10th Social Science Lesson 19 Notes in English

19. Industrial Clusters in Tamil Nadu

Introduction

Industrialisation

- Generally, **"any human activity which is engaged in the conversion of raw materials into readily usable materials is called an industry".**
- Industrialisation refers to the process of using modern techniques of production to produce goods that are required by both consumers and other producers on a large scale.
- While some consumer goods such as phones and television sets meet the requirements of consumers, industries also produce goods like components, machine parts and machines that are required by other producers.
- The historical process of a steady increase in the number and scale of manufacturing in a country exists for a long time. It is important for several reasons.
- In this chapter we will learn the nature of industrialisation of Tamil Nadu, importance of industrial clusters, how industrial clusters have developed in Tamil Nadu and the role of government initiatives in promoting industries.

Importance of Industrialisation

To understand importance of industries, we need to understand why the share of agriculture in an economy's income and employment decreases with development.

First, demand for food remains constant with regard to income. Therefore, as an economy grows and incomes increase, consumers tend to spend a lesser share of their income on products from the agricultural sector.

Second, even the food that is consumed is subject to more transformation as an economy expands and there is greater division of labour between **people and between regions**. Food products are taken over longer distances, processed and branded. This also requires that food products have to be preserved. As a result, the prices that farmers get tend to be much less compared to the prices at which consumers buy.

Third, there are limits to the ability of agriculture to absorb labour due to the declining marginal productivity of land. As a result, labour productivity in the agricultural sector cannot increase much. Wages too cannot therefore increase and as a result poverty levels may remain high, especially when more and more people continue to rely on agriculture for their livelihood. Due to all these factors, there is a need for an economy's production and employment base to diversify away from agriculture. Development economics therefore recognises the need for structural transformation of the economy where the share of non-agricultural sectors tend to get increase

steadily. Such transformation and diversification through industrialisation is therefore seen as important for an economy's development.

What benefits does industrialisation bring to an economy?

- As stated earlier, it is essential to produce inputs to other producers in an economy. Even agriculture requires inputs from industry such as fertilisers and tractors to increase productivity.
- Second, a market exists for both producers and consumer goods. Even services like **banking, transport and trade** are dependent on production of industrial goods.
- Third, by using modern methods of production, industries contribute to better productivity and hence lower cost of production of all goods produced.
- It therefore helps people to buy goods at a cheaper rate and help create demand for more products. Fourth, through such expansion of production, **industrialisation helps to absorb the labour force coming out of agriculture.**
- Employment generation is therefore an important objective of industrialisation. Fifth, a related advantage of industrialisation is therefore technological change. Through use of modern techniques, industrialisation contributes to learning of such methods and their improvement.
- As a result labour productivity, ie, output per unit of labour input increases, which can help workers earn higher wages.
- **Sixth,** expanding incomes lead to more demand for goods and services. If an economy is not able to produce enough to meet such demand, it has to rely on imports and therefore spend a lot of foreign exchange.
- If the economy does not earn enough from exporting, it will be difficult to meet the growing demand. Industrialisation therefore helps an economy to save and also generate foreign exchange through exports.

Types of Industries

Industries can be classified on the basis of

(a) Users:

If the output is consumed by the final consumer, it is called a consumer goods sector. If the output is consumed by another producer, it is called a capital goods sector. There are industries that produce raw materials for other industries such as cement and steel. Such industries are called basic goods industries.

(b) Type of Inputs Used:

Industries are also classified based on the kind of raw material used such as agro-processing, textiles sector, rubber products, leather goods, etc.

(c) Ownership:

Firms may be privately owned, publicly owned (by the government, central or state), jointly owned by the private and public sector, or cooperatively owned (cooperatives).

