



# **ALAGAPPA UNIVERSITY**

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**KARAIKUDI – 630 003**



## **Directorate of Distance Education**

### **B.A. (Economics)**

**VI - Semester**

**136 61**

## **TAMIL NADU ECONOMY**

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## INTRODUCTION

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### NOTES

The Tamil Nadu economy is a force to reckon with. Considered to be among the top five in terms of state GDP, this southern state of Tamil Nadu with a population of approximately 7 crores contributed to around 8.5% of India's GDP. It has an economy which is mainly dependent on services but is also supported by a robust manufacturing sector. The state is considered to be one of the most industrialised in the country with over 60% of the state said to be urbanised. Even with these numbers, the dominant occupation in the state remains to be agriculture. The state has attracted interesting investments and constructed industrial hubs in areas near Chennai and Coimbatore and has major automotive, IT&ITES, Engineering and Cement industries.

The study of economy of a state requires a comprehensive understanding of significant areas like land area, occupational and demographic trends, sectoral growth, finances as well as development related programmes.

This book, *Tamil Nadu Economy*, has been designed keeping in mind the self-instruction mode (SIM) format and follows a simple pattern, wherein each unit of the book begins with the Introduction followed by the Objectives for the topic. The content is then presented in a simple and easy-to-understand manner and is interspersed with Check Your Progress questions to reinforce the student's understanding of the topic. A list of Self-Assessment Questions and Exercises is also provided at the end of each unit. The Summary and Key Words further act as useful tools for students and are meant for effective recapitulation of the text.

## BLOCK - I

### BASIC PERFORMANCE OF TAMIL NADU ECONOMY

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## UNIT 1 TAMIL NADU

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### 1.0 INTRODUCTION

Tamil Nadu is a southern Indian state that has a rich historical and cultural background and boasts of the powerful kingdoms of the Cheras, Cholas and the Pandyas who were the main rulers of the southern part for a long time. The Sangam literature is regarded as a source of the history of the rich past of Tamil Nadu. Today several developments have taken place in terms of agriculture, trade, industry, education and healthcare. The salient features, geographical pattern and the occupational structure of Tamil Nadu in the present times will be discussed in this unit.

### 1.1 OBJECTIVES

After going through this unit, you will be able to:

- Discuss the salient features and the geographical pattern of Tamil Nadu
- Analyse the occupational structure of Tamil Nadu

## 1.2 SALIENT FEATURES OF TAMIL NADU

### NOTES

The historical background of Tamil Nadu begins with the formation of a trinity of powerful Tamil speaking clans of the south Indian region which were the Chera, Chola, and Pandya kingdoms—all of which belong to the distant past. These kingdoms prospered through their political and trade relations with farther lands. In the 4th century CE, the emperor of Rome, Julian welcomed a Pandyan delegation. In the meantime, the Chera dynasty developed a prosperous trade with western Asia. From the mid-6th century until the 9th century, the Chalukyas of Badami, the Pallavas of Kanchi (now Kanchipuram), and the Pandyas of Madurai were engaged in a long sequence of wars in the region. The period, nonetheless, was noticeable for the restoration of Hinduism and the development of the fine arts. From about 9<sup>th</sup> century onwards, Tamil Nadu was controlled by the Cholas, of whom Rajendrachola Deva I (reigned 1014–44) was the most famous ruler. In the middle of the 14th century, the Hindu kingdom of Vijayanagar, which comprised all of Tamil Nadu, came to power. During the 300 years of Vijayanagar rule, Telugu-speaking rulers and officials had a representation in the administration. In 1640, the East India Company of England built a trade post at the fishing village of Madraspatnam (now Chennai) with the consent of the local ruler. The history of Tamil Nadu from the middle of 17th century to 1946 is the story of the British-controlled Madras Presidency in relation to the rise and fall of British power in India. After the independence of India in 1947, Madras Presidency became the state of Madras. The state's Telugu-speaking areas were separated to form part of the new state of Andhra Pradesh in 1953. In 1956, Madras was divided further, with some areas going to the new state of Kerala and other areas becoming part of Mysore (now Karnataka). What remained of Madras state was renamed Tamil Nadu in 1968.

Tamil Nadu is one of the most prominent states of India located in the extreme south of the Deccan Subcontinent. It is surrounded by the Indian Ocean in the east and south, shares its border with Kerala to the west, Karnataka to the north-west and Andhra Pradesh to the north. The North-Central coast shares the boundaries with Puducherry and Karaikal. The Capital of Tamil Nadu is Chennai. Tamil Nadu represents the Tamil Speaking class of people who previously belonged to Madras Presidency of British India. The geographical area of Tamil Nadu is 50,216 square miles (around 1, 30,058 square kilometres). As per the 2011 census of India, the total population of Tamil Nadu was 72,138,958. Though Tamil Nadu has traditionally been an agricultural state, it has seen remarkable improvements in the industrial sector over the last few decades.

### 1.2.1 Geographical Pattern and Land Area of Tamil Nadu

As mentioned earlier, the total land area of the state of Tamil Nadu is approximately 1,30,058 sq.km. It shares borders with the state of Karnataka and Andhra Pradesh



in the north, Kerala in the West and has bay of Bengal in the east and India Ocean in the south.

*Tamil Nadu*

### **a) Land Distribution**

The Tamil Nadu terrain varies from region to region. It comprises of flat land along the eastern coast and has hills in the north and west. The largest part of eastern plains is the fertile plain known as Kaveri (Cauvery) river delta. Further in the South there are some arid flat lands covering the cities of Ramathapuram and Madurai. The highest peaks of Western Ghats run along the western borders of Tamil Nadu.

### **b) Mountain Ranges**

There are various mountain ranges in the geographical territory of Tamil Nadu. Some of them are Nilgiri, Palni, Anaimalai whose peaks exceed the range of 8000 feet in elevation. The lower peaks of the Eastern Ghats and their outliers called as Javadi, Kalvarayan and Shevaroy Hills runs along the centre of the region.

### **c) Rivers**

The major rivers of Tamil Nadu are Kaveri, Ponnaiyar, Palar, Vaigal and Tambraparni. Kaveri is the major river of Tamil Nadu and originates from the adjoining state of Karnataka and flows one-third of its total length in Tamil Nadu.

### **d) Soil Pattern**

Tamil Nadu is rich in Alluvial Soil. The other predominant soils in the region of Tamil Nadu are clay, loam, sand, and red laterite rich in iron peroxides. It also consists of Black Cotton Soil known as Regur in the local language in the parts of central, west central and south eastern regions of Tamil Nadu.

### **e) Climate**

The climate of Tamil Nadu is Tropical and prone to good rainfall. The hottest months are May and June and the coolest months are December and January. In summers the maximum daily temperature of Tamil Nadu is 100° F (38° C) and minimum temperature is 80° F (20° C). In winters the minimum daily temperature is 70° F (21° C) and maximum temperature is mid 80° F (30° C).

### **f) Annual Precipitation**

The annual rainfall ranges between 25 and 75 inches (630 and 1900 mm) between the months of October and December in a year.

### **g) Plant and Animal Life**

The total forest land in Tamil Nadu covers 15% area of the state. At the highest elevation in the Western Ghats, the mountains support subalpine vegetation. Eastern Side of Western Ghats and the hilly areas of northern and central districts of Tamil

## **NOTES**

Nadu follow the mixed pattern of vegetation with the combination of evergreen and deciduous species.

### **h) Protected Species**

## **NOTES**

Tamil Nadu comprises of various National Parks with a dozen of wildlife and bird sanctuaries. The famous Wildlife Sanctuaries of Tamil Nadu are: Mudumalai Wildlife Sanctuary, National Park in Nilgiri Hills and Indira Gandhi Wildlife Sanctuary. The majorly protected species are elephants, Gaurs, Nilgiri Tahrs, wild Boars, Sloth Bears, various species of deer, tiger, leopard and an assortment of primates (macaques, langurs and lorises), venomous king cobras, woodpeckers and flycatches are commonly found birds in the woodland. Aquatic birds find a home in the Vedantangal Sanctuary in the south central part of the state.

### **1.2.2 Health**

The medicinal necessities of the population of Tamil Nadu are assisted by a large number of public and private hospitals, dispensaries, and primary health centres. Allopathic (Western), Ayurvedic and Siddha (traditional Indian), Unani which is a Muslim system using prescribed herbs and shrubs, and homeopathic medical treatments are all recognized and supported by the government and are available throughout the state. Among Tamil Nadu's main health worries are cholera, malaria, filariasis, a disease caused by influx of the blood and tissues by parasitic worms, and HIV/AIDS infection. The state has mainly brought leprosy under control, although thousands of cases are still treated annually.

Various government agencies are promoting programs to mend the housing, education, and economic status of the Scheduled Castes and other traditionally disadvantaged groups. The state also provides assistance to women, children, and people with disabilities. A special insurance program is available for those with autism, cerebral palsy, and other developmental disabilities.

### **1.2.3 Education**

There are thousands of public and private primary, middle, and high schools distributed across the state of Tamil Nadu. Additionally, there are many arts and science colleges, medical colleges, engineering colleges, polytechnic institutes, and industrial training institutes. Amongst the most prominent of Tamil Nadu's universities are the University of Madras established in 1857 and Tamil Nadu Veterinary and Animal Sciences University established in 1989, both located in Chennai. Annamalai University was established in 1929 in Chidambaram; Tamil Nadu Agricultural University was established in 1971 in Coimbatore; and Madurai Kamaraj University in 1966 in Madurai. The Dakshina Bharat Hindi Prachar Sabha was established in 1918 in Chennai and the Gandhigram Rural University established in 1956 in Gandhigram, in southwest-central Tamil Nadu, are the two institutes of national significance that are involved in promoting the Hindi language and Mahatma Gandhi's idea of rural higher education, respectively. Tamil University, established

in 1981 near Thanjavur (Tanjore), in the eastern part of the state, focuses on the study of Tamil language, literature, and culture.

Tamil Nadu

### 1.2.4 Cultural background

Hinduism lies at the center of the culture of Tamil Nadu. Amongst the most renowned of the temples in the state, which figure in the tens of thousands, are the 7th- and 8th-century buildings at Mamallapuram, which were declared a UNESCO World Heritage Site in 1984. The gopurams, or gateway towers, of such temples are prominent in most towns, particularly Chidambaram, Kanchipuram, Thanjavur, Madurai, and the Srirangam pilgrimage centre in Tiruchchirappalli. The Hindu Religious and Charitable Endowments Administration Department is accountable for the management of the state's temples and sanctuaries.

The cycle of temple festivals attracts large congregations of devotees. Noteworthy also are the car festivals, during which large chariots decorated with religious icons are taken in procession around the temple. In addition, Tamil Nadu is scattered with sectarian monastic institutions, or *mathas*—of which the most important are the Shankara Matha at Kumbakonam and the Vaishnava compound at Srirangam—which hold various activities; Hindu families typically owe allegiance to a number of such institutions.

### 1.2.5 The arts

*Bharatanatyam*, one of India's major classical dance forms, and Karnataka music (South Indian classical music) are both widely practiced. Painting and sculpture are less prominent, although there are schools that teach the art of sculpture in stone and bronze. Tamil literature rapidly adopted the Western literary forms of the novel and the short story. The poet Subrahmanya Bharati (1882–1921) was one of the first to modify traditional Tamil poetry by blending popular and scholastic literary styles. Motion pictures are the most prevalent form of mass entertainment. There are both touring and permanent movie theatres, and sentimental and spectacular films, often featuring music and dance, produced by the film studios situated largely around Chennai.

## 1.3 DISTRIBUTION OF OCCUPATIONAL STRUCTURE OF TAMIL NADU

There are basically three sectors in which the occupational structure has been divided: Primary Sector, Secondary Sector and Tertiary Sector. Primary Sector refers to the occupations related to the production and procurement of the agricultural products, raw materials and rearing of animals. Secondary Sector is the manufacturing sector which is further divided into manufacturing of movable properties and construction industry. Service Sector is the fastest growing sector in India and it includes the aids to the occupations of primary and secondary

## NOTES

**NOTES**

sector. The State's total population grew from 62.41 million in 2001 to 72.15 million in 2011, the decadal growth being 11.6 percent. The estimated labour force (15-59 years) went up by 1.19 percent per annum from 40.00 million in 2001 to 47.76 million in 2011. Consequently, its share in total population improved from 64.10 to 66.20 percent. Between these two Censuses, the total number of workers in the State increased by 1.18 percent annually from 27.88 million to 32.88 million. Share of the total number of workers in total labour force, however, had witnessed a decline from 69.70 percent to 68.84 percent, indicating that there was a reduction in the employment absorptive capacity of the economy or there was a preference to pursue higher education or both. As a result, the proportion of persons who are not working in the State increased from 30.30 percent to 31.16 percent. All things considered, the rate of growth of labour force exceeds the rate of growth of work force besides the absolute numbers. The working population in Tamil Nadu increased from 27.88 million in 2001 Census to 32.88 million in 2011 Census witnessing an annual compound growth rate of 1.18 percent. The Work Participation Rate (WPR) i.e., the proportion of workers to total population in Tamil Nadu edged up from 44.7 percent in 2001 to 45.6 percent in 2011. The ratio at the All India level during the corresponding period was lower at 39.1 percent and 39.8 percent.

**Industrial Classification of 2001 and 2011 Census:** The total number of workers as per 2011 Census in the State was estimated at 32.8 million comprising 27.9 million main workers and 4.9 million marginal workers. The proportion of main workers i.e., those engaged in economically gainful activities during the major part of the year to total workers was higher at 85.0 percent in Tamil Nadu as compared to India (75.2%). Contrastingly, the ratio in respect of marginal workers was lower in Tamil Nadu (15.0%) as against all India (24.8%).

The major trends of the Occupation in Tamil Nadu are:

### **1. Agricultural, Fishing and Forestry**

Agriculture is the backbone of half of the working population of Tamil Nadu. Since very early times, Tamil farmers have skilfully preserved rare precipitation in small and large irrigation reservoirs, or "tanks." Government inland waterway, borewell pipes, and regular wells also form part of the irrigation system. Most of the river valley projects rely on rain, carried by the inconsistent northeast monsoon, for water. Agricultural practices have seen significant developments 20<sup>th</sup> century onwards. This has been achieved with multiple cropping, the usage of sturdier and more industrious variety of chief crops, and the use of chemical fertilizers; subsequently, since the late 1960s, the state has been self-sufficient in the production of food grains. The main crops for local consumption are rice, millet, and other cereals, as well as peanuts (groundnuts) and pulses (such as chickpeas); sugarcane, cotton, cashews, and chilies are important cash crops. Many farmers in Tamil Nadu also nurture livestock, primarily cows which are especially used for the dairy industry, poultry, goats, and sheep. Tamil Nadu is one of India's largest fish

producers, with its best produce coming from marine operations, though there also are many inland fisheries. In addition, the state has an active forestry sector, with pulpwood, babul which is a type of acacia that produces valuable tannin, firewood, bamboo, and teak among the primary products. Rubber, grown largely in plantations, is important as well.

## 2. Resources and Power

The main minerals extracted in Tamil Nadu are limestone, bauxite, gypsum, lignite (brown coal), magnetite, and iron ore. The opencast lignite mine at Neyveli, in the north-central part of the state, is amongst the biggest in India, and its products are cast-off to fuel a thermal-power plant that offers much of the state's electricity. The majority of Tamil Nadu's energy and power comes from thermal stations, but hydroelectric plants—especially along the Kaveri River and its tributaries—provide a significant secondary source of energy. The state is also a leader in wind-power generation.

## 3. Manufacturing

Tamil Nadu is one of the most industrialized of the Indian states, and the manufacturing sector covers the area for more than one-third of the state's gross product. Production of heavy vehicles—such as automobiles, agricultural equipment, military vehicles, and railway cars—is among the state's major industries; the railway-coach factory at Perambur (near Chennai) is one of the largest in Asia. There is an oil refinery and petrochemical plant in Chennai. Other important industrial activities comprise textile milling, food processing, and the manufacture of pharmaceuticals, chemicals, and electronic parts and equipment. Tamil Nadu is also rich in handicrafts, made particularly from brass, bronze, and copper ware, leather work, handloomed silk, *kalamkari* (hand-painted fabric, using natural dyes), and articles fashioned from carved wood, palm leaf, and cane.

## 4. Services

The services sector has developed particularly fast since the late 20th century, and by the early 21st century, it had developed to become the largest sponsor to Tamil Nadu's economy. Extension of the information-technology industry has been a preoccupation of the state's policies for economic development. Tourism has also been an area of importance, with constant developments in infrastructure, housings, eateries, and social and entertaining attractions.

## 5. Transportation

The transportation structure of the southern Indian states converges on Chennai. A well-built road network makes fast bus service accessible to all the main townships and tourist attractions. A large network of railway also runs through the state. Two of India's major seaports are situated in Tamil Nadu in the north at Chennai and in the south at Tuticorin. Tamil Nadu hosts an international airport

## NOTES

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at Meenambakkam, near Chennai, which is amongst the biggest airports in India. Inland flights are accessible from various other cities including Madurai, Coimbatore, and Tuticorin; the airport at Tiruchchirappalli offers domestic and limited international service.

**Check Your Progress**

1. How does the historical background of Tamil Nadu begin?
2. Which states does Tamil Nadu share its borders with?
3. What does the primary sector refer to?
4. What are the main crops for local consumption in Tamil Nadu?

## **1.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS**

1. The historical background of Tamil Nadu begins with the formation of a trinity of powerful Tamil speaking clans of the south Indian region which were the Chera, Chola, and Pandya kingdoms—all of which belong to the distant past.
2. It is surrounded by the Indian Ocean in the east and south, shares its border with Kerala to the west, Karnataka to the north-west and Andhra Pradesh to the north. The North-Central coast shares the boundaries with Puducherry and Karaikal.
3. Primary Sector refers to the occupations related to the production and procurement of the agricultural products, raw materials and rearing of animals.
4. The main crops for local consumption are rice, millet, and other cereals, as well as peanuts (groundnuts) and pulses (such as chickpeas); sugarcane, cotton, cashews, and chilies are important cash crops.

## **1.5 SUMMARY**

- The historical background of Tamil Nadu begins with the formation of a trinity of powerful Tamil speaking clans of the south Indian region which were the Chera, Chola, and Pandya kingdoms—all of which belong to the distant past.
- From about 9<sup>th</sup> century onwards, Tamil Nadu was controlled by the Cholas, of whom Rajendrachola Deva I (reigned 1014–44) was the most famous ruler.

- After the independence of India in 1947, Madras Presidency became the state of Madras. The state's Telugu-speaking areas were separated to form part of the new state of Andhra Pradesh in 1953.
- The Tamil Nadu terrain varies from region to region. It comprises of flat land along the eastern coast and has hills in the north and west.
- The major rivers of Tamil Nadu are Kaveri, Ponnaiyar, Palar, Vaigal and Tambraparni. Kaveri is the major river of Tamil Nadu and originates from the adjoining state of Karnataka and flows one-third of its total length in Tamil Nadu.
- The total forest land in Tamil Nadu covers 15% area of the state. At the highest elevation in the Western Ghats, the mountains support subalpine vegetation.
- Amongst the most prominent of Tamil Nadu's universities are the University of Madras established in 1857 and Tamil Nadu Veterinary and Animal Sciences University established in 1989, both located in Chennai.
- Amongst the most renowned of the temples in the state, which figure in the tens of thousands, are the 7th- and 8th-century buildings at Mamallapuram, which were declared a UNESCO World Heritage Site in 1984.
- There are basically three sectors in which the occupational structure has been divided: Primary Sector, Secondary Sector and Tertiary Sector. Primary Sector refers to the occupations related to the production and procurement of the agricultural products, raw materials and rearing of animals.
- Tamil Nadu is one of India's largest fish producers, with its best produce coming from marine operations, though there also are many inland fisheries.
- Tamil Nadu is also rich in handicrafts, made particularly from brass, bronze, and copper ware, leather work, handloomed silk, *kalamkari* (hand-painted fabric, using natural dyes), and articles fashioned from carved wood, palm leaf, and cane.

## NOTES

### 1.6 KEY WORDS

- **Sectarianism:** It is a form of prejudice, discrimination, or hatred arising from attaching relations of inferiority and superiority to differences between subdivisions within a group.
- **Work Participation Rate:** It indicates the percentage of all people of working age who are employed or are actively seeking work.

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## 1.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

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### NOTES

#### Short-Answer Questions

1. When did the East India Company build a trade post at Madraspatnam?
2. Name the major rivers of Tamil Nadu.
3. Which are the most prominent universities in Tamil Nadu?
4. What are some of the main minerals extracted in Tamil Nadu?

#### Long-Answer Questions

1. Discuss the geographical features of Tamil Nadu.
2. Elaborate upon the occupational structure in Tamil Nadu.
3. Examine the state of manufacturing and transportation in Tamil Nadu.

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## 1.8 FURTHER READINGS

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- Leonard, AG. 2006. *Tamil Nadu Economy*. New Delhi: Macmillan.
- Rajalakshmi, N. 1999. *Tamil Nadu Economy*. Mumbai: Business Publishers.
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- Manickam, S. 2007. *Economic Development of Tamil Nadu in Perspective*. Chennai: Uyirmmmai Publication

#### Websites

Government of Tamil Nadu's Official Websites <[www.tn.gov.in](http://www.tn.gov.in)>



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## UNIT 2 DEMOGRAPHIC TRENDS OF TAMIL NADU

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*Demographic Trends  
of Tamil Nadu*

### NOTES

#### Structure

- 2.0 Introduction
- 2.1 Objectives
- 2.2 Population and its Growth
- 2.3 National Family Health Survey of Tamil Nadu
- 2.4 Human Development Index and Gender Development Index
- 2.5 Answers to Check Your Progress Questions
- 2.6 Summary
- 2.7 Key Words
- 2.8 Self Assessment Questions and Exercises
- 2.9 Further Readings

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### 2.0 INTRODUCTION

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Demography refers to the composition of population and related statistics in a particular society. It includes figures relating to birth, death, literacy, health etc. Such statistics provide an overview of the various dimensions of the population, the living standard of people, their health, incomes and the gender gap. The demography of the state of Tamil Nadu has been discussed in this unit.

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### 2.1 OBJECTIVES

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After going through this unit, you will be able to:

- Discuss the demographic trends related to population and growth in Tamil Nadu
- Analyse the results of the National Family Health Survey, Human Development India Index and Gender Development Index.

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### 2.2 POPULATION AND ITS GROWTH

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Tamil Nadu is the 11<sup>th</sup> largest state in terms of geographical territory in India. Tamil Nadu is the seventh most densely inhabited state in the country and its core language Tamil has roots that age back to 500 BC. The capital of Tamil Nadu is Chennai and is located on the eastern coast line of India. Tamil Nadu is well-known for its great temples and monuments that were being constructed thousands of years before and has landmarks that have been declared as heritage sites by the United

Nations. In a 180 degree prototype change, the state along with an ironic importance in history of India, is also one of the fastest emerging centres for technology and trade.

## **NOTES**

### **Demography in Tamil Nadu**

According to the 2011 census, the population of Tamil Nadu stands at around 72 million which is not as large as compared to some of the other big states in the country. The state has a development speed of around 15 percent that will continue to increase because of the development in infrastructure in the state. Therefore, the inhabitants of the state are increasingly assuming a significant role in the development of the state. The literacy rate of Tamil Nadu is around 80 percent which is a very positive statistical figure much above the nation-wide average. The figures in the Tamil Nadu Census 2011 reveal figures that can be taken into consideration by the administration of Tamil Nadu in an attempt to add to its growth. The sex ratio in the state positions at 995 which is a positive figure as the figure surpasses the nation-wide average. The capital city, Chennai is also the largest city in the state of Tamil Nadu. In total, Tamil Nadu comprises of 32 districts.

### **Population 2011**

According to the report from Census 2011, Tamil Nadu has around 7.21 Crore inhabitants, an increase from the figure of 6.24 Crore in the 2001 census. The overall population of Tamil Nadu as per 2011 census is 72,147,030, out of which males and females are 36,137,975 and 36,009,055 respectively. In 2001, overall population was 62,405,679 among which males were 31,400,909 while females were 31,004,770.

### **Population Growth Rate**

The total population growth in this period was 15.61 percent while in the preceding period, it was 11.19 percent. The population of Tamil Nadu constitutes of 5.96 percent of India in 2011. In 2001, the figure was 6.07 percent.

### **Urban Population 2011**

The population of the urban areas out of the total population of Tamil Nadu is 48.40%. The absolute value of population residing in urban areas is 34,917,440 out of which 17,458,910 are males and whereas remaining 17,458,530 are females. The urban population in the previous 10 years has increased by 48.40 percent. Sex Ratio in urban regions of Tamil Nadu was 1000 females per 1000 males. Child sex ratio between the age group of 0 to 6 years for urban areas was at 952 girls per 1000 boys. Absolute number of children's population between the age group of 0 to 6 years residing in urban areas of Tamil Nadu was 3,512,530. The percentage value of child population of total population in urban region was 10.06 %.

## **Rural Population 2011**

The percentage value of rural population out of the total population of Tamil Nadu is 51.06 percent. Total population of rural areas of Tamil Nadu state was 37,229,590. In absolute numbers, males and females were 18,679,065 and 18,550,525 respectively. The population growth rate documented for the period from 2001 to 2011 was 51.60 percent. In rural regions of Tamil Nadu state, female sex ratio per 1000 males was 993 while for children between the age group of 0 to 6 years it was 936 girls per 1000 boys. In Tamil Nadu, 3,911,302 children between the age group of 0 to 6 years live in rural areas. Child population constituted 10.51 percent of the total rural population.

## **Literacy Rate**

Literacy rate in Tamil Nadu experienced rising development and is 80.09 percent according to reports of 2011 population census of India. Amongst it, the literacy level of males was measured at 86.77 percent while literacy level of females was at 73.14 percent. According to the preceding Census of India, in 2001, the literacy rate in Tamil Nadu was at 73.45 percent out of which males and females were 83.28 percent and 64.91 percent respectively. In definite numbers, total educated population in Tamil Nadu stands at 51,837,507 out of which males were 28,040,491 and females were 23,797,016. The Average Literacy rate in Tamil Nadu for urban areas was 87.04 percent out of which males were 91.80% literate while literacy level of females was at 82.31%. Total literate population in urban areas of Tamil Nadu was 27,335,312.

In rural areas of Tamil Nadu, literacy rate for males and females stood at 82.04 percent and 64.55 percent. Average literacy rate in Tamil Nadu for rural areas was 73.54 percent. Total literates in rural areas were 24,502,195.

## **Sex Ratio**

The Sex Ratio of Tamil Nadu is 996 that is measured for every 1000 males, which is more than the national average of 940 according to the report of census 2011. In 2001, the sex ratio of females was 986 per 1000 males in Tamil Nadu.

- Tamil Nadu's population stood at 72.14 million
- Decadal growth rate (2001-11) was 15.6 % (11.19 % during 1991-01)
- The decadal change in rural population was 6.49 % and that of urban population was 27.16 %, for the period 2001-11
- Sex ratio has increased from 987 in 2001 to 995 in 2011; the sex ratio is unfavourable in 12 out of 32 districts
- 2011 census reveals that the state has a population density of 555 persons per sq.km (above the national average of 382 persons per sq.km)

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- Slum population was estimated to be 2.8 million in 2011, which constitutes approximately 8 per cent of the total urban population (i.e. 34.90 million) of the State Economy
- The GSDP registered a growth rate of 7.29 % in 2013-14.
- In 2004-05, agriculture and allied activities contributed 11.65 % to State income, which declined to 8.7 % in 2011-12
- The industry sector contributed 27.91 per cent to the NDP of the state, while manufacturing sector alone contributed 17.5 per cent to NDP in 2011-12
- Approximately 92 % of the farmers in the State belong to marginal and small farmer category • The net area sown had witnessed a gradual decline from 56.38 lakh hectare in 1950 to 50.43 lakh hectare in 2008-09 and further to 49.85 lakh hectare in 2011 -12
- The proportion of land put under the non-agricultural use had increased from 21.69 lakh ha. in 2007-08 to 21.73 lakh hectare in 2008-09 and to 21.80 lakh hectare in 2011-12.
- But, the State had achieved 10.33 million metric tonne of food grains output during 2013-14, registering 0.18 million metric tonne over the State output of 2011-12 due to increase in productivity

### Check Your Progress

1. What is Tamil Nadu well-known for?
2. What is the literacy rate of Tamil Nadu?
3. What is the average literacy rate in Tamil Nadu for urban areas?

## 2.3 NATIONAL FAMILY HEALTH SURVEY OF TAMIL NADU

The National Family Health Survey (NFHS) is a large-scale, cyclical survey piloted in a symbolic model of households all over India. The NFHS is a joint project of the International Institute for Population Sciences (IIPS), Mumbai, India; ORC Macro, Calverton, Maryland, USA and the East-West Centre, Honolulu, Hawaii, USA. The Ministry of Health and Family Welfare (MOHFW), Government of India, designated IIPS as the executive agency, liable for aiding synchronisation and practical supervision for the NFHS. NFHS was subsidised by the United States Agency for International Development (USAID) with additional funding from United Nations Children's Fund (UNICEF). IIPS teamed up with the numeral of Field Organizations (FO) for survey execution. Each FO was answerable for leading survey activities in one or more states covered by the NFHS. Technical assistance for the NFHS was provided by ORC Macro and the East-West Centre.

The First National Family Health Survey (NFHS-1) was conducted in 1992-93. The survey collected general statistics on population, health, and nutrition, with a stress on women and young children. Eighteen Population Research Centres (PRCs), situated in universities and institutes of national reputation, aided IIPS in all phases of directing NFHS-1. All the state-level and national-level reports for the survey have already been published. There are 48 reports in all.

The Second National Family Health Survey (NFHS-2) was conducted in 1998-99 in all 26 states of India with additional structures on the excellence of health and family development services, domestic violence, reproductive health, anaemia, the nourishment of women, and the position of women.

The Third National Family Health Survey (NFHS-3) was carried out in 2005-2006. Eighteen Research Organizations in addition to five Population Research Centres conducted the survey in 29 states of India. The subsidy for NFHS-3 is offered by USAID, DFID, the Bill and Melinda Gates Foundation, UNICEF, UNFPA, and MOHFW, GOI. ORC Macro, USA, is on condition that practical help for NFHS-3, and the National AIDS Control Organization (NACO) and the National AIDS Research Institute (NARI) are in case aiding technical help for the HIV component.

In NFHS-3, 18 research organisations conducted interviews with more than 230,000 women aged between 15-49 and men aged between 15-54, all over India. NFHS-3 also verified more than 100,000 women and men for HIV and more than 200,000 adults and young children for anaemia. Fieldwork for NFHS-3 was conducted from December 2005 to August 2006.

The National Family Health Survey 2015-16 (NFHS-4), the fourth in the NFHS series, provides information on population, health and nutrition for India and each State / Union territory. NFHS-4, for the first time, provides district-level estimates for many important indicators. The contents of previous rounds of NFHS are generally retained and additional components are added from one round to another. In this round, information on malaria prevention, migration in the context of HIV, abortion, violence during pregnancy etc. have been added. The scope of clinical, anthropometric, and biochemical testing (CAB) or Biomarker component has been expanded to include measurement of blood pressure and blood glucose levels. NFHS-4 sample has been designed to provide district and higher level estimates of various indicators covered in the survey. However, estimates of indicators of sexual behaviour, husband's background and woman's work, HIV/AIDS knowledge, attitudes and behaviour, and, domestic violence will be available at State and national level only. As in the earlier rounds, the Ministry of Health and Family Welfare, Government of India designated International Institute for Population Sciences, Mumbai as the nodal agency to conduct NFHS-4. The main

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objective of each successive round of the NFHS has been to provide essential data on health and family welfare and emerging issues in this area. NFHS-4 data will be useful in setting benchmarks and examining the progress in health sector the country has made over time. Besides providing evidence for the effectiveness of the ongoing programmes, the data from NFHS-4 helps in identifying the need for new programmes with area specific focus. Four Survey Schedules - Household, Woman's, Man's and Biomarker - were canvassed in local language using Computer Assisted Personal Interviewing (CAPI). In the Household Schedule, information was collected on all usual members of the household and visitors who stayed in the household the previous night as well as socio-economic characteristics of the household, water and sanitation, health insurance, number of deaths in the household in the three years preceding the survey etc. Information on the woman's characteristics, marriage, fertility, children's immunizations and childcare, nutrition, contraception, reproductive health, sexual behaviour, HIV/AIDS, domestic violence, etc. was canvassed in the Woman's Schedule. The Man's Schedule covered men's characteristics, marriage, the number of children they have, contraception, fertility preferences, nutrition, sexual behaviour, attitudes towards gender roles, HIV/AIDS, etc. The Biomarker Schedule covered measurements of height, weight and haemoglobin levels for children; measurements of height, weight, haemoglobin levels, blood pressure, and random blood glucose level for women aged 15-49 years and men aged 15-54 years. In addition, women and men were requested to provide a few drops of blood from a finger prick for laboratory testing for HIV.

This statistic sheet provides information on key pointers and trends for Tamil Nadu. The numbers of NFHS-4 and that of former rounds may possibly not be severely similar due to variances in sample size and NFHS-4 was a benchmark for upcoming surveys. NFHS-4 research for Tamil Nadu was from 23 February, 2015 to 29 June, 2015 by EHI International Pvt. Ltd. and collected information from 26,033 households, 28,820 women, and 4,794 men.

Here we are providing the some of the key statistics wrt to Tamil Nadu in the NFHS:

Table 2.1 NFHS Tamil Nadu: Key Indicators

Demographic Trends  
of Tamil Nadu

Indicators	NFHS-4 (2015-16)			NFHS-3 (2005-06)
	Urban	Rural	Total	Total
<b>Population and Household Profile</b>				
1. Population (female) age 6 years and above who ever attended school (%)	83.6	70.7	77.2	69.4
2. Population below age 15 years (%)	22.4	24.1	23.3	26.6
3. Sex ratio of the total population (females per 1,000 males)	1,020	1,047	1,033	1,078
4. Sex ratio at birth for children born in the last five years (females per 1,000 males)	972	939	954	896
5. Children under age 5 years whose birth was registered (%)	98.5	98.2	98.3	85.8
6. Households with electricity (%)	99.2	98.3	98.8	88.6
7. Households with an improved drinking-water source <sup>1</sup> (%)	86.9	94.5	90.6	91.4
8. Households using improved sanitation facility <sup>2</sup> (%)	69.7	34.0	52.2	22.4
9. Households using clean fuel for cooking <sup>3</sup> (%)	87.4	58.0	73.0	31.4
10. Households using iodized salt (%)	89.1	76.2	82.8	65.5
11. Households with any usual member covered by a health scheme or health insurance (%)	59.2	69.1	64.1	4.0
<b>Characteristics of Adults (age 15-49)</b>				
12. Women who are literate (%)	85.6	72.9	79.4	69.4
13. Men who are literate (%)	91.7	86.2	89.1	84.1
14. Women with 10 or more years of schooling (%)	58.6	42.9	50.9	31.8
<b>Marriage and Fertility</b>				
15. Women age 20-24 years married before age 18 years (%)	13.4	18.9	16.3	22.3
16. Men age 25-29 years married before age 21 years (%)	10.4	7.2	9.0	8.4
17. Total fertility rate (children per woman)	1.5	1.9	1.7	1.8
18. Women age 15-19 years who were already mothers or pregnant at the time of the survey (%)	3.6	6.3	5.0	7.7
<b>Infant and Child Mortality Rates (per 1,000 live births)</b>				
19. Infant mortality rate (IMR)	18	23	20	30
20. Under-five mortality rate (U5MR)	23	30	27	36
<b>Current Use of Family Planning Methods (currently married women age 15-49 years)</b>				
21. Any method <sup>4</sup> (%)	54.1	52.3	53.2	61.4
22. Any modern method <sup>4</sup> (%)	53.5	51.6	52.6	60.0
23. Female sterilization (%)	49.4	49.4	49.4	55.0
24. Male sterilization (%)	0.0	0.0	0.0	0.4
25. IUD/PPIUD (%)	2.3	1.4	1.9	2.1
26. Pill (%)	0.4	0.1	0.2	0.2
27. Condom (%)	1.2	0.5	0.8	2.3
<b>Unmet Need for Family Planning (currently married women age 15-49 years)<sup>5</sup></b>				
28. Total unmet need (%)	10.6	9.6	10.1	10.2
29. Unmet need for spacing (%)	5.1	4.5	4.8	4.1
<b>Quality of Family Planning Services</b>				
30. Health worker ever talked to female non-users about family planning (%)	29.7	30.8	30.2	21.6
31. Current users ever told about side effects of current method <sup>6</sup> (%)	76.8	76.5	76.6	66.4

<sup>1</sup> Piped water into dwelling/yard/plot, public tap/standpipe, tube well or borehole, protected dug well, protected spring, rainwater, community RO plant. <sup>2</sup> Flush to piped sewer system, flush to septic tank, flush to pit latrine, ventilated improved pit (VIP)/biogas latrine, pit latrine with slab, twin pit/composting toilet, which is not shared with any other household. <sup>3</sup> Electricity, LPG/natural gas, biogas. <sup>4</sup> Includes other methods that are not shown separately.

<sup>5</sup> Unmet need for family planning refers to fecund women who are not using contraception but who wish to postpone the next birth (spacing) or stop childbearing altogether (limiting). Specifically, women are considered to have unmet need for spacing if they are:

- At risk of becoming pregnant, not using contraception, and either do not want to become pregnant within the next two years, or are unsure if or when they want to become pregnant.
- Pregnant with a mistimed pregnancy.
- Postpartum amenorrhoeic for up to two years following a mistimed birth and not using contraception.

Women are considered to have unmet need for limiting if they are:

- At risk of becoming pregnant, not using contraception, and want no (more) children.
- Pregnant with an unwanted pregnancy.
- Postpartum amenorrhoeic for up to two years following an unwanted birth and not using contraception.

Women who are classified as infertile have no unmet need because they are not at risk of becoming pregnant. Unmet need for family planning is the sum of unmet need for spacing plus unmet need for limiting.

<sup>6</sup> Based on current users of female sterilization, IUD/PPIUD, injectables and pill who started using that method in the past 5 years.

<sup>7</sup> 'na' not available

( ) Based on 25-49 unweighted cases

<sup>8</sup> Percentage not shown; based on fewer than 25 unweighted cases

## NOTES

## NOTES

Indicators	NFHS-4 (2015-16)			NFHS-3 (2005-06)
	Urban	Rural	Total	Total
<b>Maternal and Child Health</b>				
<b>Maternity Care (for last birth in the 5 years before the survey)</b>				
32. Mothers who had antenatal check-up in the first trimester (%)	65.1	62.9	64.0	75.3
33. Mothers who had at least 4 antenatal care visits (%)	81.3	81.0	81.1	87.4
34. Mothers whose last birth was protected against neonatal tetanus <sup>7</sup> (%)	72.4	69.6	71.0	95.9
35. Mothers who consumed iron folic acid for 100 days or more when they were pregnant (%)	65.1	62.9	64.0	28.2
36. Mothers who had full antenatal care <sup>8</sup> (%)	46.3	43.8	45.0	27.5
37. Registered pregnancies for which the mother received Mother and Child Protection (MCP) card (%)	96.0	96.0	96.0	na
38. Mothers who received postnatal care from a doctor/nurse/LHV/ANM/midwife/other health personnel within 2 days of delivery (%)	74.3	73.8	74.0	85.6
39. Mothers who received financial assistance under Janani Suraksha Yojana (JSY) for births delivered in an institution (%)	25.3	33.6	29.5	na
40. Average out of pocket expenditure per delivery in public health facility (Rs.)	2,556	2,649	2,609	na
41. Children born at home who were taken to a health facility for check-up within 24 hours of birth (%)	*	(13.0)	(11.3)	2.1
42. Children who received a health check after birth from a doctor/nurse/LHV/ANM/midwife/other health personnel within 2 days of birth (%)	34.9	35.8	35.4	na
<b>Delivery Care (for births in the 5 years before the survey)</b>				
43. Institutional births (%)	99.2	98.7	98.9	87.8
44. Institutional births in public facility (%)	58.6	73.8	66.7	48.1
45. Home delivery conducted by skilled health personnel (out of total deliveries) (%)	0.6	0.6	0.6	2.9
46. Births assisted by a doctor/nurse/LHV/ANM/other health personnel (%)	99.5	99.0	99.2	90.6
47. Births delivered by caesarean section (%)	36.1	32.3	34.1	20.3
48. Births in a private health facility delivered by caesarean section (%)	48.6	55.2	51.3	33.0
49. Births in a public health facility delivered by caesarean section (%)	28.0	25.1	26.3	14.9
<b>Child Immunizations and Vitamin A Supplementation</b>				
50. Children age 12-23 months fully immunized (BCG, measles, and 3 doses each of polio and DPT) (%)	73.3	66.8	69.7	80.9
51. Children age 12-23 months who have received BCG (%)	96.2	93.9	94.9	99.5
52. Children age 12-23 months who have received 3 doses of polio vaccine (%)	84.4	80.7	82.3	87.8
53. Children age 12-23 months who have received 3 doses of DPT vaccine (%)	86.3	83.1	84.5	95.7
54. Children age 12-23 months who have received measles vaccine (%)	85.9	84.4	85.1	92.5
55. Children age 12-23 months who have received 3 doses of Hepatitis B vaccine (%)	70.9	66.1	68.2	na
56. Children age 9-59 months who received a vitamin A dose in last 6 months (%)	65.9	70.5	68.3	33.1
57. Children age 12-23 months who received most of the vaccinations in public health facility (%)	78.7	91.9	86.1	75.0
58. Children age 12-23 months who received most of the vaccinations in private health facility (%)	21.3	8.1	14.0	25.0
<b>Treatment of Childhood Diseases (children under age 5 years)</b>				
59. Prevalence of diarrhoea (reported) in the last 2 weeks preceding the survey (%)	8.2	7.8	8.0	5.4
60. Children with diarrhoea in the last 2 weeks who received oral rehydration salts (ORS) (%)	65.0	58.7	61.8	32.2
61. Children with diarrhoea in the last 2 weeks who received zinc (%)	46.6	36.3	41.3	na
62. Children with diarrhoea in the last 2 weeks taken to a health facility (%)	73.9	72.5	73.2	62.0
63. Prevalence of symptoms of acute respiratory infection (ARI) in the last 2 weeks preceding the survey (%)	2.7	2.9	2.8	3.7
64. Children with fever or symptoms of ARI in the last 2 weeks preceding the survey taken to a health facility (%)	83.4	81.1	82.2	77.5
<b>Child Feeding Practices and Nutritional Status of Children</b>				
65. Children under age 3 years breastfed within one hour of birth <sup>9</sup> (%)	55.4	54.2	54.7	55.2
66. Children under age 6 months exclusively breastfed <sup>10</sup> (%)	47.8	48.7	48.3	34.1
67. Children age 6-8 months receiving solid or semi-solid food and breastmilk <sup>10</sup> (%)	76.4	59.8	67.5	81.2
68. Breastfeeding children age 6-23 months receiving an adequate diet <sup>10,11</sup> (%)	20.9	21.8	21.4	na
69. Non-breastfeeding children age 6-23 months receiving an adequate diet <sup>10,11</sup> (%)	42.6	51.5	47.1	na
70. Total children age 6-23 months receiving an adequate diet <sup>10,11</sup> (%)	29.4	31.7	30.7	na
71. Children under 5 years who are stunted (height-for-age) <sup>12</sup> (%)	25.5	28.6	27.1	30.9
72. Children under 5 years who are wasted (weight-for-height) <sup>12</sup> (%)	19.0	20.3	19.7	22.2
73. Children under 5 years who are severely wasted (weight-for-height) <sup>12</sup> (%)	8.2	7.6	7.9	8.9
74. Children under 5 years who are underweight (weight-for-age) <sup>12</sup> (%)	21.5	25.7	23.8	29.8

<sup>7</sup> Includes mothers with two injections during the pregnancy of her last birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last birth), or four or more injections (the last within 10 years of the last live birth), or five or more injections at any time prior to the last birth. <sup>8</sup> Full antenatal care is at least four antenatal visits, at least one tetanus toxoid (TT) injection and iron folic acid tablets or syrup taken for 100 or more days. <sup>9</sup> Based on the last child born in the 5 years before the survey. <sup>10</sup> Based on the youngest child living with the mother. <sup>11</sup> Breastfed children receiving 4 or more food groups and a minimum meal frequency, non-breastfed children fed with a minimum of 3 Infant and Young Child Feeding Practices (fed with other milk or milk products at least twice a day, a minimum meal frequency that is receiving solid or semi-solid food at least twice a day for breastfed infants 6-8 months and at least three times a day for breastfed children 9-23 months, and solid or semi-solid foods from at least four food groups not including the milk or milk products food group).

<sup>12</sup> Below -2 standard deviations, based on the WHO standard. <sup>13</sup> Below -3 standard deviations, based on the WHO standard.



