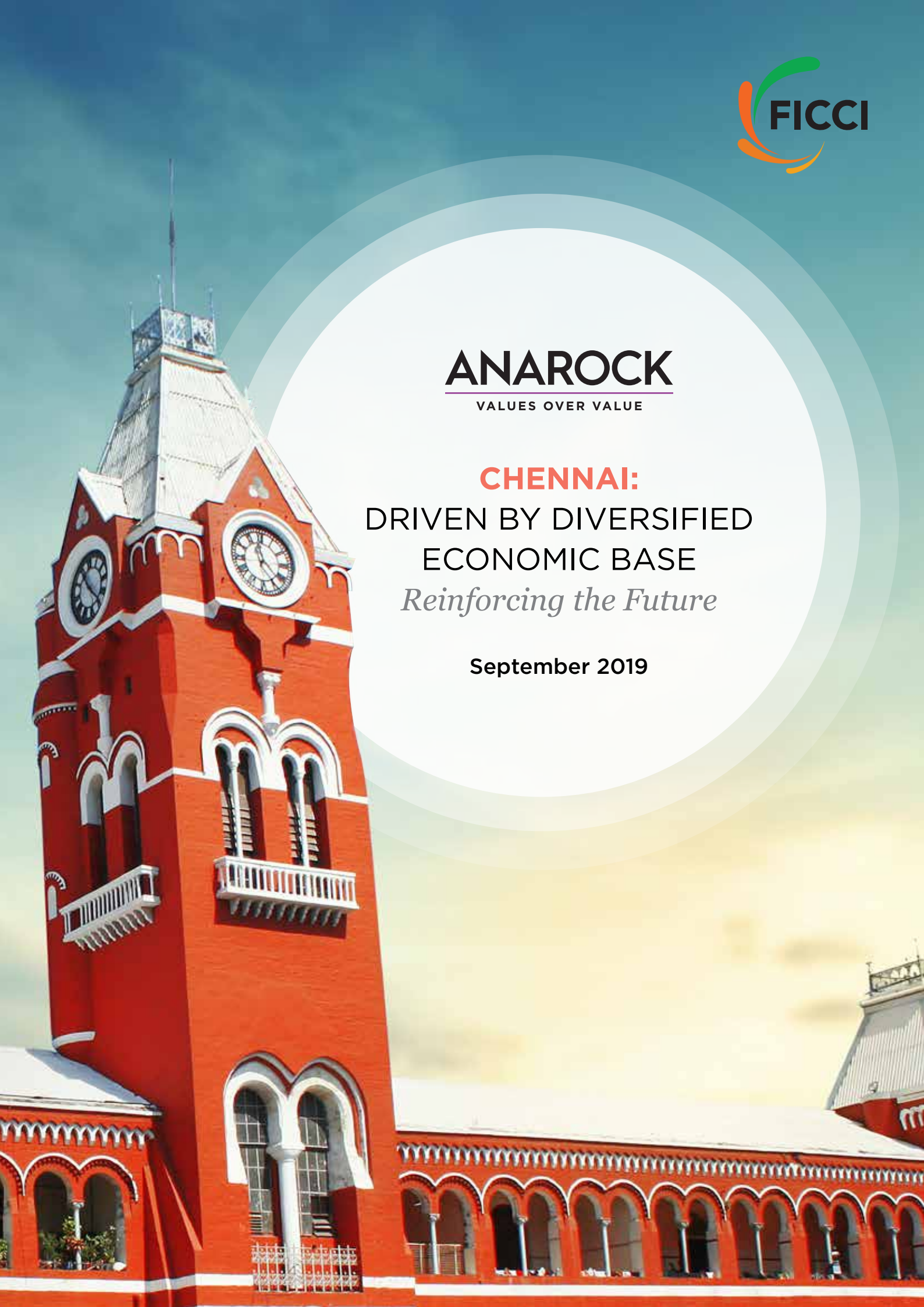


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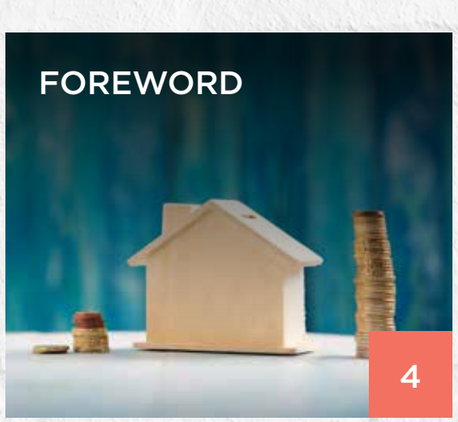
VALUES OVER VALUE

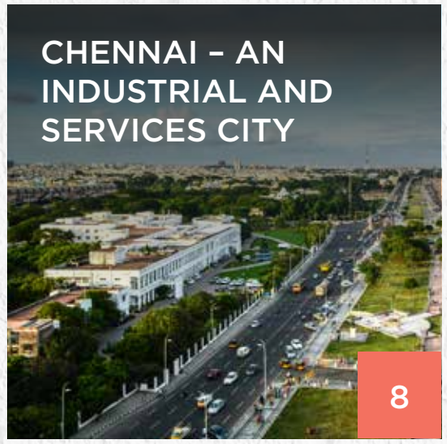
CHENNAI:
DRIVEN BY DIVERSIFIED ECONOMIC BASE

Reinforcing the Future

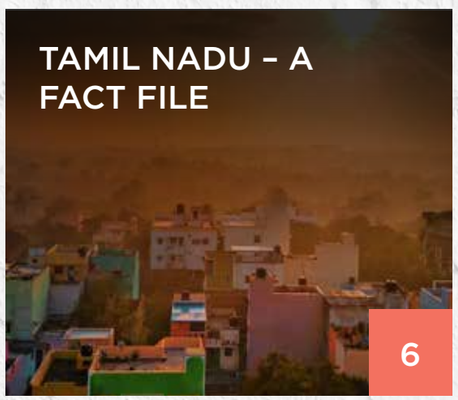
September 2019

TABLE OF CONTENTS









THREE PILLARS OF CHENNAI'S ECONOMY

AUTOMOBILE SECTOR
ELECTRONICS HARDWARE
IT-ITeS INDUSTRY

12



CHENNAI ZONAL ANALYSIS

SOUTH CHENNAI
WEST CHENNAI
NORTH CHENNAI

38







FOREWORD



V. Kavitha Dutt
Chairperson
FICCI Tamil Nadu State Council

Chennai – an economically powerful city on the south-east coast of India. Its rich cultural heritage co-exists harmoniously with industrial and services sectors that have successfully drawn people from across the country. As per the census of 2011 the population grew by 7% with a density of 26,553 persons per sq km.

The presence of ports and a long coastline enabled Chennai to develop into an industrial city. The nature of industries evolved over a period and Chennai currently houses numerous automobile companies, auto ancillaries, electronics hardware and services sector driven by IT-ITeS companies. There is significant potential for further growth for which the civic infrastructure is being continually augmented.

The metro rail and monorail are some of the significant infrastructural developments that are expected to fuel Chennai's growth and unlock the potential for future real estate developments. The cargo handled by the city's ports and air traffic has grown continually over the years. This has caused the need for a second airport in the city. To facilitate the exports from the automobiles and the electronics hardware sectors, the peripheral ring road measuring 133.65 kms will be added to the city's grid of roads.

The existing network of roads and highways that traverses across Chennai connects it to several important cities. This has influenced and developed several localities in the peripheral suburbs which have transformed into semi urban locations and employment hubs. These are predominantly in the southern and western suburbs of the city.

Chennai drives the NSDP of Tamil Nadu whose per capita income is INR 1.2 lakh, 31% higher than that of the nation. This translated into a tax revenue of INR 74,000 crores in 2018-19 which is 12% more than the previous year, securing 4th rank in the country.