(d) Size:

- Firms may be large, small or medium based on their volume of output, sales or employment or on the basis of the amount of investments made. The Indian government normally uses the investment criterion to decide whether a **firm is small, medium or large**.
- There are also micro or tiny enterprises that are smaller than even small firms. This classification is important because the government often provides financial, infrastructural or subsidy support to the smaller firms to promote them. The small sector is seen as important for two reasons.
- One, it is believed to generate more employment than the large-scale sector, which is likely to use more advanced and automated technologies and therefore may not generate enough employment.
- Second, the small scale sector allows for a larger number of entrepreneurs to emerge from less privileged backgrounds. Till the **1980**s, it was widely believed that large firms are more efficient and can out compete the smaller firms.
- But at present, based on experiences of industrialisation in different parts of the world, it is believed that when small firms specialising in one sector are geographically concentrated in specific locations, and linked to one another through production and learning, they tend to be equally if not more efficient than large scale enterprises. Such agglomerations of small firms are called industrial clusters.

Industrial Clusters

- Industrial clusters are groups of firms in a defined geographic area that share common markets, technologies and skill requirements. An important aspect of clusters is the nature of inter-firm networks and interactions.
- **Clusters where firms specialise in one stage of the production process and supply inputs or absorb the output of another firm in the cluster is critical to the efficiency and competitiveness of the cluster.**
- The advantages of industrial clusters or districts was first observed by the famous economist **Alfred Marshall in the 1920s** when he tried to understand the working of clusters of small firms in the metal-working and textile regions in England.
- While the notion of an **'industrial district'** was developed by Marshall, it was only after the success of small firms in Italy in the 1980s that it became popular.
- Policy-makers in developing countries like India began to promote them actively as they realized that there several such small firm clusters in the country.
- The following are the chief characteristics of a successful cluster.

1. geographical proximity of small and medium enterprises (SMEs)
2. sectoral specialization
3. close inter-firm collaboration
4. inter-firm competition based on innovation
5. a socio-cultural identity, which facilitates trust
6. multi-skilled workforce
7. active self-help organisations, and
8. supportive regional and municipal governments.

- Firms are therefore expected to collaborate and compete with one another at the same time.
- By collaborating, they can expand their capacity and also learn from one another. Through competition, they are forced to become more efficient.
- Apart from the Chennai region, industrial growth has been concentrated in several small town clusters, throughout the state, with the western region being more dominant.
- These clusters specialise in a range of activities like **clothing, home furnishings, textiles, leather, poultry, coir products, transport equipment servicing, engineering services and auto component making.**

How Do Clusters Originate?

- Clusters may arise due to many factors. Certain clusters evolve over a long time in history when artisans settle in one locality and evolve over centuries.
- Handloom weaving clusters are one examples of this development. Or else, in some sectors, when a large firm is established, a cluster of firms may emerge to take care of its input and service requirements.
- At times, governments may decide to encourage manufacturing using raw materials from a region, which may also lead to emergence of clusters.

Historical Development of Industrialisation in Tamil Nadu

- There is lot of evidence for presence of industrial activities such as textiles, shipbuilding, iron and steel making and pottery in precolonial Tamil Nadu.
- Given the vast coastline**, the region has been involved in trade with both South-East and West Asia for several centuries.** Colonial policies also contributed to the decline of the handloom weaving industry due to competition from machine made imports from England.
- But some industries also developed during the colonial period and provided the basis for subsequent industrialisation in the state.

Industrialisation in the Colonial Period

- There are two sets of factors that have contributed to the process. The introduction of cotton cultivation in western and southern Tamil Nadu by the colonial government led to the

emergence of a large-scale textile sector in these parts, which involved ginning, pressing, spinning and weaving operations.