## NOTES

Indicators	NFHS-4 (2015-16)			NFHS-3 (2005-06)
<b>Nutritional Status of Adults (age 15-49 years)</b>				
75. Women whose Body Mass Index (BMI) is below normal (BMI < 18.5 kg/m <sup>2</sup> ) <sup>14</sup> (%)	10.9	18.5	14.6	28.4
76. Men whose Body Mass Index (BMI) is below normal (BMI < 18.5 kg/m <sup>2</sup> ) (%)	10.7	14.3	12.4	27.1
77. Women who are overweight or obese (BMI ≥ 25.0 kg/m <sup>2</sup> ) <sup>14</sup> (%)	36.2	25.4	30.9	20.9
78. Men who are overweight or obese (BMI ≥ 25.0 kg/m <sup>2</sup> ) (%)	30.6	25.6	28.2	14.5
<b>Anaemia among Children and Adults<sup>15</sup></b>				
79. Children age 6-59 months who are anaemic (<11.0 g/dl) (%)	48.6	52.5	50.7	64.2
80. Non-pregnant women age 15-49 years who are anaemic (<12.0 g/dl) (%)	53.9	56.9	55.4	53.1
81. Pregnant women age 15-49 years who are anaemic (<11.0 g/dl) (%)	37.2	52.1	44.4	54.7
82. All women age 15-49 years who are anaemic (%)	53.4	56.8	55.0	53.2
83. Men age 15-49 years who are anaemic (<13.0 g/dl) (%)	16.9	24.3	20.4	16.6
<b>Blood Sugar Level among Adults (age 15-49 years)<sup>16</sup></b>				
<b>Women</b>				
84. Blood sugar level - high (>140 mg/dl) (%)	8.0	6.3	7.1	na
85. Blood sugar level - very high (>160 mg/dl) (%)	4.5	3.4	3.9	na
<b>Men</b>				
86. Blood sugar level - high (>140 mg/dl) (%)	10.2	9.2	9.7	na
87. Blood sugar level - very high (>160 mg/dl) (%)	5.9	5.3	5.6	na
<b>Hypertension among Adults (age 15-49 years)</b>				
<b>Women</b>				
88. Slightly above normal (Systolic 140-159 mm of Hg and/or Diastolic 90-99 mm of Hg) (%)	6.9	5.5	6.2	na
89. Moderately high (Systolic 160-179 mm of Hg and/or Diastolic 100-109 mm of Hg) (%)	1.9	1.2	1.6	na
90. Very high (Systolic ≥180 mm of Hg and/or Diastolic ≥110 mm of Hg) (%)	0.6	0.5	0.5	na
<b>Men</b>				
91. Slightly above normal (Systolic 140-159 mm of Hg and/or Diastolic 90-99 mm of Hg) (%)	12.4	11.0	11.7	na
92. Moderately high (Systolic 160-179 mm of Hg and/or Diastolic 100-109 mm of Hg) (%)	3.2	2.5	2.8	na
93. Very high (Systolic ≥180 mm of Hg and/or Diastolic ≥110 mm of Hg) (%)	1.2	1.2	1.2	na
<b>Women Age 15-49 Years Who Have Ever Undergone Examinations of:</b>				
94. Cervix (%)	21.7	24.4	23.1	na
95. Breast (%)	14.0	16.9	15.4	na
96. Oral cavity (%)	11.2	13.0	12.1	na
<b>Knowledge of HIV/AIDS among Adults (age 15-49 years)</b>				
97. Women who have comprehensive knowledge <sup>17</sup> of HIV/AIDS (%)	16.4	15.6	16.0	12.3
98. Men who have comprehensive knowledge <sup>17</sup> of HIV/AIDS (%)	10.6	11.3	10.9	37.4
99. Women who know that consistent condom use can reduce the chances of getting HIV/AIDS (%)	67.8	61.6	64.7	41.9
100. Men who know that consistent condom use can reduce the chances of getting HIV/AIDS (%)	81.2	78.2	79.7	82.0
<b>Women's Empowerment and Gender Based Violence (age 15-49 years)</b>				
101. Currently married women who usually participate in household decisions (%)	83.3	84.7	84.0	87.4
102. Women who worked in the last 12 months who were paid in cash (%)	25.2	35.7	30.5	45.7
103. Ever-married women who have ever experienced spousal violence (%)	37.2	44.2	40.6	41.9
104. Ever-married women who have experienced violence during any pregnancy (%)	5.0	7.5	6.2	na
105. Women owning a house and/or land (alone or jointly with others) (%)	34.6	37.9	36.2	na
106. Women having a bank or savings account that they themselves use (%)	75.7	78.3	77.0	15.9
107. Women having a mobile phone that they themselves use (%)	70.7	53.4	62.0	na
108. Women age 15-24 years who use hygienic methods of protection during their menstrual period <sup>18</sup> (%)	93.5	89.5	91.4	na
<b>Tobacco Use and Alcohol Consumption among Adults (age 15-49 years)</b>				
109. Women who use any kind of tobacco (%)	1.5	3.0	2.2	2.8
110. Men who use any kind of tobacco (%)	32.2	31.2	31.7	40.1
111. Women who consume alcohol (%)	0.5	0.3	0.4	0.1
112. Men who consume alcohol (%)	46.0	47.4	46.7	41.5
113. Women who tried to stop smoking or using tobacco in any other form during the past 12 months <sup>19</sup> (%)	44.8	38.1	40.4	na
114. Men who tried to stop smoking or using tobacco in any other form (during the past 12 months) <sup>19</sup> (%)	26.1	20.2	23.3	na

<sup>14</sup> Excludes pregnant women and women with a birth in the preceding 2 months. <sup>15</sup> Haemoglobin in grams per decilitre (g/dl). Among children, prevalence is adjusted for altitude. Among adults, prevalence is adjusted for altitude and for smoking status. <sup>16</sup> Random blood sugar measurement (including those under medication). <sup>17</sup> Comprehensive knowledge means knowing that consistent use of condoms every time they have sex and having just one uninfected faithful sex partner can reduce the chance of getting HIV/AIDS, knowing that a healthy-looking person can have HIV/AIDS, and rejecting the two most common misconceptions about transmission or prevention of HIV/AIDS. <sup>18</sup> Locally prepared napkins, sanitary napkins and tampons are considered as hygienic methods of protection. <sup>19</sup> Based on those who currently smoke or use tobacco.

Source: [http://rchiips.org/nfhs/pdf/NFHS4/TN\\_FactSheet.pdf](http://rchiips.org/nfhs/pdf/NFHS4/TN_FactSheet.pdf)

## 2.4 HUMAN DEVELOPMENT INDEX AND GENDER DEVELOPMENT INDEX

### NOTES

- Human Development Index is the composite measure of attainment in three core dimensions of well-being: education, health and income. Conventional measures of HDI are combined with other indices to have a better understanding
- As of 2020, the HDI for India is 0.645 and India currently ranks 131 among 189 countries in the world. Between 1990 and 2019, India's HDI value increased from 0.429 to 0.645, an increase of 50.3 percent. Between 1990 and 2019, India's life expectancy at birth increased by 11.8 years, mean years of schooling increased by 3.5 years and expected years of schooling increased by 4.5 years. India's GNI per capita increased by about 273.9 percent between 1990 and 2019.

### Gender Development Index

The GDI calculates gender differences in human development results by keeping record for disputes between women and men in three basic aspects of human development—health, knowledge and standard of living using the same factors and indicators as in the HDI. The GDI is the ratio of the HDIs calculated differently for females and males using the same method as in the HDI. It is a direct measure of gender gap showing the female HDI as a percentage of the male HDI.

The GDI is calculated for 167 countries. Countries are grouped into five groups based on the fix disrespect from gender parity in HDI values. This means that grouping ranks equally into consideration gender gaps favouring males, as well as those favouring females.

The GDI shows how much women are still standing behind their male partners and how much women need to match up within each area of human development. It is useful for understanding the real gender gap in human development achievements and is informative to design policy tools to close the gap.

India stands at the rank of 131 among all the member countries in GDI. As per the HDR 2020, the GDI value of India is 0.820, with the GDI value for females standing at 0.573 and that for males at 0.699, showcasing a wide contrast. In this measure, India is behind Bangladesh, with a GDI value of 0.904, while it stayed ahead of Pakistan (0.745)

Let's have a look at human development index data related to Tamil Nadu from different sources in India:

## HDI and GDI related data pertaining to Tamil Nadu

Demographic Trends  
of Tamil Nadu

*Table 2.2 Tamil Nadu -Human Development Index*

Top 5 districts		
Districts	Index	Rank
<b>Kanyakumari</b>	0.944	1
<b>Virudhunagar</b>	0.855	2
<b>Thoothukudi</b>	0.852	3
<b>Chennai</b>	0.847	4
<b>Kancheepuram</b>	0.845	5
Bottom 5 districts		
<b>Thiruvarur</b>	0.568	28
<b>Villupuram</b>	0.561	29
<b>Theni</b>	0.539	30
<b>Perambalur</b>	0.447	31
<b>Ariyalur</b>	0.282	32

*Source:* Tamil Nadu State Human Development Report 2017

*Table 2.3 Gender Inequality Index*

Top 5 districts		
Districts	Index	Rank
<b>Nilgiris</b>	0.036	1
<b>Virudhunagar</b>	0.048	2
<b>Vellore</b>	0.051	3
<b>Namakkal</b>	0.054	4
<b>Perambalur</b>	0.057	5
Bottom 5 districts		
<b>Chennai</b>	0.111	28
<b>Madurai</b>	0.112	29
<b>Villupuram</b>	0.113	30
<b>Sivagangai</b>	0.114	31
<b>Ariyalur</b>	0.118	32

*Source:* Tamil Nadu State Human Development Report 2017

## NOTES

## NOTES

**Table 2.4** Life Expectancy, Infant Mortality, Birth, Death and Total Fertility Rate (2018)

State	Life Expectancy (2014-18)			Infant Mortality Rate (2018)			Birth Rate (2018)	Death Rate (2018)	Total Fertility Rate (2018)
	Male	Female	Total	Male	Female	Total			
Tamil Nadu	69.9	73.7	71.7	16	14	15	14.7	6.5	1.6
All India	67.8	70.4	69	32	33	32	20	6.2	2.2

**Source:** Adapted from Economic Survey 2021

**Table 2.5** Gross enrolment Ratio (2018-19) and Literacy Rate (2011)

State	Elementary (2018-19)	Secondary level (2018-19)	Senior Secondary level (2018-19)	Higher Education (2018-19)	Literacy rate (2011)
Tamil Nadu	90.3	90.5	72.3	49.0	80.1
All India	96.1	76.9	50.1	26.3	73.0

**Source:** Adapted from Economic Survey 2021

**Table 2.6** Growth in GSDP and Per capita Income

State	GDSP 2018-19 %	GDSP 2017-18 %	Per Capital Income 2018-19 %	Per Capital Income 2017-18 %
Tamil Nadu	8.0	8.6	10.7	11.9
All India	7.0	6.1	9.9	9.9

**Source:** Adapted from Economic Survey 2021

### Check Your Progress

- Which organisations together conduct the NFHS?
- What is the main objective of each successive round of the NFHS?
- What did the information provided in NFHS-4 enable the government to do?
- What is the GDI useful for?

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## 2.5 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

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1. Tamil Nadu is well-known for its great temples and monuments that were being constructed thousands of years before and has landmarks that have been declared as heritage sites by the United Nations.
2. The literacy rate of Tamil Nadu is around 80 percent which is a very positive statistical figure much above the nation-wide average.
3. The Average Literacy rate in Tamil Nadu for urban areas was 87.04 percent out of which males were 91.80% literate while literacy level of females was at 82.31%.
4. The NFHS is a joint project of the International Institute for Population Sciences (IIPS), Mumbai, India; ORC Macro, Calverton, Maryland, USA and the East-West Centre, Honolulu, Hawaii, USA.
5. The main objective of each successive round of the NFHS has been to provide essential data on health and family welfare and emerging issues in this area.
6. The information enabled the Government of India to provide national and international organisations to display and assess policies and programmes associated to population, health, nutrition, and HIV/AIDS.
7. It is useful for understanding the real gender gap in human development achievements and is informative to design policy tools to close the gap.

## NOTES

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## 2.6 SUMMARY

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- Tamil Nadu is the 11<sup>th</sup> largest state in terms of geographical territory in India. Tamil Nadu is the seventh most densely inhabited state in the country and its core language Tamil has roots that age back to 500 BC.
- The literacy rate of Tamil Nadu is around 80 percent which is a very positive statistical figure much above the nation-wide average.
- The population of the urban areas out of the total population of Tamil Nadu is 48.40%. The absolute value of population residing in urban areas is 34,917,440 out of which 17,458,910 are males and whereas remaining 17,458,530 are females.
- Literacy rate in Tamil Nadu experienced rising development and is 80.09 percent according to reports of 2011 population census of India. Amongst it, the literacy level of males was measured at 86.77 percent while literacy level of females was at 73.14 percent.

## NOTES

- The National Family Health Survey (NFHS) is a large-scale, cyclical survey piloted in a symbolic model of households all over India.
- The Second National Family Health Survey (NFHS-2) was conducted in 1998-99 in all 26 states of India with additional structures on the excellence of health and family development services, domestic violence, reproductive health, anaemia, the nourishment of women, and the position of women.
- The National Family Health Survey 2015-16 (NFHS-4), the fourth in the NFHS series, provides information on population, health and nutrition for India and each State / Union territory. NFHS-4, for the first time, provides district-level estimates for many important indicators.
- NFHS-4 provided up-to-date information and suggestion of tendencies in main population, health and nutrition pointers, comprising HIV occurrence.
- Human Development Index is composite measure of attainment in three core dimensions of well-being: education, health and income. Conventional measures of HDI are combined with other indices to have a better understanding
- The GDI is calculated for 167 countries. Countries are grouped into five groups based on the fix disrespect from gender parity in HDI values.

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## 2.7 KEY WORDS

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- **Human Development Index (HDI):** It is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions.
- **Gender Development Index (GDI):** It is the ratio of the HDIs calculated separately for females and males using the same methodology as in the HDI. It is a direct measure of gender gap showing the female HDI as percentage of the male HDI.

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## 2.8 SELF ASSESSMENT QUESTIONS AND EXERCISES

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### Short-Answer Questions

1. What is the proportion of males and females in Tamil Nadu's urban population?
2. What was the literacy rate in Tamil Nadu in 2001?
3. What general statistics did NDHS-1 collect?

4. What did the Biomarker schedule in NFHS-4 cover?
5. Define Human Development Index.

*Demographic Trends  
of Tamil Nadu*

### Long-Answer Questions

1. Discuss the literacy rate of Tamil Nadu.
2. Analyse the survey conducted under NFHS-4.
3. Examine the concept of Gender Development Index.

### NOTES

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## 2.9 FURTHER READINGS

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Leonard, AG. 2006. *Tamil Nadu Economy*. New Delhi: Macmillan.

Rajalakshmi, N. 1999. *Tamil Nadu Economy*. Mumbai: Business Publishers.

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### Websites

NFHS 4 report <[http://rchiips.org/nfhs/pdf/NFHS4/TN\\_FactSheet.pdf](http://rchiips.org/nfhs/pdf/NFHS4/TN_FactSheet.pdf)>

Tamil Nadu State Human Development Report 2017 <[http://www.spc.tn.gov.in/TNHDR2017/salientfeatures\\_SHDR\\_2017.pdf](http://www.spc.tn.gov.in/TNHDR2017/salientfeatures_SHDR_2017.pdf)>

Human Development Report <<http://hdr.undp.org/en/countries/profiles/IND#>>

Economic Survey 2020-21 Statistical Appendix <<https://www.indiabudget.gov.in/economicsurvey/doc/Statistical-Appendix-in-English.pdf>>

## NOTES

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# UNIT 3 TRENDS IN STATE INCOME AND DYNAMISM

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### Structure

- 3.0 Introduction
- 3.1 Objectives
- 3.2 Economic Reforms and Tamil Nadu
  - 3.2.1 Economic Dynamism
  - 3.2.2 Trends in State Income: Structural Growth
  - 3.2.3 Tamil Nadu's Development Experience
  - 3.2.4 Tamil Nadu's Policy Approach for Dynamic Economy
- 3.3 Answers to Check Your Progress Questions
- 3.4 Summary
- 3.5 Key Words
- 3.6 Self Assessment Questions and Exercises
- 3.7 Further Readings

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## 3.0 INTRODUCTION

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Economic dynamism refers to the pace of change happening in any economy over a period of time. It includes the rate at which new businesses develop and innovations are made in industry. These changes are essential for the growth and development of an economy as these provide it with a stimulus to attain its goals and objectives in the long run. Structural growth is another concept that relates to the progress made by an economy through the means of a change in the way the market or economy functions. These concepts will be discussed in this unit in the context of Tamil Nadu.

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## 3.1 OBJECTIVES

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After going through this unit, you will be able to:

- Discuss the structural growth of Tamil Nadu before and after the reforms
- Analyse the concept of economic dynamism

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## 3.2 ECONOMIC REFORMS AND TAMIL NADU

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Economic Reforms refer to the essential changes that were initiated in 1991 India with the plan of broad-minded economy and for speeding up its economic growth rate. The Narasimha Rao Government, in 1991, began the economic restructuring (Economic reforms) in order to reconstruct internal and external confidence in the Indian economy.



The reforms were aimed at bringing in cooperation of the private sector in the growth method of the Indian economy. Policies modified were proposed with a view to technology up-gradation, industrial licensing, elimination of restrictions on the private sector, foreign investments and foreign trade. The important features of the economic reforms are – Liberalisation, Privatisation and Globalisation, commonly known as LPG.

In other words, “Economic reforms” normally point towards deregulation or, at times, to reduce the size of government, to remove irregularity caused by management or the existence of administration, rather than current or raised system or government plans to minimize perversions created by market failure.

### **3.2.1 Economic Dynamism**

The word economic dynamism refers to the pace and course of change in an economy. It traditionally includes actions like the rate of new business development, the rate of recurrence of labor market turnover, and the geographic mobility of the workers. The Tamil Nadu economy has historically been one of the most self-motivated in India, and its energy has been tied to high rates of economic expansion and unmatched improvement.

Tamil Nadu has a very self-motivated and gifted economy and human resource. Tamil Nadu has a specialized mechanized sector and features among the best in several industries such as automobiles, pharmaceuticals, textiles, leather products, chemicals, among others. Also TIDCO, SIPCOT, TIIC, and TANSIDCO are together developing industrial infrastructure in the State.

Today, Tamil Nadu is India’s second-largest economy even with being only its sixth most heavily populated state, and among India’s 12 largest states. Tamil Nadu has the third-highest GDP per capita. Situated on the southernmost tip of the subcontinent with a population of more than 70 million, it is India’s most urbanised state and one of its most industrialised, with a well-built manufacturing base and a big services sector. And at the same time, it positions second on the Human Development Index among India’s 13 largest states. The state has accomplished high growth rates and economic alteration in combination with important progress on social outcomes.

### **3.2.2 Trends in State Income: Structural Growth**

The Vision 2023, projects the sectoral composition of output to undergo some drastic changes – that the share of primary sector will decline from 12.0 per cent to 7.0 per cent, the share of services will go up from 57.0 per cent to 63.0 per cent and share of manufacturing sector from 20.0 per cent to 22.0 per cent between 2004-05 and 2022-23. In order to attain this share of GSDP, the overall growth of the economy is expected to grow at 10.90 per cent per annum during the period from 2012-13 to 2022-23. Vision 2023 forecasts an annual growth rate of 5.10 per cent for primary sector, 13.80 per cent for manufacturing, 9.50 per cent for non-manufacturing and 11.10 per cent for services.

## **NOTES**

**Table 3.1** Share and Growth Target of GSDP: Vision 2023 (%)

Sector	2004-05	2010-11	2022-23	Projected Average Growth
Primary	12.00	12.60	7.00	5.10
Manufacturing	20.00	16.60	22.00	13.80
Non-manufacturing*	11.00	9.20	8.00	9.50
Services	57.00	61.6	63.00	11.10
Total	100.00	100.00	100.00	10.90

## NOTES

**Note:** \*Non-manufacturing sector is mostly constituted by Construction, Mining, and Electricity generation.

**Source:** Vision Document, 2023, Government of Tamil Nadu.

**Table 3.2** Performance of Gross State Domestic Product – Tamil Nadu

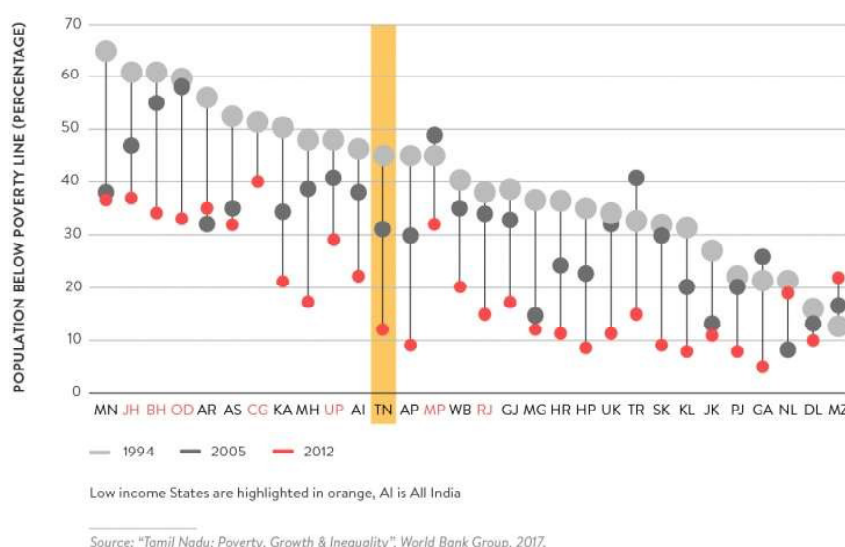
Year	At Constant (2004-05) Prices (Rs. Crore )							
	Primary		Secondary		Tertiary		GSDP	
	Income	Growth Rate (%)	Income	Growth Rate (%)	Income	Growth Rate (%)	Income	Growth Rate (%)
2011-12 (RE)	38728	10.12	130392	3.96	264118	8.77	433238	7.39
2012-13 (QE)	34777	(-)10.20	133078	2.06	280088	6.05	447943	3.39
2013-14 (AE)	37297	7.24	137159	3.07	306162	9.31	480618	7.29
At Current Prices								
2011-12 (RE)	92777	12.60	196965	12.25	377459	15.42	667201	14.08
2012-13 (QE)	91218	(-)1.68	215735	9.53	437906	16.01	744859	11.64
2013-14 ( AE)	105395	15.54	233522	8.24	515321	17.68	854238	14.68

**Note:** AE- Advanced Estimates, QE- Quick Estimates. RE – Revised Estimates. Source: Department of Economics and Statistics, Chennai – 6.

### 3.2.3 Tamil Nadu's Development Experience

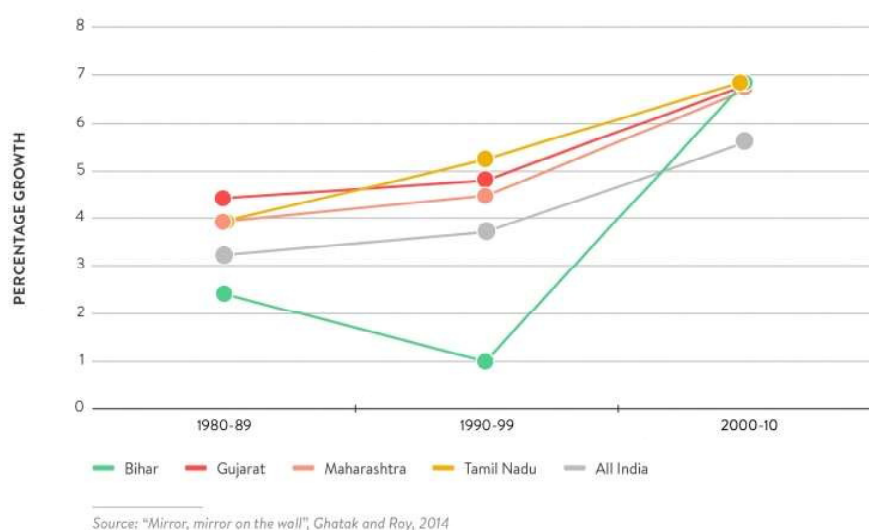
Tamil Nadu has been one of the best-performing states in India when it comes to comprehensive development. From 1994, poverty has declined gradually in the state, resulting in having lower levels of poverty in Tamil Nadu than most other states in India. This trend has been seen in both rural and urban areas of Tamil Nadu, the former seeing a 35-percentage point decrease in poverty between 1994 and 2012 and the latter seeing a 27-percentage point reduction during the same period.

## NOTES



**Fig. 3.1** Population below poverty line across Indian states, 1994-2012

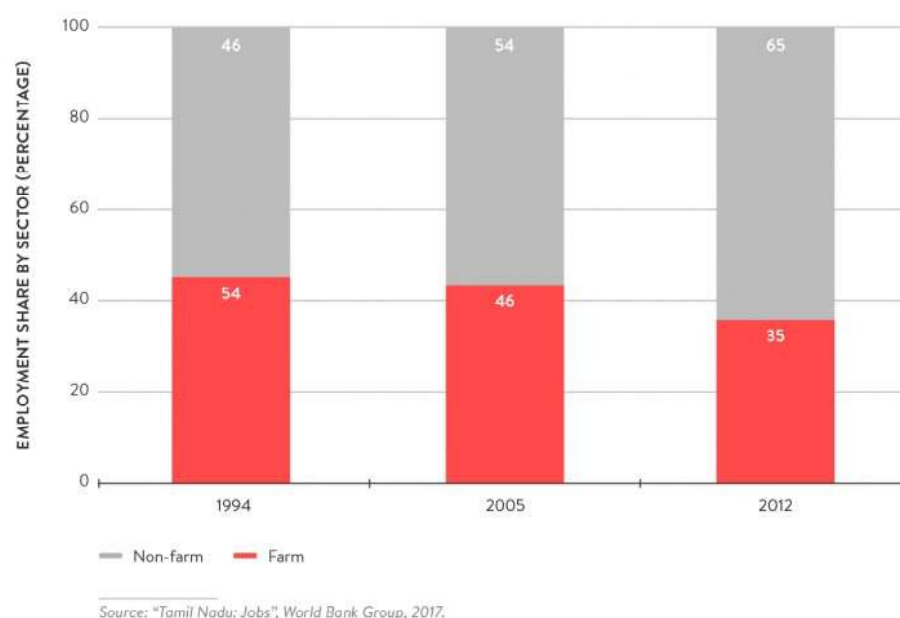
Speedy economic growth over the past few decades has played a major role in the state's poverty decline story. From 1991 to 2012, Tamil Nadu averaged 7% growth in GDP and about 6% growth in GDP per capita—both clocking in above the all-India average.



**Fig. 3.2** Average annual growth rate of per capita income in selected Indian states, by decade

Basically, economic renovation has underpinned the state's growth, as people in Tamil Nadu have moved from the farming occupation into other types of work over time. The state's non-farm services share in 2012 ranked fifth among all Indian states.

## NOTES



**Fig. 3.3** Employment share by sector in Tamil Nadu, 1994-2012

Services have guided the means in terms of contributing to growth and employment, but production has also played a significant role—accounting for approximately 30% of Tamil Nadu’s growth between 1991 and 2012. The state positioned first among all Indian states in terms of number of industrial unit and industrial workers, and has a specialized manufacturing sector. It is among the leading states in automobiles, components, textiles and garments, leather products, pharmaceuticals and other industries. Major automobile manufacturers, such as Hyundai, Ford, Renault and BMW, have had manufacturing facilities in and around Chennai for several years, and the Tirupur-Coimbatore-Salem corridor have been given the name “Manchester of South India” because of the presence of a large number of textile firms in the state.

This economic achievement has concurred with considerable growth on human development. Infant deaths have declined significantly and are now among the lowest in India. Undernourishment is also lowest in the country, and is beneath the national average for all income groups. Across a series of health display, Tamil Nadu stands well against other high-growth, high-income states, such as Gujarat.

**Table 3.3 Basic Health Indicators in Tamil Nadu and Gujarat, 2005-06**

*Trends in State Income and Dynamism*

Indicators	Tamil Nadu	Gujarat
Male life expectancy (2006-10)	67.1	64.9
Female life expectancy (2006-10)	70.9	69
Infant mortality rate (per 1,000 live births, 2011)	22	41
USMR (per 1,000 live births, 2011)	25	52
MMR (per 100,000 live births, 2007-09)	97	148
Total fertility	1.8	2.4
Children who are undernourished (stunted) (%)	31.1	51.7
Vaccination (%)	80.9	45.2
Antenatal care (%)	99	87
Safe delivery (%)	89	62
Child immunisation (%)	80.9	45.2

## NOTES

**Source:** A. Kalaiyarsan, “A Comparison of Developmental Outcomes in Gujarat and Tamil Nadu”

As mentioned earlier in Unit 2, life expectancy in the 2014-18 period was 71.7 per cent, Infant mortality rate 15, total fertility rate 1.6.

On the educational front, children in Tamil Nadu are staying in school longer, and the share of adults in secondary schooling is higher than the national average. In conditions of educational achievement across socioeconomic groups, Tamil Nadu is putting up a fight with Gujarat.

Tamil Nadu still has scope for development: non-farm job growth has been slow in current years, and is not maintained up with the growth of the working-age population; women have dropped out of the labour force, open defecation remains routine among low-income households; and learning outcomes in primary school are also not better than the all-India average. However, the state’s major economic and social growth both through and after economic liberalisation in 1991, was not considered as its experience shows what can be accomplished when political leadership and governance set out and follow through on a sturdy, inclusive progress programme.

### 3.2.4 Tamil Nadu’s Policy Approach for Dynamic Economy

Tamil Nadu has effectively united a logical industrial policy with social welfare plan, which has produced an honourable cycle of development. Industrialisation has offered the funds to invest in social policy, and these social policies have strengthened the health, productivity and talent base of the state’s population. Higher skills among employees, in turn, have endorsed the state to move into more multifaceted economic activities, expand its economy and thus maintain growth.

## NOTES

Tamil Nadu's industrial policy has focused on a few key elements. First, the state has invested in transportation by upgrading road, rail and port networks—to improve connectivity between its surroundings, industrial group and urban marketplace. For example, major ports, such as Chennai, were important in making the state an eye-catching location for export industries. Investments in communications and infrastructure were also given importance to improve connectivity, making possible for Tamil Nadu to become one of India's major IT centres. The government invested heavily from the 1950s to the 1980s, in boosting the state's electrical energy generation capacity, an essential input for manufacturing. All these collective efforts made possible the economic growth of the state.

### Conclusion

The economic dream should be geared toward the requirements and ambition of society at large, and should be obvious to all parts of government, the private sector and citizens. Economic renovation takes time and thus requires strategy steadiness and sustained compulsion on both sides of changes in political leadership across multiple decades and execution of the vision is just as crucial as the vision itself, and calls for the administration to improve its capability to deliver over time—even if the first point is a handful of dedicated agencies that function as “pockets of effectiveness”. Tamil Nadu is still in the middle of its growth journey, but its experience so far highlights how political leadership and state ability can be leveraged in African countries that search a similar path to follow.

### Check Your Progress

1. Why did the Narasimha Rao Government begin economic reforms?
2. What are the important features of economic reforms?
3. What has underpinned the growth of Tamil Nadu?

## 3.3 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The Narasimha Rao Government, in 1991, began the economic restructuring (Economic reforms) in order to reconstruct internal and external confidence in the Indian economy.
2. The important features of the economic reforms are – Liberalisation, Privatisation and Globalisation, commonly known as LPG.
3. Economic renovation has underpinned the state's growth, as people in Tamil Nadu have moved from the farming occupation into other types of work over time.

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### 3.4 SUMMARY

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- The Narasimha Rao Government, in 1991, began the economic restructuring (Economic reforms) in order to reconstruct internal and external confidence in the Indian economy.
- The word economic dynamism refers to the pace and course of change in an economy. It traditionally includes actions like the rate of new business development, the rate of recurrence of labor market turnover, and the geographic mobility of the workers.
- Today, Tamil Nadu is India's second-largest economy even with being only its sixth most heavily populated state, and among India's 12 largest states.
- From 1994, poverty has declined gradually in the state, resulting in having lower levels of poverty in Tamil Nadu than most other states in India.
- Services have guided the means in terms of contributing to growth and employment, but production has also played a significant role—accounting for approximately 30% of Tamil Nadu's growth between 1991 and 2012.
- On the educational front, children in Tamil Nadu are staying in school longer, and the share of adults in secondary schooling is higher than the national average.
- Tamil Nadu has effectively united a logical industrial policy with social welfare plan, which has produced an honourable cycle of development. Industrialisation has offered the funds to invest in social policy, and these social policies have strengthened the health, productivity and talent base of the state's population.

### NOTES

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### 3.5 KEY WORDS

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- **Globalisation:** It is the process of interaction and integration among people, companies, and governments worldwide.
- **Liberalization:** It is a broad term that usually refers to fewer government regulations and restrictions, mainly on economic activities.
- **Privatisation:** It is the transfer of a business, industry, or service from public to private ownership and control.
- **Industrialisation:** It is the period of social and economic change that transforms a human group from an agrarian society into an industrial society. This involves an extensive re-organisation of an economy for the purpose of manufacturing.

## NOTES

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### 3.6 SELF ASSESSMENT QUESTIONS AND EXERCISES

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#### Short-Answer Questions

1. What do economic reforms normally point towards?
2. What does economic dynamism refer to?
3. On which key elements has Tamil Nadu's industrial policy focused?

#### Long-Answer Questions

1. Discuss the trends in Tamil Nadu's state income.
2. Explain Tamil Nadu's development experience.

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### 3.7 FURTHER READINGS

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- Leonard, AG. 2006. *Tamil Nadu Economy*. New Delhi: Macmillan.
- Rajalakshmi, N. 1999. *Tamil Nadu Economy*. Mumbai: Business Publishers.
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## UNIT 4 TAMIL NADU STATE PLANNING COMMISSION

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*Tamil Nadu State  
Planning Commission*

### NOTES

#### Structure

- 4.0 Introduction
- 4.1 Objectives
- 4.2 State Planning Commission: Target, Achievements, and Financing
- 4.3 Current Year Budget – Revenue, Expenditure and Debt
- 4.4 Answers to Check Your Progress Questions
- 4.5 Summary
- 4.6 Key Words
- 4.7 Self Assessment Questions and Exercises
- 4.8 Further Readings

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### 4.0 INTRODUCTION

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The Tamil Nadu State Planning Commission is an institution that is entrusted with a number of tasks related to the development and progress of the state. The Commission is responsible for giving advice and recommendations to the government regarding the development of the state, the resources required, the strategy to be followed and so on. The functions of the Commission have been discussed in this unit in addition to the budget of Tamil Nadu for 2020-21.

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### 4.1 OBJECTIVES

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After going through this unit, you will be able to:

- Discuss the targets and achievements of the State Planning Commission
- Analyse the financing of plans and recent budget of Tamil Nadu

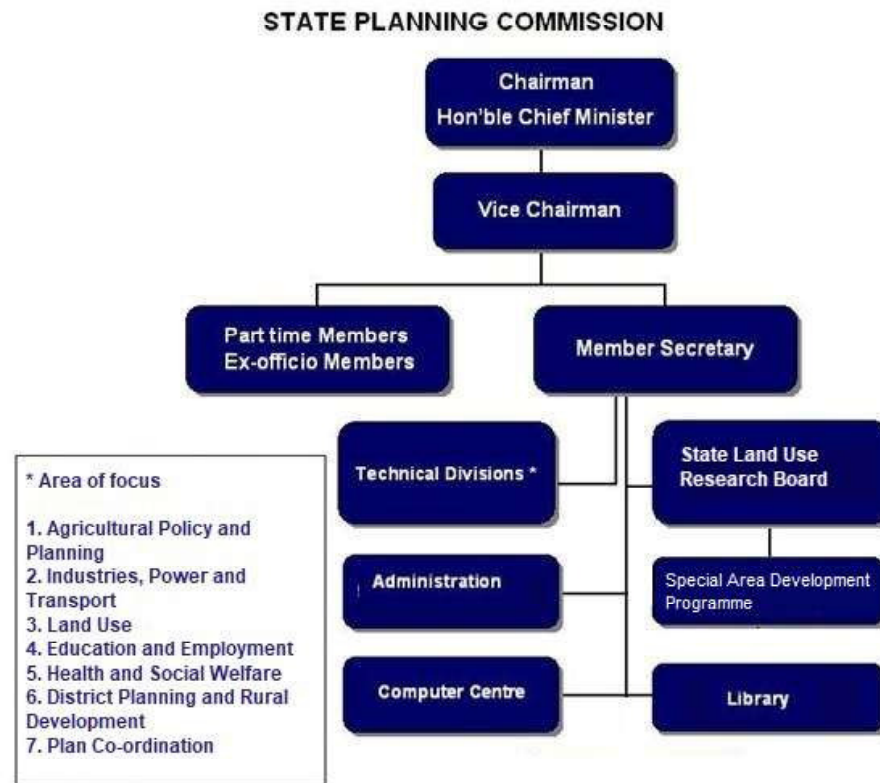
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### 4.2 STATE PLANNING COMMISSION: TARGET, ACHIEVEMENTS, AND FINANCING

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The State Planning Commission (SPC) was established in Tamil Nadu on 25th May, 1971 under the Chairmanship of the Chief Minister as an Advisory Body to make references to the Government on numerous issues related to the development of the State. The Principal Secretary to Management, Planning, Development and Special Initiatives and the Principal Secretary to Government, Finance Department are ex-officio Members. The Associated Secretary is accountable for management in the Commission. The present arrangement is as follows

## NOTES



*Fig. 4.1 Structure of State Planning Commission*

The key purposes of the State Planning Commission:

- Estimating main strategy arrangements through Department of Evaluation and Applied Research;
- Checking growth pointers that inspire the Human Development Index, Gender Development Index, etc.
- Accountability of special studies as required by the State for preparation and application of plan projects and programmes;
- Checking the Tamil Nadu economy and sending reports to Government
- Implementing and observing State Balanced Growth Fund (SBGF) to report the regional discrepancies.
- Synchronizing the functions of District Planning Cells and commencing planning process at District / Block / Village level.

The Commission has the subsequent technical divisions:

1. Agricultural Policy and Planning
2. Industries, Power and Transport
3. Land Use
4. Education and Employment
5. Health and Social Welfare
6. District Planning and Rural Development
7. Plan Co-ordination

## NOTES

### Target and Achievements

**Table 4.1** Performance of Tamil Nadu Economy 2007 to 2013 and 11<sup>th</sup> Plan

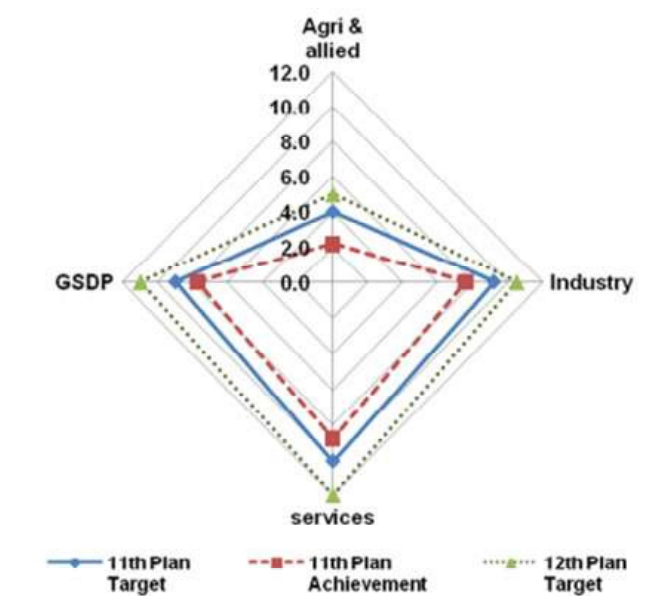
SECTOR	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	XI Plan Target	XI Plan Achievement
	Growth Rate in % - GSDP at 2004-05 Prices						AAGR	
Agriculture, Forestry & Fishing	-4.4	-2.3	6.1	4.5	7.1	1.1	4.0	2.2
Industry	3.9	-2.1	20.9	9.2	6.1	5.1	9.2	7.6
Mining & quarrying	1.2	-1.8	9.3	1.9	3.0	12.0	2.0	2.7
Manufacturing	0.6	-1.3	29.2	9.7	3.5	-1.8	9.9	8.3
Electricity Gas & water supply	-27.8	-74.3	22.4	100.6	63.6	153.2	5.7	16.9
Constructions	18.6	5.3	5.2	5.1	9.2	6.6	8.5	8.7
Services	9.3	9.6	6.1	10.9	8.1	4.8	10.1	8.8
Trade Hotel Restaurants	4.3	3.7	4.5	7.9	3.7	0.5	7.7	4.8
Transport, Storage & Communication	9.4	9.5	9.4	9.0	8.9	5.9	11.5	9.2
Financing, Insurance, Real Estate and Business Services	16.9	12.1	5.2	13.8	13.3	8.5	11.2	12.3
Community, Social & Personal Services	5.4	14.5	7.5	11.9	4.3	2.8	10.5	8.7
Gross State Domestic Products	6.1	4.9	10.4	9.8	7.4	4.6	9.0	7.7

Source: DOES

**Source:** Annual Plan 2013-14 - An Overview (State Planning Commission Tamil Nadu)

The broad objective of the Twelfth Plan was to achieve robust, inclusive and accelerated growth, which will benefit all sections of the Society. The Union Planning Commission had set its targeted growth rate of GDP at 8% in the Twelfth Plan whereas the State aimed to achieve an overall growth rate of 11% per annum during the Twelfth Plan.

## NOTES



**Fig 4.2** Growths, Targets and Achievement (11<sup>th</sup> and 12<sup>th</sup> Plan)

**Source:** Annual Plan 2013-14 - An Overview (State Planning Commission Tamil Nadu)

**Table 4.2** Targets of 12<sup>th</sup> Five Year plan (2012-2017)

Sectors/ Monitorable Indicators	Targets
<b>Income and Poverty</b>	
1. GSDP Growth (Real)	11 Percent Per Annum
2. GSDP Agriculture (Real)	5 Percent Per Annum
3. GSDP Industry (Real)	10.5 Percent Per Annum (11.4 % Manufacturing, 8.5%- Non-Manufacturing)
4. GSDP Services (Real)	12.0 Percent Per Annum
5. Employment (Opportunities)	4 Million
6. Poverty Ratio	Reduced To 8 Percent By 2017
<b>Education</b>	
7. Dropout (Elementary Schools)	Zero
8. Literacy Rate (Gender Gap Literacy)	90 Percent (8 Percentage Points)
<b>Health</b>	
9. Infant Mortality Rate	13 Per 1000 Live Births By 2017
10. Maternal Mortality Ratio	44 Per 100000 Live Births By 2017
11. Total Fertility Rate	1.6 By 2017
12. Life Expectancy	70 Years Male And 73 Years Female
<b>Women and Children</b>	
13. Child (0-3 Years) Malnutrition	16 Percent By 2017
14. Anemia Among Women	33.2 Percent By 2017
15. Sex Ratio	998 By 2017
16. Juvenile Sex Ratio (0-6 Yrs)	965 By 2017
<b>Infrastructure and Environment</b>	
17. Electrification of Households	To All
18. Clean Drinking Water	To All

**Source:** Annual Plan 2013-14 - An Overview (State Planning Commission Tamil Nadu)

## Schemes in Operation

- State Balanced Growth Fund (SBGF)
- Tamil Nadu Innovations Initiative (TANII)
- Special Area Development Programme (SADP) and
- Activities by the Tamil Nadu State Land Use Research Board (TNSLURB)

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Planning Commission

## NOTES

### Financing of Plans: Revenue, Expenditure and Debt

An outlay of ₹37,128 crore was proposed for the Annual Plan 2013-14. The proposed outlay for Annual Plan 2013-14 was 32% higher than the outlay for the year 2012-13. Planned and Non-planned division of outlay has been done away with at the Centre and consequently at the state levels too.

### Changes post 2017: Constitution of State Development Council

While at the Centre, in 2014, the Planning Constitution was replaced by the Niti Aayog, in 2017, the Tamil Nadu Government announced its decisions to reconstitute the State Planning Commission as the State Development Council. But it was not until 2020, that government order was passed in this regard. The newly reconstituted State Development Council has the same head the State Chief Minister and would have a permanent member in the form of the Vice Chairman. In addition to this, in the new body there would be 12 part time members with specific expertise. Further, the functions would remain the same as that of the State Planning Commission with addition to responsibility of monitoring and evaluating the schemes of the State Government.

## 4.3 CURRENT YEAR BUDGET – REVENUE, EXPENDITURE AND DEBT

The Finance Minister, Mr. O. Panneerselvam, offered the Budget for Tamil Nadu for financial year 2020-21 on February 14, 2020.

### Policy Highlights

- **Urban Development and Infrastructure:** The government has projected the Tamil Nadu Urban Flagship Investment Programme to help the state in developing the urban and environmental infrastructure. The programme will cost ₹ 8,156 crore and will be funded with backing from the Asian Development Bank. Further, 179 projects at a cost of ₹ 8.6 lakh crore linking to Tamil Nadu have been included in the National Infrastructure Pipeline. These projects will be implemented in the next five years.
- **Agriculture and Irrigation:** During 2020-21, crop loans of ₹ 11,000 crore will be delivered by co-operative institutions. Further, ₹ 200 crore have been assigned as interest waiver for settlement of loans.

## NOTES

- **Disaster Management:** A complete flood extenuation project for Greater Chennai has been anticipated at a cost of ₹ 3,000 crore. This will be commenced with assistance from the World Bank and Asian Infrastructure Investment Bank. In 2020-21, ₹ 1,360 crore has been provided for disaster management.
- **Stamp duty:** Stamp duty for rent payment agreements will be reduced from 1% to 0.25%. Further, registration charges on such agreements will be reduced from 1% to 0.25% (subject to a maximum of ₹ 5,000).

### Tamil Nadu's Economy

- **GSDP:** The growth rate of Tamil Nadu's GSDP (at constant prices) has increased from 7.2% in 2016-17 to 8.2% in 2018-19.
- **Sectors:** In 2018-19, agriculture, manufacturing, and services contributed to 12%, 36% and 52% of the GSVA, respectively. In the same year, these sectors grew by 9.9%, 6.6% and 8.2%, respectively.
- **Per capita income:** The per capita GSDP of Tamil Nadu in 2018-19 (at constant prices) was ₹ 1,56,041. This is 7% higher than that in 2017-18.
- **Unemployment:** According to the annual report of the Periodic Labour Force Survey (2017-18), Tamil Nadu has one of the lowest unemployment rates at 3.5% as compared to the all-India unemployment rate of 6.0%.

## Budget Estimates for 2020-21

- The total disbursement in 2020-21 is targeted at ₹ 3,00,390 crore. This is 11.2% upper than the revised estimates of 2019-20. This expenditure is anticipated to be met through receipts (other than borrowings) of ₹ 2,24,739 crore and borrowings of ₹ 74,107 crore. Total receipts for 2020-21 (other than borrowings) are expected to be 13.9% higher than the revised estimate of 2019-20.