The diverse population of Chennai has been instrumental in driving its growth. We are committed to continue this momentum that has been set despite natural calamities. We salute the undaunted spirit of Chennai's residents and their fortitude. The business fraternity is dedicated to providing opportunities to all those who wish to be a part of this journey to transform Chennai to a world-class destination.

With this background, we are pleasd to associate with ANAROCK Group for the release of this report. We hope this report will encourage more discussions and stimulate new avenues in real estate industry in Tamil Nadu.



Anuj Puri
Group Chairman

Chennai, known for its rich history and heritage is one of the most important cities of India. While strong economic contribution is the reason for the city's success and importance, it is the resilience of the people and their indomitable spirit that has helped Chennai to regain its prime position, even after the devastating floods of 2015 and the triple tsunami of DeMo, RERA and GST.

Chennai has transformed from a historical trading city owing to the presence of the country's 3rd oldest port to a major textile hub of South India. Post the economic liberalisation in 1991, the city was quick to react and developed as a centre for automobile manufacturing and IT-ITeS. Sound infrastructure comprising a good network of roads, connectivity to the port, warehousing and availability of land to scale up has helped the city to create new economic avenues. Currently, the economy is being driven by services, electronic hardware and manufacturing sectors that maintain a perfect balance of overall growth and diversification.

Total exports of the automobile and auto ancillaries touched US $6.8 billion in 2017-18 registering a growth of 19% over the previous year. The IT-ITeS sector is the major economic driver of the city for over a decade and employs over 400,000 people. The revenues from this sector are estimated at US $18.51 billion. Chennai is also the third-largest exporter of electronic hardware in the country with exports revenues in 2017-18 accounting for US $1.27 billion. The city's economy is likely to remain immune to the slowdown in the automobile sector as there are other sectors which will keep the economy resilient.

The operationalization of the first phase of metro has already created a favourable impact on the intra-city commute. Authorities are considering increasing the frequency of the metro to cater to the rising ridership which has already touched 1 lakh. The subsequent phases of the metro, monorail, expansion of the East Coast Road and the new international airport are certainly going to catalyse the future growth of the city. Already home to major national and international automobile manufacturers, the upcoming Aerospace park at Sriperumbudur is going to metamorphose the economic landscape of the region. This will not only create opportunities for increased investments and revenues but will also lead to generation of significant employment opportunities.

Rapid urbanisation and changing mindset of the populace shows an increasing acceptance of residential apartments. Post the catastrophic floods of 2015 and the implementation of RERA in 2016, the sales and launches of residential real estate is gradually gaining momentum. During the first half of 2019, over 7,000 units have been launched and nearly 6,400 have been sold showing a narrow difference. This has resulted in a minor increase in unsold inventory to 31,500 units as of June 2019. It is interesting to note that nearly 43% of the launches this year are in the affordable segment and are priced below INR 40 lakh. Post a steep correction in prices after 2016, the residential real estate market is witnessing a gradual growth in the average prices across the city. Current prices have regained the levels they were at 12 months ago, and currently stand at INR 4,950 per sq ft.

This report not only unravels the economic potential of the city but also deep dives into the residential zones of Chennai. It also highlights the existing and upcoming infrastructure, residential real estate dynamics, the impact of IT-ITeS and the automobile manufacturing sectors that are likely to impact the growth in the years to come.

TAMIL NADU – A FACT FILE

1st IN NUMBER OF FACTORIES IN INDIA
37,000+ Factories[1]

1st IN COTTON YARN PRODUCTION IN INDIA
'Yarn Bowl' of India, contributes nearly
40% of the total yarn production in India

1st IN NUMBER OF OPERATIONAL SPECIAL ECONOMIC ZONES (SEZS) IN INDIA
40 SEZs out of total 232 in India[2]

2nd LARGEST CONTRIBUTOR TO INDIA'S GDP[3]
Contributed
8.4% to the GDP of India

3rd IN TOTAL NUMBER OF MSME UNITS IN INDIA
~ 218,000 registered MSME units[4]