- The introduction of railways also expanded the market for cotton yarn and helped develop the sector. Second, increase in trade during this period led to industrial development around two of the most active ports in the region, **Chennai and Tuticorin**.
- The Chennai region also saw the beginning of the automobile sector during this period along with leather. The **growth of jaggery industry in south Tamil Nadu** is another example of this.
- Match factories too emerged during the colonial period in the **Sivakasi region,** which later on became a major centre for fireworks production and printing. Port-related activity too contributed to the growth of the region.
- Leather production was also taking place in **Dindigul, Vellore and Ambur areas**. In Western Tamil Nadu, the emergence of textiles industries also led to demand and starting of textile machinery industry in the region.
- This textile machinery industry in turn led to the rise of a number of small workshops for repair and producers of machinery components.
- Another major development in the western region is the introduction of electricity from **hydro-electric power in the 1930s.** Availability of electricity allowed for use of oil engines for drawing ground water.
- This led to both expansion of agriculture as well as increase in demand for oil engines. In turn, it led to emergence of workshops for servicing engines and also for addressing the demand for spare parts.
- Foundries began to be set up and agricultural machinery began to be produced.

Post-Independence to early 1990s

- Soon after independence, several large enterprises were set up by both the central and state governments in different segments such as the **Integral Coach Factory in Chennai** to make railway coaches and the **Bharat Heavy Electricals Limited (BHEL) in Tiruchirapalli** manufacture to boilers and turbines.
- BHEL in turn led to the emergence of an industrial cluster of several small firms catering to its input requirements. Heavy Vehicles Factory was set up to manufacture tanks in Avadi on the outskirts of Chennai.
- Standard Motors too started manufacturing cars in Chennai. **Ashok Motors (later Ashok Leyland) and Standard Motors** together helped form an automobile cluster in the Chennai region.
- The Avadi industrial estate was established in the 1950s to support the small and medium companies supplying to the large firms in the region.
- More hydro-electric power projects in the state were also initiated to increase the spread of electrification.

- The government played a major role in all these processes. The Salem Steel Plant was set up in 1973 to produce stainless steel.
- The Coimbatore region also witnessed diversification from textiles to textile machinery as well as agricultural machinery like electric motors and pumpsets for drawing ground water.
- The 1970s and 1980s saw the setting up of emergence of powerloom weaving clusters in the Coimbatore region as well as expansion of **cotton knitwear cluster in Tiruppur** and **home furnishings cluster in Karur.**
- This period also saw more encouragement of the small and medium sector with setting up of industrial estates by the state government in different parts.
- The Hosur industrial cluster is a successful case of how such policy efforts to promote industrial estates helped develop industries in a backward region.