**Table 4.3 Budget 2020-21 - Key figures (in ₹ crore)**

Items	2018-19 Actuals	2019-20 Budgeted	2019-20 Revised	% change from BE 2019-20 to RE 2019-20	2020-21 Budgeted	% change from RE 2019-20 to BE 2020-21
<b>Total Expenditure</b>	<b>2,43,053</b>	<b>2,64,556</b>	<b>2,70,256</b>	<b>2.2%</b>	<b>3,00,390</b>	<b>11.2%</b>
A. Receipts (except borrowings)	1,80,655	2,02,788	1,97,334	-2.7%	2,24,739	13.9%
B. Borrowings	47,936	58,978	67,838	15.0%	74,107	9.2%
<b>Total Receipts (A+B)</b>	<b>2,28,591</b>	<b>2,61,767</b>	<b>2,65,172</b>	<b>1.3%</b>	<b>2,98,847</b>	<b>12.7%</b>
<b>Revenue Deficit</b>	<b>23,459</b>	<b>14,315</b>	<b>25,072</b>	<b>75.1%</b>	<b>21,618</b>	<b>-13.8%</b>
<i>As % of GSDP</i>	1.41%	0.83%	1.35%		1.03%	
<b>Fiscal Deficit</b>	<b>47,335</b>	<b>44,176</b>	<b>55,058</b>	<b>24.6%</b>	<b>59,346</b>	<b>7.8%</b>
<i>As % of GSDP</i>	2.84%	2.56%	2.97%		2.84%	
<b>Primary Deficit</b>	<b>18,578</b>	<b>11,715</b>	<b>23,378</b>	<b>99.6%</b>	<b>23,035</b>	<b>-1.5%</b>
<i>As % of GSDP</i>	1.11%	0.68%	1.26%		1.10%	

**Notes:** BE is Budget Estimate; RE is Revised Estimate. GSDP for 2020-21 is ₹ 20,91,927 crore. GSDP for 2019-20 BE and 2019-20 RE taken to be ₹ 17,25,625 crore, and ₹ 18,54,952 crore respectively.

**Sources:** Tamil Nadu Budget Documents 2020-21; PRS.

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## Expenditure in 2020-21

- **Capital expenditure** for 2020-21 is projected to be ₹ 59,397 crore, which is an increase of 11.4% over the revised estimates of 2019-20.

## Grants to Local Governments

The state government provides compensation and assignments to local bodies and Panchayati Raj institutions. In 2020-21, this amount is estimated to be ₹ 19,167 crore. This is a 5% increase over the revised estimates of 2019-20.

- Capital expenses include expenditure upsetting the assets and liabilities of the state, such as: (i) capital outlay, i.e. expenditure which leads to creation of assets (such as roads and schools), and (ii) repayment and grant of loans by the state government.
- Tamil Nadu's capital outlay for 2020-21 is estimated to be ₹ 36,368 crore, which is 16.5% higher than the revised estimate of 2019-20. The capital outlay towards health and family welfare is estimated to increase by ₹ 1,385 crore (an increase of 147%) from the revised estimates of 2019-20. For 2019-20, the revised estimate for capital outlay on health and family welfare is 12% lower than the budget estimate.
- **Revenue expenditure** for 2020-21 is proposed to be ₹ 2,40,993 crore, which is 11.1% more than the revised estimates of 2019-20. This expenditure comprises payment of salaries, interest payments etc.

**Table 4.4** Expenditure budget 2020-21 (in ₹ crore)

Items	2018-19 Actuals	2019-20 Budgeted	2019-20 Revised	% change from BE 2019-20 to RE 2019-20	2020-21 Budgeted	% change from RE 2019-20 to BE 2020-21
Capital Expenditure	45,852	52,520	53,323	1.5%	59,397	11.4%
of which Capital Outlay	24,311	31,251	31,221	-0.1%	36,368	16.5%
Revenue Expenditure	1,97,201	2,12,036	2,16,933	2.3%	2,40,993	11.1%
<b>Total Expenditure</b>	<b>2,43,053</b>	<b>2,64,556</b>	<b>2,70,256</b>	<b>2.2%</b>	<b>3,00,390</b>	<b>11.2%</b>
A. Debt Repayment	15,064	17,591	17,863	1.5%	16,304	-8.7%
B. Interest Payments	28,757	32,461	31,680	-2.4%	36,311	14.6%
<b>Debt Servicing (A+B)</b>	<b>43,821</b>	<b>50,052</b>	<b>49,543</b>	<b>-1.0%</b>	<b>52,616</b>	<b>6.2%</b>

**Note:** Capital outlay denotes expenditure which leads to creation of assets.

**Sources:** Tamil Nadu Budget Documents 2020-21; PRS.

## NOTES

## Sectorial expenditure in 2020-21

The sectors listed below account for 56% of the total budgeted expenditure of Tamil Nadu in 2020-21.

### NOTES

**Table 4.5 Sector-wise expenditure for Tamil Nadu Budget 2020-21 (in ₹ crore)**

Sector	2018-19 Actuals	2019-20 Budgeted	2019-20 Revised	2020-21 Budgeted	% change from RE 2019-20 to BE 2020-21	Budget provisions for 2020-21
<b>Education</b>	33,709	35,777	37,402	41,626	11%	<ul style="list-style-type: none"> <li>₹ 10,111 crore has been allocated for government primary schools.</li> <li>11,131 crore has been allocated for government secondary schools.</li> </ul>
<b>Agriculture and allied activities</b>	13,348	15,247	16,260	16,986	4%	<ul style="list-style-type: none"> <li>₹ 724 crore has been allocated towards the Pradhan Mantri Fasal Bima Yojana.</li> </ul>
<b>Water Supply, Sanitation, Housing and Urban Development</b>	11,568	15,196	13,304	16,630	25%	<ul style="list-style-type: none"> <li>₹ 3,700 crore, ₹ 1,650 crore, and ₹ 1,450 crore have been allocated for PM Awas Yojana (Urban), Smart Cities, and AMRUT, respectively.</li> </ul>
<b>Health and Family Welfare</b>	12,489	12,398	12,898	15,773	22%	<ul style="list-style-type: none"> <li>₹ 1,033 crore has been allocated for the Chief Minister's Comprehensive Health Insurance Scheme.</li> <li>₹ 1,515 crore has been allocated towards maternity and child health.</li> </ul>
<b>Transport</b>	9,443	12,223	11,616	14,744	27%	<ul style="list-style-type: none"> <li>₹ 5,500 crore has been allocated for the Comprehensive Road Infrastructure Development programme.</li> </ul>
<b>Social Welfare and Nutrition</b>	13,909	12,877	14,589	14,072	-4%	<ul style="list-style-type: none"> <li>₹ 1,863 crore has been allocated for the MGR Nutritious Meal programme.</li> </ul>
<b>Energy</b>	7,869	9,771	9,549	13,118	37%	<ul style="list-style-type: none"> <li>₹ 4,563 crore has been granted to TANGEDCO for paying off its debt as per the UDAY scheme. Further, ₹ 4,266 crore has been allocated for taking over its future losses.</li> </ul>
<b>Police</b>	7,144	7,749	8,124	8,516	5%	<ul style="list-style-type: none"> <li>₹ 4,539 crore has been allocated towards the district police.</li> </ul>
<b>Rural Development</b>	6,745	6,435	6,522	8,004	23%	<ul style="list-style-type: none"> <li>₹ 3,099 crore has been allocated for the PM Awas Yojana (Gramin).</li> </ul>
<b>Irrigation and Flood Control</b>	3,339	5,071	5,189	6,342	22%	<ul style="list-style-type: none"> <li>₹ 1,45 crore has been allocated to increase coverage of micro irrigation.</li> </ul>
<b>% of total expenditure</b>	<b>54%</b>	<b>55%</b>	<b>55%</b>	<b>56%</b>		

**Source:** Tamil Nadu Budget Documents 2020-21; PRS.

**Committed expenditure:** Dedicated expenditure of a state usually includes expenditure on payment of salaries, pensions, and interest. A larger percentage of budget allocated for committed expenditure items restricts the state's suppleness to decide on other expenditure priorities such as capital investments.



In 2020-21, Tamil Nadu is estimated to spend ₹ 1,36,098 crore on committed expenditure, i.e. payment of salaries, pensions, and interest. This is 13.2% higher than the revised estimate of 2019-20 (₹ 1,20,242 crore). These committed liabilities form 62% of the state's revenue receipts. Salaries form the highest component (47%) of the committed expenditure. This expenditure on salaries is estimated to increase by 12.7% in 2020-21 over the 2019-20 revised estimate.

## NOTES

**Table 4.6** Committed Expenditure for the state in 2020-21 (in ₹ crore)

Item	2018-19 Actuals	2019-20 Budgeted	2019-20 Revised	% change from BE 2019-20 to RE 2019-20	2020-21 Budgeted	% change from RE 2019-20 to BE 2020-21
Salaries	52,539	54,611	56,963	4.3%	64,211	12.7%
Pensions	30,281	33,410	31,598	-5.4%	35,575	12.6%
Interest Payments	28,757	32,461	31,680	-2.4%	36,311	14.6%
<b>Committed Expenditure</b>	<b>1,11,577</b>	<b>1,20,482</b>	<b>1,20,242</b>	<b>-0.2%</b>	<b>1,36,098</b>	<b>13.2%</b>

**Sources:** Tamil Nadu Budget Documents 2020-21; PRS.

## Receipts in 2020-21

- The **total revenue receipts** for 2020-21 are projected to be ₹ 2,19,375 crore, surge of 14.3% over the reviewed estimates of 2019-20. Of this, ₹ 1,49,429 (68% of the revenue receipts) crore will be elevated by the state through its **own resources**, and ₹ 69,946 crore (32% of the revenue receipts) will be in the form of **central transfers**, i.e. state's share in central taxes and grants-in-aid from the central government.
- **Devolution:** In 2020-21, receipts from the state's share in central taxes is estimated to increase by 24.5% over the 2019-20 revised estimate. However, in 2019-20, devolution is assessed to decrease by 22.3% to ₹ 26,392 crore as related to the planned estimate. This may be due to a 19% cut in the union budget for devolution to states, from ₹ 8,09,133 crore at the budgeted stage to ₹ 6,56,046 crore at the revised stage.

**Table 4.7** Break up of state government receipts (₹ crore)

Items	2018-19 Actuals	2019-20 Budgeted	2019-20 Revised	% change from BE 2019-20 to RE 2019-20	2020-21 Budgeted	% change from RE 2019-20 to BE 2020-21
State's Own Tax	1,05,534	1,24,813	1,20,810	-3.2%	1,33,530	10.5%
State's Own Non-Tax	14,200	13,327	14,195	6.5%	15,899	12.0%
Share in Central Taxes	30,639	33,978	26,392	-22.3%	32,849	24.5%
Grants-in-aid from Centre	23,368	25,603	30,464	19.0%	37,097	21.8%
<b>Total Revenue Receipts</b>	<b>1,73,741</b>	<b>1,97,721</b>	<b>1,91,861</b>	<b>-3.0%</b>	<b>2,19,375</b>	<b>14.3%</b>
Borrowings	47,936	58,978	67,838	15.0%	74,107	9.2%
Other receipts	6,913	5,067	5,473	8.0%	5,364	-2.0%
<b>Total Capital Receipts</b>	<b>54,850</b>	<b>64,046</b>	<b>73,311</b>	<b>14.5%</b>	<b>79,472</b>	<b>8.4%</b>
<b>Total Receipts</b>	<b>2,28,591</b>	<b>2,61,767</b>	<b>2,65,172</b>	<b>1.3%</b>	<b>2,98,847</b>	<b>12.7%</b>

**Sources:** Tamil Nadu Budget Documents 2020-21; PRS.

## NOTES

- **Own tax revenue:** Total own tax revenue of Tamil Nadu is projected to be ₹ 1,33,530 crore in 2020-21. The own tax to GSDP ratio is directed at 6.4% in 2020-21, which is in the same range as the revised estimate of 6.5% in 2019-20. This implies that growth in collection of taxes has been at par with the growth in the economy.

*Table 4.8 Some of state's own-tax revenue (in ₹ crore)*

Items	2018-19 Actuals	2019-20 Budgeted	2019-20 Revised	% change from BE 19-20 to RE 19-20	2020-21 Budgeted	% change from RE 19-20 to BE 20-21	% of Revenue Receipts in 20-21
Sales Tax and VAT	42,701	48,034	48,452	1%	56,046	16%	26%
State GST	38,533	48,157	44,218	-8%	46,196	4%	21%
Stamps Duty and Registration Fees	11,066	13,123	13,123	0%	14,435	10%	7%
State Excise Duty	6,863	7,262	7,262	0%	8,134	12%	4%
Taxes on Vehicle	5,573	6,511	6,019	-8%	6,898	15%	3%
Taxes and Duties on Electricity	621	1,364	1,443	6%	1,480	3%	1%
Land Revenue	178	357	279	-22%	328	18%	0%
<b>GST Compensation Grants</b>	<b>3,151</b>	<b>5,582</b>	<b>9,000</b>	<b>61%</b>	<b>10,300</b>	<b>14%</b>	<b>5%</b>

**Sources:** Tamil Nadu Budget Documents 2020-21; PRS.

### Deficits, Debts and FRBM Targets for 2020-21

The Tamil Nadu Fiscal Responsibility Act, 2003 provides annual targets to progressively reduce the outstanding liabilities, revenue deficit and fiscal deficit of the state government.

**Revenue deficit:** It is the extra of revenue disbursement over revenue receipts. A revenue deficit suggests that the government desires to borrow in order to finance its expenses which do not create capital assets.

The budget estimates a revenue deficit of ₹ 21,618 crore (or 1.03% of GSDP) in 2020-21. This indicates that revenue receipts are anticipated to be lower than the revenue expenditure, causing a deficit. The 14<sup>th</sup> Finance Commission had suggested that states should abolish revenue deficits. The 2020-21 estimates for Tamil Nadu recommend that the state will not be meeting this target of eradicating revenue deficit. As per the 15<sup>th</sup> Finance Commission recommendations, in 2020-21, Tamil Nadu will receive revenue deficit allowances of ₹ 4,025 crore to eliminate its revenue deficit.

**Fiscal deficit:** It is the additional of total expenditure over total receipts. This gap is filled by borrowings by the government, and leads to an increase in total accountabilities. In 2020-21, fiscal deficit is estimated to be ₹ 59,346 crore, which is 2.8% of the GSDP. The evaluation is lower than the 3% limit as per the FRBM Act. This edge may be relaxed to a maximum of 3.5% of GSDP, if states are able to comprise their debt and interest payments to certain specified levels.

**Outstanding Liabilities:** Outstanding charges is the accumulation of borrowings over the years. In 2020-21, the outstanding accountabilities are expected to be 21.8% of the GSDP.

**Education:** Tamil Nadu has assigned 15% of its spending on education in 2020-21. This is slightly lower than the normal budget allocation for education by 29 states (using 2019-20 BE).

- **Health:** Tamil Nadu has allotted 5.7% of its total disbursement on health, which is higher than the average expenditure of 29 states.
- **Agriculture and allied activities:** The state has assigned 6.1% of its total budget towards cultivation and similar activities. This is lesser than the allocations of 29 states (7.1%).
- **Rural development:** Tamil Nadu has assigned 2.9% of its expenditure on rural improvement. This is considerably lesser than the average (6.2%) of the 29 states.
- **Police:** Tamil Nadu has allocated 3.1% of its total expenditure on police, which is again lesser than the average expenditure of 29 states (4.1%).
- **Roads and bridges:** Tamil Nadu has assigned 5.1% of its total expenditure on roads and bridges, which is greater than the average expenditure of 29 states (4.2%).

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### 15<sup>th</sup> Finance Commission's recommendations for 2020-21

The 15th Finance Commission's (15<sup>th</sup> FC) testimony for the financial year 2020-21 was scheduled in Parliament on February 1, 2020. The 15<sup>th</sup> FC endorsed a 41% share for states in the central government's tax revenue in 2020-21, a 1% decrease from the 42% share recommended by the 14<sup>th</sup> FC (2015-20). The 1% decrease is to offer funds to the newly formed union territories of Jammu and Kashmir, and Ladakh from the share of the central government. The 15<sup>th</sup> FC also recommended revised criteria for determining the share of individual states.

#### Check Your Progress

1. Who are the ex-officio members of the State Planning Commission?
2. How much has the growth rate of Tamil Nadu's GSDP increased between 2016 and 2019?
3. What does the dedicated expenditure of a state include?
4. What is revenue deficit?

## 4.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The Principal Secretary to Management, Planning, Development and Special Initiatives and the Principal Secretary to Government, Finance Department are ex-officio Members.

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2. The growth rate of Tamil Nadu's GSDP (at constant prices) has increased from 7.2% in 2016-17 to 8.2% in 2018-19.
3. Dedicated expenditure of a state usually includes expenditure on payment of salaries, pensions, and interest.
4. Revenue deficit is the extra of revenue disbursement over revenue receipts. A revenue deficit suggests that the government desires to borrow in order to finance its expenses which do not create capital assets.

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### 4.5 SUMMARY

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- The State Planning Commission (SPC) was established in Tamil Nadu on 25th May, 1971 under the Chairmanship of the Chief Minister as an Advisory Body to make references to the Government on numerous issues related to the development of the State.
- The government has projected the Tamil Nadu Urban Flagship Investment Programme to help the state in developing the urban and environmental infrastructure.
- A complete flood extenuation project for Greater Chennai has been anticipated at a cost of ₹ 3,000 crore. This will be commenced with assistance from the World Bank and Asian Infrastructure Investment Bank.
- According to the annual report of the Periodic Labour Force Survey (2017-18), Tamil Nadu has one of the lowest unemployment rates at 3.5% as compared to the all-India unemployment rate of 6.0%.
- Dedicated expenditure of a state usually includes expenditure on payment of salaries, pensions, and interest. A larger percentage of budget allocated for committed expenditure items restricts the state's suppleness to decide on other expenditure priorities such as capital investments.
- The Tamil Nadu Fiscal Responsibility Act, 2003 provides annual targets to progressively reduce the outstanding liabilities, revenue deficit and fiscal deficit of the state government.

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### 4.6 KEY WORDS

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- **Stamp Duty:** It is a tax that is levied on single property purchases or documents (including, historically, the majority of legal documents such as cheques, receipts, military commissions, marriage licences and land transactions).
- **Revenue expenditures:** These are short-term expenses used in the current period or typically within one year which include the expenses required to meet the ongoing operational costs of running a business.

- **Capital outlay:** It is defined as money that's spent to maintain, upgrade, acquire, or repair capital assets.
- **FRBM Act:** It is an Act of the Parliament of India to institutionalize financial discipline, reduce India's fiscal deficit, improve macroeconomic management and the overall management of the public funds by moving towards a balanced budget and strengthen fiscal prudence.

## NOTES

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### 4.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

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#### Short-Answer Questions

1. Who is accountable for management in the SPC?
2. List three key purposes of the SPC.
3. What do capital expenses include?

#### Long-Answer Questions

1. Discuss the key highlights of Tamil Nadu budget 2020-21.
2. Examine Tamil Nadu's sectorial expenditure in 2020-21.

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### 4.8 FURTHER READINGS

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- Leonard. 2006. *Tamil Nadu Economy*. New Delhi: Macmillan.
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Annual Plan 2013-14 - An Overview (State Planning Commission Tamil Nadu)  
<[http://www.spc.tn.gov.in/annualplan/ap2013-14/ch1\\_1314.pdf](http://www.spc.tn.gov.in/annualplan/ap2013-14/ch1_1314.pdf)>

## NOTES

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## BLOCK - II

### AGRICULTURAL DEVELOPMENT IN TAMIL NADU

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## UNIT 5 AGRICULTURAL SECTOR

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### Structure

- 5.0 Introduction
- 5.1 Objectives
- 5.2 Overview of Agriculture Sector
- 5.3 Sources of Irrigation
- 5.4 Cropping Pattern in Tamil Nadu
- 5.5 Productivity and Yield of Major Crops
- 5.6 Answers to Check Your Progress Questions
- 5.7 Summary
- 5.8 Key Words
- 5.9 Self Assessment Questions and Exercises
- 5.10 Further Readings

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### 5.0 INTRODUCTION

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The agriculture sector is most dominant sector in Tamil Nadu. It is important to note that the Tamil Nadu government has taken different measures to promote the agricultural sector in the State. Due to scientific advancements and proficiency of the farmers, the state of agricultural production in the State has improved considerably. Various sources of irrigation include canals, tanks and wells. This unit will discuss the cropping pattern and the major crops grown in Tamil Nadu. The measures taken to promote horticulture will also be explained.

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### 5.1 OBJECTIVES

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After going through this unit, you will be able to:

- Explain the main sources of irrigation
- Examine the cropping pattern in Tamil Nadu
- Discuss in detail the major crops produced in Tamil Nadu

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### 5.2 OVERVIEW OF AGRICULTURE SECTOR

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Agriculture is the most dominant sector in the economy of Tamil Nadu. Agriculture forms the basis of life for around 70 percent of the state's population that is engaged in agricultural activities as it is one of the most important means of occupation in

Tamil Nadu. Since the beginning, Tamil farmers have proficiently conserved limited rain water in irrigation reservoirs or tanks, government canals and tube wells. Normal wells also form part of the irrigation system.

Tamil Nadu occupies an area of 1.3 lakh sq. km for cultivation. The main task of the government of Tamil Nadu is to promote stability in the agricultural sector and to also add to the sustainability in the agricultural production of the state. This is done with an intention to meet the demands put forward by the growing population for food as well as raw materials in the agro-based industries. This will take a toll on the unemployment in the rural areas. The agriculture in Tamil Nadu has shown a remarkable progress over the years with the help of proficient farmers who have access to and are receptive to the scientific development in the agricultural sector of Tamil Nadu. The agricultural department of Tamil Nadu has introduced various development schemes and ground-breaking technologies to accelerate growth in the state's agriculture. Agriculture practices have shown drastic development since mid-20<sup>th</sup> century.

Tamil Nadu's Agriculture Department has adopted different programmes to increase agricultural production as well as to enhance the economic status of the farming sector. These are listed below:

- Intensive Integrated farming system
- Massive Wasteland Development Programme
- Extensive watershed development activities
- Water management through Micro irrigation systems
- Organic farming
- Soil health improvement through Bio-fertilizer including Green Manuring

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### 5.3 SOURCES OF IRRIGATION

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Irrigation has been practiced in India and other Asian countries since the beginning and agriculture in civilizations progressed over time through irrigation systems. All these early civilizations are in South and South West Asia. In Tamil Nadu, the Chola kingdom had well developed technologies for irrigation supervision. The check dam at Kallanai to manage the river for irrigation is a classic example.

**There are different types of irrigation:**

**Canals (Including System Tanks):** Canals are the key source of irrigation in Tamil Nadu. As the system tanks get supply from a permanent storage like reservoirs, dams etc. the region irrigated through these sources is categorized in canals. During 2009-10, canal irrigation accounted for 26.4% of the net area irrigated by all sources in the state. The net area irrigated by canals including system tanks during the year was 757090 hectare. The net area irrigated by canals is maximum in Thiruvavur district with 150564 ha (19.9%) followed by Thanjavur

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district with 134554 hectare (17.8%) and Nagapattinam district with 123696 ha (16.3%) of the total net area irrigated by canals in the State.

Greater part of the canal irrigation system in Tamil Nadu are supply-based systems. It is very difficult to improve water use efficiency in supply-based systems after a certain level. As a result, all the canal irrigation systems were slowly converted to demand based systems. Improved method to constructively use water during nights is to do groundwater recharges through open wells and construction of injection wells.

Farmers are encouraged to give land for building of farm ponds in their own lands through financial assistance. Canal water accessible during night time may be stored in these farm ponds. When their share of water is more than the field demand, that water can also be stock in their farm ponds. The poromboke lands existing in the canal domination areas are also used for the building of tanks to store water.

**Tank Irrigation**

Non-system tanks which are supplied partly from their independent catchment areas and moderately from the diversion of river water and forests streams depend fully on rain. In comparison to canal irrigation system, the water use efficiency is enhanced more easily in tank irrigation. The area of tank irrigation systems is less as compared to the canal irrigation systems. For all tank irrigation systems, Water Users Association is strengthened and the total management of tank irrigation systems are handed over to water users associations. The area irrigated by non-system tanks during the year 2009-10 is 503491 hectare as against 540281 ha in 2008-09 registering a decrease of 36790 ha or 6.8% over previous year. The coverage of area irrigated by tanks during the year is the highest in Pudukottai district with 14.9% followed by Kancheepuram district with 13.6% and Sivagangai district with 12.8%.

**Well irrigation**

Compared to canal and tank irrigation, the water use efficiency is higher in well irrigation. However, there is always a possibility for improving water use efficiency in well irrigation. If water passes through pipes from well to the field instead of field channels, the conveyance efficiency can be improved. Subsidies are given for setting up of plastic conveyance system.

Wells are the main source of irrigation in Tamil Nadu. Open wells and tube-wells/bore-wells continue to be the principal source of irrigation throughout the year. The net area irrigated by open wells and tube-wells / bore-wells together accounted for 1593968 ha (about 55.7 % of the total net area irrigated) in 09-10 as against 1614082 ha in 08-09 showing a decrease of 20114 ha i.e. 1.2%. Area irrigated by wells during the year 09-10 was the maximum in Villupuram district with 11.3% of the total net area irrigated by the wells in the state followed by 7.7% in Thiruvannamalai district and 6.4% in Salem district.



Tamil Nadu, is a farmer-friendly state that has set one of the finest platform for agricultural progress by bringing in novel agricultural equipments to re-invent Green Revolution for the second time in the state. Further, the Government has prepared and executed policies and schemes to accomplish a reliable and speedy growth at an increase speed.

The net area irrigated by various sources:

**Table 5.1** Water Source Wise Net Irrigated Area (2017-18)

Source	Availability (Nos)	Net Irrigated Area (Lakh Ha.)	% wrt to Net Area Irrigated
Canals	2,244	5.89	22.10
Tanks	41,120	3.58	12.66
Wells	18,70,841	16.77	65.16
Others		0.02	0.08
Total		26.26	100.00

The area irrigated by wells and borewells accounted for 64% followed by Canals 22% and Tanks 14%

Source: ENVIS Centre: Tamil Nadu-State of Environment and Related Issue

### Check Your Progress

1. What are the different programmes initiated by the Tamil Nadu government to enhance the farming sector?
2. Mention the three main sources of irrigation.

## 5.4 CROPPING PATTERN IN TAMIL NADU

Agriculture continues to be one of the leading sectors of the State economy, as 70% of the population is engaged in Agriculture and other related activities for their living. The State has as an area of 1.3 Lakh sq.km with a gross harvest area of around 63 L.Ha. The policies and objectives of the government is aimed at ensuring stability in agricultural production and also increasing agricultural production in a sustainable manner to meet the food requirements of the growing population. In this way, the raw material needs of agro based industries can be met and employment opportunities can be provided to the rural population.

In a mainly agricultural economy, economic growth depends to a very large extent on the rate of growth in agriculture. There is a strong need to improve agricultural production in the State. In the present time, the cropping model of Tamil Nadu has been heavily criticized with a view to get better return per unit of cultivated area. It was observed that the per hectare achievement is low at present which is somewhat due to the comparatively low prices existing in Tamil Nadu state in contrast to other states in India and to some extent because of the cropping

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pattern which has a large depiction of crops that bring low returns compared to other crops.

The Agriculture Department has challenged themselves to attain higher growth rate in agriculture by putting into practice several improvement schemes and also introducing significant technologies to increase the production. Intensive Integrated farming system, massive Wasteland Development Programme, widespread watershed development activities, water management through Micro irrigation systems, Organic farming, Soil fertilization through Bio-fertiliser together with Green Manuring, implementation of Integrated Nutrient Management (INM) and Integrated Pest Management (IPM) technologies are given preference through a range of programmes. Apart from this, crop diversification to obtain better result and value addition to agricultural produce are also given priority to improve the economic condition of the farming society.

### Agro-climatic conditions of Tamil Nadu

Agro climatic conditions mainly refers to soil types, rainfall, temperature and water availability, rainfall distribution, irrigation pattern, cropping pattern and other ecological and social uniqueness. Tamil Nadu has been segregated into seven agro-climatic zones. The seven agro-climatic zones of Tamil Nadu are as follows:

- Cauvery Delta zone
- North Eastern zone
- Western zone
- North Western zone
- High Altitude zone
- Southern zone and
- High Rainfall zone

### Important crops

The major food crops of Tamil Nadu are rice, maize, jowar (cholam), bajra (cumbu), ragi, and pulses (Bengalgram, Redgram, Greengram Blackgram and Horsegram). The cash crops include cotton, sugarcane, oilseeds, coffee, tea, rubber, coconut, ginger and chillies and the main horticultural products are bananas and mangoes. Tamil Nadu is the largest producer of bananas, flowers and tapioca; it is the second largest producer of mangoes, natural rubber, coconut, groundnut and the third largest producer of coffee, sapota, tea and sugarcane. Its sugarcane yield per hectare is the highest in India. Tamil Nadu has 17,000 hectares of land for oil palm farming, the second highest in India. Rice is the main staple food of the state.

The three crops based on duration are:

- a) **Kuruvai: This is the short term crop** with duration of three and a half to four months from June-July to October-November.

- b) **Thaladi:** This is the second crop which grows in 5 to 6 months from October-November to February-March.
- c) **Samba:** This is the third one and has duration of almost 6 months from August to January.

*Table 5.2 Land Use Pattern in Tamil Nadu (2018-19 provisional)*

S. No	Details	Area (Lakh Ha)	% with reference to total Geographical area
1	Forest	21.57	16.55
2	Net Cropped Area (*)	45.82	35.16
3	Area under Misc. Tree crops	2.26	1.73
4	Permanent Pastures	1.08	0.83
5	Current fallow	10.47	8.03
6	Other fallows	19.30	14.81
7	Culturable Waste	3.23	2.48
8	Land put to non agricultural use	22.02	16.90
9	Barren and Unculturable land	4.58	3.51
	<b>Total Geographical Area</b>	<b>130.33</b>	<b>100.00</b>
	<b>Cropping Intensity (%)</b>		<b>124</b>

(\*) Difference between Gross Cropped Area (56.72 Lakh Hectare) and Area sown more than once (10.90 Lakh Hectare)

Source: Agriculture Policy Note 2020-21

### Check Your Progress

- What do you mean by agro-climatic conditions?
- List the seven agro-climatic zones of Tamil Nadu.

## 5.5 PRODUCTIVITY AND YIELD OF MAJOR CROPS

Achieving food security by increasing agricultural production is at the core of agricultural growth policy in the State. This policy assumes importance in light of the growing population and rise in economic growth. Different programmes have been commenced for increasing production of agricultural products in the State at different points in time. Let's begin by learning about the general productivity patterns in the past year before looking at the latest date.

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**Table 5.3 Performance of Principal Crops (2011 - 2014)****NOTES**

Performance of Principal Crops in Tamil Nadu									
Crops	2011-12			2012-13			2013-14 <sup>#</sup>		
	A	Y	P	A	Y	P	A	Y	P
Paddy	19.04	3918	74.59	14.93	2712	40.50	18.49	3097	57.26
Millets	6.38	3643	23.24	6.42	2092	13.42	9.10	2747	25.00
Pulses	6.67	554	3.69	5.11	415	2.13	7.73	414	3.20
Foodgrains	32.09	3164	101.52	26.46	2118	56.05	35.32	2420	85.46
Sugarcane <sup>@</sup>	3.46	113	389.75	3.48	98	340.14	3.58	105	375.46
Cotton*	1.36	481	3.82	1.33	326	2.55	1.50	361	3.18
Oilseeds	4.49	2481	11.14	3.90	2092	8.16	4.61	2245	10.35

*Note: A – Area in lakh hectares; Y – Yield in kgs per hectare; P – Production in lakh tonnes \* in terms of lint; @ - in terms of cane # - Forecast estimates.*  
*Source: Department of Economics and Statistics, Chennai – 6*

**Rice based cropping systems in Tamil Nadu**

It can be described as a mix of farming practices that including rice as the main crop along with farming of other crops. Inter-cropping of rice and other companionable crops is also extensively practiced in many regions.

Rice based cropping system is a major cropping system practiced in India. It can be described as a mix of farming practices that includes rice as the major crop followed by subsequent cultivation of other crops. This comprises the rotation of crops involving rice, pulses, oil seeds, cotton, sugarcane, green manures, vegetables, etc. Each state and region have different rice based cropping systems in India ranging from rice-rice-rice to rice followed by different cereals, pulses, oil seeds, vegetables and fiber crops. Rice based cropping systems also include lowland and upland crops.

Tamil Nadu is one of the primary rice growing states in India. This state has a long history of growing rice, and is gifted with favorable climatic conditions suitable for rice growing. The rice based cropping patterns are seen in the major growing districts of Thanjavoor, Thiruvavoor and Nagapattinam.

**Rice-rice-pulse/oil seeds**

Other Mixed farming practices are:

- Rice-pulse-green manure
- Rice-pulse/oilseeds
- Rice-rice-rice

**Horticulture in Tamil Nadu**

The state government set up an operation for the expansion of horticulture in Tamil Nadu in 2003. It have been segregated into seven categories viz., fruits, vegetables, spices and condiments, plantation crops, flowers and medicinal and aromatic plants. It is the fastest growing sector within agriculture in Tamil Nadu. Approximately 10.96 lakh ha. is being used for a variety of horticultural crops.

**Table 5.4 Performance of Horticulture Crops (2011 - 14)**

Agricultural Sector

Performance of Horticulture Crops in Tamil Nadu									
Crops	2011-12			2012-13			2013-14 <sup>#</sup>		
	A	Y	P	A	Y	P	A	Y	P
Fruits	2.87	20.48	58.77	3.10	21.62	67.00	3.29	22.43	73.70
Vegetables	2.54	27.25	69.27	2.74	28.77	78.96	2.90	29.95	86.79
Spices & Condiments	1.65	6.11	10.05	1.78	6.44	11.46	1.88	6.69	12.61
Plantation Crops	2.55	4.12	10.50	2.75	4.34	11.97	2.92	4.51	13.16
Medicinal and aromatic crops	0.14	9.20	1.29	0.15	9.73	1.48	0.16	9.91	1.62
Flowers	0.26	10.35	2.74	0.29	10.92	3.12	0.31	11.12	3.43
Total Crops	10.01	15.24	152.62	10.81	16.09	173.99	11.46	16.69	191.31
<i>Note: A – Area in lakh hectares; Y – Yield in tonne per hectare; P – Production in lakh tonnes</i> <i># – Forecast estimates. Source: Department of Horticulture and Plantation Crops, Chennai-5</i>									

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The total production of horticultural crops is 192.28 lakh MT. Tamil Nadu contributes 10% in fruits and 6% in vegetables. Horticulture is an important division of Agriculture sector which contributes about one-fifth share in the economy of Agriculture and related sectors. Mango and Banana account for over 87% of the total fruit production. The major vegetables grown are Tapioca, Tomato, Onion, Brinjal and Drumstick. Tamil Nadu is also a leading state in the manufacture of flowers with the total production of horticultural crops at Rs. 99.47 Lakhs during 2003-04. The major flowers grown in Tamil Nadu are Jasmine, Mullai, Chrysanthemum, Marigold and Rose.

Essential spices and condiments grown are chillies, turmeric, tamarind, coriander, pepper, cardamom and cloves in an area of 1,45,559 Ha. in districts like Ramnad, Thoothukudi, Erode, Salem, Virudhunagar, Dindigul, Dharmapuri and Sivagangai Districts.

Tea, Coffee, Rubber and Cashew are other important Plantation Crops grown in an area of 2,32,988 Ha in Districts like Nilgiris, Ariyalur, Cuddalore, Kanyakumari, Dindigul, Coimbatore, Pudukottai and Salem. Traditional flowers like Jasmine, Crossandra, Tuberose, and Chrysanthemum, and cut flowers like Rose, Carnations, and Gerbera are also being produced in the State. Flower industry is growing day by day due to high export prospects. Flowers are grown in an area of 25309 ha in districts like Dindigul, Dharmapuri, Krishnagiri, Salem, Madurai, Tirunelveli, Thiruvallur, Vellore and Thiruvannamalai.

Medicinal and Aromatic crops like Gloriosa, Senna, Coleus, Lemon-grass and Periwinkle are grown in an area of 11,230 Ha. in districts like Virudhunagar, Dindigul, Thiruvallur, Ariyalur, Madurai, Thiruvallur, Dharmapuri, Salem, Nagapattinam, and Trichy. Modern and superior technologies are given to horticultural farmers to increase the productivity of all horticultural crops.

Tamil Nadu agriculture also own jatropa plant which has Bio-diesel policy. Tamil Nadu is well-liked as the largest producer of agricultural products in India.

## NOTES

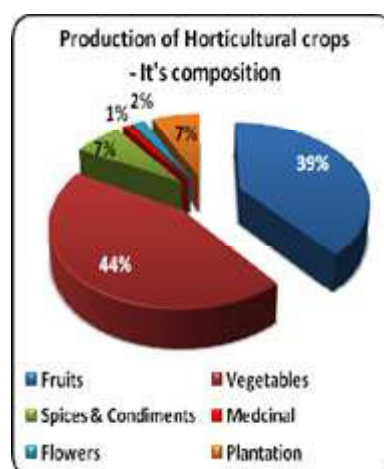


Fig 5.1 Composition of Horticulture Crops in Tamil Nadu

Table 5.5 Production Position at National Level (2018-19)

National Level Crop	Position of Tamil Nadu at National Level	Yield in Tamil Nadu (Kg/ha)	All India Average Yield (Kg/ha)
Maize	1	6,549	2,509
Cumbu	1	2,613	1,154
Groundnut	1	2,509	1,486
Total Oilseeds	1	2,230	968
Cotton	5	442	432
Coconut	2	9,238	6,721
Rice	2	3,918	2,404
Sugarcane(MT)	3	103	71
Sunflower	4	1,089	697
Jowar	3	1,558	780
Coarse cereals	2	3,759	1,596
Food grains	3	3,090	2,056
Total Pulses	8(*)	589	744
Total Geographical Area		130.33	100.00
Cropping Intensity (%)		118	-

**Source:** ENVIS Centre: Tamil Nadu-State of Environment and Related Issue

Table 5.6 Production Trend and Goals (2017-21)

(Unit:LMT)					
S. No.	CROPS	2017-18	2018-19	2019-20 (Programme)	2020-21 Target
1.	Rice	66.38	61.32	72.00	75.00
2.	Millets	35.19	37.07	36.00	42.00
3.	Pulses	5.56	5.51	7.00	8.00
	<b>Total Food grains</b>	<b>107.13</b>	<b>103.90</b>	<b>115.00</b>	<b>125.00</b>
4.	S.Cane **	171.53	170.96	230.00	240.00
5.	Oilseeds	10.38	9.41	12.84	13.52
6.	Cotton (L.bales) *	4.386	3.20	4.57	4.80

\* bales of 170 kg,

\*\* Sugarcane Production in terms of cane

**Source:** Agriculture Policy Note 2020-21

Thus, it can be said that agriculture is the growth engine of economic development in Tamil Nadu and it is the most overriding sector in the economy of the state.

*Agricultural Sector*

### Check Your Progress

5. What is rice based cropping system?
6. Mention the major flowers grown in Tamil Nadu.

### NOTES

## 5.6 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Tamil Nadu's Agriculture Department has adopted different programmes to increase agricultural production as well as to enhance the economic status of the farming sector. These include Intensive Integrated farming system, Massive Wasteland Development Programme, Extensive watershed development activities, Water management through Micro irrigation systems, Organic farming, and Soil health improvement through Bio-fertilizer including Green Manuring.
2. The three main sources of irrigation are canal irrigation, tank irrigation and well irrigation.
3. Agro climatic conditions mainly refers to soil types, rainfall, temperature and water availability, rainfall distribution, irrigation pattern, cropping pattern and other ecological and social uniqueness.
4. The seven agro-climatic zones of Tamil Nadu are Cauvery Delta zone, North Eastern zone, Western zone, North Western zone, High Altitude zone, Southern zone and, High Rainfall zone.
5. Rice based cropping system is a major cropping system practiced in India. It can be described as a mix of farming practices that includes rice as the major crop followed by subsequent cultivation of other crops.
6. The major flowers grown in Tamil Nadu are Jasmine, Mullai, Chrysanthemum, Marigold and Rose.

## 5.7 SUMMARY

- Agriculture is the most dominant sector in the economy of Tamil Nadu. Tamil Nadu occupies an area of 1.3 lakh sq. km for cultivation. The main task of the government of Tamil Nadu is to promote stability in the agricultural sector and to also add to the sustainability in the agricultural production of the state.

## NOTES

- Tamil Nadu's Agriculture Department has adopted different programmes to increase agricultural production as well as to enhance the economic status of the farming sector. These include Intensive Integrated farming system, Massive Wasteland Development Programme, Extensive watershed development activities, Water management through Micro irrigation systems, Organic farming, and Soil health improvement through Bio-fertilizer including Green Manuring.
- Canals are the main sources of irrigation in Tamil Nadu as the system tanks get supply from a permanent storage like reservoirs, dams etc. The areas covered by different types of irrigation are extensive in certain districts and minor in others districts.
- Non-system tanks which are supplied partly from their independent catchment areas and moderately from the diversion of river water and forests streams depend fully on rain. In comparison to canal irrigation system, the water use efficiency is enhanced more easily in tank irrigation.
- Compared to canal and tank irrigation, the water use efficiency is higher in well irrigation. However, there is always a possibility for improving water use efficiency in well irrigation. Wells are the main source of irrigation in Tamil Nadu. Open wells and tube-wells/bore-wells continue to be the principal source of irrigation throughout the year.
- The major food crops of Tamil Nadu are rice, maize, jowar (cholan), bajra (cumbu), ragi, and pulses (Bengalgram, Redgram, Greengram Blackgram and Horsegram). The cash crops include cotton, sugarcane, oilseeds, coffee, tea, rubber, coconut, ginger and chillies and the main horticultural products are bananas and mangoes.
- Tamil Nadu is the largest producer of bananas, flowers and tapioca; it is the second largest producer of mangoes, natural rubber, coconut, groundnut and the third largest producer of coffee, sapota, tea and sugarcane.
- Rice based cropping system is a major cropping system practiced in India. It can be described as a mix of farming practices that includes rice as the major crop followed by subsequent cultivation of other crops. This comprises the rotation of crops involving rice, pulses, oil seeds, cotton, sugarcane, green manures, vegetables, etc.
- The state government set up an operation for the expansion of horticulture in Tamil Nadu in 2003. It have been segregated into seven categories viz., fruits, vegetables, spices and condiments, plantation crops, flowers and medicinal and aromatic plants. It is the fastest growing sector within agriculture in Tamil Nadu.



## 5.8 KEY WORDS

- **Organic farming:** It is an agricultural system that uses ecologically based pest controls and biological fertilizers derived largely from animal wastes and nitrogen-fixing cover crops.
- **Bore-well:** It is a deep, narrow well for water that is drilled into the ground and has a pipe fitted as a casing in the upper part of the borehole, typically equipped with a pump to draw the water to the surface.
- **Horticulture:** It is the agriculture of plants, mainly for food, materials, comfort and beauty for decoration.

## NOTES

## 5.9 SELF ASSESSMENT QUESTIONS AND EXERCISES

### Short-Answer Questions

1. Write a short note on canal irrigation.
2. How can water use efficiency be improved for well irrigation?
3. Briefly mention the major crops grown in Tamil Nadu.
4. List the medicinal and aromatic crops grown in Tamil Nadu.

### Long-Answer Questions

1. Examine the main sources of irrigation.
2. Analyse the cropping pattern in Tamil Nadu.
3. Discuss in detail the major horticulture crops grown in Tamil Nadu.

## 5.10 FURTHER READINGS

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## UNIT 6 AGRICULTURAL MARKETING

### NOTES

#### Structure

- 6.0 Introduction
- 6.1 Objectives
- 6.2 Overview of Agricultural Marketing
  - 6.2.1 Regulated Markets in Tamil Nadu
  - 6.2.2 Uzhavar Sandhai
  - 6.2.3 Agricultural Finance
  - 6.2.4 Livestock
- 6.3 Answers to Check Your Progress Questions
- 6.4 Summary
- 6.5 Key Words
- 6.6 Self Assessment Questions and Exercises
- 6.7 Further Readings

### 6.0 INTRODUCTION

The agricultural marketing system is understood and developed as a link between the farm and non-farm sectors. A dynamic and growing agriculture sector requires fertilizers, pesticides, farm equipment, machinery, diesel, electricity, packing material and repair services which are produced and supplied by the industry and non-farm enterprises. The expansion in the size of farm output stimulates forward linkages by providing surpluses of food and natural fibres which require transportation, storage, milling or processing, packing and retailing to the consumers. In this unit, we will discuss the concept of agricultural marketing, along with the regulated markets. We will also focus on the concepts of *Uzhavar Sandhai*, agricultural finance and livestock.

### 6.1 OBJECTIVES

After going through this unit, you will be able to:

- Explain the concept of agricultural marketing and regulated markets
- Discuss the concepts of Uzhavar Sandhai and agricultural finance
- Describe the significance of livestock

## 6.2 OVERVIEW OF AGRICULTURAL MARKETING

Agricultural Marketing could be defined as ‘marketing agricultural commodities or agro-based products from producer to consumers’. It involves the movement of food and raw materials from the place of production to the place of consumption. The marketing of agri-products needs a special study due to its peculiarities in terms of production, distribution, supply and demand, involving multiple geographical domains of consumption. Agriculture, in the broadest sense, means activities aimed at the use of natural resources for human welfare that is, it includes all the primary activities of production. But, generally, it is used to mean growing and/or raising crops and livestock. This is not a complete status of agricultural contribution in the country. There are activities that take place at the backend and also in the front end of the agricultural production and distribution. Apart from the natural process of the growth, soil type, irrigational advantages, geographical advantage, and so on, the agricultural growth also depends on the technology used, skill of the agricultural labourer, type of rotation of crops adapted by the farmer, the type of crop that is chosen for a particular harvest season according to the weather during that time, method of irrigation, fertilization, soil testing, connections for the marketability of the produce, etc. Production most of the times is followed by:

- Processing (Agro processing such as rice milling, oil extraction, etc.)
- Finishing or conversion (by-products fruit juice, fruit pulp, tinned vegetables, etc.)
- Integrating the produce and process (contractual processing of the produce in select fields- fruit pulp etc., are done in such a fashion)
- Linking up with activities of industrial production of agro-based industries (solvents, oil extraction, dry food production, tin food packaging, powdered agro food)
- Distribution—directly and/or indirectly

Marketing means a series of activities involved in moving the goods from the point of production to the point of consumption. It includes all activities involved in the creation of time, place, form and possession advantages. Marketing functions include buying, assembling, grading, standardising, storing, etc. The next stage of retail selling is referred to as merchandising. Marketing covers that part which is concerned with getting the goods on to the retailers’ shelves while merchandising has to do with getting the goods off the dealers’ shelves into the hands of actual buyer. Manufactures market their goods by means of a highly efficient sales, while merchandise them by means of consumer advertising.