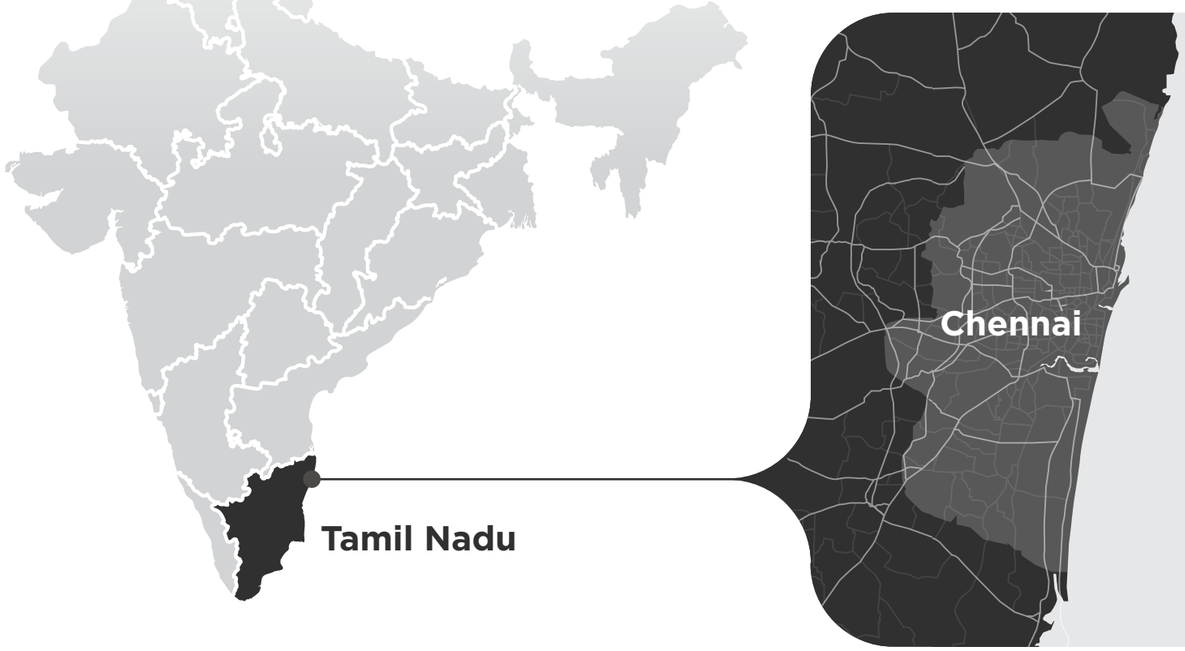
3rd LARGEST SOFTWARE EXPORTER IN INDIA
Exported software worth
US $16.93 billion[5]

3rd IN TERMS OF ELECTRONICS EXPORTS IN INDIA
Exported electronic items worth
US $1,270.6 million[6]

4th IN TERMS OF EXPORTS IN INDIA
Contributed
11.5% of India's total exports[7]

5th IN TERMS OF FDI INFLOWS IN INDIA[8]
Received US $2.61 billion
5.9% of total FDI received in India

1 RBI Handbook 2018-19; data as of 2016-17
2 pib.gov.in; Data as of July 2019
3 State's announcement
4 MSME Policy Note 2018-19; data as of 2017-18
5 Data as of 2017-18
6 Data as of 2017-18
7 Economic Survey 2017-18
8 Data as of 2018-19



Tamil Nadu, with the GSDP of US $215.81 billion in 2017-18, is the second-largest economy of India after Maharashtra. The state's economy is bigger than Vietnam, Belgium, Sweden, Norway, Finland, Denmark, and New Zealand. Being the second-largest economy of India, the state is always on the radar of the investors and attracted FDI investments worth US $2.61 billion in 2018-19, which is 5.9% of total FDI investments in India.

Tamil Nadu is a leading exporter of ready-made garments. It contributed nearly 20% (US $6.7 billion) to India's total export of ready-made garments in 2016-17. The state is also a leading producer of technical textiles with units pre-dominantly located in Chennai and Coimbatore.

