tax, privacy■ Exponential growth
<h4>CRUISE MODE</h4> <ul style="list-style-type: none">■ Ola, Uber offered fat incentives in the initial years■ Targets were pretty achievable■ Hundreds of thousands availed bought cars to partner with Ola, Uber■ Few claimed to earned Rs 1 lakh a month	<h4>FOR OLA, UBER DRIVERS</h4> 	<h4>REVERSE GEAR</h4> <ul style="list-style-type: none">■ Drivers hit downhill road as Ola, Uber gained market share■ Incentives became unattractive■ Needed more trips to meet targets, had to face growing traffic■ Crimes on passengers compounded problems
		<h4>FEW KEY PLAYERS</h4> <p>UBER, OLA, ZOMATO, FOODPANDA, SWIGGY, AIRBNB, UPWORK</p>

KEY FEATURES OF THE BILL:

- **Scope:** The bill covers both aggregators and primary employers engaging platform-based gig workers in the state.
- **Welfare Board:** A Welfare Board chaired by the Labour Department's minister will be established to oversee and implement welfare measures for gig workers. It will have nominated members, including at least one-third representing women.
- **Registration and Unique ID:** Gig workers and aggregators will be registered, and each gig worker will receive a unique ID applicable across all platforms for easy access to welfare schemes.
- **Social Security and Welfare Fund:** The state will create a dedicated fund, The Rajasthan Platform Based Gig Workers Social Security and Welfare Fund, to provide social security benefits to gig workers.
- **Welfare Fee:** Aggregators will contribute to the welfare fund by deducting a percentage of the transaction value from each gig worker's earnings.
- **Access to Benefits:** Gig workers will have access to various social security benefits, including accidental insurance and health insurance, as formulated by the state government.
- **Grievance Redressal:** Gig workers will have the right to present grievances, and a robust redressal mechanism will be in place to address their concerns.
- **Representation:** Gig workers will be represented on the Welfare Board, allowing them to have a say in decisions affecting their welfare.
- **Compliance and Fines:** Aggregators must comply with the Act and rules set by the Welfare Board, and failure to do so may result in fines imposed by the state government, ranging from Rs 5 lakh to Rs 50 lakh depending on the severity of the contravention.

CONCERNS RAISED OVER THE BILL:

- **Ambiguous Terminologies:** Labor unions are concerned about the use of vague terms in the bill, potentially creating loopholes for companies and weakening gig workers' protection.
- **Funding Concerns:** Labor unions fear gig workers may bear an undue burden in contributing to the welfare fund, suggesting aggregator companies and State funds should shoulder the primary funding responsibility.
- **Limited Social Security Benefits:** Critics point out that the bill's focus on accidental and health insurance may not adequately cover all gig workers' needs, urging a comprehensive benefits list.
- **Grievance Redressal Effectiveness:** Doubts are raised about the bill's grievance redressal mechanism's responsiveness and efficiency based on reports of ineffective systems for gig workers.
- **Definition of Gig Workers:** Some stakeholders question the bill's scope in defining gig workers, suggesting other gig worker forms may not be covered.
- **Recognition of Rights:** Despite improvements, critics argue gig workers may not be fully recognized as employees entitled to certain labour rights.
- **Implementation Challenges:** The bill's success hinges on the Welfare Board and State government's effectiveness in seamless registration, representation, and benefit distribution for gig workers.

WAY FORWARD FOR SOCIAL AND ECONOMIC PROTECTION OF GIG WORKERS:

- **Comprehensive Legal Framework:** Develop a comprehensive legal framework that clearly defines gig workers' rights and protections to ensure their social security and welfare.
- **Strengthening Social Security Benefits:** Expand the scope of social security benefits for gig workers, including health insurance, accident coverage, maternity benefits, and pension schemes.
- **Inclusive Registration Process:** Establish an inclusive and user-friendly registration process for gig workers to access welfare schemes and benefits easily.
- **Skill Development and Training:** Implement skill development and training programs to enhance the employability of gig workers and improve their earning potential.
- **Public Awareness Campaigns:** Conduct public awareness campaigns to educate gig workers about their rights and entitlements under the new legal framework.
- **Collaboration with Aggregator Companies:** Collaborate with aggregator companies to ensure fair treatment and adequate compensation for gig workers, promoting a responsible gig economy.

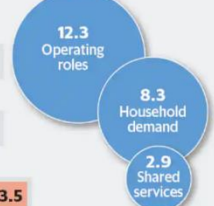
Growing gigs

Construction, manufacturing, retail, transportation and logistics sectors may create around 70 million 'gigable' jobs within 8-10 years.

No. of gig jobs projected (in mn)

Gig workers may service 23.5 million jobs in three to four years

Type of gig roles



Source: Unlocking the Potential of Gig Economy in India Report