### NOTES

Before you learn about agriculture markets, let's briefly revise the status of agricultural production in Tamil Nadu

### **Tamil Nadu and Agricultural Production**

#### **NOTES**

Among all the states of India, Tamil Nadu is considered the second largest economy. The reasons are numerous; primarily, the urbanization is 60% in Tamil Nadu, wherein 10.6% of the urban population of the country live in. Tamil Nadu as a whole comprises of 6% of the India's total population. Agricultural activities account for 21% of the economic activity in the state, while services contribute 45% and manufacturing 34%. Tamil Nadu is historically projected as an agrarian state, while other accolades of industrialization were added later to the crown. Agriculture depends on both perennial water resources and non-perennial water resources of the state.

### **Land holdings pattern in Tamil Nadu**

Land holdings in Tamil Nadu are badly affected due to multiple factors such as increasing industrialization, urbanization, housing activities and infrastructure development, which have triggered the conversion of agricultural land into non-agricultural ones. Area under cultivation has shrunk due to these misutilization. The scope for expansion of the area available for cultivation is also very limited. The pattern of land ownership imposes limitations on the models that can be adopted for agricultural development. As per the latest Agricultural Census 2010-11, marginal and small holdings of less than 2 hectares accounted for 92.0 percent of the total holdings and 61.0 percent of the total operated area. The conventional technology and methods cannot be applied on this 61 percent of the land holdings which are operational. This further becomes an issue for small and marginalized farmers.

**Table 6.1** Top Produce of Tamil Nadu in India

S. No.	Name of the Top Produce in Tamil Nadu
1	Banana
2	Paddy (Rice)
3	Turmeric
4	Sugarcane
5	Cotton
6	Rye
7	Ragi
8	Kambu
9	Oil Seeds
10	Drumstick (98% of the National Produce)
11	Corn
12	Tapioca (44.4% of the National Produce)
13	Coconut
14	Tamarind
15	Floriculture products

### 6.2.1 Regulated Markets in Tamil Nadu

Regulated markets act as a link between the farmer and the consumer directly or indirectly, thereby reducing the time-lag in the economic cycle of the farmer, who has invested his entire money and lifetime in the production process. Many states have enacted regulations regarding the agricultural marketing through produce marketing yards and with the associates of civic bodies to conduct the day to day operations and financial transactions involved in produce procuring, selling and reimbursing the farmer his share. In the agrarian economy of India, Tamil Nadu still has a lion's share due to its traditional agrarian background. There are citations in the Tamil Nadu's literary works regarding the traditional systems of taking the produce to the markets, commercializing them and the well-established medium of exchange even during the Tamil Rule of Chera, Chola and Pandya Kings and thereafter. However, in the changing times, due to fast urbanization and transportation, technology innovations, agricultural marketing has gained importance and in the recent year of the pandemic of COVID-19, public prefer the agricultural produce straight from the farms. The distinction between the Organic and Inorganic produce have also been actively accepted in the consumer markets for the agricultural produce. Besides the use of hybrid, use of pesticides and artificial methods of maturing the fruits are deeply debated.

#### NOTES

#### Legislative resolve and the state regulations

The Tamil Nadu Agricultural Produce Marketing (Regulation) Second Amendment Ordinance, 2020 was promulgated on May 28, 2020, replacing the Tamil Nadu Agricultural Produce Marketing (Regulation) Act, 1987. Some of the key amendments are classified as under:

- **Market Area:** The Total Market Area is defined as 'Unified Market Area' under the control of APMCs (Agricultural Produce Marketing Committees).
- **Private Market Yards:** Permission for establishing private marketing yards anywhere in the market area, is afforded in this Ordinance. The State Government is also empowered to notify establishing structures/areas for providing storage and infrastructure facilities such as :
  - o Silos
  - o Warehouses
  - o Cold storages
  - o Any other infrastructure in process link(private market sub-yards)

These establishments are licenced for a period of 3 years by the Director (Business) and the Director of Agricultural Marketing.

- **Direct Marketing:** Any one obtaining a licence from the Director of Agricultural Marketing can put up a Direct Marketing Centre and carry on purchase of produce directly from the agriculturists and trade the produce. It is possible that collection or aggregation centres can be set up close to

## NOTES

any production area or within a designated food park for direct marketing. It can also be carried out, without setting up such centres, in areas specified for this purpose, including private market yards and sub-yards.

- **Dispute Settlement:** The Ordinance provides for the Director to be the arbiter of all disputes between various categories of licensees.

### Background of the fresh laws for agricultural marketing

The Standing Committee on Agriculture (2018-19) noted that state APMC Acts are highly restrictive in promotion of multiple marketing channels and competition in the system. The Standing Committee further observed that APMC markets across the country are not working in the interest of farmers due to reasons such as:

- Limited traders in APMC markets thereby reducing competition,
- Cartel system adapted by traders, and
- High deductions in the form of commission charges and market fees.

The Committee suggested that states should reform their APMC Acts by introducing reforms such as enhancing the number of marketing platforms for farm produce and making the functioning of APMC markets democratic and transparent. Following this ordinance multiple states including Tamil Nadu have removed certain geographical restrictions on the trade of agricultural produce and allow the trade of agricultural produce outside the state APMC markets. These states now allow for: (i) setting up agricultural produce market in the private sector, (ii) direct marketing, and (iii) electronic trading (other than Tamil Nadu). While States have introduced Electronic trading in Agricultural Produce, Tamil Nadu has not considered the same.

### Direct and indirect impacts of the legislation

Fears are expressed by experts that cartel systems that have/will sprung up (existing and future ones) would disable the new entrants into the market whether licenced or not. Hence, several experts have recommended that licensing should be replaced by a one-time simple registration system. The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Ordinance, 2020, promulgated by the Central Government in June 2020, provides for direct marketing by anybody outside APMC, without any license or registration. Under the Ordinance, any trader having a PAN card can directly buy produce from farmers anywhere outside the APMC markets. As the central law will prevail over the state law, traders will neither require a license nor have to pay a fee or cess for such transactions outside APMC markets.

### Benefits of better coordination

The initiatives taken at various levels on various agro-marketing development areas need to be supported wholeheartedly as the farmers of the entire country are

dictated by the whims of monsoon as well as the local administrations. Functions of the marketing committees are:

- To ensure remunerative price for agricultural produce through regulated markets.
- To facilitate marketing through regulated markets and providing infrastructure facilities and co-ordination of marketing.
- To make farmers aware of the benefits of grading, storing of their agriculture produce using the facilities in the regulated markets

## NOTES

### Market fees on vegetables and fruits segment

The Tamil Nadu Ordinance does not de-regulate fruits and vegetables or exempt them from market fee. However, various experts have recommended that fruits and vegetables should be taken out of the ambit of APMC Acts and market fees should not be levied on these commodities. The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Ordinance, 2020 promulgated by the central government prohibits states from levying any market fee, cess, or tax on farmers, traders, and electronic trading platforms for trading in agricultural produce outside the state APMC markets. Perhaps this would help the fruits and vegetable traders of the state from paying out the cess/fee.

### Need for a regulated market

Regulated markets provide necessary infrastructure for both farmers and traders. It enables the farmers to bring their agricultural produce to the regulated markets, so that they get maximum price advantage and without middlemen commission. These services are provided free of cost to the farmers. Farmers get connected to the consumers directly thereby safeguarding their price bargains. Confidence and trust is built between the consumers and the producers. Facilities generally available at the Regulated Marketing Arrangements:

- Trading Hall
- Weighing Machine
- Godown facilities in and around the marketing area at reasonable rentals
- Auction [Secret and Open] of agricultural produces especially special products of that specified geographical location.

Pledge loans for the farmers as well as the traders are made available by the financial institutions through the state government initiatives. The schemes are dovetailed to the produce sale and the farmers' interests.

### 6.2.2 Uzhavar Sandhai

Uzhavar Sandhai (Farmers' Direct Selling point) is a scheme of the government of Tamil Nadu to promote direct contact between farmers and consumers in the state of Tamil Nadu. The scheme was introduced in 1999 by the state government. The first Uzhavar Sandhai was inaugurated in Madurai in November 1999. The

## NOTES

objective of the scheme was to promote direct contact between farmers and consumers, avoiding the middlemen and brokers, through which the farmer can get full profit. In 2001, the scheme was stalled by the next government. It was revived again in 2006. The scheme was continued by the successive governments. The markets are maintained and regulated by the Tamil Nadu State Agricultural Marketing Board and prices to the products are fixed on daily basis.

### 6.2.3 Agricultural Finance

Unlike in the traditional agriculture, the present day agriculture requires more of an investment either small or large depending upon the type/size of the farming and the natural bounties embedded in such fields. Like industrial labour, the agricultural labour force, though unorganized as a sector, is also regulated in terms of minimum wages, number of hours, health care, welfare measures, etc. Similar to industry sector, agriculture is also projected as a profit venture and agricultural field is also considered as profit centre, especially where commercial crops are sown and grown.

Agricultural finance is extended for the following purposes:

- Land development
- Irrigation (Major and Minor)
- Production cycle (for producing crops)
- Farm equipment such as tractors, tillers and other implements
- Rural electrification including solar based alternative energy systems
- Crop maintenance such as farm pesticides, farm fertilizers and so on.
- Technology advancement in farming such as harvester machine, tree cutters, tree climbers, drip irrigation and other types of scientific improvements
- Agro marketing and supporting marketing logistics
- Building up of silos, godowns and market yards
- Soil testing, water testing, seed research and all other improved techniques

### Financing agencies

To augment the agricultural pursuits, there are many financing agencies that coordinate the agricultural finance:

- Banking Institutions/ public sector and private sector
- Private Money Lending Individuals and agencies
- Cooperative segment and Farmers' Credit societies
- Institutional Project Finance through Banks, DRDA or other APEX bodies



## General terms and conditions

- Public Sector and Private Sector Banks offer loans at concessional rates and they have to fulfil the RBI norms of Credit dispensation to the tune of 40% of their total lending to agricultural and allied activities.
- Cooperative credit societies and land mortgage banks are the local resources who are not sophisticated in their approach and are not cut out for bigger size of projects.
- Private money lenders are the most easily available agricultural finance resources of the villages, even today after the financial inclusion process (including consumption loans) to the farmers; but the cost as well as the recovery methods are tough and unimaginable ranges.
- Project finances flow through corporate with bigger projects and purposes.
- Apart from this, there is a set-up of SHG or Self Help Group concept in the villages of Tamil Nadu, wherein the small worker groups are organizing themselves into a borrower syndicate and take a single loan for the group to implement a project/to take working capital for a running venture etc., This money is repaid by the group members in a weekly payment and the beneficiaries are all the contributors to the work as well as payments. This model is adapted from the Bangladesh's Rural Credit Model.
- State and Central Government Programmes for Agricultural Development: Various programmes for the Agricultural Development are drawn by the Central and State Governments to associate with the agriculturists and the field level supervisors. Subsidies are extended and sometimes the EDP like training programmes are given at special introduction of strategies either production, development or marketing.

## NOTES

### 6.2.4 Livestock

Livestock forms a major asset of the agricultural development in India, especially when the majority of the rural population is dependent on the agricultural production and the agricultural sector for their livelihood. State government of Tamil Nadu has formed the animal husbandry ministry and many schemes are envisioned and implemented in the state.

- Primary animal husbandry health centres
- Veterinary research centres for the purpose of reproduction, quality animal population/breeding centres and insemination centres
- Dairy Development Schemes and the Cooperative Milk Producers' Federation (AAVIN) for Milk procurement and Distribution.
- Sheep and goat rearing
- Development of piggeries

## NOTES

- Fisheries development
- Shrimp farming and local fishery development projects
- Cattle feed and cattle markets for quality cattle buying/selling
- Milk testing and milk procurement chain development
- Construction and preservation of milk in cold storages and transportation in milk tankers
- Grazing lands and the feed are also developed side by side to enable the Cattle owners to regulate their animals for grazing.

In conclusion, Tamil Nadu's agricultural assets are considered to be the primary sector of economic activity. Moreover, Tamil Nadu has abundant water resources as well as soil advantages to produce all types of crops and productions including plantations of tea, coffee and timber. Agricultural marketing acts as a fillip to the efforts of the farmers and also to coordinate the actual conversion of an agro activity into a business for livelihood.

### Check Your Progress

1. Define agricultural marketing.
2. Which factors affect the land holdings in Tamil Nadu?
3. Mention any two functions of the marketing committees.

## 6.3 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Agricultural marketing could be defined as 'marketing agricultural commodities or agro-based products from producer to consumers'.
2. The land holdings in Tamil Nadu are badly affected due to multiple factors such as increasing industrialization, urbanization, housing activities and infrastructure development, which have triggered the conversion of agricultural land into non-agricultural ones.
3. The functions of the marketing committees are:
  - a. To ensure remunerative price for agricultural produce through regulated markets.
  - b. To facilitate marketing through regulated markets and providing infrastructure facilities and co-ordination of marketing.

## 6.4 SUMMARY

- Agricultural Marketing could be defined as ‘marketing agricultural commodities or agro-based products from producer to consumers’. It involves the movement of food and raw materials from the place of production to the place of consumption.
- Marketing means a series of activities involved in moving the goods from the point of production to the point of consumption.
- Among all the states of India, Tamil Nadu is considered the second largest economy. The reasons are numerous.
- Land holdings in Tamil Nadu are badly affected due to multiple factors such as increasing industrialization, urbanization, housing activities and infrastructure development, which have triggered the conversion of agricultural land into non-agricultural ones.
- Regulated markets act as a link between the farmer and the consumer directly or indirectly, thereby reducing the time-lag in the economic cycle of the farmer, who has invested his entire money and lifetime in the production process.
- The Tamil Nadu Agricultural Produce Marketing (Regulation) Second Amendment Ordinance, 2020 was promulgated on May 28, 2020, replacing the Tamil Nadu Agricultural Produce Marketing (Regulation) Act, 1987.
- Fears are expressed by experts that cartel systems that have/will sprung up (existing and future ones) would disable the new entrants into the market whether licenced or not. Hence, several experts have recommended that licensing should be replaced by a one-time simple registration system.
- Regulated markets provide necessary infrastructure for both farmers and traders. It enables the farmers to bring their agricultural produce to the regulated markets, so that they get maximum price advantage and without middlemen commission.
- Uzhavar Sandhai (Farmers’ Direct Selling point) is a scheme of the government of Tamil Nadu to promote direct contact between farmers and consumers in the state of Tamil Nadu.
- Unlike in the traditional agriculture, the present day agriculture requires more of an investment either small or large depending upon the type/size of the farming and the natural bounties embedded in such fields.
- Livestock forms a major asset of the agricultural development in India, especially when the majority of the rural population is dependent on the agricultural production and the agricultural sector for their livelihood.

## NOTES

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## 6.5 KEY WORDS

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- **Rice Milling:** It is removal or separation of husk (dehusking) and bran to obtain the edible portion for consumption. The process has to be accomplished with care to prevent excessive breakage of the kernel and improve recovery of paddy or rice.
- **Godown:** In eastern Asia, especially India, it refers to a warehouse.

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## 6.6 SELF ASSESSMENT QUESTIONS AND EXERCISES

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### Short Answer Questions

1. What were the key amendments made under the Tamil Nadu Agricultural Produce Marketing (Regulation) Second Amendment Ordinance, 2020?
2. Write a short note on livestock.

### Long Answer Questions

1. Explain the concept of agricultural marketing in detail.
2. Discuss the significance of agricultural finance and the financial agencies.

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## 6.7 FURTHER READINGS

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**BLOCK III**  
**INDUSTRY AND INFRASTRUCTURAL**  
**DEVELOPMENT**

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*Industrial Sector*

**NOTES**

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**UNIT 7 INDUSTRIAL SECTOR**

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**Structure**

- 7.0 Introduction
- 7.1 Objectives
- 7.2 Industry in Tamil Nadu
  - 7.2.1 Trends and Patterns in Industrial Growth
  - 7.2.2 Large Scale Industries
  - 7.2.3 Small Scale Industries (SSI)
  - 7.2.4 Industrial Estate
  - 7.2.5 KVIC (Khadi and Village Industries Commission)
  - 7.2.6 District Industries Center (DIC)
  - 7.2.7 Labour Welfare Measures
- 7.3 Answers to Check Your Progress Questions
- 7.4 Summary
- 7.5 Key Words
- 7.6 Self Assessment Questions and Exercises
- 7.7 Further Readings

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**7.0 INTRODUCTION**

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The industrial sector is a driver of economic growth. Industrial sector is important in terms of its contribution to Gross State Domestic Product (GSDP) and employment. This sector which is vital in stimulating growth of the economy is closely interconnected with primary and tertiary sector through its forward and backward linkages. The percentage share of secondary sector in Gross Value Added during 2019-20 in the State was about 33.44% percent. In this unit, we will discuss the trends and patterns in industrial growth, along with the large and small scale industries, and industrial estate. We will also focus on the concepts of KVIC and DIC, and labour welfare measures.

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**7.1 OBJECTIVES**

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After going through this unit, you will be able to:

- Explain the trends and patterns in industrial growth
- Discuss the large and small scale industries
- Describe the concepts of KVIC and DIC, and labour welfare measures

## 7.2 INDUSTRY IN TAMIL NADU

### NOTES

Tamil Nadu is the fourth largest state of India. It has a diversified manufacturing sector and features leaders among several industries like automobiles and auto components, engineering, pharmaceuticals, garments, textiles, leather, chemicals, plastics, etc. It ranks first among the states in terms of number of factories and industrial workers. Tamil Nadu Industrial Development Corporation Ltd (TIDCO), State Industries Promotion Corporation of Tamil Nadu (SIPCOT), Tamil Nadu Industrial Investment Corporation Limited (TIIC), and Tamil Nadu Small Industries Development Corporation Limited (TANSIDCO) are jointly developing industrial infrastructure in the state. Between 2015-16 and 2020-21, Gross State Domestic Product (GSDP) was expected to expand at a Compound Annual Growth Rate (CAGR) of 12.20% to reach ₹ 20.92 trillion (US\$ 299.32 billion). Net State Domestic Product (NSDP) expanded at a CAGR of 11.93% to touch ₹ 16.59 trillion (US\$ 237.40 billion) between 2015-16 and 2019-20. In 2019-20, tertiary sector contributed 53.67% to state's Gross State Value Added (GSVA) at current prices, followed by secondary sector at 33.44%. As of March 2020, the state had a total installed power generation capacity of 32.62 gigawatt (GW).

According to Department for Promotion of Industry and Internal Trade (DPIIT), cumulative Foreign Direct Investment (FDI) inflow in Tamil Nadu and Puducherry stood at US\$ 32.20 billion between April 2000 and March 2020. Total merchandise export from the state stood at US\$ 30.05 billion during 2019-20. During April-July 2020, export stood at US\$ 5.87 billion. IT and ITeS export from Tamil Nadu increased to ₹ 1.39 lakh crore (US\$ 19.9 billion) in 2018-19, at a growth rate of 10% y-o-y. Tamil Nadu Industrial Guidance and Export Promotion Bureau has been set up with an objective to attract major investment proposals to Tamil Nadu. Some of the major initiatives taken by the government to promote Tamil Nadu as an investment destination are:

- Comprehensive Road Infrastructure Development Programme (CRIDP) is a flagship scheme to upgrade road infrastructure in the State. Under Budget 2020-21, ₹ 5,500 crore (US\$ 780.25 million) has been allocated to the scheme.
- The Asian Development Bank assisted Tourism Development Project is currently under implementation and a sum of ₹ 90.85 crore (US\$ 12.89 million) has been provided in the Budget Estimates of 2020-21.
- In 2019, Chief Minister launched the Tamil Nadu New Integrated Textile Policy, 2019.
- According to Good Governance Index 2019, Tamil Nadu ranks first in terms of governance.
- Tamil Nadu organised its second Global Investor Meet (GIM) on January 23 and 24, 2019. The state surpassed the targeted investment and

attracted ₹ 3.4 lakh crore (US\$ 48.65 billion) investment in 12 sectors including automobile, textiles, renewable energy, etc. Around 146 memorandum of understanding (MoUs) were signed with an expectation to generate 10.5 lakh job opportunities in the state.

- During September 2017-October 2019, 50,606 formal jobs were created in Tamil Nadu.
- Tamil Nadu ranked first in terms of domestic tourist arrival and second in terms of foreign tourist arrival in 2018(P). In 2018, foreign tourist arrival reached 6.07 million, while domestic tourist arrival reached 385.90 million.
- In July 2020, the Tamil Nadu government signed MoUs worth US\$ 1.48 billion; this is expected to create 13,507 jobs in fields such as solar cells, data centres and industrial parks.

## NOTES

### 7.2.1 Trends and Patterns in Industrial Growth

One of the global electrical equipment manufacturing public sector company, BHEL, has manufacturing plants at Tiruchirappalli and Ranipet. The Tamil Nadu state government owns the Tamil Nadu Newsprint and Papers (TNPL), the world's biggest bagasse-based paper mills in Karur. The world's sixth largest manufacturer of watches together with TATA, under the brand name of 'Titan' has its manufacturing plant in Hosur. 40 percent of all wind-generated electricity in India is created by windmills in Tamil Nadu. Danish wind power company NEG Micon has established its manufacturing unit in Chennai. Tamil Nadu is a leading producer of cement in India, with manufacturing units located at Ariyalur, Coimbatore, Karur and Tirunelveli. High-density Polyethylene mono filament yarn and associated products are manufactured in Karur for mosquito nets and fishing nets. More than 60% mosquito nets in India are manufactured here. The region around Salem is rich in mineral ores. The country's largest steel public sector undertaking, SAIL, has a steel plant in Salem.

Coimbatore is a major industrial hub in South India and houses more than 30,000 small, medium and large industries. Coimbatore is known as 'Manchester of South India' due to its extensive textile industry and also referred to as 'the Pump City' as it supplies half or 50% of India's requirements of motors and pumps. The city is one of the largest exporters of textile, jewellery, wet grinders, poultry and auto components and the term "Coimbatore Wet Grinder" has been given a Geographical indication. Larsen & Toubro has 300 acre huge manufacturing campus in Coimbatore which houses various units of company, manufactures aerospace and defence parts for leading players in the market. Tuticorin is known as 'Gateway of Tamil Nadu'. Thoothukudi is the major chemical producer in the state. It produces the 70 percent of the total salt production in the state and 30 percent in the country.

## NOTES

As per the Annual Survey of Industries published by the Central Statistical Organisation Tamil Nadu holds a prominent position in the industrial map of India. In 2017-18 among the major states, Tamil Nadu was at the top in terms of number of factories. It ranked fifth in fixed and third in productive capital.

**Table 7.1 Tamil Nadu in All India: By Select Characteristics: ASI (2000-03)**

Sl. No.	Characteristics	All India			Tamil Nadu's (Share %)		
		2000-01	2001-02	2002-03	2000-01	2001-02	2002-03
1.	Number of Factories	131268	128549	127957	15.69 (1)	14.71 (1)	15.28 (1)
2.	Fixed Capital (Rs. crores)	399604	431960	444759	9.37 (3)	8.31 (3)	9.78 (3)
3.	Productive Capital (Rs. crores)	504813	532366	544880	9.30 (3)	8.61 (3)	9.54 (3)
4.	Employment (Lakh Nos.)	79.88	77.50	79.36	14.22 (2)	14.14 (2)	11.25 (2)
5.	Gross Value of Output (Rs. crores)	926902	962457	1130561	11.17 (3)	9.80 (3)	9.56 (3)
6.	Net Value Added (Rs. crores)	143621	144302	172340	11.51 (3)	10.13 (3)	8.76 (3)

**Note:** Figures in brackets indicate the position of Tamil Nadu among the States at National level. Source: Central Statistical Organisation, New Delhi.

**Table 7.2 Tamil Nadu in All India: By Select Characteristics: ASI**

States	Factories	Fixed	Productive	Invested	Workers	Total Persons	Wages to
		Capital	Capital	Capital		Engaged	Workers
Tamil Nadu	37,787	277,54,189	389,86,490	404,48,082	20,95,223	25,23,483	29,07,651
All India	2,37,684	3285, 88, 927	3930,00,817	4460,94,480	122,24,422	156,14,619	192,80,066

### Plan investment in industrial sector

Investment of additional funds into the industrial sector is a pre-condition for quickening the pace of industrialisation. The share of Plan investment for industries and minerals in the State had increased to ₹14.08 crores (7.50%) of total investment during the Second Five Year Plan from ₹1.53 crores (1.90%) in the First Five Year Plan. The Plan investment for this sector in the subsequent five Plan periods had increased. During the Eighth Five Year Plan period also, it was hiked to ₹1160.24 crores (8.28%). However, it declined to ₹864.6 crores during Ninth Plan and further to ₹555 crores of the total outlay of Tenth Five Year Plan Period. As per one of the last annual plans 2013-14 (12th Fy. Plan), the outlay was ₹875 crores for industry and minerals. Here it is also relevant to note that Tamil Nadu has been one of the leaders in attracting investment from the private sector.



## Industrial production

Industrial Sector

The industrial growth as measured by the Index of Industrial Production was encouraging in the State during 2004-05. The performance of industry during the review year showed a spectacular rebound and registered a growth rate of 8.2 per cent. The positive growth in all the three sub-sectors was contributing to a higher industrial growth though electricity clocked at 3.0 per cent only. The manufacturing sector having the highest weight in IIP witnessed a growth of 8.7 percent. Since there is a close linkage between agriculture and industry, the growth will be mutually reinforcing in each sector. Industrial production at the National level was also at percent during 2004-05. The manufacturing sector registered a growth of 9.0 per cent followed by mining 4.4 per cent and electricity 5.2 per cent.

## NOTES

**Table 7.3** Index of Industrial Production: Tamil Nadu and All-India  
(Index Base year: 1993-94 = 100)

Tamil Nadu								
Year / Weight	Mining (1.27%)		Manufacturing (92.01%)		Electricity (6.72%)		General (100.00%)	
	Index	Growth Rate (%)	Index	Growth Rate (%)	Index	Growth Rate (%)	Index	Growth Rate (%)
2002-03	142.8	6.3	127.9	2.4	161.0	0.3	130.3	2.4
2003-04	158.0	10.6	130.3	1.9	164.4	2.1	132.9	2.0
2004-05	171.2	8.4	141.6	8.7	169.4	3.0	143.8	8.2
All-India								
Year/ Weight	(10.47%)		(79.36%)		(10.17%)		(100.00%)	
2003-04	146.9	5.2	196.6	7.4	172.6	5.1	189.0	7.0
2003-04	146.7	5.1	196.3	7.2	172.5	5.0	188.7	6.9
2004-05	153.4	4.4	214.2	9.0	181.5	5.2	204.5	8.2

**Source:** 1. Tamil Nadu: Department of Economics and Statistics, Chennai  
2. Central Statistical Organisation, New Delhi.

## Situation in 2013-14

As of the year 2013-14, with base year as 2004-05, the Index for Mining in Tamil Nadu was around 122.3, for Manufacturing was 168.6, for Electricity was 129.7 and General Index was 161.6. This was against the All India index for Mining at 124.7, Index for Manufacturing at 181.9, Index for Electricity at 164.7 and General Index at 171.9.

Industries are categorized with reference to the following: raw materials usage; the specific productive process in which they engage; the skill-mix of labour

## NOTES

force; the capital intensity; the finished products; the market that is being served etc. An analysis of industrial growth by use-based classification shows that basic goods industries producing bulk raw materials used for production and intermediate goods industries which have unfinished products for further production had performed well in the State during 2004-05. They registered a growth of 10.3 per cent and 7.0 per cent, respectively. The growth recorded by the basic goods and intermediate goods industries is of utmost importance in that a rapid growth in these sectors is needed to exhibit good industrial growth. A salutary performance in these sectors had sustained marked industrial growth and drive overall economic growth in the economy.

Growth in the capital goods industries was very impressive. Plants and machineries used as investments included in this category registered the hefty growth of 29.1 per cent in 2004-05. In this Use-based classification, both sub-groups viz. machinery and equipment other than transport equipment and rubber, plastic, petroleum and coal products exhibited a substantial growth of 41.3 per cent and 27.3 per cent, respectively. However, the consumer durable goods industries producing final products such as refrigerators, electric fans, television, cycle, motor cycles and automobiles recorded a subdued growth of 3.4 per cent against 6.2 per cent registered in the previous year of 2003-04.

The consumer-non-durable items which normally have short durability had a negative growth of 2.0 per cent during the review year. It is due to stiff competition from local brands which are not usually covered in IIP. The Fast Moving Consumer Goods (FMCS) Companies did not perform well as price wars cut into profit margins.

**Table 7.4 Industrial Production: By Use-Based Classification (2003-05)**

Industry Group	Weight (%)	Growth Rate (%)	
		2003-04	2004-05
1. Basic Goods	22.992	3.4	10.3
2. Capital Goods	12.081	17.2	29.1
3. Intermediate Goods	36.083	2.0	7.0
4. Consumer Goods	28.844	(-) 4.2	(-) 0.8
a. Consumer-Durable Goods	6.395	6.2	3.4
b. Consumer - Non-durable Goods	22.449	(-) 6.8	(-) 2.0
General	100.00 0	2.0	8.2

**Source:** Department of Economics and Statistics, Chennai - 6.

During the year 2004-05, a disaggregated analysis of manufacturing group of industrial sector at two-digit level shows that as many as 13 sub-groups with a total weight of 69.02 per cent had registered a positive growth against eight sub-groups in the previous year of 2003-04. Among them, robust growth rate was

exhibited by machinery and equipment other than transport equipment (41.3%). The robust growth rate was displayed by other eight sub groups namely: rubber, plastic, petroleum and coal products (27.3%); basic metals and alloys (17.0%); wool, synthetic and fibre textiles (15.3%); leather products (14.3%); metal products and parts except electrical machinery (12.3%); chemical and chemical products (12.8%); transport equipment and parts (11.9%); beverages, tobacco and tobacco products (11.0%); and moderate growth by four sub-groups namely: non-metallic mineral products (7.6%) paper and paper products (6.5%); other manufacturing industries (4.7%); and food products (4.3%). However, cotton textiles (-5.2) and textile products other than mills (-37.4%) witnessed deceleration during the review year.

## NOTES

**Table 7.5 Industrial Production by Use Based Classification - Tamil Nadu**  
Base Year 2004-05 (2005-2014)

Year / Weight	Basic Goods (309.7)	Capital Goods (163.0)	Intermediate Goods (169.2)	Consumer Goods (358.0)	Consumer Durables (111.0)	Consumer Non-Durables (247.1)	General Index (1000.0)
2005-06	104.8 (4.8)	134.5 (34.5)	106.7 (6.7)	114.9 (14.9)	111.8 (11.8)	116.3 (16.3)	113.6 (13.6)
2006-07	110.4 (5.3)	144.9 (7.7)	119.9 (12.4)	126.0 (9.7)	145.5 (30.1)	117.2 (0.8)	123.2 (8.5)
2007-08	113.1 (2.4)	155.8 (7.5)	116.0 (-1.6)	129.3 (2.6)	138.4 (-4.9)	125.1 (6.7)	126.7 (2.8)
2008-09	109.7 (-3.0)	162.4 (4.2)	106.7 (-9.6)	128.9 (-0.3)	132.0 (-4.6)	127.5 (1.9)	124.7 (-1.6)
2009-10	107.9 (-1.6)	172.7 (6.4)	139.1 (-30.4)	137.2 (6.4)	140.2 (6.2)	135.9 (6.6)	134.3 (7.7)
2010-11	106.9 (-0.9)	228.2 (32.1)	126.7 (-8.9)	151.1 (10.1)	151.5 (8.1)	150.9 (11.0)	145.8 (8.6)
2011-12	113.1 (5.8)	274.4 (-20.2)	108.3 (14.5)	149.8 (-0.9)	158.8 (4.8)	145.7 (-3.4)	151.7 (4.0)
2012-13	111.3 (-1.6)	269.4 (-1.8)	112.7 (4.1)	157.1 (4.9)	169.2 (6.5)	151.6 (4.0)	153.7 (1.3)
2013-14	117.0 (5.1)	277.6 (3.00)	119.9 (6.4)	167.0 (6.3)	169.1 (-0.1)	166.0 (9.6)	161.6 (5.1)
<i>Note: Figures in brackets indicate percentage change over the previous years, Source: Department of Economics &amp; Statistics, Chennai 600 006, Government of Tamil Nadu.</i>							

### 7.2.2 Large Scale Industries

The large scale industries like manufacturing have been promoted like never before in Tamil Nadu. For the purpose of administering the fiscal incentives, the State Government has classified the districts of the state as follows:

- A CATEGORY-Chennai, Tiruvallur and Kancheepuram (3 districts)
- B CATEGORY-Other than A & C (20 districts)
- C CATEGORY-Southern Districts (9 districts)\*

\*Southern districts include districts of Madurai, Theni, Dindigul, Sivagangai, Ramanathapuram, Virudhunagar, Tirunelveli, Thoothukudi and Kanniyakumari

## NOTES

Project Type	Minimum Investment Required	Investment Period	Eligibility VAT Refund/ Soft Loan for the Period of
Mega Project	Rs.350 crore for Chennai, Kancheepuram & Thiruvallur dts. and Rs.250 crore for other district.	3 years	10 years
Super Mega Project	Rs.1500 crores	5 years	14 years
Ultra Mega Project	Rs.4000 crores	7 years	21 years

Source: SIPCOT, Chennai.

‘Mega Project’ means a manufacturing project, new or expansion, located in A & B category districts with the following investment ranges and creating the employment stipulated therein:

Category	Investment Range (Rs. in crore)	
	A	B
Mega Projects	Above 500 – 1500 creating an employment of 300 in 3 years	Above 350- 1000 creating an employment of 200 in 3 years

‘Super Mega Project-A’ means a manufacturing project, new or expansion, located in A & B category districts with the following investment ranges and creating the employment stipulated therein:

Category	Investment Range (Rs. in crores)	
	A	B
Super Mega A	Above 1500-3000 creating an employment of 400 in 5 years.	Above 1000-2000 creating an employment of 300 in 5 years.

‘Super Mega Project-B’ means a manufacturing project, new or expansion, located in A & B category districts with the following investment ranges and creating the employment stipulated therein.

Category	Investment Range (Rs. in crore)	
	A	B
Super Mega B	Above 3000 – 5000 creating an employment of 600 in 6 years	Above 2000 – 4000 creating an employment of 500 in 6 years

‘Ultra Mega Project’ means a manufacturing project, new or expansion, located in A & B category districts with the following investment ranges and creating the employment stipulated therein:

Category	Investment Range (Rs. in crore)	
	A	B
Ultra Mega	Above 5000 creating an employment of 700 in 7 years	Above 4000 creating an employment of 600 in 7 years

**NOTES**

The Government is extending various incentives/subsidies for each category of manufacturing Industries namely:

- Capital subsidy and electricity tax exemption
- Stamp duty concession
- Environmental protection infrastructure subsidy
- Structured package of incentives towards VAT/CST
- Incentivizing additional employment generation

The State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT) and Tamil Nadu Industrial Investment Corporation (TIIC) are mandated to act as the implementation agencies for the various incentives listed out in this Policy as per the level of investments. Further, Industrial units in existence in Tamil Nadu for over 10 years will be given suitable extra benefits for expansion projects over and above the normal structured package of incentives, subject to investing the minimum level of investment mentioned.

As per Policy Note of Industries Department (Major Industries) - 2020-2021, 'Upto 31.12.2019, ₹11,345.37 crore have been released to 30 industrial units. The amount released during the year 2019-20 is ₹814.21 crore to 17 industries.'

### 7.2.3 Small Scale Industries (SSI)

The SSI sector occupies a pivotal place for its contribution to industrial production, employment generation, export and State income. In continuation of programme of reforms initiated in the New Industrial Policy, 2003, IT and ITES Policies, a new policy for SSIs is on the anvil. This will help to provide a support for common facilities with a package of measures for rehabilitating viable sick SSI units in the State. During 2004-05, 15083 SSI units were given permanent registration and total number of SSI increased to 4.89 lakh SSI units with an investment of ₹ 14397.31 cores and employment to 35.26 lakh persons produced ₹99496.77 crores worth of output. In the country, 118.53 lakh SSI units during 2004-05 comprising of 16.38 lakh registered units and 102.15 lakh of unregistered units as per the Department of Small Scale Industries and Commerce, GOI, had produced ₹399020 crores worth of goods by employing 282.82 lakh number of persons. The State shared 4.13 per cent of SSI units, 24.94 per cent of output and 12.09 per cent of employment at the national level. As on 28.02.05, ₹ 7523.22 lakhs were sanctioned to 18127 educated unemployed youths under the PMRY Scheme.

**Table 7.5** Performance of Small Scale Industry (2002-2005)

Parameter	Tamil Nadu			All India*		
	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05
Number of Registered SSI Units (Lakhs)	4.49	4.75	4.89	109.49	113.95	118.53
Investment in Fixed Capital (Rs. Crores)	12569.34	13291.50	14397.31	N.A.	N.A.	N.A.
Value of Output (Rs. Crores)	89781.00	94939.80	99496.77	311993	357733	399020
Employment (Lakh Nos.)	31.42	34.18	35.26	260.13	271.36	282.82

**NOTES**

**Note:** All India\* - Registered and Unregistered Units.

**Source:** 1. Department of Industries and Commerce, Chennai - 5.

2. Economic Survey, GOI, New Delhi.

**Table 7.6** Trend in Performance of SSI (2007-19)

Year	Number of Registered units	Investment (Rs. in crores)	Production (Rs. in crores)	Employment (Numbers)
2007-08	27,209	2,547.14	8,739.95	2,42,855
2008-09	32,049	3,557.89	13,354.86	2,94,255
2009-10	41,799	3,214.22	10,880.01	1,51,743
2010-11	57,902	5,872.37	12,500.86	4,05,233
2011-12	70,758	7,429.59	15,496.00	5,02,381
2012-13	83,348	8,751.54	17,503.08	5,83,436
2013-14	1,16,393	18,939.87	16,832.25	4,94,990
2014-15	1,43,104	24,349.65	59,789.70	6,51,180
2015-16 (up to 21.1.2016)	1,42,136	34,411.90	59,332.19	8,15,315
UAM * (as on 31.3.2016)	41,656	6,218.69	-	2,96,687
2016-17**	2,67,310	36,221.78	-	18,97,619
2017-18	2,17,981	25,373.12	-	13,78,544
2018-19	2,33,954	30,078.85	-	15,33,804

\* Registration details as per UAM portal of Government of India.

\*\* Consequent to the introduction of UAM filing w.e.f. 21.1.2016, the enterprises which have obtained EM Part-II earlier have also filed UAM subsequently, resulting in an increase in the filing of UAM during 2016-17.

The New Anna Marumalarchi Thittam is being implemented in the State for the promotion of agro based, food processing and other related industries in rural areas to generate rural employment and thereby improve the rural economy. As on 28.02.05, 213 projects with total cost of ₹138.43 crores had commenced production giving employment to 8335 persons of which 5638 are women. In addition to that, 165 projects are under various stages of implementation. Keeping in view the scenario outlined above, the Government is working out a strategy for this sector. Global experience shows that the SME sector has great potential. Further the challenges in terms of access and competitiveness also presents new challenges and opportunities to SME sector in Tamil Nadu.

## NOTES

### Khadi and village industry

The khadi production units in the State had declined from 501 in 2002-03 to 460 in 2003-04 forming 67 khadi production centres, 27 silk production centres, 170 khadi crafts units, 183 rural textile centres and 13 Co-operative production units. It was noted that the overall performance of khadi industry was not well except khadi yarn production and sales. The khadi yarn production registering a growth of 7.95 per cent increased to 10.73 lakh metres in 2003-04, from 9.94 lakh metres in 2002-03. The khadi cloth production for the corresponding period had dwindled to 1.68 lakh metres from 3.28 lakh metres, silk khadi production to 1.46 lakh metres from 2.12 lakh metres and khadi polyester production shrank to 1.74 lakh metres from 2.14 lakh metres. The number of persons employed by the khadi units also went down to 7324 in 2003-04 from 10564 in 2002-03. However, value of the sales realised at ₹18.81 crores during the review year was higher than ₹15.81 crores in the preceding year, the growth being 18.98 per cent.

Village industries also did not fare well during the review year. The total number of village industrial units had fallen down from 92283 in 2002-03 to 74215 units in 2003-04 consisting of 1842 Industrial Co-operative Units, 86 Departmental Units and 72287 individuals. The value of production decreased to ₹327.55 crores in 2003-04 from ₹363.52 crores in 2002-03, decline being 9.89 per cent. Correspondingly, the value of sales also fell to ₹362.44 crores from ₹401.91 crores for the same period. The employment provided by these units had decreased from 9.92 lakhs to 9.04 lakhs.

### Handicrafts

The government is giving special thrust and direction for the promotion and development of handicrafts in the State. Government had established 'Tamil Nadu Handicrafts Development Corporation' with a view to giving focussed attention in the production and marketing of handicrafts. Production centres for handicrafts are established at Nachiarkoil, Madurai, Thanjavur, Vagaikulam, Swamimalai, Kallakurichi and Mamallapuram. The government's focus is on giving training to artisans to upgrade their skills, productivity and quality of products. It also encourages innovations in design and provide socio-economic security to craftsman.



**NOTES**

The total value of sales of handicrafts by the Corporation is put at ₹1430 lakhs during 2004-05 and about ₹80 lakhs of foreign exchange was earned through selling of bronzes, brass, ornamental lamps, rosewood utility items, Thanjavur paintings to foreigners. Consistent with the requirement to facilitate empowerment of women in SHGs training in handicrafts for SHG members is an area with potential for empowerment and income generation. During the period, 1100 craftswomen belonging to various SHGs were trained in the production of lace embroidery, agarbatties, sea shell products, etc.

**Silk industry**

Tamil Nadu is renowned for its silk and its related products. Tamil Nadu Co-operative Silk Production Federation (TANSILK) supports the development of sericulture activities in the State for supplying silk to Handloom Weavers' Co-operative Societies, Khadi and Village Industries Board, Sarvodaya Sangh, etc. During the year 2004-05, it has transacted 112 metric tons of silk as against the target of 150 metric tons and 278 metric tons of silk yarn valued at ₹3280 lakhs. Raw Silk production in the year 2018-19 was around 2073 metric tons. Additional employment opportunities are created in sericulture related activities in the State. The sericulture industry has potential for employment and income generation. Of late, the introduction of the silk mark is designed to boost marketing. Indigenous silk is also facing competition from Chinese silk. This issue calls for calibrating duties to safeguard domestic interests. Further the unique brand equity of Kancheepuram silk also is being promoted. Special GI Protection for the product will be useful.

**7.2.4 Industrial Estate**

The Government have established eight exclusive Industrial estates for Electrical and Electronic industries consisting of 517 Developed Plots and 140 Sheds. These industrial estates are located at Thiruvannamiyur (Chennai District), Perungudi (Kancheepuram District), Kakkalur (Tiruvallur District), Kappalur (Madurai District), Suramangalam (Salem District), Kalapatti (Coimbatore District), Hosur (Krishnagiri District) and Thuvakudi (Tiruchirappalli District). Tamil Nadu Small Industries Development Corporation (TANSIDCO) is maintaining 35 Industrial Estates created by Government of Tamil Nadu and 62 Industrial Estates established on its own. Details are given at Annexure.

A transparent procedure is followed in allotting the sheds/plots by advertising the availability of shed/ plots in newspapers. 335 plots and 11 sheds were allotted to new entrepreneurs in the year 2013-14. Under this new policy allotment will be made on 30 years lease basis with an option to the entrepreneurs to buy the sheds / plots on outright purchase basis at the end of 30 years in the new Industrial Estates. 30% of the saleable area of the Industrial Estates are earmarked for Micro Enterprises. Priority is given in allotment of developed plots/sheds to the following categories:



- 30% for Women Entrepreneurs.
- 10% for Ex-servicemen
- 10% for SC/ST and Transgender

*Industrial Sector*

Priority in allotment will be given to the first generation entrepreneurs who have successfully completed Entrepreneurship Development Programme (EDP) training under NEEDS Scheme, on application, subject to availability. Among the 22 new Industrial Estates were announced to be established during the year 2011-14, five Industrial Estates have been established in Rasathavalasu (Tiruppur District), Mathur (Pudukottai Dist.), Vaniyambadi (Vellore Dist.), Virudhunagar (urban) (Virudhunagar Dist.), and Venmaniathur (Villupuram District). The remaining 17 Industrial Estates are in various stages of completion 5 Women Industrial Estates were developed viz. Thirumullaivoil at Tiruvallur Distt., ii) Thirumudivakkam at Kancheepuram Distt, iii) Valavaanthankottai at Trichy Distt, iv) Karuppur at Salem Distt and v) Kappalur at Madurai Distt.

## NOTES

### 7.2.5 KVIC (Khadi and Village Industries Commission)

Government of India has approved the introduction of a new credit linked subsidy programme called Prime Minister's Employment Generation Programme (PMEGP) by merging the two schemes that were in operation till 31.03.2008 namely Prime Minister's Rojgar Yojana (PMRY) and Rural Employment Generation Programme (REGP) for generation of employment opportunities through establishment of micro enterprises in rural as well as urban areas. PMEGP will be a central sector scheme to be administered by the Ministry of Micro, Small and Medium Enterprises (MoMSME). The Scheme will be implemented by Khadi and Village Industries Commission (KVIC), a statutory organization under the administrative control of the Ministry of MSME as the single nodal agency at the National level.

At the State level, the Scheme will be implemented through State KVIC Directorates, State Khadi and Village Industries Boards (KVIBs) and District Industries Centres (DICs) and banks. The Government subsidy under the Scheme will be routed by KVIC through the identified Banks for eventual distribution to the beneficiaries/entrepreneurs in their Bank accounts. The implementing agencies, namely KVIC, KVIBs and DICs will associate reputed Non-Government Organization (NGOs)/reputed autonomous institutions/Self Help Groups (SHGs)/National Small Industries Corporation (NSIC)/Udyami Mitras empanelled under Rajiv Gandhi Udyami Mitra Yojana (RGUMY), Panchayati Raj institutions and other relevant bodies in the implementation of the Scheme, especially in the area of identification of beneficiaries, of area specific viable projects, and providing training in entrepreneurship development.

**NOTES****Objectives**

The objectives of KVIC are:

- To generate employment opportunities in rural as well as urban areas of the country through setting up of new self-employment ventures/projects/micro enterprises.
- To bring together widely dispersed traditional artisans/ rural and urban unemployed youth and give them self-employment opportunities to the extent possible, at their place.
- To provide continuous and sustainable employment to a large segment of traditional and prospective artisans and rural and urban unemployed youth in the country, so as to help arrest migration of rural youth to urban areas.
- To increase the wage earning capacity of artisans and contribute to increase in the growth rate of rural and urban employment.