Chennai is the major manufacturing hub of Tamil Nadu. The city is not only a well-known destination of automobile and auto ancillary production but also the second-largest electronic hardware manufacturing hub in India. The city hosts more than twenty electronic hardware technology parks in major IT-centric SEZs of Sriperumbudur, Oragadam and Mahindra World City.

CHENNAI – AN INDUSTRIAL AND SERVICES CITY

Chennai is the engine for Tamil Nadu's growth

Tamil Nadu has highly skilled labour force and well-established infrastructure which support industries to flourish in the state. Majority of industries are concentrated in Chennai and Coimbatore cities. Chennai has come a long way from being a dominant industrial destination to a city that offers a fine balance of manufacturing and services sectors employment opportunities.

Population & Density[1]

- Tamil Nadu has a population of 72.2 million which grew by 15.6% from 2001 to 2011
- Chennai district population witnessed a decadal growth of 7% with a population density of 26,553 people per sq km in 2011
- Chennai has a literacy rate of 90% which is higher than that of the state and the country

Tax Revenue

- Chennai ranked 4th in India with overall tax collection (corporate tax, income tax, fringe benefit tax and securities transaction tax) of INR 74,000 cr in 2018-19, registering a 12% annual growth

Ports[4]

- Tamil Nadu has 3 major ports - Chennai port, Ennore port and VO Chidambaranar port.
- Chennai port being the biggest in Tamil Nadu, handled 53.01 MMT of cargo in 2018-19 as compared to 51.88 MMT in 2017-18, registering an annual growth of 2%

State's Contribution to India

- Tamil Nadu's GSDP grew by 8.1% for 2017-18[6] as compared to India's GDP growth of 6.98%[7]
- 2nd largest contributor to India's GDP (8.4%)[6]
- Tamil Nadu ranked 4th in terms of FDI inflows during 2017-18, received US $3.48 billion - 7.7% of total FDI received in India[6]

Industrial Clusters of Tamil Nadu

- Chennai - The city's economy is majorly driven by automobile, auto ancillary, general engineering, IT-ITeS and electronics sectors
- Coimbatore - Also known as 'The Manchester of South India' for its textile industry. The city accounts for more than 80% of the textile machinery manufacturing in India[2]

Per Capita Income

- Tamil Nadu's per capita income (INR 1.2 lakh) is 31% higher than overall India[3]
- Chennai primarily drives the state's NSDP

Airports[5]

- Tamil Nadu has four international airports - Chennai, Coimbatore, Madurai and Tiruchirapalli
- Chennai airport constituted 6.7% share in India's total air traffic movement in 2017-18. It is the 4th busiest airport in India after Delhi, Mumbai and Bengaluru
- Chennai airport handled nearly 20.36 million passengers in 2017-18

Services Sector

- Tamil Nadu's IT-ITeS exports stood at US $16.93 billion in 2017-18, growing at a CAGR of 9.17% since in last 5 years
- Tamil Nadu has 18 operational IT-ITeS SEZs, out of which 13 are in and around Chennai

1. Census of India 2011
2. 'SME Cluster Series 2015'report by D&B
3. Tamil Nadu Global Investors Meet Presentation 2019
4. Port of Chennai
5. Tamil Nadu Industrial Development Corporation
6. Tamil Nadu Global Investors Meet Presentation 2019
7. World Bank