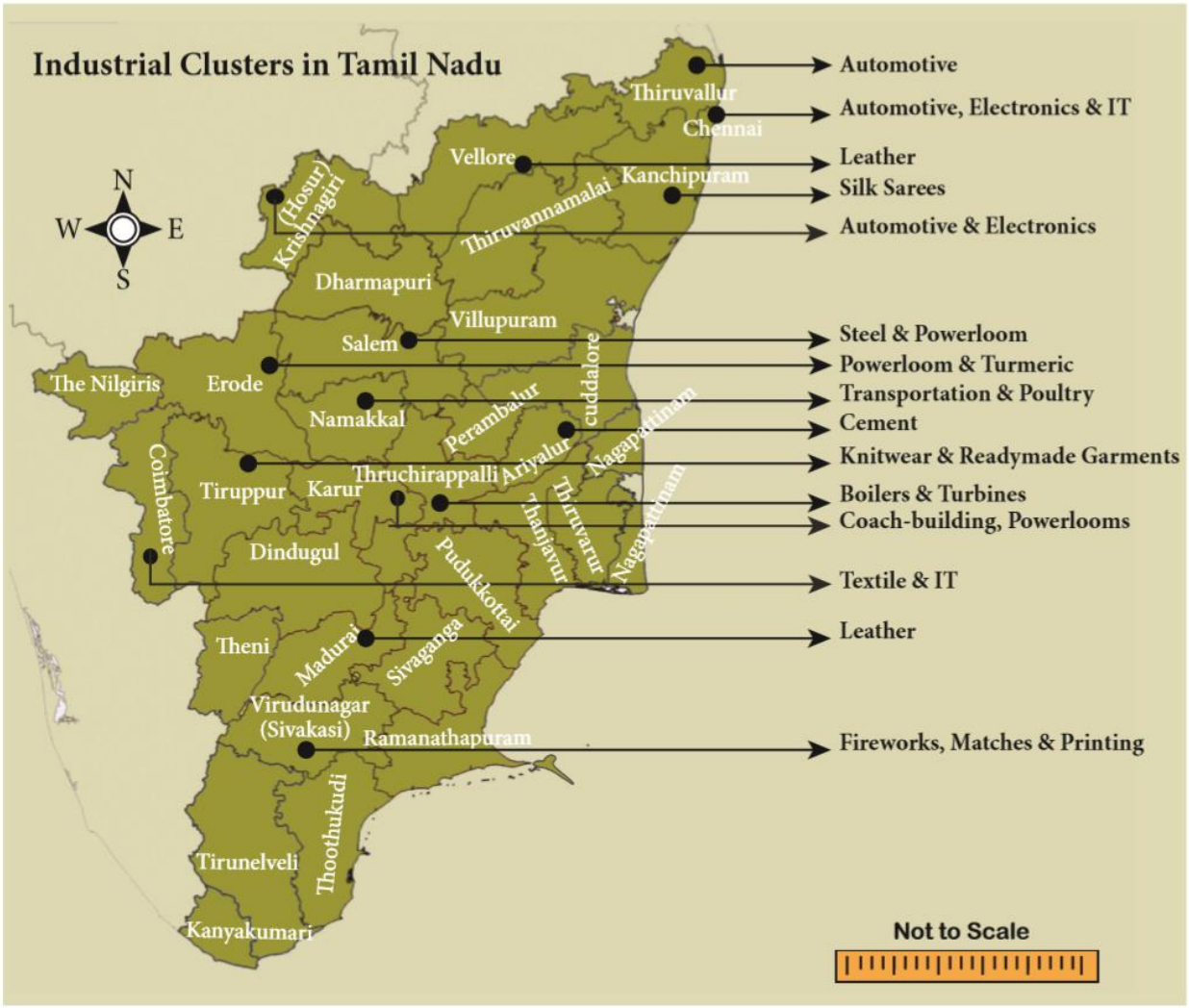
Industrialisation in Tamil Nadu – Liberalization Phase

- The final phase of industrialisation is the post-reforms period since the early 1990s. The reforms made the state governments more responsible for resource mobilisation and they were forced to compete with each other to attract private investments for industrialisation.
- Incentives such as **cheap land, tax concessions and subsidised** but quality power were all offered to woo investors. Trade liberalisation and currency devaluation also helped open up export markets. This led to two major developments.
- First, because of trade liberalisation measures, exports of textiles, home furnishings and leather products began to grow rapidly.
- Second, efforts to attract investments led to entry of leading multinational firms (MNCs) into the state, especially in the automobile sector.
- Since automobile sector relies heavily on component makers, entry of MNCs not only brought along other MNC component suppliers but also opened up new market opportunities for domestic component producers.
- Chennai region also emerged as a hub for electronics industry with MNCs such as **Nokia, Foxconn, Samsung and Flextronics opening plants on the city's outskirts**. A significant share of these investments has come up in special economic zones in the districts bordering Chennai.
- Tamil Nadu has often been hailed as a model for successfully using the SEZ route to attract productive investments. Other important industries in the state that evolved over a much longer period include **sugar, fertilizers, cement, agricultural implements, iron and steel, chemicals, transformers and paper**.
- Because of all these factors, Tamil Nadu at present has the largest number of factories among all states in India and also has the largest share of workforce employed in manufacturing.
- Importantly, it is more labour intensive compared to other industrially advanced states like Maharashtra and Gujarat. The major industries are **automobiles, autocomponents, light and**

heavy engineering, machinery, cotton, textiles, rubber, food products, transport equipment, chemicals, and leather and leather goods. Unlike other states, the industries are spread across all regions of the state (**there are 27 clusters in 13 districts)** with many of them being export oriented as well.