**Implementing agencies**

The Scheme will be implemented by Khadi and Village Industries Commission (KVIC), Mumbai, a statutory body created by the Khadi and Village Industries Commission Act, 1956, which will be the single nodal agency at the national level. At the State level, the scheme will be implemented through State Directorates of KVIC, State Khadi and Village Industries Boards (KVIBs) and District Industries Centres in rural areas. In urban areas, the Scheme will be implemented by the State District Industries Centres (DICs) only. KVIC will coordinate with State KVIBs/State DICs and monitor performance in rural and urban areas. KVIC and DICs will also involve NSIC, Udyami Mitras empanelled under Rajiv Gandhi Udyami Mitra Yojana (RGUMY), Panchayati Raj Institutions and other NGOs of repute in identification of beneficiaries under PMEGP.

**7.2.6 District Industries Center (DIC)**

Established in 1978, District Industries Centres' program was initiated by central government to promote tiny, cottage, village and Small Scale Industries (SSIs) in smaller towns and their particular areas to make them available with all the basic needs, services and facilities. All the MSMEs are offered various services and support under the single roof of the District Industries Centre. The General Manager is the head of the District Industries Centre functioning in 31 districts, while Chennai district is headed by Regional Joint Director. The post of General Manager is of Joint/Deputy Director Level. The General Manager is assisted by the Project Manager, Manager (Credit), Manager (Economic Investigation)/ Manager (Village Administration) and an office Superintendent.

The functioning of DICs and their performance is monitored by the Principal Secretary/ Industries Commissioner & Director of Industries & Commerce. The review of the General Managers is organized periodically to evaluate the

performance and also help in resolving difficulties in implementation of various schemes. The following incentives are being extended to Micro, Small and Medium Enterprises in the State through DICs:

- Subsidy schemes for micro manufacturing enterprises
- Subsidy schemes for Small and Medium manufacturing enterprises establishing in 251 Industrially Backward Blocks
- Subsidy schemes for Agro based Small and Medium manufacturing enterprises established in all the 385 blocks of the State.
- Special Capital Subsidy for Thrust Sector Enterprises
- Generator Subsidy
- Back-ended Interest Subsidy

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### Implementation of self-employment schemes

The following Schemes are being implemented in the State through DICs

- Prime Minister's Employment Generation Programme (PMEGP)
- Unemployed Youth Employment Generation Programme (UYEGP)
- New Entrepreneur-Cum- Enterprise Development Scheme (NEEDS)

Industrial policy initiatives in the State are designed in the backdrop of the increasing multifaceted globalisation of production systems, especially, in terms of technology transfers and development of physical infrastructure for higher growth. Recognising the importance of industry, Tamil Nadu formulated the dynamic New Industrial Policy 2003 and evolved strategies to make the State a leading industrial destination in India. The New Industrial Policy has its focus on optimal use of resources, upgradation of managerial skills and administrative, technical improvement and modernisation in the fields of manufacturing and infrastructure sectors for higher growth in Tenth Five Year Plan Period. In the Information Technology sector, the State is a leader. Chennai has become a hub of software industry. Besides Information Technology, the State has made strident progress in automobile sector and is poised to record significant growth in the Textile Sector in view of the abolition of the Textile Quota regime.

### 7.2.7 Labour Welfare Measures

The Tamil Nadu Labour Welfare Board is executing numerous welfare arrangements for the profit of the workers who donate to Labour Welfare Fund. The extreme income limit for availing the schemes is ₹25,000/- p.m.

- **Labour welfare centres:** 38 labour welfare centres are operating in Tamil Nadu which contains dressmaking section, pre-school and reading room.
  - o **Tailoring centres:** Spouses and single daughters/sisters of workmen who are donors of the Tamil Nadu Labour Welfare Fund are entitled to commence training in Tailoring Centre. The course is for one year

## NOTES

beginning from January. The learners are paid a sum of ₹150/- per month as remuneration. At the closer of the Course, the learners are sent to the examinations led by the Government. The first rank container in every centre is given a prize of Sewing Machine for lesser as well as higher grade.

- o **Pre-schools:** Employees 'youngsters in the age group of 2 to 5 are admitted in the playschool. Every day the children are given healthy mid-day meals and 150 ml. milk in the evening. They are given eggs three times a week and fruits two times a week. Children are conveyed education in Tamil, Maths and English and also delivered with two sets of cotton Uniforms. Pre-schools are operational from June to April of every Year.
- **Educational scholarship:** Allowances are given to the children of the employees for their higher education at the rates as specified below:
 

1 Master Degree in Engineering	
2 Master Degree in Medical	
3 Master Degree in Law	₹12000/-
4 Master Degree in Agriculture	
5 Master Degree in Education	
6 Master Degree in Physical Education	
7 Bachelor Degree in Engineering	
8 Bachelor Degree in Medical	
9 Bachelor Degree in Law	
10 Bachelor Degree in Agriculture	
11 Bachelor Degree in Education	₹8000/-
12 Bachelor Degree in Physical Education	
13 Diploma in Engineering	
14 Diploma in Medicine	₹5000/-
15 Certificate Course in Physical Education	
16 Diploma in Teacher Training Education	
17 Higher Secondary	₹4000/-
18 I.T.I	₹4000/-
- **Educational incentive:** Cash Prize of ₹2000/- for 10th standard and ₹3,000/- for 12th standard is being given to the children of the employees who held first 10 places in Government Public Examinations in each Educational District.
- **Book allowance:** Book Pin money (allowance) is given to the children of the employees for pursuing their studies at the charges as showed below:

1 Higher Secondary	1000/-
2 Diploma Course	1500/-
3 Bachelor Degree	2000/-
4 Master Degree	3000/-

Industrial Sector

## NOTES

- **Assistance for basic computer training:** Payment of ₹1000/- is given to five employees/children in each Revenue District for Basic Computer Training.
- **Marriage assistance scheme:** An amount of ₹10, 000/- is given as marriage support to employees or their son/daughter who officially achieve the age of marriage.
- **Spectacles assistance:** Compensation of the cost of Eyeglasses of ₹1000/- is given to the employees on production of Doctor's Recommendation.
- **Typewriting/Short hand assistance:** Employees' children who have passed the Typewriting/Shorthand Govt. Examinations are rewarded ₹1000/- for Typewriting Lower, ₹600/- for Typewriting Higher and ₹1500/- for Shorthand Lower and Higher.
- **Assistance for accidental death and funeral expense:** Accidental Death Support of ₹1, 00, 000/- is given to the reliant of the employee who expires in an accident. In totalling to that ₹5, 000/- concerning funeral expenditures is paid to a dependent of employee for accidental demise.
- **Assistance for natural death and funeral expenses:** Natural Death Support of ₹25, 000/- is given to the reliant of the employee. In addition to that ₹5, 000/- to funeral expenditures is paid to a dependant of the worker for natural death.
- **Hearing aid, artificial limbs and three-wheelers:** Recompense of cost of hearing aid up to ₹1000/- is given to hearing weakened workers/dependents. Likewise, price of artificial limbs are also compensated and three wheelers are provided free of cost to the handicapped employees.
- **Uzhaippavar Ulagam:** A monthly magazine named *Uzhaippavar Ulagam* is printed by the Labour Welfare Board. This magazine conveys articles on verdicts associated with labour disputes, details of labour laws, amendments, question-answers and letters from readers, etc. The cost of a single magazine is ₹10/-, yearly subscription ₹100/- and lifetime subscription is ₹1000/-.
- **Holiday homes:** Holiday homes have been built by the Tamil Nadu Labour Welfare Board at Mamallapuram, Courtallam and Valparai for the employees and their family member to relish their outings.
  - o Since 1988, a holiday home called 'Jawaharlal Nehru Illam' is operational at Mamallapuram, which consists of forty four beds.
  - o Since 1987, a holiday home called 'Singaravelar Illam' is operational at Valparai, which has 30 beds in it.

- o Since 1983, a holiday home called ‘Thiru-vi-ka Illam’ is operational at Courtallam, with ninety three beds in it.

#### *Rent for Holiday Homes*

### NOTES

Rest House	Labour		Public	
	Double room	Dormitory	Double room	Dormitory
Mamallapuram	70/-	40/-	375/-	190/-
Valparai	80/-	40/-	250/-	190/-
Courtallam				
Ordinary days	60/-	40/-	250/-	125/-
Season days	70/-	60/-	375/-	190/-

- **Jeeva Illam:** A rest house named ‘Jeeva Illam’ has been built in Chennai in the year 1981 for lodging of the Office carriers of registered Trade Unions who come to Chennai from different places in Tamil Nadu to conduct cases on behalf of the staffs. Sixty two beds are delivered there.

#### Check Your Progress

1. What is the objective of setting up Tamil Nadu Industrial Guidance and Export Promotion Bureau?
2. Where is the world’s biggest bagasse-based paper mills located?
3. How has the government of Tamil Nadu classified the state for the purpose of administering the fiscal incentives?
4. State any two objectives of KVIC.
5. Who is the head of the District Industries Centre in Tamil Nadu?

### 7.3 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Tamil Nadu Industrial Guidance and Export Promotion Bureau has been set up with an objective to attract major investment proposals to Tamil Nadu.
2. The world’s biggest bagasse-based paper mills, Tamil Nadu Newsprint and Papers (TNPL), owned by Tamil Nadu state government is located in Karur.
3. The government of Tamil Nadu classified the state for the purpose of administering the fiscal incentives as follows:
  - a. A CATEGORY-Chennai, Tiruvallur and Kancheepuram (3 districts)
  - b. B CATEGORY–Other than A & C (20 districts)
  - c. C CATEGORY-Southern Districts (9 districts)

4. The objectives of KVIC are:
  - a. To generate employment opportunities in rural as well as urban areas of the country through setting up of new self-employment ventures/projects/micro enterprises.
  - b. To increase the wage earning capacity of artisans and contribute to increase in the growth rate of rural and urban employment.
5. The General Manager is the head of the District Industries Centre functioning in 31 districts, while Chennai district is headed by Regional Joint Director.

**NOTES**


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## 7.4 SUMMARY

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- Tamil Nadu is the fourth largest state of India. It has a diversified manufacturing sector and features leaders among several industries like automobiles and auto components, engineering, pharmaceuticals, garments, textiles, leather, chemicals, plastics, etc.
- According to Department for Promotion of Industry and Internal Trade (DPIIT), cumulative Foreign Direct Investment (FDI) inflow in Tamil Nadu and Puducherry stood at US\$ 32.20 billion between April 2000 and March 2020.
- One of the global electrical equipment manufacturing public sector company, BHEL, has manufacturing plants at Tiruchirappalli and Ranipet.
- Investment of additional funds into the industrial sector is a pre-condition for quickening the pace of industrialisation.
- The industrial growth as measured by the Index of Industrial Production was encouraging in the State during 2004-05. The performance of industry during the review year showed a spectacular rebound and registered a growth rate of 8.2 per cent.
- The large scale industries like manufacturing have been promoted like never before in Tamil Nadu.
- The SSI sector occupies a pivotal place for its contribution to industrial production, employment generation, export and State income.
- The Government have established eight exclusive Industrial estates for Electrical and Electronic industries consisting of 517 Developed Plots and 140 Sheds.
- The Scheme will be implemented by Khadi and Village Industries Commission (KVIC), a statutory organization under the administrative control of the Ministry of MSME as the single nodal agency at the National level.
- Established in 1978, District Industries Centres' program was initiated by central government to promote tiny, cottage, village and Small Scale Industries (SSIs) in smaller towns and their particular areas to make them available with all the basic needs, services and facilities.

- The Tamil Nadu Labour Welfare Board is executing numerous welfare arrangements for the profit of the workers who donate to Labour Welfare Fund. The extreme income limit for availing the schemes is ₹25,000/- p.m.

## NOTES

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### 7.5 KEY WORDS

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- **Compound Annual Growth Rate:** It is a business and investing specific term for the geometric progression ratio that provides a constant rate of return over the time period.
  - **Subsidy:** It is the transfer of a certain amount of money from the Government to an entity that further sells subsidized products to people.
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### 7.6 SELF ASSESSMENT QUESTIONS AND EXERCISES

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#### Short Answer Questions

1. What are the major initiatives taken by the government to promote Tamil Nadu as an investment destination?
2. Write a short note on industrial estate in Tamil Nadu.
3. What are the incentives that are being extended to MSME in Tamil Nadu through DICs?

#### Long Answer Questions

1. Examine the different trends and patterns in industrial growth in Tamil Nadu.
  2. Discuss the significance and reforms in small scale industries in Tamil Nadu.
  3. Explain the different labour welfare schemes in Tamil Nadu.
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### 7.7 FURTHER READINGS

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Rajalakshmi, N. 1999. *Tamil Nadu Economy*. Mumbai: Business Publishers.

Perumalsamy, S. 1990. *Economic Development of Tamil Nadu*. New Delhi: S. Chand & Co. Ltd.

Veeramani, A. R. 2005. *Tamil Nadu Agricultural Economy*. Chennai: Divyasre.

Manickam, S. 2007. *Economic Development of Tamil Nadu in Perspective*. Chennai: Uyirmmmai Publication.



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## UNIT 8 INDUSTRIAL FINANCIAL INSTITUTIONS

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*Industrial Financial  
Institutions*

### NOTES

#### Structure

- 8.0 Introduction
- 8.1 Objectives
- 8.2 Industrial Financing
  - 8.2.1 TIIC (Tamil Nadu Industrial Investment Corporation Limited)
  - 8.2.2 SIDCO (Tamil Nadu Small Industries Development Corporation Ltd)
  - 8.2.3 SIPCOT (State Industries Promotion Corporation of Tamil Nadu Limited)
  - 8.2.4 Industrial Estate
  - 8.2.5 District Industries Center (DIC)
  - 8.2.6 Export Processing Zones (EPZ)/ Special Processing Zone (SPZ)
  - 8.2.7 Special Economic Zone (SEZ)
- 8.3 Answers to Check Your Progress Questions
- 8.4 Summary
- 8.5 Key Words
- 8.6 Self Assessment Questions and Exercises
- 8.7 Further Readings

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### 8.0 INTRODUCTION

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Finance and industrial development go hand in hand. No two industry require the same kind of financial assistance. It is for this reason that industrial financial institutions have been established to meet the demands of the small, medium and large scale industries. This unit will discuss the role of TIIC, SIDCO, SIPCOT, Industrial estate and DIC. The establishment of export processing zone and special economic zone will also be discussed.

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### 8.1 OBJECTIVES

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After going through this unit, you will be able to:

- Discuss the role of various industrial financial institutions
- Explain the importance of TIIC, SIDCO and SIPCOT in promotion of industrial growth
- Analyse the objectives and types of industrial estates
- Discuss in detail the establishment of Export Processing Zone and Special Economic Zone

## NOTES

## 8.2 INDUSTRIAL FINANCING

Finance is measured as the lifeline of any industry. Industrial development is impossible without proper finance. Due to the lack of adequate finance, industrial development in India could not achieve a considerable position and shape. Industries require different types of financial assistance. Short term, medium term and long term finance are required for meeting the needs of fixed capital expenditure and working capital.

### 8.2.1 TIIC (Tamil Nadu Industrial Investment Corporation Limited)

The Tamil Nadu Industrial Investment Corporation Limited is an institution maintained by the government of Tamil Nadu. It served as a catalyst for the expansion of small, medium and large scale industries.

Established in 1949, it was the first State Level Development Financial Institution that was focused on promoting industrial development. TIIC had financed Greenfield projects; many of them are currently successful brands.

TIIC facilitates industrial expansion in Tamil Nadu by providing financial help for acquisition of land, machinery and structure of buildings. The motive could be for setting up new units, development, rejuvenation and expansion of current industries. Assistance is given to manufacturing as well as eligible service sector industries.

It focuses on providing assistance to Micro, Small, and Medium enterprises, which accounts for 90 per cent of the total assistance. More about 40 per cent of the total assistance is availed by first generation entrepreneurs. The Corporation is led by a Board of senior Bureaucrats, Banking Professionals and Sector representatives.

The Corporation has continuously earned profit for past 16 years. So far, they have assisted 1, 23, 544 units with a cumulative sanction of Rs.17, 281 crores up to 31.03.2019.

### Vision

‘To be a viable and vibrant financial institution committed to serving industries in Tamil Nadu.’

### Mission

- To continuously develop schemes and processes which are customer-friendly
- To work closely with the Government of Tamil Nadu and other central agencies to channelize incentives and services for development of MSMEs in the State.
- To become the desired destination for those seeking long term finance in the State.

- To establish network with other stakeholders in the MSME Ecosystem in order to improve in-house domain knowledge.
- To discover newer choices to reach out to MSMEs by working with Fintech companies, NBFC, SFB, MFI and other large industries.

### 8.2.2 SIDCO (Tamil Nadu Small Industries Development Corporation Ltd)

Small Industries Development Corporation Limited (SIDCO) was established on 16 March 1970 by the Government of Tamil Nadu to promote the interest of Micro, Small and Medium Enterprises in the State.

A few other SIDCOs are:

- Kerala Small Industries Development Corporation Limited
- Small Industries Development Corporation of Jammu and Kashmir.
- Tamil Nadu Small Industries Development Corporation Limited (TANSIDCO)

The **Tamil Nadu Small Industries Development Corporation Limited (TANSIDCO)**, an undertaking of the Government of Tamil Nadu, was established in 1970, with the aim of promoting and developing small-scale industries in the state.

The main areas of TANSIDCO's activities are:

- Establishing Industrial Estates
- Assisting promotion of Private Industrial Estates.
- Promotion of Common Facility Centres under Cluster Development Programme.
- Providing technical and managerial guidance to the MSMEs.
- Extending raw material support and marketing support.

### 8.2.3 SIPCOT (State Industries Promotion Corporation of Tamil Nadu Limited)

The State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT) was established in 1971 to promote industrial growth in Tamil Nadu. It provided financial assistance to medium and large industries.

In order to support area development activities, the organization gets involved in the formation of industrial complexes by providing basic infrastructure facilities for the industries to set up their units. Till date, SIPCOT has developed 21 Industrial Complexes in 12 districts and 7 Sector Specific Special Economic Zones (SEZs) across Tamil Nadu. SIPCOT also work as a Nodal Agency of Government of Tamil Nadu in the approval and disbursement of Structured Package of Assistance to large industrial units.

## NOTES

## NOTES

SIPCOT has provided rewarding services to the state by recognizing, developing and maintaining industrial areas in backward and most backward talukas of the State. SIPCOT's job in supporting the industrialization in the State is not only quantitative but also qualitative.

### 8.2.4 Industrial Estate

An industrial estate is a place where the essential amenities and factory space are made accessible by the government to the industrialists so that the latter can easily set up their industries. In India, industrial estates have been used as an effective tool for promotion and growth of small-scale industries. It has also been used to decentralize industrial activity to rural and backward areas. Industrial estates known by different names, such as industrial region, industrial park, industrial area, industrial zone, etc.

### Types of Industrial Estates

Industrial Estates are classified on various basis:

The well-known ones are:

#### I. On the basis of functions:

On the basis of functions, industrial estates are of two types:

- a) General Type Industrial Estate: It is also called as conservative or complex industrial estate. It provides space to a wide variety and range of industrial concern.
- b) Special Type Industrial Estate: This type of industrial estates is built for specific industrial units, which are independent.

#### II. On the basis of directorial set-up:

On this basis, industrial estates are classified into following four types:

- a) Government Industrial Estates,
- b) Private Industrial Estates,
- c) Co-operative Industrial Estates.
- d) Municipal Industrial Estates

### Objectives of Industrial Estates

The main objectives of the establishment of industrial estates are to:

- a) Provide infrastructure and lodging facilities to the entrepreneurs
- b) Promote the growth of small-scale industries in the country
- c) Decentralize industries to the rural and backward areas
- d) Promote ancillarisation in surroundings of major industrial units
- e) Develop entrepreneurship by creating a friendly environment to run the industries in these estates/area /township, etc.

## Establishment of Industrial Estates

- Appropriate lands are recognized, taking into consideration various factors such as location, availability of power and water, transport facilities, etc. for the construction of new Industrial Estates.
- The lands are purchased if they are personal patta lands or left alone if they are Government lands.
- Necessary infrastructure facilities such as roads, streetlights, water supply system, storm water drainage, sewage system etc., are made available in the lands taken over and new Industrial estates are created.
- The Tamil Nadu government established 35 Industrial Estates through Directorate of Industries and Commerce and the administrative control of these industrial estates were later transmitted to SIDCO on agency terms in 1974.
- Since its establishment in 1970, SIDCO has developed 59 Industrial Estates on its own and a total of 94 industrial estates (Annexure- IV) are currently functioning under the direction of SIDCO.

## NOTES

### Special Features

Small Plots measuring 5 cents to 15 cents are allocated exclusively to Micro Enterprises and Industrial plots measuring 0.25 acre to 1 acre and beyond are allotted to Micro, Small and Medium Enterprises depending on their project requirement. Multistoried industrial complexes with an area of 500 sq. ft, 1000 sq. ft and 1500sq. ft are allocated to Electronic and Readymade Garment Industries in Thiru-vi-ka Industrial Estate, Guindy. Women Industrial Parks have been developed to support women entrepreneurs in 5 places:

- a) Karuppur (Salem Dist.)
- b) Valavanthankottai (Trichy District)
- c) Thirumullaivoyal (Thiruvallur District)
- d) Thirumudivakkam (Kancheepuram District)
- e) Kappalur (Madurai District)

30 per cent of the commercial area of New Industrial Estates is assigned for Micro Enterprises as per G.O.Ms.No.7 MSME. Dept. dated 31.01.2009 and allotted to Micro Enterprises.

To make sure that all sections of the society are benefitted in the industrial development of the State, priority is on the following during allotment:

- 30% for Women Entrepreneurs
- 10% for Ex-servicemen
- 10% for SC/ST and Transgender.

## NOTES

### 8.2.5 District Industries Center (DIC)

As mentioned in Unit 7, all the MSMEs are offered a range of services and support under the single roof of the District Industries Centre. The General Manager is the head of the District Industries Centre operating in 31 districts and the Chennai district is headed by Regional Joint Director. The post of General Manager is of Joint/Deputy Director Level. The General Manager is assisted by the Project Manager, Manager (Credit), Manager (Economic Investigation)/ Manager (Village Administration) and an office Superintendent.

#### Incentive Schemes

As you have already learnt in Unit 7, the following encouragement are being provided to Micro, Small and Medium Enterprises in the State through DICs:

- a) Subsidy schemes for micro manufacturing enterprises
- b) Subsidy schemes for Small and Medium manufacturing enterprises being established in 251 Industrially Backward Blocks
- c) Subsidy schemes for Agro based Small and Medium manufacturing enterprises established in all the 385 blocks of the State.
- d) Special Capital Subsidy for Thrust Sector Enterprises
- e) Generator Subsidy
- f) Back-ended Interest Subsidy

#### Implementation of Self Employment schemes

The following schemes are being put into practice in the State through DICs:

- Prime Minister's Employment Generation Programme (PMEGP)
- Unemployed Youth Employment Generation Programme (UYEGP)
- New Entrepreneur-Cum- Enterprise Development Scheme (NEEDS)

### 8.2.6 Export Processing Zones (EPZ)/ Special Processing Zone (SPZ)

It can be defined as a free trade zone. In other words, it is a geographical area where goods can be landed, put in storage, controlled, mass-produced, reconfigured and exported under specific customs regulation and generally not subject to customs duty.

Many developing nations are trying to transform their economy by integrating themselves into the global supply chain. This implies a shift from import-centric economy to an export-based economy. Countries like Asia, Africa, and Latin America are creating various export development programs to promote investments from multinational companies.

Several nations have used a tool in this regard. This tool is Export Processing Zones (EPZ). These are particular areas in a country that are intended to do the following:

- Attract foreign investment to generate jobs
- Enlarge the industrial base
- Introduce technology
- Create backward link between the zones and the domestic economy

The EPZ can have certain resources such as natural resources, cheap skilled labor, or logistical advantages in order to draw the attention of investors. Countries can also promote investment in the EPZ by offering expedited licensing or building permits, nominal customs regulations, duty-free tax incentives, such as a ten year tax holiday, and developing infrastructure as per the investor's requirements.

Since the 1930's, the EPZ has been used by developing nations to attract foreign investment. This system is called EPZ in some countries, while in others it is known as Free Trade Zone (FTZ), Special Economic Zone (SEZ) or Ormaquiladora, in Mexico.

The first EPZs were found in Latin America, whereas in the US, the first free trade zone was created in 1934. From the 1970s, developing nations have seen EPZs as a way of boosting their economies by promoting investment from the developed nations.

### **Advantages of the Export Processing Zone**

The advantages of the export processing zone are given below:

- It leads to an increase in foreign exchange through increased exports
- Employment generation
- Foreign direct investment (FDI) to the host country
- The introduction of technology into the country
- Generating backward linkages from the EPZ to the domestic economy

### **Disadvantages of the Export Processing Zone**

Many economists have mentioned that employment in EPZs means low salary, high work intensity, poor working conditions and suppression of labor rights. While it is true that wages in EPZs are higher than the rural areas of the same country, it is not always true that the wages in EPZs are higher as compared to outside the EPZs. Families in rural areas are often dependent on the income sent back by female workers within the EPZ.

Unsafe working conditions is often associated with EPZs. Employees are required to work long hours in physically unsafe circumstances, including extreme noise and heat, unsafe manufacturing tools, and uninspected buildings. With no access to union representation, there is little that is done to change the situation.

As new EPZs are formed, there is an emphasis to keep costs as low as possible in order to compete against other developing nations. This means that the workers continue to work in unsafe environment.

## **NOTES**

## NOTES

### Export Processing Zone in Tamil Nadu

Madras Export Processing Zone is a multi-product special economic zone in Chennai. It was established as EPZ in 1987 and converted into SEZ multi-product in 2003.

#### 8.2.7 Special Economic Zone (SEZ)

The SEZ or Special Economic Zone is an area in a country that is selected by the government for its development. In 1984, the Zone was established as an Export Processing Zone (MEPZ). The Zone was became operational during the financial year 1985-86 and exports commenced. Seven Special Economic Zones were set up by Indian Government; MEPZ SEZ is one of them.

This Zone was changed into a Special Economic Zone on 1 January 2003. The added purpose of the SEZ was to ease the export process through reduction of transaction costs. The Government of India, Department of Commerce, has launched special features that contains off shore Banking Units and Container Freight Stations to be set up within the Zone besides relaxed Customs procedures. The Zone is headed by the Development Commissioner.

#### Objectives of SEZ

- Generation of additional economic activity.
- Promotion of exports of goods and services.
- Promotion of investment from domestic and foreign sources.
- Creation of employment opportunities.
- Development of infrastructure facilities

#### A Glimpse of SEZs in India

There are Seven Zones:

- Kandla and Surat (Gujarat)
- SEEPZ (Maharashtra)
- MEPZ (Tamil Nadu)
- Noida (Uttar Pradesh)
- Cochin (Kerala)
- Falta (West Bengal)
- Vishakapatnam (Andhra Pradesh)

No. of Operating SEZs: 232

- No. of Industrial Units : 5146 Units
- Exports (2018-19) : ₹ 7,05,272 Cr. (\$ 100,752)
- Employment generated : 20 lakh



There are close to 41 operational SEZs under the jurisdiction of MEPZ-SEZ in Tamil Nadu

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**Table 8.1** Export Performance (Operational SEZs in Tamil Nadu)

Sl.NO	Year	Exports ( in Crore)	Employment (Cumulative)	Investment ( in Crore)
1	2013-14	79,555	2,68,405	36,506
2	2014-15	70,428	2,87,230	40,359
3	2015-16	80,392	3,27,040	46,340
4	2016-17	82,631	3,57,067	49,783
5	2017-18	88,848	3,81,233	55,366
6	2018-19	1,01,387	4,07,498	56,803

## NOTES

### Check Your Progress

1. When was the Tamil Nadu Industrial Investment Corporation Limited established?
2. In which year was SIPCOT established?
3. How many industrial complexes and special economic zones have been established by SIPCOT?
4. What is General Type Industrial Estate also known as?
5. Who is the head of the District Industries Centre?
6. What are the main objectives of SEZ?

## 8.3 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The Tamil Nadu Industrial Investment Corporation Limited was established in 1949.
2. The State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT) was established in 1971 to promote industrial growth in Tamil Nadu. It provided financial assistance to medium and large industries.
3. Till date, SIPCOT has developed 21 Industrial Complexes in 12 districts and 7 Sector Specific Special Economic Zones (SEZs) across Tamil Nadu.
4. The General Type Industrial Estate is also known as conservative or complex industrial estate.

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5. The General Manager is the head of the District Industries Centre.
6. The objectives of SEZ are given below:
  - Generation of additional economic activity.
  - Promotion of exports of goods and services.
  - Promotion of investment from domestic and foreign sources.
  - Creation of employment opportunities.
  - Development of infrastructure facilities

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## 8.4 SUMMARY

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- Industrial development is impossible without proper finance. Short term, medium term and long term finance are required for meeting the needs of fixed capital expenditure and working capital.
- The Tamil Nadu Industrial Investment Corporation Limited is an institution maintained by the government of Tamil Nadu. It served as a catalyst for the expansion of small, medium and large scale industries. Established in 1949, it was the first State Level Development Financial Institution that was focused on promoting industrial development.
- TIIC focuses on providing assistance to Micro, Small, and Medium enterprises, which accounts for 90 per cent of the total assistance. More about 40 per cent of the total assistance is availed by first generation entrepreneurs. The Corporation is led by a Board of senior Bureaucrats, Banking Professionals and Sector representatives.
- Small Industries Development Corporation Limited (SIDCO) was established on 16 March 1970 by the Government of Tamil Nadu to promote the interest of Micro, Small and Medium Enterprises in the State.
- The State Industries Promotion Corporation of Tamil Nadu Limited (SIPCOT) was established in 1971 to promote industrial growth in Tamil Nadu. It provided financial assistance to medium and large industries. Till date, SIPCOT has developed 21 Industrial Complexes in 12 districts and 7 Sector Specific Special Economic Zones (SEZs) across Tamil Nadu.
- An industrial estate is a place where the essential amenities and factory space are made accessible by the government to the industrialists so that the latter can easily set up their industries. In India, industrial estates have been used as an effective tool for promotion and growth of small-scale industries.
- All the MSMEs are offered a range of services and support under the single roof of the District Industries Centre. The General Manager is the head of the District Industries Centre operating in 31 districts and the Chennai

district is headed by Regional Joint Director. The General Manager is assisted by the Project Manager, Manager (Credit), Manager (Economic Investigation)/ Manager (Village Administration) and an office Superintendent.

- Export Processing Zone can be defined as a free trade zone. In other words, it is a geographical area where goods can be landed, put in storage, controlled, mass-produced, reconfigured and exported under specific customs regulation and generally not subject to customs duty.
- The first EPZs were found in Latin America, whereas in the US, the first free trade zone was created in 1934. From the 1970s, developing nations have seen EPZs as a way of boosting their economies by promoting investment from the developed nations.
- The SEZ or Special Economic Zone is an area in a country that is selected by the government for its development. In 1984, the Zone was established as an Export Processing Zone (MEPZ). This Zone was changed into a Special Economic Zone on 1 January 2003.

## NOTES

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### 8.5 KEY WORDS

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- **Industrial Estate:** It is a place where the essential amenities and factory space are made accessible by the government to the industrialists so that the latter can easily set up their industries.
- **Export Processing Zone:** It can be defined as a free trade zone. In other words, it is a geographical area where goods can be landed, put in storage, controlled, mass-produced, reconfigured and exported under specific customs regulation and generally not subject to customs duty.
- **Special Economic Zone:** It is an area in a country that is selected by the government for its development.

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### 8.6 SELF ASSESSMENT QUESTIONS AND EXERCISES

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#### Short Answer Questions

1. What is the mission of the Tamil Nadu Industrial Investment Corporation Limited?
2. Write a short note on the main activities of SIDCO.
3. What is an industrial estate?
4. What are various incentive schemes offered by the DIC?
5. Write a short note on SEZ.

## NOTES

### Long Answer Questions

1. Examine the role of the various financial institutions in promotion of industrial development.
2. Discuss in detail the objectives, types and establishment of industrial estate.
3. Examine the advantages and disadvantages of establishing Export Processing Zones.

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### 8.7 FURTHER READINGS

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- Leonard, A.G. 2006. *Tamil Nadu Economy*. New Delhi: MacMillan India.
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## UNIT 9 INFRASTRUCTURE- I

### Structure

- 9.0 Introduction
- 9.1 Objectives
- 9.2 Rural-Urban Education
- 9.3 Health Infrastructural Development
  - 9.3.1 Some of the Ongoing Schemes Related to Health in Tamil Nadu
- 9.4 Banking Infrastructure, Power Infrastructure, Communication and Transport
- 9.5 Answers to Check Your Progress Questions
- 9.6 Summary
- 9.7 Key Words
- 9.8 Self Assessment Questions and Exercises
- 9.9 Further Readings

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### 9.0 INTRODUCTION

Tamil Nadu is one of the most developed states in the country. Not only does it have an investor-friendly environment, it also has a stable economic environment. The Tamil Nadu Infrastructure Development Act, 2012 was introduced to enhance the development of infrastructure in the State. The foundation of success is based on the state of education, healthcare, banking services, transport and communication. This unit will discuss in detail these factors which are essential for the development of economy and infrastructure, with respect to Tamil Nadu.

### 9.1 OBJECTIVES

After going through this unit, you will be able to:

- Discuss the state of rural-urban education in Tamil Nadu
- Examine the health infrastructure in Tamil Nadu
- Analyse the development of banking, power infrastructure and communication in Tamil Nadu

### 9.2 RURAL-URBAN EDUCATION

In India, Tamil Nadu is one of the most developed States. It is one of the top three States in the country depending upon economic and social pointers. Tamil Nadu has a stable political environment; it has an investor friendly government, and there is transparency in decision making. The state has well developed manufacturing sector and IT hub; it has abundant skilled manpower and lower crime rate. The Government's 'Vision Tamil Nadu 2023', a strategic plan for infrastructure

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development in Tamil Nadu, endeavours to further enhance the State's economic and social performance. This Vision seeks to achieve the objectives of economic prosperity and employment generation accompanied by inclusive growth. The Vision 2023 will focus on developing an array of projects to strengthen the State's infrastructure.

The Tamil Nadu Infrastructure Development Act, 2012 has been passed for providing an institutional framework with the following objectives:

- Create an enabling and facilitative environment
- Identify, prioritise and implement infrastructure projects
- Enable private sector participation where feasible

Tamil Nadu Infrastructure Development Board (TNIDB), set up under the Tamil Nadu Infrastructure Development Act (TNID Act) 2012, is envisioned as the premium agency for development of infrastructure in Tamil Nadu. TNIDB is likely to play a serious role in development of infrastructure in the State by enabling development of project in a unified, competent and clear manner. The TNID Act along with the Rules and Regulations thereof provide the Board with the necessary administrative authority and lay down a clear framework of processes and procedures to ensure speedy project development.

### **Rural Urban Educational Development**

Education is believed to be essential for the development of economy and infrastructure. There can no sustainable economic development without human resource capital in any country. Learning offers individual with the finest prospects of success in the modern society. With respect to knowledge, quality, skill, attitude, and capacity, education enables individuals to become conscious subjects of their growth and become active responsible participants in a systematic process of building a new world order. Education makes people insightful about themselves and the world. It improves the standard of living and brings about broad social benefits to individuals and society. Education increases productivity and creativity of people and encourages entrepreneurship and technological advances. It plays a very important role in safeguarding economic and social development and redefining distribution of income. Education strengthens democracy by providing the citizens the tools they need to take part in the functioning of the government. Education also acts an integrative force in society, imparting values that fosters social position and national identity.

Knowing the significance of education, the State Government has decided to focus their attention on expansion of education, thereby improving the state of education and ensuring that quality education is accessible to all sections of the society in Tamil Nadu. As far as elementary education is concerned, Tamil Nadu has performed well in comparison to other states. The Composite Education Development Index which assessed the status of elementary education and was computed by the National University of Educational Planning and Administration

(NEUPA) and the Government of India (Ministry of Human Resource and Development, Department of School Education and Literacy) put Tamil Nadu in the number one position. The Report on Annual Status on Higher Education 2011-12 brought out by Ministry of Human Resource Development and Department of Higher Education ranked Tamil Nadu as first in gross enrolment ratio of higher education. Recognizing the significance of education in the development process and the economic imperative of 'quality education for all' during the 12th Plan period (2012-2017), the Government of Tamil Nadu had earmarked a sizeable amount of ₹19,608 crore for education out of the aggregate outlay of ₹2,11,250 crore. It works out to 9.28 percent of the total Plan outlay. A larger slice of the outlay, 34 percent is allocated to secondary and vocational education, followed by 28 percent to primary education and 19 percent to higher education. The goals of the 12th Plan was universal access, universal enrolment, universal retention, universal achievement and equity. The budgetary provision of ₹16,728.09 crore was made for elementary education and ₹16,717.33 crore for secondary and higher education for the year 2020-21.

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### Literacy Attainment

The growth rate of the economy, birth rate, death rate, infant mortality rate (IMR) and literacy rate are all interrelated. The literacy rate is considered to be the major factor for the increase or decrease of the other factors. The State government has been draining every nerve to attain the objective of 'Universalization of Education' and 'Education for All' for many years. All these struggles have been fruitful in terms of improved literacy rate and educational accomplishment.

**Literacy Rate:** During the previous five decades, the literacy rate in Tamil Nadu had more than doubled. There has been an increase in the literacy rate from 36.4 percent in 1961 to 80.1 percent during 2011. The increase in the literacy rate over the years could be credited to better contributions in primary education. The literacy rate in Tamil Nadu was comparatively better than the all India rate (73.0%). However, the decadal improvements in literacy rate in Tamil Nadu has slowdown in the 2001-2011 decade which is a cause for worry.

Literacy rate in Tamil Nadu have been slower than the all India gains since 1981. This suggests that sustained efforts are required in this field. Among the 15 major States, Tamil Nadu ranked third in respect of literacy rate, Kerala (93.91%) and Maharashtra (82.91%) occupied the first and second position respectively. In terms of gender, the literacy rate of males was higher than the females in Tamil Nadu as well as at all India. The literacy rate of males and females in Tamil Nadu was higher than that of all-India. The literacy gap between males and females and rural and urban was lower in Tamil Nadu as compared to all-India.

Out of 32 districts in the State, only in 13 districts viz., Thiruvallur, Kancheepuram, Tiruchirappalli, Nagapattinam, Thiruvallur, Thanjavur, Madurai, Thoothukudi, Tirunelveli, Ramanathapuram, Kanniyakumari, Coimbatore and The Nilgiris, the overall literacy rate was higher than the State's average (80.1%). The

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literacy rate of males in the districts ranged between 93.7 percent (Chennai) and 76.9 percent (Dharmapuri). The literacy rate of females varied between 89.9 percent (Kanyakumari) and 59.8 percent (Dharmapuri). In as many as 18 districts viz., Thiruvannamalai, Vellore, Villupuram, Salem, Namakkal, Erode, Dindigul, Karur, Perambalur, Ariyalur, Cuddalore, Pudukkottai, Sivagangai, Theni, Virudhunagar, Dharmapuri, Krishnagiri and Tiruppur, the literacy rate was lower than the State's average (73.4%). The gender literacy gap was higher at 19.5 percent in Ariyalur district and lower at 3.7 percent in Kanyakumari district. The literacy rates in rural and urban areas among the districts were the highest in Kanyakumari district and the lowest in Erode district. The literacy gap in rural and urban areas ranged between 1.8 percent in Kanyakumari district and 18.2 percent in Krishnagiri district. Presence of literacy gap between males and females and rural and urban is a tough task for planners in the State. The gap needs to be closed. The female literacy particularly that of SC/ST girls, needs to take a centre stage in Government's education policies.

All these have received a major push through the State Government's own initiatives complimented by Sarva Shiksha Abiyan (SSA) launched in November 2000 to impart quality elementary education to all children in the age group 6-14 by subsuming all existing programmes. The National Programme for Education of Girls at Elementary Level (NPEGEL) was launched in 2003-04 for providing additional components for education of girls at elementary level under the SSA.

**Elementary Education:** Tamil Nadu has put in efforts to make improvements in quality of elementary education by providing an adequate number of schools and ensuring that students are enrolled in those schools. They have also tried to create a suitable environment to ensure that children do not quit schools by focusing on improving the reading and writing skills of children. Moreover, the focus is on migrant labourers' children, street children, and school drop-outs. All these have received a major push from the State Government which has launched initiatives keeping in mind the goals mentioned above. The State Government's initiatives was complemented by Sarva Shiksha Abiyan (SSA) launched in November 2000 to teach quality elementary education to all children in the age group 6-14 by including all existing programmes. The National Programme for Education of Girls at Elementary Level (NPEGEL) was launched in 2003-04 for providing additional components for education of girls at elementary level under the SSA. The enrolment by type of institutions revealed that 40.44 percent were admitted in Government schools in Tamil Nadu. This ratio was lower than that of all India and in Andhra Pradesh (54.02%) and Karnataka (55.04%). The proportion of student enrolled in private schools was 21.55 percent in the State and it was significantly higher than all-India. Among the Southern States with 44.49 percent enrolled in private schools, Kerala uniquely stood first. With 42.34 percent enrolled in private management schools, Andhra Pradesh occupied the first position and it was closely followed by Tamil Nadu. Of the total students enrolled, the proportion of girls in both primary and upper primary schools stood at 48 percent in the



State. It was the case at the all-India level as well. The proportion of SC student enrolled in elementary schools (I-VIII) declined marginally from 24.41 percent in 2010-11 to 23.89 percent in 2012-13. At this level, Tamil Nadu occupied the first position among the southern States. Of the total students enrolled in elementary schools in Tamil Nadu, the proportion of ST had come down from 1.71 percent to 1.68 percent. At this level it was lower than the southern States as well as all-India. It is ensured that no child with special needs is denied admission in mainstream schools. During the year 2012-13, the proportion of children with special needs enrolled in elementary schools in the State was 1.13 percent. Among girls the proportion was lower at 0.99 percent as compared to boys (1.27%). Children with special needs face challenges in learning as they may not be able to focus on the teacher during classroom interaction or their pace of learning may vary. Moreover, social skills and emotional skills may need to be strengthened. Going by the medium of instruction, 60 percent of the students in elementary education in the State were enrolled under Tamil medium, 39 percent in English medium and one percent in other languages (Urdu, Telugu, etc). At primary level, the GER was 106.60, and the dropout rate 0.75. At the upper primary level, the GER was 106.48 and dropout rate was 1.35 in the year 2019-20.

**Teachers in Elementary Schools:** The learner-teacher ratio at the primary level has seen a steady decline in Tamil Nadu from 28 in 2010-11 to 24 in 2012-13. At this point, it was less than the standard norm of 30. The learner-teacher ratio in the Tamil Nadu at the primary level was also lesser than the all India (28). Among the southern States, only in Kerala (19) was the student-teacher ratio at the primary level was lower than in Tamil Nadu. At the upper primary level, the ratio in the State was 19 as against the required level of 35. In Tamil Nadu, the ratio declined from 33 in 2010-11 to 19 in 2012-13. As compared to the all India level (25), the ratio in Tamil Nadu was lower. Among the southern States, Kerala (18) and Andhra Pradesh (18) were better placed than Tamil Nadu.

In 2019-20, the pupil teacher ratio at primary level was 21.80 and upper primary level was 24.45.

**Secondary Education:** Tamil Nadu had already realized the goal of establishing one high school within the radius of 5 kms from a residential area and one higher secondary school within the radius of 8 kms from an occupancy according to the rules of Government of India. Overall, there are 11,587 higher secondary schools operative in the State, 49 percent of which are Government, 36 percent are private management and 15 percent are Government assisted schools. The total number of students registered in the higher secondary schools in the State were 38.42 lakh during 2012-13, out of which the students registered from urban areas were 50.2 percent and rural children were 49.8 percent. The enrolment of girls was somewhat higher than the boys. The proportion of students with disability in the total admission was 0.28 percent. Gross Enrolment Rate at secondary level was 93.85% as per educational indicator's in 2019-20. And in higher secondary the GER was 77.80% in 2019-20.

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**Higher Education in Tamil Nadu:** The Gross Enrolment Ratio of population between the age group of 18 to 23 age group in higher education was 38.2 percent in Tamil Nadu as against 20.4 percent at all India during 2011-12. Among the other major states, in respect of Gross Enrolment Ratio in higher education, Tamil Nadu ranked first. The gender based ratio among males at 41.1 percent was greater than females which was 35.2% in Tamil Nadu. Amid the social groups, the Gross Enrolment Ratio in higher education was higher in the case of STs i.e. 31% as against SCs 27.1%. As per AISHE 2017-18, Tamil Nadu State has achieved GER of 48.6 and Gender parity index of 0.98.

**Universities:** The total number of Universities functioning in the State are 59. It consists of 31 State Public Universities and 28 Private Deemed Universities. Tamil Nadu stands at the first position among all States in India with 59 Universities, followed by Uttar Pradesh (58) and Andhra Pradesh (47). It is 9.2 percent of whole India. As per the report, the Annual Status of Higher Education in States and Union Territories, the total number of colleges / institutions in the State as of 2012 was 3445, of which colleges alone accounted for 58 percent and the remaining were stand-alone institutions (42%). Tamil Nadu has an admission size of 27 colleges per lakh population. Out of the total colleges in the State, 93 percent are affiliated to Universities and the remaining are constituent/university colleges, PG/off campus or recognized centres by the universities. As per AISEIE 2018-19, Tamil Nadu comes at sixth position with 2466 colleges and 35 colleges per lakh population. The state has 13 state universities, 829 Arts and Science colleges, 718 Teacher Education, 585 Engineering, 520 Polytechnic, Hotels Management and Catering colleges under Higher Education Department.

### Educational Development Index

The Tamil Nadu government has taken certain measures to maintain the standard mentioned in Education Development Index. The Government of Tamil Nadu have provided free laptops to all plus one, plus two and college students who are studying in Government/Government aided institutions from 2011 onwards. During 2013-14, 5.50 lakh students studying plus one and plus two were benefited from the distribution of free laptops at a total cost of ₹925.01 crore as against the 5.35 lakh students who were given laptops at an expenditure of ₹898 crore in 2012-13.