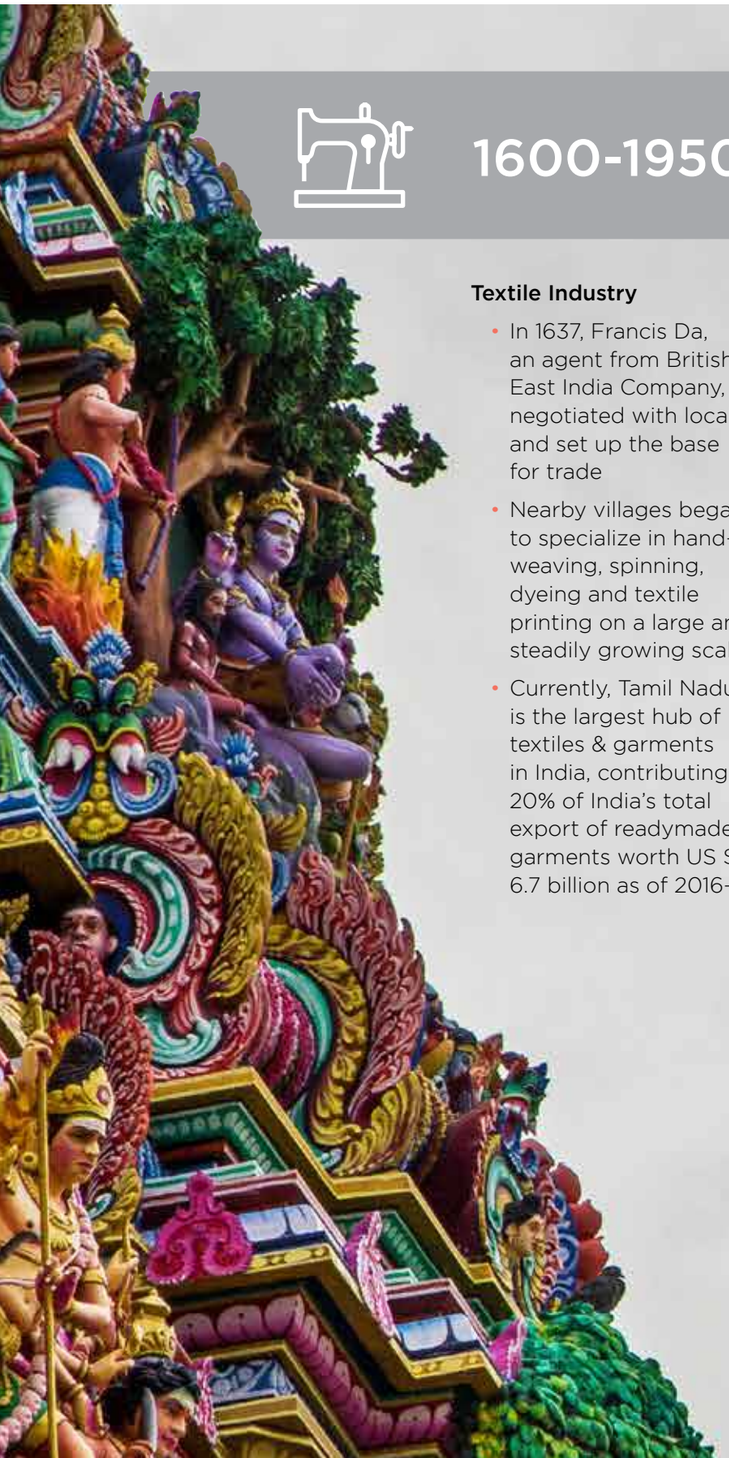


Marina Beach, Chennai

EVOLUTION OF CHENNAI

From textile to automobile to IT, Chennai became the hub of various businesses

Chennai gained prominence due to its strategic location and connectivity with other parts of the world through ports. This led to various manufacturing businesses to set up their base in the city. The businesses have now evolved and new employment opportunities in the IT-ITeS sector are redefining the contours and boundaries of the city.



1600-1950

Textile Industry

- In 1637, Francis Da, an agent from British East India Company, negotiated with locals and set up the base for trade
- Nearby villages began to specialize in hand-weaving, spinning, dyeing and textile printing on a large and steadily growing scale
- Currently, Tamil Nadu is the largest hub of textiles & garments in India, contributing 20% of India's total export of readymade garments worth US $ 6.7 billion as of 2016-17

1950-1991

Automobile Industry

- Domestic automobile and auto parts manufacturers such as Royal Enfield, Ashok Leyland, Tractors and Farm Equipment Ltd. (TAFE), TVS Motor, MRF set up their base between 1950-1990