- The state has a well-developed network of roads, rail, air and major ports. The diffusion of industrialisation also implies a widening of the social base of entrepreneurship.
- Unlike in North India where entrepreneurs and business groups are drawn mostly from merchant communities, in Tamil Nadu, the entrepreneurs come from a dispersed social background, with a relatively small size of capital.
- Further, the spatial spread of industries is higher. The state also has a better mix of large, small and household industries.
- This diffused process of industrialisation and corresponding urbanisation has paved the way for better rural-urban linkages in Tamil Nadu than in most other states.

Major Industrial Clusters and Their Specialisation in Tamil Nadu



Automotive Clusters

- **Chennai is nicknamed as "The Detroit of Asia"** because of its large auto industry base. Chennai is home to large number of auto assembly and component making firms.
- While there were a few domestic firms like TVS, TI Cycles, Ashok Leyland and Standard Motors earlier, in the postreform period, several **MNC firms like Hyundai, Ford, Daimler-Benz and Renault-Nissan** have opened factories in the region.
- This in turn has attracted a number of component suppliers from foreign countries. Many local firms too cater to component production for all these firms Hosur is another auto cluster with firms like **TVS and Ashok Leyland** having their factories there. Coimbatore region is also developing into an auto component cluster.

Truck and Bus Body Building Industry Clusters

- The **Namakkal Tiruchengode** belt in western Tamil Nadu is known for its truck body building industry.
- About 150 of the 250 units in this sector are located in this cluster including 12 large-sized body building houses.
- Karur is another major hub with more than 50 units. Many entrepreuners were previous employees in a big firm involved in body building who came out to set up their own units.

Textile Clusters

- Tamil Nadu is home to the largest textiles sector in the country. Because of the development of cotton textile industry since the colonial period, Coimbatore often referred as the **"Manchester of South India".**
- At present, most of the spinning mills have moved to the smaller towns and villages at a radius over **100 to 150 km** around the Coimbatore city. Tamil Nadu is the biggest producer of cotton yarn in the country.
- **Palladam and Somanur**, small towns near Coimbatore and the villages near these towns, are home to a dynamic powerloom weaving cluster as well. Powerloom is however more widespread with Erode and Salem region too having a large number of power loom units.
- **Tiruppur** is famous for clustering of a large number of firms producing cotton knitwear. It accounts for nearly 80% of the country's cotton knitwear exports and generates employment in the range of over three lakh people since the late 1980s.
- It is also a major producer for the domestic market. Because of its success in the global market, it is seen as one of the most dynamic clusters in the Global South.
- While initially most firms were run by local entrepreneurs, at present, some of the leading garment exporters in India have set up factories here.
- Apart from body building, Karur is a major centre of exports of home furnishings like table cloth, curtains, bed covers and towels.

- **Bhavani and Kumrapalayam** are again major centres of production of carpets, both for the domestic and the global markets.
- Apart from such modern clusters, there are also traditional artisanal clusters such as Madurai and Kanchipuram that are famous for silk and cotton handloom sarees.
- Even these clusters have witnessed a degree of modernisation with use of powerlooms in several units.

Leather and Leather Goods Clusters

- Tamil Nadu accounts for 60 per cent of leather tanning capacity in India and 38 per cent of all leather footwear, garments and components.
- Hundreds of leather and tannery facilities are located around Vellore and its nearby towns, such as **Ranipet, Ambur and Vaniyambadi**.
- The Vellore district is the top exporter of finished leather goods in the country. Chennai also has a large number of leather product making units involved in exports.
- There is another clustering of leather processing in Dindigul and Erode. The leather products sector too is a major employment generator.

Fireworks, Matches and Printing Cluster

- Sivakasi region, once famous for its match industry has now become a major centre for printing and fireworks in the country.
- It is believed to contribute to **90% of India's fireworks production, 80% of safety matches and 60% of offset printing solutions.**
- The offset printing industry has a high degree of specialisation among firms with several of them undertaking just one operation required for printing.
- All these industries have their origin in the colonial period and at present offer employment to a large number of workers.