With a view to overcome shortages in the availability as well as to ensure the students from lower rungs of socio-economic pyramid to possess books, free textbooks were provided for all students from I to XII standard in Government schools/Government aided schools from the academic year 2005-06. After the introduction of Continuous and Comprehensive Education and Tri-semester in 2012-13, the annual books for students studying in standard X, XI and XII and 1st term books for students studying from I to IX are being distributed on the day of reopening of the schools since 2012-13. The number of students receiving free textbooks had steadily increased over the years. In 2013-14, textbooks were

distributed to 97.70 lakh students as against 92.00 lakh students in 2012-13. The total expenditure incurred under the scheme went from ₹206 crore to ₹215 crore between these two years. As against 81.0 lakh students that benefited in 2012-13 under the scheme, the number of students receiving free notebooks increased to 86.71 lakh students in the academic year 2013-14. The expenditure under the scheme had gone up from ₹ 103 crore in 2012-13 to ₹111 crore in 2013-14.

Educational kits consist of school bags, geometry box, colour pencils, crayons and atlas which are provided to students at free of cost to make the learning process meaningful, easy and child-friendly from the year 2012-13 onwards. School bags are provided to 105 lakh students from I to XII standard in Government/Government aided schools at a cost of ₹147.57 crore in 2013-14. Atlas and geometry boxes are distributed to students once in three years. Geometry boxes are distributed to 56.0 lakh students studying in classes VI to X involving a cost of ₹20.25 crore in 2013-14. With a view to encourage students from classes I to V to attend classes, colour pencils and crayons are supplied to 64 lakh students at a cost of ₹12.0 crore. Atlas are distributed to 56 lakh students studying in classes VI to X involving an expenditure of ₹16.42 crore.

Children with barefoot may easily be susceptible to contagious diseases which will affect their health. In order to prevent this, pair of footwear is distributed to all students studying I to X standard in Government/Government aided schools free of cost in the beginning of the year. In both the years 2012-13 and 2013-14, a total of 84.92 lakh students were supplied with footwear involving a cost of ₹112.62 crore. The Government of Tamil Nadu has issued free bus passes to all students to travel in Tamil Nadu State Transport Corporation (TNSTC) buses from the residence to schools and back to home throughout the academic year. Under the scheme, free bus passes were given to 23.73 lakh students studying in I to XII in 2013-14 as against 14.02 lakh students in 2012-13.

Under Puratchi Thalaivar MGR Nutritious Noon-Meal Programme, the State is providing nutritious noon-meal to all willing children up to standard X in schools so as to encourage them to attend school. Besides, it also helps the children to satisfy their nutritional needs. The number of students benefitting from the scheme had increased from 48.63 lakh in 2012-13 to 53.40 lakh in 2013-14.

The main objective of the Government is to create educational opportunities for students who were coming from deep rural pockets. This forms the basis for distribution of free bicycles. Presently, under the scheme free bicycles are distributed to all students studying in plus one classes. In 2012-13 and 2013-14, bicycles were distributed to 6.30 lakh students each year. In order to reduce the dropout and encourage children to continue secondary education, Special Cash Incentives have been given to students in the State from 2011-12. Under this scheme, ₹1500 per student for those studying in X and XI standard and ₹2000 per student for those studying in XII standard in Government and Government aided schools are deposited in Tamil Nadu Power Finance Corporations. The amount is being

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released to the students on completion of the study. The number of students receiving Special Cash Incentive had gone up from 21.52 lakh in 2012-13 to 23.21 lakh in 2013-14. The total cost involved had also gone up from ₹354 crore to ₹381 crore.

### **Welfare Scheme at School Education Level**

As mentioned in the policy note on School Education 2020-21: 'The Government of Tamil Nadu has been implementing myriad of innovative cost-free welfare schemes for the benefit of children such as providing nutritious noon meal, textbooks, notebooks, laptop, uniform, footwear, school bag, crayons, colour pencils, geometry box, atlas, 6 woollen sweaters, rain coats, boots, socks, bus pass and bicycles. Financial assistance for students who lose their bread winning parents, student accident relief scheme and special cash incentive to students studying in standards 10 to 12 to reduce dropouts at secondary level are the other schemes implemented for the welfare of the students. Monitoring of schemes is being done for effective implementation and to ensure that the students are fully benefitted. A sum of ₹2,174.10 crore has been allocated for continuing the welfare schemes for students during 2020-21. The Government has appointed sufficient number of teachers in Government schools to ensure a comfortable Pupil Teacher Ratio in Government schools.'

### **Welfare Scheme at Higher Education Level**

As per the Higher Education Policy Note of Tamil Nadu government 2020-21, 'Tamil Nadu is a Progressive State which is at the forefront of implementing many welfare schemes for the students. Main achievements of Students Welfare Schemes implemented during the period from the year 2011-12 to 2018-19 have been highlighted as follows:

- Establishment of 4 new Government Engineering Colleges and 21 new Government Polytechnic Colleges with a total expenditure of ₹840.90 crore including ₹98 crore for equipment, ₹6.04 crore for hostel furniture and utensils, ₹3.49 crore towards contingencies, ₹733.38 crore for construction of buildings. 2,805 new posts have been created, in these Institutions.
- Establishment of an Indian Institute of Information Technology under N-PPP mode in Srirangam, Tiruchirappalli.
- Establishment of a Centre of Excellence and 5 Technical Skill development Institutes in collaboration with Siemens and Design Tech. Ltd under PPP mode.
- Continuance of students welfare schemes applicable for Engineering College students such as First Generation Graduate Tuition fee concession, Post Matric Scholarship to students belonging to SC, ST and SC converted into Christianity, Financial Assistance to economically weaker sections of students from Chief Minister's Public Relief fund, Post Graduate Assistantship at

₹6,000 per month to PG students, Foreign Technical Training Programme for 100 students for 15 days every year, Technical Education Quality Improvement Programme (TEQIP) grant for Institutional development and Research activities, Concessional facilities to 14 Sri Lankan Tamil Refugee students on par with Tamil Nadu students.

- The Students welfare schemes applicable for Polytechnic College students such as Distribution of free of cost laptop computers, Free Text Book for first year Diploma students, Waiver of Tuition fee and free bus pass for all Diploma students, Post Matric Scholarship to students belonging to SC, ST and SC converted into Christianity.

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### Check Your Progress

1. What were the main objectives of Tamil Nadu Infrastructure Development Act, 2012?
2. When was the National Programme for Education of Girls at Elementary Level launched?

## 9.3 HEALTH INFRASTRUCTURAL DEVELOPMENT

Good health is a vital pre-requirement which adds considerably both to the development in productivity of labour and human resource development. Health care is broadly acknowledged to be a public good with strong positive externalities. Universal access, of an adequate level of care, with equitable distribution of financial costs, cost effective use of the results of relevant research and special attention to vulnerable groups such as children, women, disabled and the aged is a key component of a modern civilized society. Tamil Nadu ranks 'fourth highest' in terms of life expectancy at birth, 'second lowest' next only to Kerala in terms of infant mortality rate and birth rate, 'third lowest' in terms of maternal mortality rate and 'tenth lowest' in terms of death rate. Small pox, polio and guinea worm have been eradicated.

The health of the population has been assessed by taking into account different indicators like Infant Mortality Rate (IMR), Death Rate, Birth Rate, Total Fertility Rate (TFR), Maternal Mortality Rate (MMR) and Life Expectancy at Birth (LEB). Tamil Nadu had volunteered a diminishing trend with respect to Infant Mortality Rate (IMR), Birth Rate, Total Fertility Rate (TFR), Maternal Mortality Rate (MMR) and an upward trend in Life Expectancy at Birth.

**Crude Birth Rate (CBR):** It indicates the number of live births occurring during the year per thousand population. There was a steady decline in the crude birth rate of Tamil Nadu. It went from 18.5 in 2002 to 15.7 in 2012. As of 2018, the birth rate was around 14.7. The reasons behind this decline are stress on higher age at marriage, a much wider reach of mass media facilitating speedier

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diffusion of small family norm, increasing literacy rate, improving status of women, better road connections between rural and urban areas, higher participation of females in non-farm activities, declining fertility rate, and rising aspirations of the people in the contest of improving living standards.

**Crude Death Rate (CDR):** It indicates the total number of deaths per year per thousand population. Over the years, it had steadily declined in the state. This was the result of greater health consciousness amongst the public, increasing education levels, rising nutritional status, improving standard of living, early detection, treatment and control of outbreak epidemics, easy accessibility to an efficacious health care delivery systems, infectious disease prevention control, application of modern medical practices in diagnosis and treatment of various ailments and effective administration of universal immunisation, better connectivity of roads and easy transportation between rural and urban areas. Between 2002 and 2012, the crude death rate in the State had declined from 7.7 to 7.4. As of 2018, the crude-death rate declined further to 6.5.

**Total Fertility Rate (TFR):** It measures the number of children born to women during her entire reproductive period. There was a fall in the total fertility rate in Tamil Nadu from 2.1 in 2002 to 1.7 in 2011. The total fertility rate in 2018 was 1.6.

**Infant Mortality Rate (IMR):** It indicates the death of children before the age of one year. It is a reliable indicator of health and nutritional status of the population. The concerted efforts of the State through setting up of Comprehensive Emergency and Obstetric and Neonatal Care Centres, ensuring 24x7 delivery services in all PHCs by posting five medical officers and three staff nurses with the provision of necessary equipments, introducing special vehicles for transport of new born, control of birth asphyxia and death due to hypothermia and implementing strategies for reduction and management of neonatal sepsis, instructing the pregnant mothers on exclusive breast feeding, complementary foods, child care practices, danger signs in sick new-born and immunization of preventable diseases, rising female literacy rate and increasing institutional deliveries has paid rich dividends in bringing down the infant mortality rate considerably in the State. The IMR in the State declined from 44 in 2002 to 21 in 2012. In 2018, the infant mortality rate was 15.

**Life Expectancy at Birth:** It indicates the average number of years that a new born is expected to live if current mortality rates continue to apply. With the improvements in the prevention and control of major childhood infectious diseases, nutritional status, housing condition and modern medical care, there has been an increase in life expectancy in the State. There was an improvement in the life expectancy at birth in Tamil Nadu from 66.0 years (2001-05) to 68.9 years (2006-10). Life expectancy for the period (2014-18) was 71.7.

## Primary Healthcare Services

Primary Health Centres (PHCs) and Health Sub-centres (HSCs) are providing the preventive, curative and rehabilitative health care services to the rural people. The rural health care infrastructure has been reinforced and modified under the National Rural Health Mission to recognise the objective of Health for All. The number of PHCs functioning in the State was on an increase over the last four years. It had gone up from 1539 in 2010-11 to 1751 in 2013-14. As per the 2019-20 policy note of health and welfare department, there are close to 1806 PHCs and 8713 health sub centres in the state. All PHCs are functioning on 24x7 basis. The network of PHCs and Health Sub-centres has been providing universal health care to rural population with a holistic approach.

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### Women and Child Health

There are 7 Women and Children hospitals functioning in the State. A total of 119 doctors were employed in these hospitals to take care of various paediatric related issues. The total number of beds in these hospitals was 537. On an average daily 1,641 outpatients and 532 in patients were treated in these hospitals.

### Immunization

Tamil Nadu has in place robust immunization programmes against preventable diseases like Diphtheria, Pertussis, Tetanus, Measles, Poliomyelitis and Tuberculosis ever since 1985.

### 9.3.1 Some of the Ongoing Schemes related to Health in Tamil Nadu

Given below are some of the important schemes relating to healthcare:

#### a) Dr. Muthulakshmi Reddy Maternity Benefit Scheme

Under this, financial aid to the tune of ₹12, 000 is being paid to poor pregnant women in three instalments who are availing antenatal care, delivery and immunization of the babies born in Government Institutions. The aim is to meet the expenses of a healthy diet, reimburse for loss of income during delivery and avoid the low birth weight of new-born babies.

#### b) The Menstrual Hygiene Programme

It was launched in the State in 2012-13 with the objective of increasing awareness among the rural adolescent girls (10-19 years) on menstrual hygiene. The programme has also covered post natal mothers who delivered in Government institutions, female inpatients in the institute of mental health and women prisoners. Under the scheme, 18 packs of sanitary napkin are provided for each adolescent girl.

**NOTES****c) Chief Minister's Comprehensive Health Insurance Scheme**

It was launched in the State in 2011-12 with the aim to provide Universal Healthcare to All by providing free medical surgical treatment in Government and private hospitals to any family whose annual income is less than ₹72,000 by meeting all expenses relating to the hospitalization of the beneficiary. The scheme provides a coverage of ₹1,00,000 per family per year on floater basis for ailments and procedures. For certain specified ailments and procedures of critical nature, the overall limit was ₹1,50,000. The scheme covers 1027 lifesaving procedures inclusive of 23 diagnostic procedure and 113 follow up packages which includes cardiology and cardiothoracic surgery, Oncology, Urology, Neurology and neuro surgery, Ophthalmology, Gastroenterology, Plastic surgery, E.N.T, Gynaecology and haematology. The scheme is implemented through 977 hospitals. From 2017, the scheme is being continued through United India Insurance Company Ltd.

There are many other schemes functioning in the healthcare area including Birth companion programme, Amma Arogya Thittam, Amma whole body check up Amma Magaperu Sajeevi, etc.

**Check Your Progress**

3. What are the indicators of the health of a population?
4. Mention the reasons for a decline in Crude Death Rate in Tamil Nadu.
5. State the immunization programmes introduced in Tamil Nadu.
6. What was the main objective of launching Menstrual Hygiene Programme?

## **9.4 BANKING INFRASTRUCTURE, POWER INFRASTRUCTURE, COMMUNICATION AND TRANSPORT**

Let us first discuss the state of banking infrastructure in Tamil Nadu.

**Banking**

There has been a steady increase in the number of bank branches in Tamil Nadu. The number of bank branches functioning in the State went up from 7253 in 2011-12 to 7830 in 2012-13 (8%) and further to 7966 in 2013-14 (up to June 2013). In the case of All India, it went from 0.96 lakhs in 2011-12 to 1.05 lakhs in 2012-13 (9%) and subsequently to 1.06 lakhs in 2013-14. Of the total bank branches in the State, nationalized banks alone accounted for a larger share of 55 percent, followed by Scheduled Commercial Banks (26%), State Bank of India and its associates (14%), Regional Rural Banks (4%) and the remaining being foreign banks. Tamil Nadu housed 7.5 percent of the total number of banks in the country as of June 2013. Regional distribution of banks in 2013-14 in Tamil Nadu shows that urban/metropolitan regions accounted for a higher share of 38.3 percent,



whereas at all India level the rural regions had the higher share of 36.8 percent. The proportion of banks in rural areas to total in Tamil Nadu had witnessed a steady upward movement from 27.5 percent in 2011-12 to 27.8 percent in 2012-13 and 28.0 percent in 2013-14 which was considered to be a positive development.

Population served per bank branch is one of the parameters with which the expansion of banking activities in the State is measured. The population served per bank in the State declined steadily. It was 9452 per bank branch in 2013-14 as against 10930 in 2010-11.

The total credit disbursed by the banks in the State improved from ₹ 466031 crore in 2011-12 to ₹ 549245 crore in 2012-13, registering a growth of 17.9 percent. In 2013-14 (up to June 2013), it stood at ₹541048 crore.

## NOTES

**Table 9.1 Banking Development - Key Indicators**

(At the end of March 2018)					
Indicators	Unit	2016-17		2017-18	
		Tamil Nadu	All India	Tamil Nadu	All India
1	2	3	4	5	6
1. Bank Offices	Nos.	10405	137770	10893	141909
2. Population Served Per Bank Office *	Nos.	6934	8787	6623	8531
3. Aggregate Bank Deposits	Rs. in Cr.	671756.4	10751439	716716.5	11434450.9
4. Gross Bank Credit	Rs. in Cr.	715725.4	7927002.8	794181.7	8766972.6
5. Credit Deposit Ratio	Percentage	106.5	73.7	110.8	76.7

\* Based on 2011 Census Population Govt. of India.

Source : Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks, March 2019, RBI

**Table 9.2 Number of Commercial Banks in Tamil Nadu**

(At the end of March 2018)	
Bank Group	Bank Offices
1. Nationalised Banks	6794
2. State Bank of India and its Associates	
3. Foreign Banks	31
4. Regional Rural Banks	617
5. Private Sector Banks	3267
6. Small Finance Banks	184
<b>Total</b>	<b>10893</b>

Source: Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks, March 2019

As of 2017-18, there are a total of 10893 reporting bank offices in Tamil Nadu, with 2914 in the rural region, 3871 in semi urban, 1534 in urban and 2574 in metropolitan region.

## NOTES

As of 2017-18, there are 6623 Population Served Per Bank Reporting Office compared to the national average of 8531.

### Power Infrastructural Development

The Government of Tamil Nadu is prioritizing development of power infrastructure in the State. Strategic steps are being taken to provide quality and uninterrupted power supply for all the sectors in the State by increasing installed capacity, giving thrust to development of nonconventional energy sources, resorting to purchase of power from other sources, enhancing performance in the working of thermal power plants, improving the efficiency of transmission and distribution networks and thus reducing losses in the system. The Southern power grid is the third largest in terms of power consumption among the five power grids. The integration of Southern power grid with the national power grid fulfils a long-felt need of the consumers. The per capita consumption (KWH) has increased from 780 KWH to 1389 KWH in 2017-18.

### Communication

A total of 7.6 million Tamil Nadu subscribers formed about 10 percent of the All India subscribers. The Indian telecom industry is highly competitive with at least seven service providers in each circle and up to 12 service providers in some circles competing for market share.

**Cellular Subscriber Base:** Cellular phones have turned out to be a boon to the poorest of the poor as the subscriber base in Tamil Nadu in 2011- 12 had shown a rise of 48.21 per cent. The year 2012-13 exhibited a negative growth and the reason is partly because of the clean-up exercise by mobile service providers and because of the exit of some service providers. Service providers started terminating connections of prepaid users who had not used their SIM cards for 60 days. Around 30 million users had their connections disconnected during July-October 2012. As of December 2020, there are total of score mobile connections in the state.

### Transport

The major means of transportation in Tamil Nadu are roads, ports, railways and air travel. These will be discussed in detail in Unit 10.

#### Check Your Progress

7. What are some of the steps taken to boost power infrastructure in Tamil Nadu?
8. What are the means of transportation in Tamil Nadu?

## 9.5 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The Tamil Nadu Infrastructure Development Act, 2012 has been passed for providing an institutional framework with the following objectives:
  - o Create an enabling and facilitative environment
  - o Identify, prioritise and implement infrastructure projects
  - o Enable private sector participation where feasible.
2. The National Programme for Education of Girls at Elementary Level (NPEGEL) was launched in 2003-04 for providing additional components for education of girls at elementary level under the SSA.
3. The health of the population has been assessed by taking into account different indicators like Infant Mortality Rate (IMR), Death Rate, Birth Rate, Total Fertility Rate (TFR), Maternal Mortality Rate (MMR) and Life Expectancy at Birth (LEB).
4. Crude Death Rate had steadily declined in Tamil Nadu. This was the result of greater health consciousness amongst the public, increasing education level, rising nutritional status, improve in standard of living, early detection, treatment and control of outbreak epidemics, easy accessibility to an efficacious health care delivery systems, infectious disease prevention control, application of modern medical practices in diagnosis and treatment of various ailments and effective administration of universal immunisation, better connectivity of roads and easy transportation between rural and urban areas.
5. Tamil Nadu started immunization programmes against preventable diseases like Diphtheria, Pertussis, Tetanus, Measles, Poliomyelitis and Tuberculosis since 1985.
6. The Menstrual Hygiene Programme was launched in Tamil Nadu in 2012-13 with the objective of increasing awareness among the rural adolescent girls (10-19 years) on menstrual hygiene.
7. The Government of Tamil Nadu is prioritizing development of power infrastructure in the State. Strategic steps are being taken to provide quality and uninterrupted power supply for all the sectors in the State by increasing installed capacity, giving thrust to development of nonconventional energy sources, resorting to purchase of power from other sources, enhancing performance in the working of thermal power plants, improving the efficiency of transmission and distribution networks and thus reducing losses in the system.
8. The major means of transportation in Tamil Nadu are roads, ports, railways and air travel.

## NOTES

## 9.6 SUMMARY

### NOTES

- The Tamil Nadu Infrastructure Development Act, 2012 has been passed for providing an institutional framework with the following objectives:
  - o Create an enabling and facilitative environment
  - o Identify, prioritise and implement infrastructure projects
  - o Enable private sector participation where feasible
- Education is believed to be essential for the development of economy and infrastructure. As far as elementary education is concerned, Tamil Nadu has performed well in comparison to other states.
- Recognizing the significance of education in the development process and the economic imperative of 'quality education for all' during the 12th Plan period (2012-2017), the Government of Tamil Nadu had earmarked a sizeable amount of ₹19,608 crore for education out of the aggregate outlay of ₹2,11,250 crore.
- Tamil Nadu has put in efforts to make improvements in quality of elementary education by providing an adequate number of schools and ensuring that students are enrolled in those schools.
- Tamil Nadu had already realized the goal of establishing one high school within the radius of 5 kms from a residential area and one higher secondary school within the radius of 8 kms from an occupancy according to the rules of Government of India.
- The total number of Universities functioning in Tamil Nadu are 59. It consists of 31 State Public Universities and 28 Private Deemed Universities. Tamil Nadu stands at the first position among all States in India with 59 Universities, followed by Uttar Pradesh (58) and Andhra Pradesh (47).
- The Tamil Nadu government has taken certain measures to maintain the standard mentioned in Education Development Index.
- Under Puratchi Thalaivar MGR Nutritious Noon-Meal Programme, the State is providing nutritious noon-meal to all willing children up to standard X in schools so as in order to encourage them to attend school.
- Health care is broadly acknowledged to be a public good with strong positive externalities. Tamil Nadu ranks 'fourth highest' in terms of life expectancy at birth, 'second lowest' next only to Kerala in terms of infant mortality rate and birth rate, 'third lowest' in terms of maternal mortality rate and 'tenth lowest' in terms of death rate.
- Crude Birth Rate (CBR) indicates the number of live births occurring during the year per thousand population. There was a steady decline in the crude birth rate of Tamil Nadu.

- Crude Death Rate (CDR) indicates the total number of deaths per year per thousand population. Over the years, it had steadily declined in the state.
- Total Fertility Rate (TFR) measures the number of children born to women during her entire reproductive period. There was a fall in the total fertility rate in Tamil Nadu from 2.1 in 2002 to 1.7 in 2011.
- Infant Mortality Rate (IMR) indicates the death of children before the age of one year. It is a reliable indicator of health and nutritional status of the population.
- Life Expectancy at Birth indicates the average number of years that a new born is expected to live if current mortality rates continue to apply.
- There are 7 Women and Children hospitals functioning in Tamil Nadu. A total of 119 doctors were employed in these hospitals to take care of various paediatric related issues. The total number of beds in these hospitals was 537. On an average daily 1,641 outpatients and 532 in patients were treated in these hospitals.
- Some of the important schemes relating to healthcare are Dr. Muthulakshmi Reddy Maternity Benefit Scheme, the Menstrual Hygiene Programme and Chief Minister's Comprehensive Health Insurance Scheme.
- There has been a steady increase in the number of bank branches in Tamil Nadu. The number of bank branches functioning in the State went up from 7253 in 2011-12 to 7830 in 2012-13 (8%) and further to 7966 in 2013-14 (up to June 2013).
- Population served per bank branch is one of the parameters with which the expansion of banking activities in the State is measured. The population served per bank in the State declined steadily. It was 9452 per bank branch in 2013-14 as against 10930 in 2010-11.
- The Government of Tamil Nadu is prioritizing development of power infrastructure in the State. Strategic steps are being taken to provide quality and uninterrupted power supply for all the sectors in the State by increasing installed capacity, giving thrust to development of nonconventional energy sources, resorting to purchase of power from other sources, enhancing performance in the working of thermal power plants, improving the efficiency of transmission and distribution networks and thus reducing losses in the system.
- Cellular phones have turned out to be a boon to the poorest of the poor as the subscriber base in Tamil Nadu in 2011-12 had shown a rise of 48.21 per cent. The year 2012-13 exhibited a negative growth and the reason is partly because of the clean-up exercise by mobile service providers and because of the exit of some service providers.
- The major means of transportation in Tamil Nadu are roads, ports, railways and air travel.

## NOTES

## NOTES

### 9.7 KEY WORDS

- **Crude Death Rate (CDR):** It indicates the total number of deaths per year per thousand population.
- **Total Fertility Rate (TFR):** It measures the number of children born to women during their entire reproductive period.
- **Infant Mortality Rate (IMR):** It indicates the death of children before the age of one year. It is a reliable indicator of health and nutritional status of the population.

### 9.8 SELF ASSESSMENT QUESTIONS AND EXERCISES

#### Short-Answer Questions

1. Write a short note on the state of elementary education in Tamil Nadu.
2. How has Tamil Nadu maintained the standard mentioned in Education Development Index?
3. Briefly mention the important schemes related to healthcare in Tamil Nadu.
4. Write a short note on the state of banking infrastructure in Tamil Nadu.

#### Long-Answer Questions

1. Discuss the measures taken to improve the state of education in Tamil Nadu.
2. Explain some of the important schemes related to healthcare in Tamil Nadu.
3. Analyse the major indicators of healthcare and its current status in Tamil Nadu.
4. Discuss the state of banking and power infrastructure in Tamil Nadu.

### 9.9 FURTHER READINGS

- Leonard, A.G. 2006. *Tamil Nadu Economy*. New Delhi: MacMillan India.
- Rajalakshmi, N. 1999, *Tamil Nadu Economy*. Mumbai: Business Publishers.
- Perumalsamy, S. 1990. *Economic Development of Tamil Nadu*. New Delhi: S. Chand & Co. Ltd.
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## UNIT 10 INFRASTRUCTURE- II

### Structure

- 10.0 Introduction
- 10.1 Objectives
- 10.2 Road Transport of Tamil Nadu
  - 10.2.1 Department of Highways and Minor Ports
  - 10.2.2 Comprehensive Road Infrastructure Development Programme (CRIDP)
  - 10.2.3 Projects and Performance of National Highways Authority of India (NHAI)
  - 10.2.4 Special Industrial Corridors
  - 10.2.6 Tamil Nadu Road Sector Project- World Bank Assistance
  - 10.2.7 Growth of Vehicle Population
  - 10.2.8 State Transport Undertakings (STU)
- 10.3 Rail Transport of Tamil Nadu
- 10.4 Sea Ports of Tamil Nadu
  - 10.4.1 Port Policy
  - 10.4.2 Development of Ports
- 10.5 Air Transport of Tamil Nadu
- 10.6 Answers to Check Your Progress Questions
- 10.7 Summary
- 10.8 Key Words
- 10.9 Self Assessment Questions and Exercises
- 10.10 Further Readings

### NOTES

### 10.0 INTRODUCTION

One of the most important parameters of the infrastructure in a State is the means of transport available. Not only does transport pave the way for smooth movement of people and better connectivity, it also allows for import and export of goods. In Tamil Nadu, there are broadly four means of transport: road, railways, port, and air transport. Various measures have been taken by the State government to improve these transport facilities in the State. These will be discussed in detail in the unit.

### 10.1 OBJECTIVES

After going through this unit, you will be able to:

- Discuss the measures taken to improve road transport in Tamil Nadu
- Examine the railways projects undertaken in Tamil Nadu
- Analyse the port policy and the development of ports in Tamil Nadu
- Explain the state of air transport in Tamil Nadu

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## 10.2 ROAD TRANSPORT OF TAMIL NADU

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The road transport network improves connectivity and provides a link between industries and agriculture. It incentivizes the directly productive activities and accelerates the process of economic development. As per MORT & H Road Statistics, as of March 2012, the road extensions of Tamil Nadu is 177 km per 100 sq km more than the Indian average of 148 km per 100 sq km. There has been an increase of 8% in the total length of road in 2013-14 from the year 2012 of State Highway Roads because of conversion of Major District Roads into the State Highways. As far as Major District Roads are concerned, the reason for the increase in its length is due to the upgradation of Other District Roads. On the other hand, a declining trend has been seen in Other District Roads due to their conversion into Major District Roads because of high traffic and other reasons. The rise in the Panchayat Union and Village Panchayat roads from 128189 Kms to 143071 Kms, is 12 %. It bears a testament to the increasing connectivity of roads in the remote villages of Tamil Nadu. Thus rural connectivity is ensured. As of 30 June 2018, the road network in Tamil Nadu covered a total length of 199,040 km.

### Surfaced Lanes of Road Transport

The improvement of roads, maintenance of existing roads and construction of new roads - all guarantee easy movement of goods and services from one place to another. A surfaced road implies superior connectivity. The proportion of surfaced and unsurfaced roads to total length of roads shows a shift from 65:35 in 1950-51 to 91:9 in 2013-14 which is an indicator of progress in terms of movement and motorability. The need for lanes in road is meant to improve the speed, safety and smooth flow of goods and services. The lane-wise length share specifies the state of the road networks in the State as about half of the road length is turning into Intermediate lane (17.11 %), double lane (26.33 %) and Multi-lane (5.90 %). However, 51 % of the roads are still single lane which is a cause for concern.

### IRC Standards

Indian Roads Congress (IRC) Standards serve as a benchmark to determine the status of road development in a State. As per the standards of IRC, Major District Roads have met the required standards with 92% having the Double/Intermediate Lane and the State Highways have follow suit with 95% of it matching Double Lane norms in Tamil Nadu.

#### 10.2.1 Department of Highways and Minor Ports

Highways Department plays an important function of carrying out road and bridge projects. The department is an individual entity, after it split from Public Works Department as a separate Secretariat Department in 1996. The wings under the



Highways are - The Office of the Director General, Construction and Maintenance, NABARD and Rural Roads, National Highways, Projects, Metro, Planning, Design and Investigation and Quality Assurance and Research. The Tamil Nadu Road Sector Project, The Tamil Nadu Road Development Company and The Tamil Nadu Road Infrastructure Development Corporation also function under the Highways Department.

### **Construction and Maintenance Wing**

The duty of the Construction and Maintenance Wing of the Highways Department is to carry out chief infrastructural development projects such as improvement of roads, construction of bridges, Railway Over Bridges and construction of bypasses. A total length of 57,043 km of Government Roads is under its control and effectively managed by the eight circles and forty divisions under this wing.

### **10.2.2 Comprehensive Road Infrastructure Development Programme (CRIDP)**

This is the leading scheme of the Government, under which it aims on widening all intermediate lane of State Highways (SH) to double lane and widening single lane of Major District Roads (MDR) to intermediate lane. It also wants to widen Other District Roads (ODR) having heavy traffic amount from single lane to intermediate lane. Furthermore, construction of Bridges and Culverts, construction of bypasses and essential works such as Drains, Retaining walls, and Centre mediums are part of this scheme. Some recent initiatives under CRIDP include the following:

#### **1. Urban State Highway Roads**

Rapid urbanization has led to heavy flow of traffic, which has augmented the need for bypasses for easy movement of vehicles. In this way, traffic snarls can be solved. Currently, 11 such abandoned stretches, to a length of 81.53 km were identified and permanent restoration at a cost of ` 85.66 crore had been granted under the CRIDP for 2013-2014.

#### **2. Stress on Maintenance of Roads with quality**

The Government swiftly sanctioned ` 16.50 crore from the Comprehensive Road Infrastructure Development Programme to restore the roads which had been handed over to NHAI. NHAI could not take up permanent road improvement works due to non-viability of the BOT (Build, Operate and Transfer) matrix stipulations. Further, the Government sanctioned ` 5 crore to repair the busy 22 km stretch from Padi to Thirunindravur of NH-205, to ease the difficulties being experienced by the public.

#### **3. Performance Based Maintenance Contract**

There should be no consideration with the quality of roads. The Government has ensured quality in road works through implementation of Performance-Based

## **NOTES**

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Maintenance Contract. Government sanctioned the Performance Based Maintenance Contract of 191.40 km of State Highways at a cost of `121.62 crore and 185.98 km of Major District Roads in Pollachi division at a cost of `112.31 crore. The total cost of the project stood at `233.93 crore.

### **10.2.3 Projects and Performance of National Highways Authority of India (NHAI)**

The National Highways Authority of India (NHAI), is the implementing agency for the National Highway Development Project; it mainly focuses on development of National Highways in Tamil Nadu in association with the State Government. Other than this, roads, Fly-overs and under passes are being constructed under the Port Connectivity Project and other Special Projects. So far, works completed by NHAI are 2089 m. length of roads at a cost of `13079 crore; upgraded to four lane/ six lane works under implementation are 1083 km. length of roads at a cost of `8649 crore and 1799 km length of roads are yet to be awarded.

#### **Port Connectivity Scheme**

The Cabinet Committee on Economic Affairs (CCEA) has approved the port connectivity scheme which aims at linking the 12 important ports in India through NHAI by establishing a Special Purpose Vehicle (SPV). Two Special Purpose Vehicles (SPV) were established in Tamil Nadu to improve the roads connecting 3 major ports in Chennai, Ennore and Thoothukudi.

#### **Chennai-Ennore-Manali Road Improvement Project (EMRIP)**

Chennai - Ennore - Manali Road Improvement Project (EMRIP) is being implemented by NHAI through a SPV established by name Chennai Ennore Port Road Company Ltd with Government of Tamil Nadu, Chennai Port Trust and Kamaraj Port Ltd, erstwhile called as Ennore Port Ltd. Widening to four lane with service road and improvements such as paved shoulder to a stretch of 30 Km. of State Highways connecting the Chennai port are being carried out at an estimated cost of `600 crore.

#### ***Thoothukudi Port Connectivity Scheme***

Under this scheme, NHAI established a SPV namely, Thoothukudi Port Road Company Ltd with Thoothukudi Port Trust to improve 47.20 km length of road in NH-7A from Tirunelveli to Thoothukudi at a cost of `290 crore. The work was completed during January 2013.

### **10.2.4 Special Industrial Corridors**

Tamil Nadu is the only state in India to have all its districts covered under industrial corridor projects. Let us discuss some of the important projects.

### **Rajiv Gandhi Salai (IT Expressway)**

Under Phase-I, the Rajiv Gandhi Salai (IT Corridor) was constructed as a six lane road of international standards from Madhya Kailash to Siruseri for a length of 20.10 km. Also the link road connecting Sholinganallur and East Coast Road for a length of 2.15 km was widened to four lanes. This road is being maintained as a toll road by M/s IT Expressway Ltd., the Special Purpose Vehicle (SPV) of Tamil Nadu Road Development Company. In the second phase, the Government proposed to construct a six lane road for a length of 25 km from Siruseri to East Coast Road near Mamallapuram, under a viable financial arrangement through Public Private Partnership. As per the Detailed Project Report (DPR), the cost estimate for the project is `574 crore. The Government sanctioned `294 crore for land acquisition. The process of updating the DPR as per current rates and modified specifications is on. Out of the 13 villages, land acquisition works have been completed for 8 villages and it is under progress for the remaining 5 villages. The DPR is under process.

### **NOTES**

#### ***Elevated Road from Taramani to Mahabalipuram in 2 phases***

An administrative sanction of ` 5.0 Crores has been accorded for 'The Construction of Elevated Road from Taramani to Siruseri under Phase-I and from Siruseri to Mahabalipuram under Phase-II, for a length of 45Km'. The tenders for appointing the consultancy service for preparation of Detailed Project Report (DPR) for the above work has been called for and the technical bids have been opened and it is under scrutiny.

### **Road Infrastructure Facility Improvement in Oragadam Industrial Park**

Tamil Nadu Road Infrastructure Development (TNRIDC) has taken up the task of road infrastructure facility improvement in Oragadam Industrial Park so as to cater to the needs of newly started industries in Sriperumpudur area to ease the traffic congestion. The Phase I of the scheme is split into two road works. The first road work is for 24.00 Km. The second road work is for 33.4 Km which is split up into two packages as 16.60 km and 16.80 km. The road works in the first phase were completed for a length of 44.6 km. A total of ` 10 crore worth drainage works were completed. Construction of a Grade Separator at Oragadam junction at a cost of `23 crore is in progress. The total expenditure so far incurred for this project stood at `382.25 crore including cost of Land acquisition against the estimated cost of `300 crore, and the scheme is under implementation with the revised estimated cost of `462.42 crore.

#### **10.2.5 NABARD-Assisted Schemes**

The contributions of the NABARD-Assisted Scheme such as construction of bridges, improvements of roads, construction of Railway Over Bridges, Railway Under Bridges and bypasses are significant.

**NOTES****10.2.6 Tamil Nadu Road Sector Project- World Bank Assistance**

Due to sustained efforts and follow-up, the approval of the World Bank and the Government of India for the Second Phase of the Tamil Nadu Road Sector Project (TNRSP) was achieved. This project is the biggest externally aided project implemented by the State so far, covering 1678 km at a cost of `8583 crore. The project was aimed at improving and developing road links with high-density traffic. The approval of the Ministry of Road Transport and Highways (MoRTH), Government of India was obtained, which was subsequently followed up by the approval of the Department of Economic Affairs. The World Bank also gave its 'In-Principle Approval'. The State Government sanctioned an amount of `65 crore from the Project Preparatory Fund of the Tamil Nadu Infrastructure Development Board.

**10.2.7 Growth of Vehicle Population**

The vehicle population has been increasing at an unprecedented rate in Tamil Nadu. This spike in vehicle population has been attributed to the growing demand for transport of goods and passengers. The demand for personalized vehicles, facilities for hire purchase system, and increase in per capita income are reasons for the increase in vehicle population. As of 31 March 2017, the vehicle population in Tamil Nadu crossed the 2.5 crore mark. The growth rate of the vehicle in the State, also serve as a barometer of the growth of economy, which peaked at 12.50 per cent in 2011-12, decelerated to 11.21 per cent in 2012-13 and further to 9.65 per cent in 2013-14. The slowdown in the tertiary sector and sluggishness in purchase of consumer durables that fuelled the growth in vehicle population may be attributed to this falling trend. More than 90 per cent of the total vehicles are non-transport vehicles. Between 2012-13 and 2013-14, the growth in non-transport vehicles (9.9%) in the State had outweighed the transport vehicles (5.9%). Vehicle density per square kilometre in the State reached peak at 144 in 2013-14.

**10.2.8 State Transport Undertakings (STU)**

The inadequate public transport system has been straining the growing population especially in the urban areas due to congestion and overcrowding. This trend has led to exploration of other transport systems like Metro rail, Mono rail and Bus Rapid Transport Systems (BRTS). Metropolitan Cities like Calcutta, New Delhi, Mumbai, and Bangalore started implementing such transport systems. The Chennai Metro Rail System was launched in 2015.

**Fleet Strength:** The seven State Transport Undertaking in Tamil Nadu constitute a total fleet strength of 22053 in 2012-13 which was higher by 4% from the fleet strength for 2011-12. The financial position of the STC continues to be in the red with a temporary easing to the extent of loss which was `829.91 crore (pre-audit) in 2012-13 compared to the loss of `1791.64 (Post-audit) in 2011-

12. The diesel subsidy of `500 crore from the budgetary allocation of the government gives some respite to the STUs reeling under loss. As per the transport policy 2020-21, the fleet strength of STC is 20944 buses. The total income of STC upto January 2020 is close to `29 crores.

### **Dual Pricing Policy for Diesel Supply to STU**

Dual pricing policy for diesel adopted by the Oil Marketing companies worsened the operational efficiency of the State Transport Undertakings (STU). The supply price for diesel for the bulk orders from Tamil Nadu State Transport Undertakings is comparatively higher than the supply price in retail outlets. This dual pricing system has caused increasing losses for the Transport Undertakings. This policy which actually subsidizes private transport and penalizes public transport has been strongly opposed by the State Government which has called on the Central Government to abolish the dual price policy.

#### **Check Your Progress**

1. What is the main function of the Construction and Maintenance Wing of the Highways Department?
2. State the aim of Comprehensive Road Infrastructure Development Programme.'
3. Why has there been an increase in vehicle population in Tamil Nadu?
4. In which year was the Chennai Metro Rail System launched?

## **10.3 RAIL TRANSPORT OF TAMIL NADU**

Railways are the lifeline in the movement of bulk cargo within the State as well as for interstate movement. The conversion of meter gauge lines to broad gauge and electrification of tracks have been happening slowly and steadily in the State within the given fund constraints and competing claims. The rail network covered 3761.62 Kms in the year 2011-12 which was a decline of (-) 3.07 % as compared to 3880.90 Kms in the year 2010-11 all due to the conversion of meter gauge. In the total 3761.6 Km routes, electrified routes constitute 1759.16 Kms. (46.76%). As of 2017-18, the total route length is 3850.13 km electrified route is close to 1957.95km.

### **Railway Projects in the State**

The Railway projects in Tamil Nadu include new line completion, doubling, gauge conversion, New Railway Electrification Projects as well as Rail Neer plant. The new Rail Neer Plant was inaugurated at Palur in Tamil Nadu.

## **NOTES**

**NOTES****Chennai Metro Rail Limited (CMRL)**

The two initial corridors in the Chennai Metro Rail Project under the Phase-1 were running from Washermenpet to Airport (23.1 Kms) and Chennai Central to St. Thomas Mount (45.1 Kms). CMRL officials completed the tests/trials on 30 January 2014 which was tested on the ramp section leading up to the elevated portion for a distance of 1.5 km from the Koyambedu Depot. A total of 42 train sets, with four cars each, was made operational by the Chennai Metro. Of these, nine were imported from Brazil, while the balance 33 were manufactured at French multinational Alstom's plant at Sri City SEZ, 55 Kms from Chennai. CMRL projected passenger trips per day would reach 12.85 lakh in 2026. The State Government has proposed the extension of line I to Thiruvottiyur and also Phase II of the Project for a further three lines to the Government of India.

**Chennai Mono Rail Project**

The Chennai Mono Rail Project is slowly but steadily emerging successfully. This flagship project of the Government has been pruned to two corridors namely Vandalur-Velachery corridor and Poonamallee-Kathipara corridor. Apart from Vadapalani, areas such as Valasaravakkam and Virugumbakkam will be covered in the Poonamallee to Kathipara corridor. The cost of the 23-km-long Vandalur-Velachery corridor is around ` 4,000 crore. The estimated cost of the Poonamallee-Kathipara corridor had been reduced to ` 3,235 crore. The pre-qualification bids have been floated for the Poonamallee-Kathipara corridor. The process of bidding for the project is in the final stage and the bids would be floated soon.

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**10.4 SEA PORTS OF TAMIL NADU**


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An effective multimodal structure which practises the most effective way of transport from beginning to end is pre-requisite for the smooth working of any port. A multimodal rail and road system includes coordinating networks to guarantee good connectivity between port and the surrounding area. Sea Ports promote foreign exchange flow to the country as it provides a link for export and import of goods from foreign countries. There are three major sea ports in Tamil Nadu, namely, Chennai, Tuticorin and Kamaraj port, which allows import and export of cargo. The Kamaraj port started export of cars from the port owned General Cargo Berth (GCB) from January 2012 and handled around 1.50 lakh units of automobiles during 2012-13 for the automobile manufacturers like Nissan, Renault, Ford, Toyota, Ashok Leyland ET, etc. The year 2012-13 marked yet another milestone with Honda cars being shipped out to South Africa. The analysis of commodity wise cargo movements through three major ports of Tamil Nadu exhibits an overall growth rate of 7.57 per cent between, 2012-13 and 2013-14.

### 10.4.1 Port Policy

The main objective of Port Policy is to accelerate the pace of economic growth of the State by developing a number of captive ports through Public Private Participation.

#### Salient Features of the Port Policy

1. To facilitate establishment of Port-based Thermal Power Plants by giving high-class port facilities to import Coal, Naphtha, Oil and Natural Gas.
2. To provide port facilities to promote export-oriented industries and port based industries along the coastal Districts of Tamil Nadu.
3. To decongest Highways and Railways by providing facilities for coastal traffic along the East Coast.
4. To promote tourism, cruises and coastal trade.
5. To provide facilities to encourage ship repairing and construction of floating crafts.

#### Policy Guidelines

- a) **Private Participation:** With a view to creating multiuser facilities capable of handling all types of cargo like bulk, break bulk, containers, liquid bulk petroleum products, and chemicals, the Government of Tamil Nadu aims to develop all Minor and intermediate ports in the State through Public Private Participation.
- b) **Captive Jetties:** In order to meet the requirements of industries for allocation of sites for construction of captive jetties for port based industries, the Government of Tamil Nadu has permitted private initiatives in construction of Ports/Jetties. Private companies making substantial investment in coastal areas requiring port based facilities will be allotted sites to facilitate construction of jetties both captive and commercial.

### 10.4.2 Development of Ports

#### 1. Kattupalli Port

The inauguration of Kattupalli port has marked a new dawn with M/s Tamil Nadu Industrial Development Corporation Ltd and M/s. L&T, Mumbai forming a joint venture with a view to establishing a Ship Yard-cum-Minor Port complex at Kattupalli. One of the important terms and conditions in this joint venture is that the joint venture company is permitted to operate the minor port on captive basis. It will also handle the cargo relating to Shipbuilding material and containers (Quantity: Proposed 1.5 MMTPA). In addition, it has placed a request to Tamil Nadu Maritime Board to consider permitting the joint venture company to handle other commercial cargoes and to facilitate optimum usage of the port facilities in accordance with the Minor Port Development Policy of Government of Tamil

## NOTES

**NOTES**

Nadu. Permission to commence handling of Captive and Commercial cargo at Kattupalli port was placed before the Tamil Nadu Maritime Board in its 75th Board meeting held on 6 December 2012 and the board resolved to grant permission with certain conditions. This port was inaugurated on 30 January 2013. Ship repair facility is in full utilization. Containerships have started calling at this port.

**2. Green Field Port at Nagapattinam**

The age-old port at Nagapattinam is a minor Port, located at the mouth of the Kaduvaiyaru. It was used to import wheat and fertilizers. The recent initiative was aimed at expanding the port through a Techno Economic Feasibility Report by engaging I.I.T., Madras to develop an All Weather, Deep Water, Direct Berthing, and Greenfield Port, adjacent to the existing Nagapattinam Minor Port. The I.I.T., Madras, in their report, recommended developing this port as an all Weather, Deep Water, and Direct Berthing Port at an estimate of `380 crore. The proposed port at Nagapattinam is located near the districts of Nagapattinam, Perambalur, Villupuram, Salem, Namakkal, Karur, Thanjavur, Thiruvarur and Erode.