Post 1991

Automobile Industry

- After liberalization, as India opened the gates for foreign players, Ford Motor set up their plant at Chennai in 1995.
- Ford was followed by Hyundai Motor, BMW, Daimler, Renault-Nissan Alliance, Mitsubishi Motors and Yamaha Motor
- Along with them came an array of auto component makers who built a world-class ecosystem for automobile manufacturing
- Currently, Chennai accounts for about 33% of India's auto parts production and is popularly known as the 'Detroit of India'

IT-ITeS Industry

- IT-ITeS industry has also grown steadily in the city, primarily due to the cost advantage and availability of a good talent pool.
- The city hosts IT majors such as HCL, Wipro, Infosys, IBM, Cognizant, L&T, TCS, Mphasis, WNS, Accenture
- Tamil Nadu's IT-ITeS exports stood at US $16.93 billion in 2017-18 which has grown at a CAGR of 9.17% since 2012-13. Chennai is the key contributor of IT-ITeS exports from the state.

Kapaleeswarar Temple

From Madras to Chennai, the city historically embraced diversified industries and business opportunities for trade and commerce. Presence of an operational major port within the city has been a key growth driver of industrial development. In the process, it opened its doors to expatriates, technocrats, educationists, and entrepreneurs from across the globe. The city has made rapid strides in the quest for economic development.

The city which is rapidly emerging as an Information Technology and services hub is also a broad-based manufacturing centre for the automobile sector and its ancillaries. Chennai's transformation to a metropolis was aided by its healthy infrastructure, presence of nation's 3rd oldest port and excellent connectivity to southern India as well as to the rest of the world.

THREE PILLARS OF CHENNAI'S ECONOMY

Chennai's economy is majorly driven by Automobile, Electronic hardware, and IT-ITeS industry.



AUTOMOBILE

The total exports of automobile and auto components touched US $6.8 billion in 2017-18 registering a growth of 19% over the previous year.

ELECTRONICS

The electronic hardware industry in the state is primarily concentrated in Chennai. The state ranks second in the production of electronic hardware in the country and has been the third-largest exporter in the country during 2017-18 accounting for US $1.27 billion.

IT-ITES

The IT-ITeS sector has been a dominant economic driver of the city in the past decade. Industry estimates that till 2017-18 the revenues of the sector were around US $18.51 billion and created direct employment of over 400,000 people.

Automobile Sector: Powering Growth

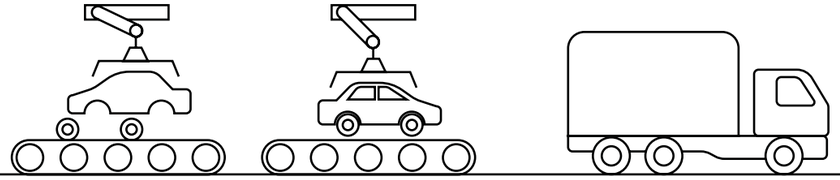
Tamil Nadu might become the first state of India to manufacture electric cars. A draft of the state-level electric vehicles policy is ready and is likely to provide several benefits such as GST refunds, capital subsidies, and payroll-based incentives to the early entrants. Hyundai is the first company to express interest and is expected to invest INR 7,000 Cr to expand its manufacturing facility at Sriperumbudur to produce electric vehicles.

Chennai accounts for about 33% of India's auto parts production and so is popularly known as the 'Detroit of India'. Some of the prominent automobile companies such as Ashok Leyland, Ford India, Renault Nissan, Royal Enfield, Daimler, and Eicher have established their manufacturing base in the city. The automobile manufacturing businesses are extensively supported by over 4,000 SMEs and 350 suppliers. The city produced more than four million vehicles in 2017-18 and exported more than 1 million vehicles during the same period.

The city produces three cars every minute, one truck every two minutes and one two-wheeler every six seconds.