Electronics and Information Technology (IT) Clusters

- After the economic reforms started in the early 1990s, the state has seen the entry of hardware and electronics manufacturers like **Nokia, Foxconn, Motorola, SonyEricsson, Samsung and Dell making cellular handset devices, circuit boards and consumer electronics**.
- They have all been set up in the Chennai region. While Nokia has been closed down, Chennai still continues to be a minor electronics hub in the country.
- Similarly, with the expansion of the software sector, Chennai and, to a limited extent Coimbatore, have emerged as centres for software services

The Policy Factors that Helped the Industrialisation Process in Tamil Nadu

Policy factors can be divided into three aspects:

Education

Industries require skilled human resources. Apart from a lot of attention to primary education to promote literacy and basic arithmetic skills, the state is known for its vast supply of technical human resources. It is home to one of the largest number of **engineering colleges, polytechnics and Industrial Training Centres in the country.**

Infrastructure

- The widespread diffusion of electrification has contributed to the spread of industrialisation to smaller towns and villages in the state.
- Along with electrification, **Tamil Nadu is known for its excellent transport infrastructure, especially minor roads** that connect rural parts of the state to nearby towns and cities.
- A combination of public and private transport has also facilitated rural to urban connectivity and therefore connect small producers to markets better.

Industrial Promotion

- Apart from investments in education and transport and energy infrastructure, active policy efforts were made to promote specific sectors and also industrialisation in specific regions.
- Policies to promote specific sectors like automobile, auto components, bio technology and Information and communication Technology sectors have been formulated in the post reform period.
- In addition, the state has put in place several industrial promotion agencies for both large enterprises and the small and medium segments, as well as to provide supporting infrastructure.

The following are some agencies that have played a key role in industrialization in the state

SIPCOT (State Industries Promotion Corporation of Tamil Nadu), 1971

SIPCOT was formed in the year 1971 to promote industrial growth in the state by setting up industrial estates.

TANSIDCO (Tamil Nadu Small Industries Development Corporation), 1970

TANSIDCO is a state-agency of the state of Tamil Nadu established in the year **1970** to promote small-s

cale industries in the state. It gives subsidies and provide technical assistance for new firms in the small scale sector.

TIDCO (Tamil Nadu Industrial Development Corporation), 1965

TIDCO is another government agency to promote industries in the state and to establish industrial estates.

TIIC (Tamil Nadu Industrial Investment Corporation Ltd.), 1949

TIIC is intended to provide low-cost financial support for both setting up new units and also for expansion of existing units. Though it is meant to meet the requirements of all types of firms, **90% of support goes to micro, small and medium enterprises.**

TANSI (Tamil Nadu Small Industries Corporation Ltd.), 1965

TANSI was formed in 1965 to take over the small scale-units that were set up and run by the Department of Industries and Commerce. It is supposed to be the first industrial corporation operating in the domain for small enterprises.

Emerging Services Sector in Tamil Nadu

- With technological changes, industries too are not able to absorb labour. Automation has been reducing the need for labour in manufacturing.
- The services sector has emerged as a much bigger employer over the last three decades.
- Tamil Nadu has become a hub for some important and dynamic service sectors such as software services, healthcare and education services.
- Healthcare and educational services are diffused across major cities, Chennai and Coimbatore in particular.
- **Software services is, however, largely confined to Chennai.** Only in the last ten years, a few software firms have moved to Coimbatore.

Issues with Industrialisation

- Though Tamil Nadu has emerged as a relatively highly industrialised state in the country, the state faces a few issues in sustaining the process.
- To begin with, **some clusters, especially chemicals, textiles and leather clusters, tend to generate a lot of polluting effluents** that affect health.
- The effluents also pollute water bodies into which effluents are let into and also adjoining agricultural lands. This issue requires urgent attention.
- Second, employment generation potential has declined because of use of frontier technologies because of the need to compete globally.
- Quality of employment also has suffered in recent years as most workers are employed only temporarily. This issue too requires urgent attention among policy makers

Entrepreneur

Entrepreneur is an innovator of new ideas and business processes. He possesses management skills, strong team building abilities and essential leadership qualities to manage a business.