**3. Port at Cuddalore**

Steps are being taken to salvage the Cuddalore port which was handling multifarious cargo to the tune of 2-3 lakh Metric tonnes per annum during the eighties. The traffic dwindled and there are presently no cargo activity. As such, it was decided by the Board to offer the existing Cuddalore Minor Port on the basis of Develop, Operate, Maintain, Share and Transfer (DOMST) through Public Private Participation mode. Tamil Nadu Maritime Board in its 76th Board meeting held on 27 March 2013 decided to approve the proposal of appointment of a consultant for developing the existing Cuddalore minor port on PPP mode and to authorize VC&CEO to send a proposal to the Government for obtaining the approval of TNIDB for the engagement of the consultant. Furthermore, the plan for expansion of the port has been obtained. The ` 135 crore project has already got environment and CRZ clearances.

**Check Your Progress**

5. Where in Tamil Nadu was the Rail Neer Plant set up?
6. Name any three major ports in Tamil Nadu.

**10.5 AIR TRANSPORT OF TAMIL NADU**

As of 2021, there are a total of seven airports in Tamil Nadu. While airport at Chennai, Coimbatore, Madurai, and Tiruchirapalli are international airports, the airport at Tuticorin, Salem and Pondicherry are domestic airports. There are two more domestic airports in Tamil Nadu named Neyveli airport and Vellore airport.



Chennai International Airport is the first airport established in Tamil Nadu. The airport is sprawling across a land area of 1323 acres and houses three terminals. In the fiscal year 2018-19, the airport handled over 22.5 million passengers with over 570 air flights. During this period, Chennai International Airport managed to handle 30,000 passengers per day. The Airport Authority of India has undertaken the expansion and modernisation of Chennai Airport. The State Government have been extending full co-operation and conducting co-ordination meeting with concerned departments for early completion of this prestigious project.

The slowdown in the economy is self-evident with the domestic traffic in passenger having witnessed a negative growth. The austerity measures taken by the companies pulled down the volume of domestic passenger traffic and the international passenger traffic recorded a growth of 2.93 per cent, which was lower than the growth registered in 2011-12. The cargo traffic, an indicator for the industrial growth, had taken a beating with the overall cargo traffic of domestic and international front having clocked a negative growth of 11.14 percent.

### Check Your Progress

7. How many airports are active in Tamil Nadu?
8. Which was the first airport to be established in Tamil Nadu?

## 10.6 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. The duty of the Construction and Maintenance Wing of the Highways Department is to carry out chief infrastructural development projects such as improvement of roads, construction of bridges, Railway Over Bridges and construction of bypasses.
2. Comprehensive Road Infrastructure Development Programme is the leading scheme of the Government, under which it aims on widening all intermediate lane of State Highways (SH) to double lane and widening single lane of Major District Roads (MDR) to intermediate lane. It also wants to widen Other District Roads (ODR) having heavy traffic amount from single lane to intermediate lane.
3. The vehicle population has been increasing at an unprecedented rate in Tamil Nadu. This spike in vehicle population has been attributed to the growing demand for transport of goods and passengers. The demand for personalized vehicles, facilities for hire purchase system, and increase in per capita income are reasons for the increase in vehicle population.
4. The Chennai Metro Rail System was launched in 2015.
5. The new Rail Neer Plant was inaugurated at Palur in Tamil Nadu.

## NOTES

## NOTES

6. There are three major sea ports in Tamil Nadu, namely, Chennai, Tuticorin and Kamaraj port, which allows import and export of cargo.
7. As of 2021, there are a total of seven airports in Tamil Nadu.
8. Chennai International Airport is the first airport established in Tamil Nadu.

### 10.7 SUMMARY

- The road transport network improves connectivity and provides a link between industries and agriculture. It incentivizes the directly productive activities and accelerates the process of economic development.
- The improvement of roads, maintenance of existing roads and construction of new roads - all guarantee easy movement of goods and services from one place to another. A surfaced road implies superior connectivity.
- Indian Roads Congress (IRC) Standards serve as a benchmark to determine the status of road development in a State. As per the standards of IRC, Major District Roads have met the required standards with 92% having the Double/Intermediate Lane and the State Highways have follow suit with 95% of it matching Double Lane norms in Tamil Nadu.
- Highways Department plays an important function of carrying out road and bridge projects. The department is an individual entity, after it split from Public Works Department as a separate Secretariat Department in 1996.
- The duty of the Construction and Maintenance Wing of the Highways Department is to carry out chief infrastructural development projects such as improvement of roads, construction of bridges, Railway Over Bridges and construction of bypasses.
- Comprehensive Road Infrastructure Development Programme is the leading scheme of the Government, under which it aims on widening all intermediate lane of State Highways (SH) to double lane and widening single lane of Major District Roads (MDR) to intermediate lane. It also wants to widen Other District Roads (ODR) having heavy traffic amount from single lane to intermediate lane.
- The National Highways Authority of India (NHAI), is the implementing agency for the National Highway Development Project; it mainly focuses on development of National Highways in Tamil Nadu in association with the State Government. Other than this, roads, Fly-overs and under passes are being constructed under the Port Connectivity Project and other Special Projects.
- Tamil Nadu is the only state in India to have all its districts covered under industrial corridor projects. Some of them are Rajiv Gandhi Salai (IT Corridor), Elevated Road from Taramani to Mahabalipuram, and infrastructure facility improvement in Oragadam Industrial Park.

- The contributions of the NABARD-Assisted Scheme such as construction of bridges, improvements of roads, construction of Railway Over Bridges, Railway Under Bridges and bypasses are significant.
- Due to sustained efforts and follow-up, the approval of the World Bank and the Government of India for the Second Phase of the Tamil Nadu Road Sector Project (TNRSP) was achieved. This project is the biggest externally aided project implemented by the State so far, covering 1678 km at a cost of ₹8583 crore. The project was aimed at improving and developing road links with high-density traffic.
- The vehicle population has been increasing at an unprecedented rate in Tamil Nadu. This spike in vehicle population has been attributed to the growing demand for transport of goods and passengers. The demand for personalized vehicles, facilities for hire purchase system, and increase in per capita income are reasons for the increase in vehicle population.
- The inadequate public transport system has been straining the growing population especially in the urban areas due to congestion and overcrowding. This trend has led to exploration of other transport systems like Metro rail, Mono rail and Bus Rapid Transport Systems (BRTS). Metropolitan Cities like Calcutta, New Delhi, Mumbai, and Bangalore started implementing such transport systems. The Chennai Metro Rail System was launched in 2015.
- Railways are the lifeline in the movement of bulk cargo within the State as well as for interstate movement. The Railway projects in Tamil Nadu include new line completion, doubling, gauge conversion, New Railway Electrification Projects as well as Rail Neer plant. The new Rail Neer Plant was inaugurated at Palur in Tamil Nadu.
- The two initial corridors in the Chennai Metro Rail Project under the Phase-I were running from Washermenpet to Airport (23.1 Kms) and Chennai Central to St. Thomas Mount (45.1 Kms). The State Government has proposed the extension of line I to Thiruvottiyur and also Phase II of the Project for a further three lines to the Government of India.
- The Chennai Mono Rail Project is slowly but steadily emerging successfully. This flagship project of the Government has been pruned to two corridors namely Vandalur-Velachery corridor and Poonamallee-Kathipara corridor.
- Sea Ports promote foreign exchange flow to the country as it provides a link for export and import of goods from foreign countries. There are three major sea ports in Tamil Nadu, namely, Chennai, Tuticorin and Kamaraj port, which allows import and export of cargo.
- The main objective of Port Policy is to accelerate the pace of economic growth of the State by developing a number of captive ports through Public Private Participation.

## NOTES

## NOTES

- As of 2021, there are a total of seven airports in Tamil Nadu. While airport at Chennai, Coimbatore, Madurai, and Tiruchirapalli are international airports, the airport at Tuticorin, Salem and Pondicherry are domestic airports. There are two more domestic airports in Tamil Nadu named Neyveli airport and Vellore airport. Chennai International Airport is the first airport established in Tamil Nadu.
- The slowdown in the economy is self-evident with the domestic traffic in passenger having witnessed a negative growth. The austerity measures taken by the companies pulled down the volume of domestic passenger traffic and the international passenger traffic recorded a growth of 2.93 per cent, which was lower than the growth registered in 2011-12.

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### 10.8 KEY WORDS

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- **Bypasses:** It is a road passing round a town or its centre to provide an alternative route for through traffic.
- **Culverts:** It is a tunnel carrying a stream or open drain under a road or railway.
- **Urbanization:** It refers to the shift in population from rural to urban areas, the decrease in the number of people living in rural areas, and the ways in which societies adapt to this change.

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### 10.9 SELF ASSESSMENT QUESTIONS AND EXERCISES

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#### Short-Answer Questions

1. Write a short note on Comprehensive Road Infrastructure Development Programme.
2. How did the dual pricing policy for diesel affect the State Transport Undertaking?
3. Briefly mention the railway projects currently underway in Tamil Nadu.
4. Write a short note on the Chennai Mono Rail Project.
5. State the features of port policy in Tamil Nadu.

#### Long-Answer Questions

1. Discuss in detail the projects initiated by the National Highways Authority of India.
2. Examine the measures taken to improve the road transport of Tamil Nadu.

3. Analyse the various projects undertaken for development of ports in Tamil Nadu.
4. Discuss the state of air transport in Tamil Nadu.

*Infrastructure- II*

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### **10.10 FURTHER READINGS**

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Leonard, A.G. 2006. *Tamil Nadu Economy*. New Delhi: MacMillan India.

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### **NOTES**

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## UNIT 11 ENERGY SECTOR

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### NOTES

#### Structure

- 11.0 Introduction
- 11.1 Objectives
- 11.2 Energy Sector
  - 11.2.1 Hydro Energy
  - 11.2.2 Thermal Energy
  - 11.2.3 Nuclear Energy
  - 11.2.4 Gas Turbines
  - 11.2.5 Wind Mills
- 11.3 Tamil Nadu Energy Policy
- 11.4 Answers to Check Your Progress Questions
- 11.5 Summary
- 11.6 Key Words
- 11.7 Self Assessment Questions and Exercises
- 11.8 Further Readings

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### 11.0 INTRODUCTION

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Power infrastructure is crucial for economic growth and prosperity. The Tamil Nadu government has taken sustained efforts to develop the power infrastructure in the State. In this regard, it has focused on the development of the Hydro power plant, Thermal power Stations and Nuclear Power systems. This unit will discuss in detail these energy sources and examine the energy policy of the Tamil Nadu government, particularly the Tamil Nadu Solar Policy 2019.

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### 11.1 OBJECTIVES

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After going through this unit, you will be able to:

- Explain the growth of the energy sector in Tamil Nadu
- Discuss in detail the Hydro, Thermal and Nuclear Power Systems
- Examine the Tamil Nadu Energy Policy

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### 11.2 ENERGY SECTOR

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Power infrastructure is an important element for ensuring a sustained growth of the economy. Power input is a pivot around which all economic activities revolve. It facilitates agricultural, industrial, commercial, social and economic growth. Availability of affordable, reliable and quality power is an important requirement. Power projects are capital-intensive by nature with a long gestation period. The private sector is being encouraged to increase power resources. For an

industrialized State like Tamil Nadu, the demand for quality power has increased considerably due to economic growth and increase in population. As a result, the demand-supply gap is likely to continue. The Government of Tamil Nadu is prioritizing the development of power infrastructure in the State. Strategic steps are being taken to ensure quality and uninterrupted power supply for all the sectors in the State by increasing installed capacity, giving thrust to development of nonconventional energy sources, resorting to purchase of power from other sources, enhancing performance in the working of thermal power plants, improving the efficiency of transmission and distribution networks and thus reducing losses in the system.

### 11.2.1 Hydro Energy

The continuous accessibility of water plays a vital role in generation of power from hydro stations. Supply of water for the hydro stations depends on monsoons and the inflows to the reservoirs. A total of 42 hydro stations are functioning in Tamil Nadu. During 2012-13, the South-West monsoon from June to September and North-East monsoon from October to December were deficit. This had led to poor inflows to hydro stations. The deficit of rainfall was experienced all throughout the year. The total inflows in hydro power stations at 2,836 MU in 2012-13 was lower than the previous year's level 3,783 MU (25%). The State tried to maximize the utilization of the limited hydro resources. Therefore, the total power generation by these hydro stations in the State during the year was 2,905 MU in 2012-13. In spite of this, generation was lower than the previous year's level by 45.7 percent. An appearance in the trend in the generation of hydro stations in the previous 10 years discovered that it was the second lowest, next only to 2,067 MW in 2003-04. There is a steady decline in the share of the hydro stations to total generation in the State since 2009-10. As of Jan 2020, there as 47 hydro power stations in the state with 2321090 MW of installed capacity as 4349.11 MV of power generation.

### 11.2.2 Thermal Energy

There are four State owned thermal stations – Tuticorin, Ennore, Mettur and North Chennai. The total power generation from thermal stations gradually declined from 2008-09 to 2010-11. Due to the intensive efforts of the State Government, a positive trend was seen in the years 2011-12 and 2012-13. There was an increase in power generation from these thermal stations from 20,324 MU in 2011-12 to 20,663 MU in 2012-13 (1.7%). This was mainly due to increase in power generation in Tuticorin (4.9%) and North Chennai (16.0%) thermal stations. The three State owned Stations Tuticorin (40.1%), North Chennai (26.4%) and Mettur (30.0%) together accounted for 96.5 percent of the total generation from the thermal stations in 2012-13. There has been a steady decline in generation from Ennore thermal power station since 2007-08 which is causing concern. The relative contribution of the thermal stations to total power generation had varied between 71.4 percent in 2009-10 and 81.7 percent in 2012-13.

## NOTES

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The Plant Load Factor (PLF) is an index to ascertain to what extent the installed capacity of Thermal Power Stations (TPSs) has been effectively put in use. The steady decline in plant load factor from 2008-09 to 2010-11 was registered and turned around to improvements in the two years 2011-12 and 2012-13. The plant load factor at 77.94 percent in 2012-13 exhibited a marginal improvement over the previous year's level of 77.90 percent. Among the power plants, the ratio was the highest in North Chennai and the lowest in Ennore. The total quantity of coal required for the existing four thermal power stations is 16 million tonnes per annum. Of the total coal requirements, 1.425 million tonnes from Eastern Coalfields Limited and 12.075 million tonnes from Mahanadi Coalfields were received annually under Fuel Supply Agreement and the remaining from imports. One of the major issues is that the percentage realization of coal under Fuel Supply Agreement has been on steady decline year by year. The total coal used for power generation in thermal stations had increased from 14.95 million tonnes in 2011-12 to 15.66 million tonnes in 2012-13 (4.7%). Of this, the total consumption of coal in Tuticorin and Mettur thermal power stations accounted for a sizable share of 72.0 percent. The performance of the thermal stations as estimated by the generation power for utilization of coal indicates that there was a fall in the generation of power per tonne of coal used, from 1359 units per tonne in 2011-12 to 1319 units in 2012-13. This trend has continued over the years. Among the thermal stations, except North Chennai, all other stations in the State had experienced fall in the generation of power for per unit of coal used. To address the problems of pollution, the disposal of ash by thermal stations also needs to be taken care of.

The performance of the thermal stations is assessed by studying the two indicators viz., outage rate (plants not available for generating power during a given period) and availability factor (plants engaged in generation of power during a given period). During the five year period from 2008-09 to 2012-13 in the State, the outage rate of thermal power stations was on the increase. The steady increase of the forced outage of the Ennore thermal power station was the reason behind it. Among the other thermal plants, it varied from 6.48 percent (North Chennai) to 14.08 percent (Mettur). On the other hand, the availability factor was on the decline. This needs to be reversed.

As of 2020, the total installed capacity of thermal power is 4,320 MW. The generation of thermal power in MU for 2019-20 for Tuticorin, Mettur-I, Mettur-II, North Chennai-I, North-Chennai-II has been 4380.53, 3863.747, 2116.76, 2805.097, 4626.40 MU respectively.

**11.2.3 Nuclear Energy**

Nuclear energy is essential for Tamil Nadu as its benefits are varied. Let us discuss the establishment of the nuclear power plant in Tamil Nadu.



## **Kudankulam Nuclear Power Plant, Tamil Nadu**

*Energy Sector*

The Kudankulam Nuclear Power Plant (KNPP) is located 650 km south of Chennai, in the Tirunelveli district of Tamil Nadu, India. It was established by the Nuclear Power Corporation of India (NPCIL). Two 1,000 megawatt (MW) pressurized water reactor (PWR) units based on the Russian technology were added in stage one of the project. It was decided that four more units would be added as per the agreement signed between India and Russia in December 2008.

The excavation process for the building of unit three and four commenced in 2016 with the objective of making them operational by 2023. In 2017, NPCIL and ASE Group of companies signed a general framework agreement which was focused on constructing unit five and six in June 2017. The units are expected to be commissioned between 2025 and 2026. The power plant will have a collective capacity of 6000MW upon commissioning of its six units. NPCIL and Rosatom decided upon the reactor design and engineering supervision arrangements for the construction of KNPP phase one in 1998, which cost Rs140bn (\$2.47bn). The total cost of the project for the six units is Rs1.11tn (\$16.3bn). Construction of phase one started in 2001 and the first two units were commissioned in 2013 and 2016 respectively. The ground-breaking for the construction of units three and four happened in February 2016 while the concrete pouring ceremony for the third unit was held in June 2017.

The project was considerably delayed because of persistent protests by locals and nuclear activists over safety concerns. Kudankulam nuclear power plant has a production life of 60 years, which can be stretched by another 20 years. The first unit of the plant supplies power at a cheaper rate of about Rs 3.89 per unit. Tamil Nadu is allocated 50% (925MW) of the power generated while the neighbouring states share 35% of the residual power, including 442MW for Karnataka, 266MW for Kerala and 67MW for Puducherry. The other 15% of the generated power is unallocated and is added to a central pool.

### **KNPP reactor**

It is important to note that Kudankulam, or Koodankulam, is the first nuclear plant in India to use imported PWR technology. The existing nuclear power plants in India uses pressurised heavy water reactor or boiling water reactor technology. KNPP uses the advanced version of Russian-developed PWR nuclear technology, VVER-1000 type reactors, also known as water-water power reactors. VVER technology has completed more than 1,500 reactor-years of operating time. KNPP uses AES-92, also called the V-466 model, which is the modern type of the third generation VVER-1000. This integrates active and passive safety measures, including passive heat removal system (PHRS), hydrogen re-combiners, core catcher, hydro accumulators and quick boron injection system (QBIS). This multi-layered feature ensures the plant and environment are safe.

## **NOTES**

**NOTES****Safety features**

1. The AES-92 comprises a mixture of active and passive safety solutions. It preserves the traditional active safety requirements such as the use of neutron-absorbing regulator rods to control the reactivity.
2. The passive safety relies on natural factors, such as pressure differentials, gravity or natural convection, to ensure protection against malfunctions during emergency situations.
3. This includes the fast injection of high-pressure boron and the provision of extra tanks for long-term supply of borated water to the reactor in a passive way, as well as a system for inter-containment area passive filtration.
4. The reactor building has a series of passive hydrogen re-combiners to convert abnormal production of hydrogen into water. This also includes a system for containing the molten core of the reactor during severe accidents.
5. AES-92 has a double protective containment with the inner envelope made of steel and the outer one made of heavy reinforced concrete steel. This prevents radioactive release into the environment during possible disasters, including earthquakes, tornadoes or aircraft crash. The inner containment is equipped with a water sprayer system to ease the steam pressure in the reactor.

**Madras Atomic Power Station (MAPS)**

Madras Atomic Power Station (MAPS) situated at Kalpakkam about 80 kilometres (50 miles) south of Chennai, India, is a comprehensive nuclear power production, fuel reprocessing, and waste treatment facility that also includes plutonium fuel fabrication for fast breeder reactors (FBRs). It is also India's first fully indigenously built nuclear power station, with two units each generating 220 MW of electricity. The first and second units of the station went critical in 1983 and 1985, respectively. The station has reactors in a reactor building with double shell containment improving protection in the case of a loss-of-coolant accident. An Interim Storage Facility (ISF) is also located in Kalpakkam. There are two indigenously built Pressurized Heavy-Water Reactors (PHWRs), MAPS-1 and MAPS-2, in the facility. These reactors aim to produce 235 MW of electricity each. MAPS-1 was finished in 1981, but was started late due to scarcity of heavy water. After procuring the required heavy water, MAPS-1 went critical in 1983 and started operating at full power on 27 January 1984. MAPS-2 obtained criticality in 1985 and started full power operations on 21 March 1986. With India not being a participant to the Treaty on the Non-Proliferation of Nuclear Weapons, the reactors have since 1985 been distributing their consumed fuel to the nuclear reprocessing plant at Tarapur, providing the country with unsafeguarded plutonium. A beachhead at Kalpakkam also hosts India's first indigenous Pressurised (light) water reactor (PWR). The 80 MW reactor was developed by Bhabha Atomic

Research Centre (BARC) as the land-based prototype of the nuclear power unit for India's nuclear submarines. This unit does not come under MAPS.

Energy Sector

#### 11.2.4 Gas Turbines

Gas turbines under the control of the State are functioning in Basin Bridge, Kovilkalappal, Valluthur and Kuttalam and their portion in total power generation from gas turbines was in the ratio of 3:32:45:20 during the five year period ending 2012-13. Between 2011-12 and 2012-13, power generation by the gas turbines witnessed a fall from 2252 MU to 1720 MU (-23.6%). Except the gas turbines in Kovilkalappal, the decline in generation in other stations was the reason behind it. As of Feb 2020s Tamil Nadu has 316.08mw of installed capacity from gas turbines.

#### 11.2.5 Wind Mills

The number of wind mills operational under the State sector were inadequate and the yield of the same rest on the volatile force of wind. The state has harnessed 11717 million units of wind energy during 2019-20 total installed capacity is 8507mw.

#### Check Your Progress

1. How many hydro stations are currently functioning in Tamil Nadu?
2. Name the four State owned thermal stations in Tamil Nadu.
3. What is Plant Load Factor?
4. What are the two indicators of the performance of thermal stations?
5. Where is Madras Atomic Power Station located?

### 11.3 TAMIL NADU ENERGY POLICY

Tamil Nadu Energy Development Agency announced the Tamil Nadu solar energy policy in 2019. The policy aims to embrace solar energy in demand side management, energy conservation, energy efficiency, smart grids, etc. The policy also discusses about inspiring public-private partnerships, joint ventures, etc. to accelerate solar energy projects, manufacturing facilities, and R&D.

- Tamil Nadu aims to have an installed capacity of 9,000 MW by 2023, out of which 40% is slated to originate from rooftop solar plants.
- The policy can be applied to both utility and consumer category systems.

**Utility category:** When the target is sales of solar energy to a distribution licensee or a third party or self-consumption at a distant location (wheeling), the grid connection is done with a devoted gross metering interface.

**Consumer category systems:** When the target is self-consumption of solar energy and export of surplus energy to the grid, the grid connection is through a consumer service connection of a distribution licensee.

#### NOTES

**NOTES**

- The tariffs will be founded on market-based competitive bidding and net feed-in tariff, which will be defined by TNERC from time to time.
- TNERC may present Time of Day (TOD) solar energy Feed-in tariffs to inspire solar energy producers and solar energy storage operators to feed energy into the grid when the energy demand is high.

**Types of solar plant models**

- Upfront ownership: The purchaser of the solar system pays the supplier for the capital cost and takes ownership of the solar system.
- Deferred ownership: The solar system is installed and operated by the supplier. The purchaser makes system performance-based payments to the supplier or leases the system from the supplier. System ownership is transferred to the purchaser on a mutually agreed date or is triggered by a mutually agreed event.

**Incentives**

- Rooftop solar plants will be exempted from electricity-tax for two years from the date of the policy.
- Solar energy injected into the grid of the distribution licensee by solar energy producers who have no renewable energy purchase obligations (non-obligated entities), including the solar energy export by non-obligated electricity consumers, can be claimed by the distribution licensee towards the fulfilment of their Renewable Energy Purchase Obligations (RPO).
- The government will provide land for the development of solar system manufacturing components such as solar cells, inverters, mounting structures, and batteries, etc.

**Grid connectivity and Energy evacuation**

- For consumer category solar PV systems, the scheme capacity at the service connection point shall not exceed 100% of the authorised load of the service connection.
- For high tension consumers, open access regulations of TNERC will apply, subject to the conditions set by SLDC. However, wheeling for less than 1 MW shall not be allowed.

TEDA and TANGEDCO will be the foremost government agencies in implementing the new solar policy in the state of Tamil Nadu.

**Check Your Progress**

6. What is Tamil Nadu solar energy policy aimed at?
7. Name the two agencies that will implement solar policy in Tamil Nadu.

## 11.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. A total of 42 hydro stations are functioning in Tamil Nadu.
2. There are four State owned thermal stations in Tamil Nadu – Tuticorin, Ennore, Mettur and North Chennai.
3. The Plant Load Factor (PLF) is an index to ascertain to what extent the installed capacity of Thermal Power Stations (TPSs) has been effectively put in use.
4. The performance of the thermal stations is assessed by studying the two indicators viz., outage rate (plants not available for generating power during a given period) and availability factor (plants engaged in generation of power during a given period).
5. Madras Atomic Power Station (MAPS) is situated at Kalpakkam about 80 kilometres (50 miles) south of Chennai, India.
6. Tamil Nadu solar energy policy aims to embrace solar energy in demand side management, energy conservation, energy efficiency, smart grids, etc. The policy also discusses about inspiring public-private partnerships, joint ventures, etc. to accelerate solar energy projects, manufacturing facilities, and R&D.
7. TEDA and TANGEDCO will be the foremost government agencies in implementing the new solar policy in the state of Tamil Nadu.

## NOTES

## 11.5 SUMMARY

- Power infrastructure is an important element for ensuring a sustained growth of the economy. Power input is a pivot around which all economic activities revolve. The Government of Tamil Nadu is prioritizing the development of power infrastructure in the State. Strategic steps are being taken to ensure quality and uninterrupted power supply for all the sectors in the State.
- The continuous accessibility of water plays a vital role in generation of power from hydro stations. Supply of water for the hydro stations depends on monsoons and the inflows to the reservoirs. A total of 42 hydro stations are functioning in Tamil Nadu.
- There are four State owned thermal stations – Tuticorin, Ennore, Mettur and North Chennai. The total power generation from thermal stations gradually declined from 2008-09 to 2010-11. Due to the intensive efforts of the State Government, a positive trend was seen in the years 2011-12 and 2012-13.

## NOTES

- The Plant Load Factor (PLF) is an index to ascertain to what extent the installed capacity of Thermal Power Stations (TPSS) has been effectively put in use. The steady decline in plant load factor from 2008-09 to 2010-11 was registered and turned around to improvements in the two years 2011-12 and 2012-13.
- The performance of the thermal stations is assessed by studying the two indicators viz., outage rate (plants not available for generating power during a given period) and availability factor (plants engaged in generation of power during a given period).
- The Kudankulam Nuclear Power Plant (KNPP) is located 650 km south of Chennai, in the Tirunelveli district of Tamil Nadu, India. It was established by the Nuclear Power Corporation of India (NPCIL). Two 1,000 megawatt (MW) pressurized water reactor (PWR) units based on the Russian technology were added in stage one of the project. It was decided that four more units would be added as per the agreement signed between India and Russia in December 2008.
- It is important to note that Kudankulam, or Koodankulam, is the first nuclear plant in India to use imported PWR technology. The existing nuclear power plants in India uses pressurised heavy water reactor or boiling water reactor technology. KNPP uses the advanced version of Russian-developed PWR nuclear technology, VVER-1000 type reactors, also known as water-water power reactors.
- Madras Atomic Power Station (MAPS) situated at Kalpakkam about 80 kilometres (50 miles) south of Chennai, India, is a comprehensive nuclear power production, fuel reprocessing, and waste treatment facility that also includes plutonium fuel fabrication for fast breeder reactors (FBRs). It is also India's first fully indigenously built nuclear power station, with two units each generating 220 MW of electricity.
- Gas turbines under the control of the Tamil Nadu government are functioning in Basin Bridge, Kovilkalappal, Valluthur and Kuttalam and their portion in total power generation from gas turbines was in the ratio of 3:32:45:20 during the five year period ending 2012-13.
- The number of wind mills operational in Tamil Nadu were inadequate and the yield of the same rest on the volatile force of wind. The total power generation by these wind mills had hovered around 12 MU. Its share in total generation was negligible at 0.5 percent.
- Tamil Nadu Energy Development Agency announced the Tamil Nadu solar energy policy in 2019. The policy aims to embrace solar energy in demand side management, energy conservation, energy efficiency, smart grids, etc. The policy also discusses about inspiring public-private partnerships, joint ventures, etc. to accelerate solar energy projects, manufacturing facilities, and R&D.

- TEDA and TANGEDCO will be the foremost government agencies in implementing the new solar policy in the state of Tamil Nadu.

Energy Sector

## 11.6 KEY WORDS

- **Thermal Power Station:** It is a power station in which heat energy is converted to electricity.
- **Gas turbines:** It is a turbine driven by expanding hot gases produced by burning fuel, as in a jet engine.
- **Wind Mills:** It is a building with sails or vanes that turn in the wind and generate power.

## NOTES

## 11.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

### Short-Answer Questions

1. How has the government of Tamil Nadu prioritized the development of power infrastructure in the State?
2. Write a short note on the state of hydro stations in Tamil Nadu.
3. Briefly mention the safety features of KKNP reactor.
4. Write a short note on Madras Atomic Power Station.

### Long-Answer Questions

1. Discuss the condition of the four thermal power plant in Tamil Nadu.
2. Examine the Tamil Nadu Solar Energy Policy.
3. Examine the measures taken by Tamil Nadu Government to develop power infrastructure in the State.

## 11.8 FURTHER READINGS

Leonard, A.G. 2006. *Tamil Nadu Economy*. New Delhi: MacMillan India.

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## NOTES

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### BLOCK IV DEVELOPMENT PROGRAMMES IN TAMIL NADU

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## UNIT 12 STATE FINANCE AND DEVELOPMENT PROGRAMMES

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### Structure

- 12.0 Introduction
- 12.1 Objectives
- 12.2 State Finance: Revenue and Expenditure of the State
  - 12.2.1 Development Programmes
  - 12.2.2 Tamil Nadu's Recent Budget
- 12.3 Answers to Check Your Progress Questions
- 12.4 Summary
- 12.5 Key Words
- 12.6 Self Assessment Questions and Exercises
- 12.7 Further Readings

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### 12.0 INTRODUCTION

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State finance is the study of the role of the government in the economy. It is the branch of economics that assesses the government revenue and government expenditure of the public authorities and the adjustment of one or the other to achieve desirable effects and avoid undesirable ones. In this unit, we will discuss the status of state finance and development programmes in the context of Tamil Nadu. We will also focus on revenue, expenditure, and recent budget of Tamil Nadu.

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### 12.1 OBJECTIVES

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After going through this unit, you will be able to:

- Explain the status of state finance and development programmes in Tamil Nadu
- Discuss the revenue and expenditure of the state of Tamil Nadu
- Describe the recent budget of Tamil Nadu



## 12.2 STATE FINANCE: REVENUE AND EXPENDITURE OF THE STATE

Tamil Nadu with its size and the scope of economy has a budgetary impact on the national scenario as well. As Tamil Nadu is the major contributor in major industrial as well as agricultural production, it has a crucial role to play in the fiscal budget of the country. The budget of Tamil Nadu also creates ripples in other states economic inflows and outflows as well as their industrial or agricultural prospects and programmes. With a size of ₹3, 00, 390 crore of total expenditure in its budgetary plan, Tamil Nadu draws out its budget with revisions every year suitable to the changing scenario of people's needs and budgetary requirements. As it happens every year, the onlookers of the budget including common man looks towards the state for reducing surcharges on the fuel prices, transportation costs, entertainment, liquor, and so on. The economists look forward to the values of the budgets in the form of incentives to investment and invitation to outside capital investment from abroad, industrial climate and establishment of more special industrial estates and Defence Corridors including Special Economic Zones (SEZs), etc.

Budget of every state is drawn to reckon the various public expenditure covering the areas such as:

- Creating employment
- Creating industrialisation
- Transport systems including MRTS (Mass Rapid Transit Systems)
- Construction of infrastructure such as fly overs, state high ways and so on
- Welfare in the form of public health
- Welfare in the form of public education
- Welfare in the form of women and children care
- Establishment cost of the government machinery including police

All the governmental expenditure are considered as having two forms:

- Capital Expenditure
- Revenue Expenditure

In any state budget, the budget is made not for containing the expenditure within the revenue expected, but to increase the revenue to suit the expenditure pattern of that year's economic requirements. Resources for Tamil Nadu Government (not exhaustive, but indicative):

- Central government aids/grants and share of the income from central budgetary revenue allocations

### NOTES

## NOTES

- State revenue on the taxations from the state subjects/surcharges share from the centre
- Foreign Direct Investments (FDI)
- World bank or other aids and grants from abroad
- PPP (Public Private Participation) projects of national importance

### 12.2.1 Development Programmes

When the state envisages developmental policies for the priority growth and push to certain sectors, the budgetary provisions to that segment automatically is increased. For example, the COVID 19 vaccination is given in all the government and ESI hospitals free of cost to the public in the state. Numerous people have already availed these benefits from the government health centres and hospitals. Similarly, the additional emoluments to the COVID frontline workers is to be met in the budget. The Transport Strike that was through during the Budget Session in Feb 2021, at Tamil Nadu, made it clear that there should be another re-allocation for the Transport wage pacts. Growth is directly proportional to the allocation of funds as well as the administration of the funds under the Budget allocations. In case the project does not get its approval, there is no allocation for such an expenditure from the governmental side. This project gets shelved for the time being until it is taken up by another team of social activists to further the idea of the welfare measure and the consequential expenditure.

The state's finance and development programmes is a crucial terminology wherein we find that the financial position of the state government compels it to take public projects or investments or even initiatives. Some examples are:

- The CCTV cameras on the roads of all metro traffic junctions enable traffic offenders to get booked electronically. This initiative is a budgetary expenditure also. Unless the allocations have been utilized to install all the required cameras, the state cannot complete its network.
- The Legal proceedings now take place through video conferencing in most of the judicial set-ups due to the severity of COVID19 pandemic. For this purpose, the budgetary allocation for installation of all the required infrastructure in the majority of the judicial set-ups becomes a priority.
- Expenditure allocation for the provision of PPT and other equipment to the frontline workers facing COVID 19 pandemic prevention.
- Allocation for the NEP (New Education Policy) and the required infrastructure and expenditure
- Metro Lines at Chennai, being expanded under various phases, involves a part of contribution from the State Government as well. Allocation for new routes and allocations for new stations etc., need to be made in a budget.

- Establishing a defence corridor in Tamil Nadu for the production of defence related equipment at Hosur, Coimbatore (sular), Salem, Trichy, Chennai, Nilgiris, etc. require fund allocations and other infrastructural expenses from the government of Tamil Nadu.

Non-availability of the fund from any other source makes the state government abandon the projects *ab initio* for the sole reason that there is a dearth of funds for the allocation.

The Planning, Development and Special Initiatives Department is involved with long term structuring of development programmes line attainment of SDG, monitoring of Tamil Nadu innovation initiatives, state balanced growth fund, special area development programme, etc.

### **Status of Tamil Nadu in the economic development**

If one would look at the status of economic development in Tamil Nadu, one would observe that:

- Tamil Nadu geographically occupies 4% (130,000 sq. kilometres) of the total area of the country.
- Population of Tamil Nadu is 72 million
- Literacy rates have crossed 52 million literates
- 48.5% of the total population live in urbanised societies
- Gross Domestic Product of Tamil Nadu is quoted as USD 80 Billion in 2013-14 (constant rates)
- Tamil Nadu is considered as the 2nd largest economy in India contributing the GDP to the Nation.
- Tamil Nadu is proud of industrialisation and that creates opportunities in rest of India
- Tamil Nadu is transforming into a defence corridor for producing defence equipment in more than 5 centres of Tamil Nadu.

### **Revenue pattern in Tamil Nadu Budgets**

Tax revenue of the government includes the following taxes:

- Sales tax
- Excise duties
- Registration fees
- Corporation taxation
- Vehicle taxation

A comparative picture of the past and the present is furnished to see the magnitude of the growth of our economy and also the growth in taxation:

## **NOTES**

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Year	Tax revenues	Sales tax	Excise duties	Registration fees	Corporation tax	Vehicle tax
1950	441					
1955	270	112	3	7		
1960	417	191				
1965	723	409	4	99		133
1975	3,190					
1990	34,508	20,659	4,348	2,263		2,273
1995	79,045	46,892	9,346	6,130		3,922
2000	150,659	81,971	18,686	9,101		5,904
2005	253,232	143,607	24,780	15,628	13,846	11,305

(With figures in INR Rupees Million)

Tax revenue inputs of the government also indicates the growth in the economy during these years and also the segments that have been given the priority by the governments ruled Tamil Nadu successively.

As per the Interim Budget speech, the state's Own Tax Revenue is estimated to be ₹ 1,09,968.97 in revised estimate 2020-21.

### 12.2.2 Tamil Nadu's Recent Budget

In a democratic set up, the budgets are drawn once a financial year that is, April to March and capital and revenue are allocated for various fields. A budgetary approval is reckoned as a statute of the legislature as the budget session discusses the budget and there are approvals and disapprovals of the principles and concepts for allocations of funds. Besides, the budget is also passed in the legislature through the voting by the legislators. Majority of the voting leads to the acceptance of the budget. The process of Budget include:

- Budget speech by the Finance Minister
- Budget explanation by the ruling party Chief Minister and also the ministers about various allocations
- Budget question by opposition and other legislators
- Voting for the passing of the budgetary provisions
- Budget endorsed by the legislature, which is enthroned in its right of a statute.

Highlights of the Interim budget was presented by Mr. O. Panneerselvam, Deputy Chief Minister of Tamil Nadu in February 2021. This is the eleventh Budget presented by the minister in the capacity of Finance Minister of the Government of Tamil Nadu.

Bear in mind some of these points have already been discussed in Unit-4.

## NOTES

- ₹ 19.42 crore allocated to health sector, after playing a robust role in containing the spread of COVID-19 in Tamil Nadu since the outbreak of the pandemic in the state in March last year [2020]
- ₹ 5,478 crore allocated for higher education. School education sector allocated ₹ 34,181 crore
- ₹ 1738 crore allocated towards the state's agriculture sector. Additional ₹ 5000 crore allocated towards crop loan waiver. Relief provided for loss of paddy due to natural disasters hiked from ₹ 13,000 per hectare to ₹ 20,000 per hectare
- Tamil Nadu police department allocated ₹ 9567 crore. Additional ₹ 100 crore allocated towards modernisation
- ₹ 3700 crore allocated under PM housing scheme. Subsidy for roofing hiked to ₹ 70,000
- ₹ 1953.98 crore allocated for nutrition programme
- Adi Dravidar department allocated ₹ 1932 crore. Additionally, ₹ 100 crore allocated to improve the residential accommodations of the community with basic amenities. ₹ 1276 crore also allocated towards the Tribal sub-project in the State.
- ₹ 1700 crore allocated towards special schemes for the disabled to provide them with ease of access and other facilities.
- Amma mini clinics, launched in December last year to provide essential healthcare services to the downtrodden allocated ₹ 144 crore in the budget.
- ₹ 4371 crore distributed to beneficiaries under the state marriage assistance scheme. Further, gold worth ₹ 1791 crore distributed to 12.5 lakh people over the last 10 years under the state marriage financing scheme
- 40 lakh households to be provided with drinking water connection at a cost of Rs 3,016 crore, with ₹ 6,453 allocated to the Water Resources Department
- ₹ 5171 crore allocated for Phase 2 of road development project. ₹ 6448 crore allocated for Chennai-Kanyakumari industrial route project
- Tamil Nadu receives ₹ 1492 stimulus from the World Bank to finance the state's housing sector
- ₹ 3140 crore allocated for development projects by the Greater Chennai Corporation
- 62 investment projects worth ₹ 39,941 crore granted approval

### **Budget provisioning of the government during the previous financial year 2020-21**

The total expenditure in 2020-21 targeted at Rs 3, 00, 390 crore. This was 11.2% higher than the revised estimates of 2019-20. This expenditure was

## NOTES

proposed to be met through receipts (other than borrowings) of Rs 2, 24, 739 crore and borrowings of Rs 74, 107 crore. Total receipts for 2020-21 (other than borrowings) are expected to be 13.9% higher than the revised estimate of 2019-20.

Expenditure	2020-21	Sources	2020-21
		Receipts	224739
		Borrowings	74107
Total Expenditure	300390		

Rupees in Crore

Highlights of the segments to which the allocations were made by the Previous Budget 2020-21:

- **Urban development and infrastructure:** The Government has proposed the Tamil Nadu Urban Flagship Investment Programme to support the state in developing urban and environmental infrastructure. The programme will cost of ₹ 8,156 crore and will be financed with assistance from the Asian Development Bank. Further, 179 projects at a cost of ₹ 8.6 lakh crore relating to Tamil Nadu have been included in the National Infrastructure Pipeline. These projects will be implemented in the next five years.
- **Agriculture and irrigation:** During 2020-21, crop loans of ₹ 11,000 crore will be provided by co-operative institutions. Further, ₹ 200 crore has been allocated as interest waiver for repayment of loans.
- **Disaster management:** A comprehensive flood mitigation project for Greater Chennai has been proposed at a cost of ₹ 3,000 crore. This will be undertaken with assistance from the World Bank and Asian Infrastructure Investment Bank. In 2020-21, Rs 1,360 crore has been provided for disaster management.
- **Stamp duty:** Stamp duty for rental agreements will be reduced from 1% to 0.25%. Further, registration charges on such agreements will be reduced from 1% to 0.25% (subject to a maximum of ₹ 5,000).

### Budgetary allocations segment-wise this year 2021-22

More allocations have been made for a few new projects and priorities in the Interim budget of Tamil Nadu:

- ₹ 6,683 crore allocated for Coimbatore Metro project
- ₹ 7,217 crore allocated for fisheries
- ₹ 9,567 crore for the police department modernization and infrastructural development for detecting cyber crimes

The total revenue deficit in 2020-21 is estimated to be ₹ 65,994.05 crore, a substantial increase from ₹ 21,617.64 crore projected in the Budget Estimates of 2020-21. Revenue sources are:

- GST-₹ 45395.50
- VAT-₹ 56413.19
- Excise-₹ 9613.91

The state government proposes to avail its debt level at ₹84686.75 crore falling within the overall debt limit of ₹85454 Crore. In case of Gross state domestic product (GSDP), following observations can be made:

- As per Revised Estimates of 2020-21 GSDP is at ₹ 19.43 lakh crore
- Estimated to increase in 2021-22 at ₹ 23.42 lakh crore
- Tamil Nadu's GSDP has been projected at 2.02%

Tamil Nadu Budget, this time, occupies an importance place as the state is going for the assembly elections in the month of April 2021. The present budget presented by the government may have to wait for its implementation by the successive government. However, generally too in economics, state income and expenditure Budget assumes a historic importance due to the fact that the budgets not only speak about the economic figures of revenue and expenditure in rupees but they also outline the following important aspects of the economic growth of the state and its population:

- Health and hygiene
- Economic development in general
- Education and employment
- Entrepreneurship and development of incubating processes
- Industrial revolution through innovation
- Urbanisation
- Agricultural growth and development
- Business styles and business climate creation
- State revenue pattern without pinching the public
- Optimality in the development and growth at the districts
- Equal attention to develop all the areas/districts of the state of Tamil Nadu.
- Law and order
- Women and children welfare
- Interstate cordial relationship

### Check Your Progress

1. Mention any five areas covered under the Budget of every state.
2. What are the two forms of governmental expenditure?
3. Who is the current Deputy Chief Minister of Tamil Nadu?

### NOTES

## NOTES

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### 12.3 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

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1. The Budget of every state is drawn to reckon the various public expenditure covering the areas such as:
  - a. Creating employment
  - b. Creating industrialisation
  - c. Transport systems including MRTS (Mass Rapid Transit Systems)
  - d. Construction of infrastructure such as fly overs, state high ways and so on
  - e. Welfare in the form of public health
2. All the governmental expenditure are considered as having two forms:
  - a. Capital Expenditure
  - b. Revenue Expenditure
3. As of 2021, Mr. O. Panneerselvam is the Deputy Chief Minister of Tamil Nadu.

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### 12.4 SUMMARY

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- As Tamil Nadu is the major contributor in major industrial as well as agricultural production, it has a crucial role to play in the fiscal budget of the country.
- In any state budget, the budget is made not for containing the expenditure within the revenue expected, but to increase the revenue to suit the expenditure pattern of that year's economic requirements.
- When the state envisages developmental policies for the priority growth and push to certain sectors, the budgetary provisions to that segment automatically is increased.
- In case the project does not get its approval, there is no allocation for such an expenditure from the governmental side.
- The state's finance and development programmes is a crucial terminology wherein we find that the financial position of the state government compels it to take public projects or investments or even initiatives.
- In a democratic set up, the budgets are drawn once a financial year that is, April to March and capital and revenue are allocated for various fields.
- Highlights of the Interim budget was presented by Mr. O. Panneerselvam, Deputy Chief Minister of Tamil Nadu in February 2021. This is the eleventh Budget presented by the minister in the capacity of Finance Minister of the Government of Tamil Nadu.



- The total expenditure in 2020-21 targeted at Rs 3, 00, 390 crore. This was 11.2% higher than the revised estimates of 2019-20.
- Tamil Nadu Budget, this time, occupies an importance place as the state is going for the assembly elections in the month of April 2021. The present budget presented by the government may have to wait for its implementation by the successive government.

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### 12.5 KEY WORDS

- **Surcharge:** It is an extra fee, charge, or tax that is added on to the cost of a good or service, beyond the initially quoted price. Often, a surcharge is added to an existing tax and is not included in the stated price of the good or service.
- **Defence Corridors:** It refers to a route or a path along which domestic productions of defence equipment by public sector, private sector and MSMEs are lined up to enhance the operational capability of the defence forces.
- **Ab Initio:** It is a Latin term meaning 'from the beginning'.

### 12.6 SELF ASSESSMENT QUESTIONS AND EXERCISES

#### Short-Answer Questions

1. Give examples of the dependency of development programmes on state's finance.
2. Write a short note on the Budget provisioning of the Tamil Nadu government during the financial year 2020-21.

#### Long-Answer Questions

1. Discuss the state finance of Tamil Nadu along with its expenditure and revenue stats.
2. Examine the recent budget of Tamil Nadu.