Entrepreneurship

Entrepreneurship is a process of a action of an entrepreneur who undertakes to establish his enterprise. It is the ability to create and build something.

Role of an Entrepreneur

Entrepreneurs play a most important role in the economic growth and development of a country's economy.

1. They promote development of industries and help to remove regional disparities by industrialising rural and backward areas.

2. They help the country to increase the GDP and Per Capita Income.

3. They contribute towards the development of society by reducing concentration of income and wealth.

4. They promote capital formation by mobilising the idle savings of the citizens and country's export trade.

5. Entrepreneurs provide large-scale employment to artisans, technically qualified persons and professionals and work in an environment of changing technology and try to maximise profits by innovations.

6. They enable the people to avail better quality goods at lower prices, which results in the improvement of their standard of living.

More to Know:

1. Startup India Scheme (Launched 16-Jan-2016):

Startup India Scheme is an initiative of the Indian government, the primary objective of which is the promotion of startups, generation of employment and wealth creation.

2. Standup India Scheme (Launched 5-April-2016):

Standup India Scheme is to facilitate bank loans between **`10 lakh and `1 crore** to at least one Scheduled Caste (SC) or Scheduled Tribe (ST) borrower and one woman borrower per bank branch for setting up a greenfield enterprise.

3. **Special Economic Zones (SEZs)**

A policy was introduced on in **April 2000** for the settling up of special Economic Zones in the country with a view to a hassle-free environment for exports. Units may be set up in SEZ units are on a self-certification basis. The policy provides for setting up of SEZs in the public, private, joint

sector or by state governments. It is also envisaged the some of the existing **Export Processing Zones, would be converted in to Special Economic Zones.**

Accordingly, the government has converted Export Processing Zones located at following places.

- Nanguneri SEZ – A multi product SEZ, Thirunelveli
- Ennore SEZ – Thermal power project, Vayalur
- Coimbatore SEZ – IT Parks
- Hosur SEZ – Auto Engineering, Electronics, Defence and Aerospace
- Perambalur SEZ – Multi product SEZ
- Autocity SEZ – Automobile/Auto Components, Tiruvallur
- India-Singapore SEZ – IT & ITES, Electronic Hardware, Logistics and Warehousing – Thiruvallur District
- Bio-Pharmaceuticals SEZ – Clinical Research Organisation, Poison Control Centre, Centre for Regenerative Medicine, Medicine Research

4. Madras Export Processing Zone (MEPZ)

MEPZ is a Special Economic Zone in Chennai. It is one of the seven export processing zones in the country set up the central government. It was established in 1984 to promote foreign direct investment, enhance foreign exchange earnings and create greater employment opportunities in the region. The MPEZ headquarters is located on GST Road in Tambaram, Chennai.

5. Information Technology Specific Special Economic Zones:

In order to make development more inclusive, Tier II cities such as Coimbatore, Madurai, Trichy, Tirunelveli, Hosur and Salem have been promoted as IT investment destinations apart from the Chennai region. To facilitate this, ELCOT has established ELCOSEZs (IT Specific Special Economic Zones) in the following eight locations:

- Chennai – Sholinganallur
- Coimbatore – Vilankurichi
- Madurai – Ilandhaikulam
- Madurai – Vadapalanji-Kinnimangalam
- Trichy – Navalpattu

Companies desiring to set up units in the state can avail themselves of the facilities provided in ELCOSEZs. The possibility of setting up ELCOSEZs in new locations will be explored based on demand and viability. (Map Information Communication Technology Policy - 2018–19)

- Tirunelveli – Gangaikondan
- Salem – Jagirammapalayam
- Hosur – Viswanathapuram

6. Global South

Countries in the southern hemisphere are called Global South countries