### 12.7 FURTHER READINGS

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## NOTES

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# UNIT 13 WELFARE PROGRAMMES OF THE STATE GOVERNMENT

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### Structure

- 13.0 Introduction
- 13.1 Objectives
- 13.2 Welfare Programmes of the State Government
  - 13.2.1 Education and Health
  - 13.2.2 TINP and ICDS
  - 13.2.3 Unemployment and Anti-Poverty Strategies
  - 13.2.4 PDS (Public Distribution System)
  - 13.2.5 Women Development
- 13.3 Answers to Check Your Progress Questions
- 13.4 Summary
- 13.5 Key Words
- 13.6 Self Assessment Questions and Exercises
- 13.7 Further Readings

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## 13.0 INTRODUCTION

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Tamil Nadu is well poised towards a big leap in its welfare measures to the society. However, society's involvement and the responsive follow up actions by the governmental agencies or their extended arms will make things happen faster and with more effectiveness as well as efficient. Tamil Nadu is going through a vibrant phase of development, with the state government giving emphasis to the development of women and children addressing their concern in a multi phased manner to the social welfare and nutritious programme department. To ensure the welfare of the poor, the downtrodden, women, children and senior citizens, the Government of Tamil Nadu has taken various steps for improving their health, nutrition, education and protection through various social welfare schemes. They have also been given many opportunities and facilities to live a better life. Education in Tamil Nadu, not only prepares the best students, but also produces entrepreneurs and scientists within their own domains through the advanced methods of skill developments and also the systems of education. Many government schools and colleges are competing for their excellence in this journey towards academic achievements. In this unit, we will study in detail about the welfare programmes of Tamil Nadu government.

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## 13.1 OBJECTIVES

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After going through this unit, you will be able to:

- Describe the welfare programs of Tamil Nadu Government
- Explain the changes and progress made in health and education system of Tamil Nadu
- Discuss the benefits of ICDS and PDS schemes in Tamil Nadu
- State the Women Development Programmes in Tamil Nadu

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## 13.2 WELFARE PROGRAMMES OF THE STATE GOVERNMENT

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Tamil Nadu, with its pride of being the second largest free market economy contributing to the GDP of India, has focused on the social welfare programmes during the successive political party headed governments. Though the rulers changed the themes and the names, the benefits and the focus were the social welfare for the people living in villages, towns and cities. Welfare programmes of Tamil Nadu are unmatched as Tamil Nadu has also earned its popularity for ‘freebies’. There are many free measures from the Government of Tamil Nadu as a welfare initiative which other governments elsewhere have started copying in their states.

For the development of a state into a complete welfare state, the development of Agriculture, Industry and Business is not sufficient, the infrastructure to support the welfare of the society and its various strata, viz., education, health and sanitation with clean environment is also needed.

### 13.2.1 Education and Health

Education is one supreme welfare project wherein the light of education removes the ignorance in the minds of the people. The Government is able to develop a knowledgeable society and intellectual citizens living in it. Welfare measures in the field of education commenced as early as from the British India through the missionaries spread over Madras State. Education which was a proprietary right of only the rich in old days became an affordable reality to all the people irrespective of caste, creed, colour and wealth.

### Five Year Plans for Education

In Tamil Nadu educational development has reached significant heights with the following standard parameters:

**Table 13.1** Availability of Educational Institutions

Sl. No	Type of Education	Yardstick by the Government
1	Primary Schools	within 5 kilometres' reach
2	High Schools	within 10 kilometres' reach
3	Colleges	within 25 kilometres' reach

## NOTES

It is a macro picture but at micro levels there might be more or less number of educational institution in a particular geographical area.

With a concerted effort by the Government and Educationists in Tamil Nadu, today we find the following data of educational institutions and Universities in the state:

**Table 13.2** Number of educational institutions in Tamil Nadu (2010)

Institutions	Numbers	Students (approx)	Students during 2010	Institutions 2010 status
Universities	19			37
Colleges	392	514000	na	1702
Higher Secondary	3627	562000	1184232	2550
High School	5345		1873989	na
Middle Schools	5503			na
Primary Schools	30795	2998000	9797264	na

As per AISHE 2018-19 there are 2466 colleges and 35 colleges per lakh population. Tamil Nadu is ranked third in the country for highest student enrolment. It is one of the few states to achieve nearly 100% net enrolment ratio in primary education.

As Swami Vivekananda said 'Education is a manifestation in man', education leads a person not only to the higher levels of knowledge; but also to a different track of growth and development towards welfare and achievement of goals. It develops humanity, human values and the systems which build the heritage of any nation. Heritage is the back bone of any society or civilization.

### Education Pattern

Tamil Nadu is one of the states that has achieved 80.33 per cent literacy rate. It is also certified by ASSOCHAM that Tamil Nadu has reached Gross Enrolment Ratio (GER) of 100 per cent in primary and middle level of education. Educational patterns have undergone a number of changes in the education system of Tamil Nadu, falling in line with other states that have reached their respective heights in educational standards. Tamil Nadu education level is always compared with that of Kerala and West Bengal. These two states are said to have crossed the national average of literacy rate. Tamil Nadu has also achieved the same.

Universities which were only handful during the colonial days, increased to a remarkable level thereafter with the following categories:

1. Full-fledged Universities established by the Statute
2. Central Government/State Government Universities
3. Deemed Universities that have followed the pattern of Autonomous Universities
4. Technical and Professional Varsities which are of a specialized nature. (Anna University for Engineering; Dr. MGR University for Medicine)

Moreover, schools with new education pattern, boards of education and new education schemes were also inducted, which are as follows:

1. CBSE syllabus followed by all the Central Schools and also Navodaya Schools (Navodaya schools are yet to be started in Tamil Nadu). This is also followed by some Convent Schools which are run by private Educationists.
2. ICSE – Indian Certificate of Secondary Education courses are also offered by some schools.
2. State Education Board syllabus is administered in the Government schools and all aided and Local body schools. (SSLC pattern) Samacheer Education System introduced in the year 2010 replaced the disparities between the educational pattern in various schools and systems to reduce the book burden on the children as well as to equip them with more inputs that are relevant to science and technology and welfare.
3. Different syllabus patterns are followed by the private institutions for higher secondary qualification. Now disparities are minimized.
4. At pre-university level, eleventh and twelfth class education is carried out in Higher Secondary Schools.
5. Graduation courses and professional courses are offered at various levels and the admissions take place through entrance tests like NEET, JEE, etc.
6. The New Educational Policy (NEP) of the Government of India is yet to be endorsed by the Tamil Nadu Government.
7. Besides degree courses, polytechnic courses, ITI trade courses and draftsmen courses, etc., are developed for the segment of students who prefer them.
8. Under the National Skill Development Schemes of the Government of India, many courses are run across Tamil Nadu to impart skill development certification courses to the students who are already enrolled in the colleges. These courses are administered by the NSE (National Stock Exchange) Portal.

## **NOTES**

## NOTES

9. Sarva Siksha Abhiyaan Scheme of the Government of India lays special emphasis on the education of underprivileged and downtrodden children.

Extra-Curricular Activities: Apart from sports, arts and music, the education curriculum encourages students to join the;

- 1) Scouts and Guides
- 2) National Cadet Corps (NCC)
- 3) National Service Scheme (NSS)
- 4) Science Talent Project Training Schemes

These extra-curricular activities develop leadership, duty and discipline amongst the young students who belong to the next generation of the Indian economic development.

Various Incentives from the State Government: (schemes apply to Government Schools)

Apart from the schemes of free education in the Government Schools, the student community enjoys the following benefits from the State Government:

- Computer education
- Early childhood care and Education
- Education of the girl child
- Nutritious food scheme [Mid-day meal]. Almost 85 lakh students in the age group of 2-15 years are benefited through the scheme.
- Kasturba Gandhi Balika Vidyalaya
- EDUSAT (Educational Satellite)
- Free Text Books
- Free Bicycles for girls
- Free Laptops for higher secondary students (September 2011)
- Free Travel pass for students in Government Buses
- Free smart phone system to the students (after the COVID pandemic)

### Education and COVID

During the COVID pandemic, all schools and colleges were following the lockdown instructions. Students were compelled to stay engaged through the online classes. Now the Government has decided to give smartphones to students for their pursuits.

Students were also encouraged to participate in local lesson tests, exams as per the norms of COVID gatherings.

During the COVID pandemic year, exams were postponed or cancelled for majority of the classes and many students up to middle/high school levels were given automatic promotions to higher classes for 2020-21 academic year.

Apart from the Kendriya Vidyalayas, IIT and Regional Engineering Colleges, (now renamed as N.I.Ts) many institutions have come up with professional excellence offering employment oriented educational programmes. Many Industrial wizards have also collaborated with on the job programmes for the benefit of practical experience to the student professionals. Today, the State is proud of having an educational supermarket to cater to other states and also the international students who choose Tamil Nadu for their educational pursuits.

## NOTES

### Health

Living conditions and living standards of people determine the development of an economy. Tamil Nadu has been on a growth sprint for decades and has to its credit a robust health care and hygiene system well established right from the primary health levels.

People have also undergone a lot of practical exposure on hygiene and cleanliness during these years of growth that has formed the basis of Tamil Nadu's development story.

**Table 13.3** Statistical Data on Health in Tamil Nadu

Sr. No.	Category	Statistical Parameter
01	Primary Health Facility/Services availability	within 5 kilometers reach
02	Mortality rate in Tamil Nadu	60.8 years average
03	Birth rate	20%
04	Death Rate	8.8%

### Pattern

The health care pattern can be well defined with the following structure:

- 1) Primary Health Centres (PHC)
- 2) Government General Hospitals in Towns and Cities
- 3) Multi-speciality Government Hospitals in Metro Cities
- 4) Private Clinics and Hospitals co-exist

**Emergency Care:** Emergency Care Services are called 108 services wherein the Emergency Medical Relief Service (EMRS) reach the victim within a short time and he/she is taken to the Government Hospital Care.

**Chief Minister's Medical Insurance Scheme:** People within the Poverty line are accommodated under the Chief Minister's Medical Insurance Scheme and are treated free as per the scheme eligibility.

Medical facilities and health care have reached even to the villages as the supporting para-medical staff and also the nursing staff take their leads wherever necessary.

## NOTES

During the COVID-19 pandemic, with the services of the medical and paramedical staff along with the police, other security personnel and volunteers it became possible to attend to the people at every nook and corner of the State. Orchestrated efforts of the State Government, the District Administration and the Local Administration made it possible to achieve control over the pandemic.

**Medicinal practices:** Apart from the allopathic pattern of medical care, medicines like Siddha research, Ayurveda and Ayur Cure, homeopathy medicines, Unani medicines, holistic medicines practiced by practitioners, various other medicinal practices including traditional medicinal practices, distant healing techniques, allied medicinal and physiotherapy practices are also practiced in Tamil Nadu.

**Child Care:** Ab Initio, when the pregnancy starts, the Bala Sevika at the Panchayat comes into play and registers the mother and the growth details. The mother is given periodical medical check-up sessions and also the vitamins and other nutritious medicines. When the mother goes for delivery, the Government of Tamil Nadu supports her with Rs. 16000 towards the medical care and expenses for delivery. Dr. Muthulakshmi Reddy Maternity Benefit Scheme takes care of the income loss for the unemployed period of the working women during pregnancy.

Once the child is born, immunization process is commenced and the medical team at the PHC guide the mother and the child to undergo periodical checks and medicines are also administered. Polio drops and the injections are also administered at proper intervals.

All these health centres not only treat the sick and people with symptoms but also help the public for a clean living and a hygienic habitation. PHCs promote welfare and preventive measures to avoid diseases. Girls also get their best share from the Government as the Government supplies them with food supplements and also free sanitary napkins to tide over their difficult days. Girl students were first given the laptops and then bicycles by the State Government. Now there is a finalized plan to provide smartphones to all higher secondary students.

All the villagers have accepted the concept of building their own bathrooms and toilets to follow the system of hygiene.

Apart from health centres, mobile clinics are also organized by the Government and Private Hospitals in a few centres and the Mobile advertising services through vans, community radio and newspaper media are carried out. Health camps are conducted by the Lions, Rotary and other service organisations. Red Cross organizes blood donation camps and voluntary health camps. The Government also encourage people for organ donations through recognized bodies through a legal process.

Multi-speciality hospitals have also developed organ transplant platforms as a part of life saving activity from legally declared donors and such replacements are done in a scientific and professional way.



**Trauma Care:** Another facet of emergency medical care is trauma care due to accidents and other traumatic conditions. Many cities and metros are provided with such Trauma Care centres with hybrid ambulance cum theatre facilities. Sometimes, even airlifting of the patient from the hospitals is carried out, on the request of the Government.

**Family Welfare and Family Planning:** Since 1977, family planning across the country has faced a setback due to the general resentment of the public on the family planning surgeries. In Tamil Nadu, the family planning and family welfare schemes are progressing well with state wide publicity for the birth control methods and birth control operations for males and females. As for the population growth, Tamil Nadu has followed Kerala in containing the net population growth. Many families have voluntarily adopted the principle of 'One Child One Family'. Thus Tamil Nadu aims to have a complete control of population growth by the end of 2025.

**Integrated Nutrition Scheme:** A Scheme of the Tamil Nadu Government, commenced in the year 1980 at Madurai Kottampatti Panchayat Union, spread to 318 Panchayat Unions of the State gradually. This scheme ended in the year 1997. The Centre for Nutrition, Hyderabad in its research papers found that the scheme could reduce the deficiency in nutrition of the children from 16 per cent to 3 per cent. This scheme enabled employment for 60000 women workers covering 19500 villages in 24 districts of the State. Besides children, the pregnant women and also lactating mothers aggregating to 7 lac women are benefited from this scheme.

**Women and Children Development Scheme:** This scheme commenced in October 1998 with the assistance of the World Bank and the Government of India. This scheme has three objectives:

1. To improve the habits in bringing up the children
2. Nutrition, hygiene and Environmental Cleanliness
3. The Role of Society and Families in improving the Nourishment

This scheme enables and empowers the women to take the portfolio of nutrition and nourishment under their direct understanding and execution with the help of the society and family, guided by the trained case workers.

Wide publicity and visible awareness of the concepts and the steps taken/to be taken are well proclaimed under this scheme. This scheme has the twin objectives of development of women and children simultaneously, that is considered as the primary concern of the State and the society.

### 13.2.2 TINP and ICDS

Tamil Nadu Integrated Nutrition Project and Integrated Child Development Scheme are two different schemes aiming to help the children and also the lactating mothers to nourish them with sufficient nutrition and also to provide for healthy food intakes as prescribed for better health and nutrition standards.

## NOTES

## NOTES

TINP's main goals could be recapitulated as:

- a) To remove malnutrition among children under four years of age
- b) To reduce infant mortality by one-fourth of the present levels
- c) To reduce vitamin A deficiency in children under five years of age from about 27% to about 5%
- d) To reduce anaemia in pregnant and nursing women from about 55% to about 20%

Four major components of the project:

- nutrition services
- health services
- communications
- monitoring and evaluation

Project strategies:

- to provide nutrition education and primary health care to pregnant and lactating women and children of 6-36 months age
- to monitor the growth of children of 6-36 months through monthly weighing and growth charting
- to provide supplementary feeding and health checks to children with faltering growth, as well as intensive counselling to their mothers.

These services were provided by the nutrition centres, staffed by part-time women community nutrition workers, which were set up in about 9000 villages. Assisted by the local women's groups created under the project strengthened the scheme and its extension to more families and better coverage.

ICDS is similar to the Mid-day Meal Scheme. This scheme under the Government in collaboration with the World Bank takes care of the programmes related to women welfare and environment sanitisation. Through this scheme, the children of different age groups are given nutrition rich food and also the lessons to the mothers who nourish these children. Mid-day Meal Scheme became the Nutritious Food Scheme of the Government of Tamil Nadu. Though many political reasons are advocated for the various Governmental programmes, the ICDS is one scheme that has shown visual results in developing the new generation of Tamil Nadu by saving them from malnutrition.

In Pudukkottai district, ICDS and Mid-day Meal Programme have been integrated wherein the food and education activities are carried out in a two tier model.

Success of ICDS depends from block to block and is incomparable as the inputs remain the same, the efforts differ due to ethos of the location.

The key issues to improve the ICDS impact on child development are to ensure:

- (a) the whole range of ICDS services is provided to the targeted beneficiaries, particularly, to the children under three years of age and pregnant women.
- (b) nutrition supplementation should not be considered as a substitute for a part of the home meal.
- (c) health and nutritional competence of the families is increased accompanied by better weaning and child feeding practices.
- (d) coverage of necessary health services is increased, referrals for malnourished children and at-risk pregnant and nursing women are completed and severely underweight children are nutritionally rescued and rehabilitated.

ICDS has succeeded in reaching around 40% of rural India and parts of rural Tamil Nadu, mainly the poor areas, an achievement in itself. ICDS is well-conceived provision of an integrated package of health and nutrition services. It has considerable potential for improving child nutrition and health in Tamil Nadu and promoting early childhood development.

Full potential of ICDS could be visualized with its

- training and supervision
- health linkages
- referral services
- mother counselling and nutrition education
- coverage of under-three children
- degree of community participation

### 13.2.3 Unemployment and Anti-Poverty Strategies

Anti-poverty strategies are aimed at uplifting the people through the Governments' poverty alleviation programmes, which are as follows:

- A) 100 day employment programme
- B) Integrated Rural Development Programme (IRDP)
- C) Self-employment Programmes for the Urban Youth
- D) Entrepreneurial Development Programmes (EDP)
- E) Formation of Self-Help Groups (SHG) for women
- F) MGNREGA -Mahatma Gandhi National Rural Employment Guarantee Act

Tamil Nadu Empowerment and Poverty Reduction Project (TNEPRP) study reveals various micro aspects of the alleviation of poverty and also the generation of employment in rural and semi-urban economies.

## NOTES

## NOTES

In the recent past, a lot of incubation processes for promoting self-employment ventures have emerged.

Tamil Nadu has in place 'Unemployment Assistance' scheme for providing monetary assistance to the unemployed for 3 years subject to conditions. There is also the Unemployed youth employment generation programme by agriculture department. There are also incentive programmes for Tribals in forest operations.

Assistance to lawyers for starting practice scheme is also for the unemployed in the state.

### 13.2.4 PDS (Public Distribution System)

In our country, PDS was first started on 14 January 1945, during the Second World War, and was launched in the current form in June 1947. The introduction of rationing in India dates back to the 1940s Bengal famine. This rationing system was revived in the wake of acute food shortage during the early 1960s, before the Green Revolution. Ration Cards serve the purpose of public distribution of food grains and essential commodities either free or at subsidized rates depending upon the economic status of the card holder and the state. Tamil Nadu Public Distribution System is based on the same principles and the Tamil Nadu Civil Supplies Corporation was formed with those objectives of procurement, identification and distribution. The State Government is fully responsible for establishing and managing the FP Shops (Fair Price Shops).

In the modern times, with the advent of technology and computerisation, mobile telephony, Public Distribution System has undergone tremendous changes. The efficiency of the Public Distribution System and also the Government's role came to the fore during the COVID pandemic. The PDS proudly carried out its task during the pandemic without any amount of scandals and delays. Public also cooperated with the PDS implementation. PDS as on today has adopted electronic and biometric method to initiate the purchase, such as;

- 1) Issuance of the Smart Cards
- 2) Bio Metric Registration before each purchase
- 3) SMS message to the registered mobile number on purchase or benefits
- 4) Addition/Deletion/Change of Address/Type of ration availed could be changed across the online platform.
- 5) Aadhaar based registration is the underlying principle of PDS in Tamil Nadu.

The following are the types of cards issued in Tamil Nadu:

- 1) Rice Card of BPL (Below Poverty Line): All items are permitted-including freebies of the Government.
- 2) Rice Card of non-BPL: Few items are not permitted and freebies are allowed.

3) Sugar Card – Only for sugar and no freebies permitted; items are not supplied.

4) Card only for Identity and Address Proof: This card is not eligible for receiving any ration items under the PDS.

PDS in Tamil Nadu offers freebies such as COVID cash gift; Pongal cash gift and Pongal package gifts with sugarcane, extended to the category 1 and 2 of the above list.

Civil Supplies Department of the Government of Tamil Nadu manages the entire Public Distribution outlets and their supplies.

As of 2020, the PDS is being implemented in 38 districts, 313 taluks with 34773 for price shops in Tamil Nadu. There are 36448044 beneficiaries and 11200237 family card holders.

### 13.2.5 Women Development

Universally, the concept of women development is equal to development of the society as women play a significant role in the development by procreating the next generation of the nations all over the world. The children are expected to grow with proper nourishment and cultural value to safeguard the heritage of the country and be a good and law abiding citizen of the country.

Women Development is assessed in terms of

- o Education
- o Employment
- o Welfare
- o Reservation

Education of Women: The status of education of women has changed from 18% (1961) to 39% (1991) and 52% (2019). Women's Life Expectancy has increased from 39.2 years to 73.7 years. Many programmes of the Government of Tamil Nadu have envisaged the Women Development across the state in all possible segments, including the agricultural and industrial worker segments.

The following are some Women Development programmes:

1. TANWA (Tamil Nadu Women in Agriculture)
2. DWARCA (Development of Women in Rural Areas)
3. IRDP (Integrated Rural Development Programme)

The ratio of women in employment has grown due to effective employment strategies and self-employment opportunities. Girl Child is also another focus area wherein the children are given financial support by the Government, to generate perennial income from the fixed deposits made by the Government Welfare

## NOTES

Schemes. Social Welfare Department implements these schemes for women and children welfare. As a result, the number of women and children living below the poverty line has come down in Tamil Nadu.

## NOTES

### Check Your Progress

1. What is ICDS?
2. What are anti-poverty strategies?
3. What is PDS and the purpose of ration cards?
4. How is Women Development assessed?
5. List some Women Development programmes.

## 13.3 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. ICDS is Integrated Child Development Scheme. Through ICDS, the children of different age groups are given nutrition rich food and also the lessons to the mothers who nourish these children.
2. Anti-poverty strategies are aimed at uplifting the people through the Governments' poverty alleviation programmes.
3. PDS is Public Distribution System. Ration Cards serve the purpose of public distribution of food grains and essential commodities either free or at subsidized rates depending upon the economic status of the card holder and the state.
4. Women Development is assessed in terms of
  - Education
  - Employment
  - Welfare
  - Reservation
5. The following are some Women Development programmes:
  - TANWA (Tamil Nadu Women in Agriculture)
  - DWARCA (Development of Women in Rural Areas)
  - IRDP (Integrated Rural Development Programme)

## 13.4 SUMMARY

- For the development of a state into a complete welfare state, the development of Agriculture, Industry and Business is not sufficient, the

infrastructure to support the welfare of the society and its various strata, viz., education, health and sanitation with clean environment is also needed.

- Tamil Nadu is one of the states that has achieved 80.33 per cent literacy rate. It is also certified by ASSOCHAM that Tamil Nadu has reached Gross Enrolment Ratio (GER) of 100 per cent in primary and middle level of education.
- Living conditions and living standards of people determine the development of an economy. Tamil Nadu has been on a growth sprint for decades and has to its credit a robust health care and hygiene system well established right from the primary health levels.
- Apart from the allopathic pattern of medical care, medicines like Siddha research, Ayurveda and Ayur Cure, homeopathy medicines, Unani medicines, holistic medicines practiced by practitioners, various other medicinal practices including traditional medicinal practices, distant healing techniques, allied medicinal and physiotherapy practices are also practiced in Tamil Nadu.
- Apart from Health Centres, Mobile clinics are also organized by the Government and Private Hospitals in a few centres and the Mobile advertising services through vans, community radio and newspaper media are carried out. Health camps are conducted by the Lions, Rotary and other service organisations.
- ICDS is similar to the Mid-day Meal Scheme. This scheme is also under the Government with the help of the World Bank to take care of Women Welfare and Environment Sanitisation.
- The introduction of rationing in India dates back to the 1940s Bengal famine. This rationing system was revived in the wake of acute food shortage during the early 1960s, before the Green Revolution.
- Ration Cards serve the purpose of public distribution of food grains and essential commodities either free or at subsidized rates depending upon the economic status of the card holder and the state.
- PDS in Tamil Nadu offers freebies such as COVID cash gift; Pongal cash gift and Pongal package gifts with sugarcane, extended to the holders of rice card of BPL and non-BPL.
- Universally, the concept of women development is equal to development of the society as women play a significant role in the development by procreating the next generation of the nations all over the world.
- Women's Life Expectancy has increased from 39.2 years to 73.7 years. Many programmes of the Government of Tamil Nadu have envisaged the Women Development across the state in all possible segments, including the agricultural and industrial worker segments.

## NOTES

## NOTES

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### 13.5 KEY WORDS

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- **Welfare programmes:** Welfare refers to a range of government programs that provide financial or other aid to individuals or groups who cannot support themselves. Welfare programs are typically funded by taxpayers and allow people to cope with financial stress during rough periods of their lives.
- **Health care:** It refers to the maintenance or improvement of health via the prevention, diagnosis, treatment, recovery, or cure of disease, illness, injury, and other physical and mental impairments in people.
- **Mobile clinics:** These are customized vehicles that travel to the heart of communities, both urban and rural, and provide prevention and healthcare services where people work, live, and play.
- **PDS:** PDS is the Public Distribution System in the country which facilitates the supply of food grains and distribution of essential commodities to a large number of poor people through a network of Fair Price Shops at a subsidized price on a recurring basis.

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### 13.6 SELF ASSESSMENT QUESTIONS AND EXERCISES

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#### Short-Answer Questions

1. What kind of other benefits besides the scheme of free education do the students enjoy from the State Government?
2. Mention the health and medicinal practices practiced in Tamil Nadu.
3. How can the potential of ICDS be visualized?
4. What are the types of PDS cards issued by the Tamil Nadu Government?

#### Long-Answer Questions

1. Explain the education pattern in Tamil Nadu.
2. Describe the health care system of Tamil Nadu.

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### 13.7 FURTHER READINGS

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- Rajalakshmi, N. 1999. *Tamil Nadu Economy*. Mumbai: Business Publishers.
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- Veeramani, A. R. 2005. *Tamil Nadu Agricultural Economy*. Chennai: Divyasre.
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# UNIT 14 SELF-EMPLOYMENT AND ENTREPRENEURIAL DEVELOPMENT

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*Self-Employment and  
Entrepreneurial  
Development*

## NOTES

### Structure

- 14.0 Introduction
- 14.1 Objectives
- 14.2 Self-Employment: Micro Financing and Self Help Groups
- 14.3 Entrepreneurial Development In Tamil Nadu
- 14.4 Answers to Check Your Progress Questions
- 14.5 Summary
- 14.6 Key Words
- 14.7 Self Assessment Questions and Exercises
- 14.8 Further Readings

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## 14.0 INTRODUCTION

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Development of Tamil Nadu State, like any other state is significant in its natural resources, human resources, technology and its investments. Analysing the inherent business and economic activities, Tamil Nadu from its earlier strides, has historically displayed many segments of development including in overseas trade and transportation. In the era of Chola dynasty, the Tamils ruled the roost on the seas with trading as well as containing the sea pirates of the other countries. They even extended the Tamil rule in offshore countries. Foreign trade was being carried out from the ports of Korkai and Thondi of Tamilnadu. In this unit, various aspects of economic activities that lead to income and employment generation and also the development of the entrepreneurial skills are discussed. Moreover, we will also become familiar with various institutional initiatives and Governmental schemes to improve income, employment and entrepreneurship in Tamil Nadu. Enterprises are born out of an individual entrepreneur's dreams, visions and efforts. In Tamil Nadu, we have many such examples of entrepreneurial efforts. Entrepreneurial development anywhere depends upon four canons, viz., an entrepreneur's commitment (end to end picture), risk bearing (with proper acumen), discipline (in sustaining the efforts) and product/service reputation.

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## 14.1 OBJECTIVES

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After going through this unit, you will be able to:

- Describe the meaning of self-employment and Self Help Groups
- Discuss the entrepreneurial development programmes in Tamil Nadu

*Self-Instructional  
Material*

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## 14.2 SELF-EMPLOYMENT: MICRO FINANCING AND SELF HELP GROUPS

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### NOTES

Employment may be defined as an activity that enables any individual to encash his labour and skills into a regular income generating endeavour.

Income and employment have the following economic significance:

- Income and employment are two parallel yardsticks
- Income and employment are active at different rates in the economic cycle
- Income and employment are coefficients for economic development
- Income and employment are also considered the indicators of economic activity
- The level of economic advancement is mostly measured by Income and Employment

**Self-employment:** Self-employment is a vital economic activity that takes an individual to create a venture through his innovative skills and entrepreneurial ability to further the prospects of business and employment to many more in the working segment. Self-employment is connoted as a 'venture'. Venture capital is given as a seed money by financing institutions to the self-employed entrepreneurs.

Self-employment indicates:

- i. A venture, a Start-up of one's own
- ii. A tiny, small, Micro or Medium level of segment of activity
- iii. Falling under Industries, Service or Business Categories [I, S, B]
- iv. With owned skills and borrowed funds or owned skills and owned funds
- v. With a potential to generate employment opportunities for minimum two persons, in addition to the entrepreneur
- vi. This includes women entrepreneurs and enterprises also
- vii. Total investment involves a small investment and moderate technology, with multiple options for a segment of activity under I, S, B

### Micro Financing and Self Help Groups

**Self Help Groups in Tamil Nadu:** Self Help Groups are a voluntary formation of small groups of 12 to 20 women of the age group in 18 to 60, with a common economic pursuit as its goal, living in the same area, skilled in the identical fields of economic activity, they volunteer to unite, co-work and cooperate to carry out any economic activity decided by the group members and also its team/project leader, with the self-generated resources as capital. Monetary and other parameters are also fixed by them in their group meetings. Marketing arrangements, if any, are

supported by the State Government and also the other entrepreneurial development outfits. Self Help groups are also eligible for bank finance under the Micro Credit schemes. State Government through its Social Welfare Schemes has launched several such SHG development programmes to create these groups and also to make them work together towards a pursuit of economic importance. It is common that women are encouraged to form SHG in the country to enable themselves to get into the main stream of economic cycle and also the income generation capabilities.

Features:

- i) Common Goal
- ii) People of the same trade and same area
- iii) Entry and exit to the group is voluntary
- iv) Commitment and Promises fall on the group as a whole
- v) Revenue and earnings are distributed equally among the members
- vi) Sustaining the group formation and also continuance of the group members is encouraged
- vii) Ease of getting financial and entrepreneurial or technological inputs and technical or marketing support is felt as the strength
- viii) Many Tamil Nadu Government Agencies of the Womens' Welfare Schemes are promoting Self-help groups and their success.
- ix) The Accounting process as well as the distribution process is also done effectively.

Following are the objectives of SHG (Self-Help Groups):

- i) To organize and participate regularly in meetings
- ii) To inculcate the habit of small savings by its members
- iii) To create a source of investment / borrowing out of the same group
- iv) To benefit the savings and also to benefit the income out of group lending

The Pancha Suthras (The Five Principles):

- regular meetings,
- regular savings,
- regular internal lending,
- regular repayment and
- regular maintenance of books of accounts.

Given below are the benefits of the Self-Help Groups (SHG):

- o Platform to practice collective and democratic decision making
- o A transformation medium for economic and social empowerment of women

## **NOTES**

## NOTES

- o Training to effectively upgrade oneself to join the main stream of financial inclusion

In order to enable all poor women living below poverty line to join and benefit from the Self Help Group movement, the group formation is undertaken with special focus on NREGS women workers, urban slum dwellers and in Village Panchayats where SHG coverage is still inadequate.

**Table 14.1** Data on Performance of Self Help Groups in Tamil Nadu

Number of Groups (in lac)	Number of Members (in lac)	Rural		Urban	
		Groups (in lac)	Members (in lac)	Groups (in lac)	Members (in lac)
6.96	103.32	4.67	69.28	2.29	34.04
		Total Savings of SHG Members in TN Rs. Crore	Total Seed Money Given to SHGs (Numbers in lac)	Aggregate Credit availed by SHG Members  Rs. Crore  [2011-2020]	
6.96	103.32	8921	5.98	65930	

### Check Your Progress

1. Define employment.
2. State the objectives of SHG.

## 14.3 ENTREPRENEURIAL DEVELOPMENT IN TAMIL NADU

Entrepreneurs play an important role in the economic development of a country. Successful entrepreneurs innovate, bring new products and concepts to the market, improve market efficiency, build wealth, create jobs, and enhance economic growth. Entrepreneurs convert ideas into economic opportunities through innovations which are considered to be major source of competitiveness in an increasingly globalizing world economy.

Tamil Nadu now occupies a status of Teaching Economy and its achievements and performance under the various segments display the role of entrepreneurs as the pioneers to lead the industrial growth be it small, medium, large or even micro. The spark of an entrepreneur is considered the flame of a big business dream.

An entrepreneur by and large possesses the following qualities:

- i) A dream
- ii) Risk Taking capacity
- iii) Leadership qualities

- iv) Business Acumen
- v) Marketing skills
- vi) HR skills
- vii) Accounting skills

## **NOTES**

Entrepreneurial Development Programmes (EDP) in Tamil Nadu are carried out by the Government of Tamil Nadu to identify the entrepreneurs and also to establish them into viable activity circles. Following are some of these organs:

- DIC (District Industries Centre, Government of Tamil Nadu) is one such main agency that takes up the EDP as its main theme of activity to develop industries and ventures in the districts of Tamil Nadu.
- SIDCO (Small Industries Development Corporation) is another organ of the Government of Tamil Nadu, engaged in skilfully supporting Industrial Estates and Small and Micro Industrial Activities in Tamil Nadu.
- TIIC (Tamil Nadu Industrial Investment Corporation) is an organ of the Government of Tamil Nadu which aims at creating funding for the enterprises.
- THADCO (Tamil Nadu Adi Dravida Development Corporation) is a unit of Government of Tamil Nadu that takes up the task of assisting the Adi Dravida entrepreneurs (part of the SC and ST Development Corporation) and their welfare activities in several segments including industrial units and small and micro units set up by Adi Dravidas.
- SIPCOT Industrial Estates are formed in every District by the Government whereby the Industrial Estates are promoted in the State. Industrial Estates are well established with the infrastructural and backward and forward linkages that are essential to connect the raw materials for production and the product per se, to the markets and transportation.

Entrepreneurs in Tamil Nadu: Like in other states, entrepreneurs from various walks of life grow in Tamil Nadu on a regular basis. There are avenues for them to seek their vistas of development and growth. There are programmes to guide them to choose the enterprise; run the enterprise; evaluate the functioning and so on.

EDP: Entrepreneurial Development Programmes are run across Tamil Nadu by various Governmental and Non-Governmental agencies to

- i) identify
- ii) enlighten
- iii) handhold
- iv) incubate

## NOTES

With these types of activities, the enterprises small and big grow steadily in the State of Tamil Nadu.

There are Governmental and Non-Governmental Agencies promoting the steady growth of Business, Industrial and Service units in Tamil Nadu.

Tamil Nadu at present is considered full-fledged free market in the entire country and has to its credit various portfolios of trade and development. The economy and its technological adoption are on par with international standards. Tamil Nadu Urbanisation and Metropolitan activities have also grown side by side and there are major hubs for different activities can be found in Tamil Nadu.

**Table 14.2** *Tamil Nadu Urbanisation and Metropolitan activities*

Sr. No.	Name of the District	Predominantly known for
01	Coimbatore	Textiles, Foundries, Pumps and IT Hub under Special Economic Zone (SEZ)
02	Tiruchirappalli	Heavy Industries and Trade. BHEL and Railways have installed their utilities in Tiruchirappalli. The Defence related Cardite Factory manufactures Rifles in Tiruchi. Cement Factory and Sugar Factory are situated at Tiruchi.
03	Salem	Natural Resources and all types of trades and Industrial Growth. Salem Steel Plant is a leading public sector Venture.
04	Thanjavur	Titled as 'Grannary of South India' Tanjore is popular for its Agro based activities and production; Education and Architecture, Art and Religion and various other heritage related monuments
05	Madurai, Kodai, Theni and Dindigul	Madurai is a leading city of Tamil Nadu with its industries related to textiles, weaving and also trade. Its heritage related monuments are also preserved. Dindigul is famous for its industrial belt including the strong locks of Dindigul, some leather products and vegetable trading etc. Theni is famous for its tea gardens and agricultural activities.
06	Tiruppur	Tiruppur, Salem and Erode are called the Tex cities of Tamil Nadu. Tiruppur is internationally renowned for its Apparels and hoserries. Erode is known for its home furnishing and other related textiles production. Salem for its cotton and silk weaving. Salem is internationally famous for its silver products related to the anklets and other decorative ornaments. Erode is mostly noted for its Diesel and Electric Locomotives made and used by the Indian Railways.
07	Erode	
08	Karur, Tiruchengodu and Namakkal	Bus Body Building and Lorry body building are the basic industrial activities in Karur and Namakkal. Tiruchengodu is focused on the Bore Rig vehicles and their Management, all

09 Chennai

over India. Karur and Namakkal also have their plethora of educational institutions that serve the nation. Namakkal is also focusing on the eggs and chickens.

Chennai Metropolitan has extended beyond its seams and now caters to multifaceted economic activities and growth be it a micro, small, medium or large. This includes defence products like ordinance factories at Avadi make several defence equipment. Perambur manufactures internationally reputed rail coaches. SEZ units and IT Hubs are plenty in Chennai and its suburbs of OMR, Siruchery, Guduvancherry etc. Apart from this the Kalpakkam Project, Manali refineries and many such Industrial activities are the realities in Chennai. Besides, Chennai has developed the OTT and other modern technologies in the mobile telephony. It has captured the international markets and standards in channel televisions and also in print and visual media. Cinematography is already a known trait of Chennai; Coimbatore and Salem with are known for traditional studios. Automobile related industry is also flourishing in Chennai and suburbs with Ashok Leyland, TVS and a few car manufacturers have established their names in India and abroad. Chennai Port Trust is another mega marine industry in the sea port operations. The largest port in the South entertaining the traffic of people, goods and shipments.

10 Tirunelveli and Southern Districts Nagercoil

Tirunelveli is famous as a twin city of Tirunelveli and Palayamkottai famous for its Agriculture and small industries. Tirunelveli holds its heritage value related to the language development of Tamil with Saiva Siddantha Book Publishing Company. Printing and Litho works and financial education are special with Tirunelveli. Famous for agriculture and also for the windmill power generation processes, these districts are on the map of Tamil Nadu Power Supply also.

11 Sivakasi, Kovilpatti

Sivakasi is the international destination for crackers and matchboxes. Kovilpatti has its share in match boxes and also in textiles. Sivakasi and Kovilpatti are also known for the calendars and offset printing processes, including the matchbox labels.

12 Tuticorin, Kumbakonam, Karur and Thanjavur

Apart from other specialties, these cities have retained their pride for promoting banking business in India and abroad. Karur has to its credit Karur Vysya Bank Limited and Lakshmi Vilas Bank Limited (now merged with DBS). Kumbakonam is proud to have City Union Bank Limited (CUB) formerly called as the Kumbakonam City Union Bank Limited established as early as in

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13 Nilgiris, SathyamangalamThalavadi

1904.Tuticorin has to its pride Tamil Nadu Mercantile Bank Limited (TMB). Thanjavur had its Banking initiatives with Bank of Thanjavur (later got merged with the present Indian Bank).

Nilgiris has its pride of having ordinance factory (Cardite factory) at Aravangadu and is popular for its horticulture and bakery activities. Besides, tourism is the main driver of economy in Nilgiris. Nilgiris is also popular for its various projects in the uplifting of the Tribal population and its empowerment. The Indian Army has its Madras Regiment headquartered at Nilgiris. These are forestry and agricultural belts with estates having potentials for pepper, clove, Eucalyptus, tea, coffee, Sandalwood, Teak and other quality timber. Bee keeping is also practiced in these belts; Medical tourism with traditional and holistic treatments for diseases is also prevalent.

14 Mettur andNeyveli

Mettur for its Water Resources and the Dam constructed across Cauvery threshold- main water source for Tamil Nadu agriculture. Neyveli is known for the Lignite Bricketting and also for the Thermal Power Production. NLC (Neyveli Lignite Corporation Limited) is also the biggest employer in the entire geographical area of North Arcot and South Arcot

15 Ambur, VaniyambadiDharmapuriHosur

Leather processing and manufacturing industries are in plenty at these centres. Quality leather hides are traded at large quantities which are of international standards.Food/Fruit processing units, Marble, Granite Slabs, Monumental Cutting and designing units, Automobile manufacture, and Defence Equipment manufacture are spread over Hosur and Dharmapuri.

It should not be mistaken that large industries remain large and are of no use for startups. Agglomeration grows with the entry of a large unit. Large units specify their requirements of feeder services and spares, components, part-time job, etc. It is a proven fact that large Industries depend on the startups for their day to day components, original equipment and so on. When a large industry shapes up the allied division of labour from the other sides and encourages other industries of a smaller size and capacity, it forms the industrial hubs at the centre and the component producers in the surroundings.

Tamil Nadu has to its credit several Industrial hubs with the development of the urban agglomeration as a part of urbanization, intertwined with the industrial and other support services activities required as a part of the infrastructure. More startups mean more entrepreneurs and more innovations.

Supporting, incubating and developing enterprises will lead to the global demand to fulfil the affording of the employment opportunities to almost 600 million



new jobs in the next 15 years (World Bank's Development Report of 2013). However, due to COVID pandemic, the job situations have become different and the opportunities cross these 600 million threshold touching even 1000 million levels, to support the growth in the work force worldwide.

It is a challenge for the more established 'Knowledge Institutions' to develop, create and share ecosystems that could induct innovations, share their acumen with the remaining industry to sustain the enterprises and also to be more innovative towards the goals set by the fresh entrepreneurs. This system is adaptable by Industries, Business and Services segments of the new enterprises. An ethical and an empowered enabler would go a long way in sustaining the enterprises thus innovated.

At the same time, the enterprises should aim at the real markets available before them be it foreign or domestic. An end to end effort is a real asset for an entrepreneur as he/ she should see the whole picture to go higher.

Tamil Nadu is one of the main hubs hosting fastest growing defence sector generating a huge amount of revenue. Various projects of medium and large scale that are in the Offing in Tamil Nadu are as follows:

- Heavy Vehicles Factory, Combat Vehicles Research and Development Establishment, Ordnance Factory Tiruchirappalli, L&T Aerospace & Defence unit Sulur-Coimbatore, LMW Advanced Technology Centre, Coimbatore, Ashok Leyland Defence Systems, Mahindra Aerospace, Ramco Systems, Taneja Aerospace and Salem Aerospace Limited are the major defence productions that are shaping up in the State of Tamil Nadu once the Schemes of Make In India and Athmanirbhar have been announced and practiced.
- Principal cities manufacturing defence and aerospace components are Chennai, Coimbatore, Tiruchirappalli, Salem and the secondary manufacturing cities are Nagercoil and Hosur. Airbus has proposed an aerospace project in Chennai and building a helicopter assembly factory in Tamil Nadu.
- Guns, ammunitions and bullets are planned to be manufactured from the secondary cities of Tamil Nadu while special steel missiles are to be manufactured in Salem.

**Table 14.3** Classification of Micro Small and Medium Industries  
(Manufacturing Enterprises and Enterprises rendering the Services)

Category and particulars	Micro	Small	Medium
Investment in Plant and Machinery or Equipment	Not Exceeding ₹1 Crore	Not Exceeding ₹10 Crore	Not Exceeding ₹50 Crore
Annual Turnover	Not Exceeding ₹5 crore	Not Exceeding ₹50 Crore	Not Exceeding ₹250 Crore

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### Check Your Progress

3. List the qualities of an entrepreneur.
4. Name the organs which carry out the activities related to entrepreneurial development in Tamil Nadu.

## 14.4 ANSWERS TO CHECK YOUR PROGRESS QUESTIONS

1. Employment may be defined as an activity that enables any individual to encash his labour and skills into a regular income generating endeavour.
2. Objectives of SHG (Self-Help Groups):
  - i) To organize and participate regularly in meetings
  - ii) To inculcate the habit of small savings by its members
  - iii) To create a source of investment / borrowing out of the same group
  - iv) To benefit the savings and also to benefit the income out of group lending
3. An entrepreneur by and large possesses the following qualities:
  - i) A dream
  - ii) Risk Taking capacity
  - iii) Leadership qualities
  - iv) Business Acumen
  - v) Marketing skills
  - vi) HR skills
  - vii) Accounting skills
4. The organs which carry out the activities related to entrepreneurial development in Tamil Nadu are DIC, SIDCO, TIIC, THADCO and SIPCOT.

## 14.5 SUMMARY

- Self-employment is a vital economic activity that takes an individual to create a venture through his innovative skills and entrepreneurial ability to further the prospects of business and employment to many more in the working segment.
- Self Help Groups are a voluntary formation of small groups of 12 to 20 women of the age group in 18 to 60, with a common economic pursuit as its goal, living in the same area, skilled in the identical fields of economic

activity, they volunteer to unite, co-work and cooperate to carry out any economic activity decided by the group members and also its team/project leader, with the self-generated resources as capital.

- Entrepreneurs play an important role in the economic development of a country. Successful entrepreneurs innovate, bring new products and concepts to the market, improve market efficiency, build wealth, create jobs, and enhance economic growth.
- Tamil Nadu now occupies a status of Teaching Economy and its achievements and performance under the various segments display the role of entrepreneurs as the pioneers to lead the industrial growth be it small, medium, large or even micro.
- Entrepreneurial Development Programmes are run across Tamil Nadu by various Governmental and Non-Governmental agencies to: i) identify ii) enlighten iii) handhold iv) incubate
- Tamil Nadu has to its credit several Industrial hubs with the development of the urban agglomeration as a part of urbanization, intertwined with the industrial and other support services activities required as a part of the infrastructure.

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### 14.6 KEY WORDS

- **Self Help Groups:** It can be defined as self-governed, peer controlled information group of people with similar socio-economic background and having a desire to collectively perform common purpose.
- **Entrepreneur:** It refers to a person who sets up a business or businesses, taking on financial risks in the hope of profit.
- **Startups:** These are companies or ventures that are focused around a single product or service that the founders want to bring to market.

### 14.7 SELF ASSESSMENT QUESTIONS AND EXERCISES

#### Short-Answer Questions

1. What is the economic significance of income and employment?
2. What does self-employment indicate?

#### Long-Answer Questions

1. Write an essay on the Entrepreneurial Development Programmes in Tamil Nadu.
2. Describe the projects of medium and large scale that are in the offing in Tamil Nadu.

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## 14.8 FURTHER READINGS

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