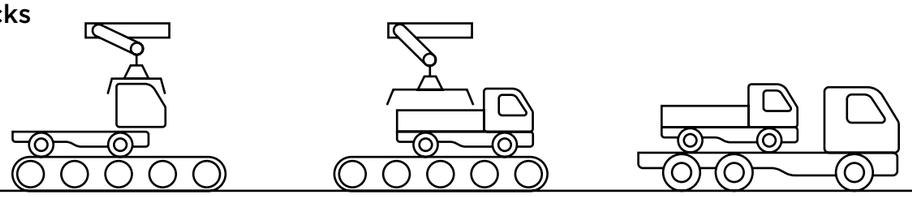
Auto ancillary units and automobile manufacturing units are mainly concentrated in West Chennai. The reason for the concentration is primarily due to its direct connectivity to Chennai port and Ennore port through various radial roads. The development of the Outer Ring Road has reduced travel time to Ennore port significantly.

Cars



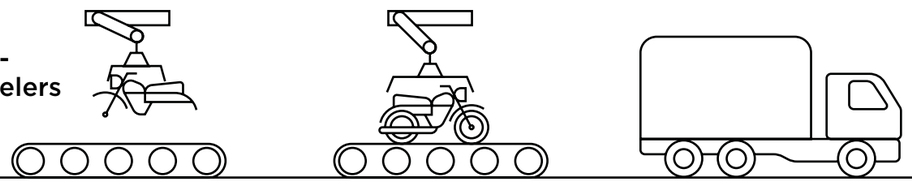
1.64 **Installed Capacity (Mn)** | 1.09 **Production (Mn)** | 0.31 **Exports (Mn)**

Trucks



0.22 **Installed Capacity (Mn)** | 0.11 **Production (Mn)** | 0.02 **Exports (Mn)**

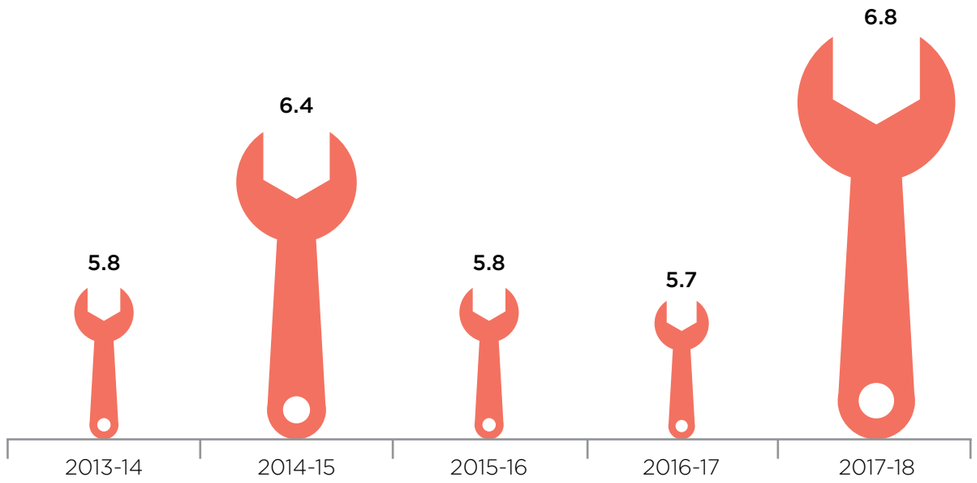
Two-wheelers



4.82 **Installed Capacity (Mn)** | 3.18 **Production (Mn)** | 0.70 **Exports (Mn)**

Source: Tamil Nadu Global Investors Meet 2019
Note: Data as of 2017-18

Automobile and Auto Components Exports from Tamil Nadu (US$ billion)



Source: Tamil Nadu Global Investors Meet 2019

Chennai – one of the largest automobile cluster of India

1. Ford
2. BMW
3. Nissan
4. Daimler
5. Renault
6. Caparo
7. Hyundai
8. Tafe
9. Ashok Leyland
10. Delphi
11. Yamaha
12. Visteon
13. Same
14. Saint-gobain
15. Royal Enfield
16. Bosch
17. Mahindra
18. Allison Transmission
19. MRF Tyres
20. Michelin
21. Caterpillar
22. Hitachi
23. CEAT
24. Schwing
25. Hwashin
26. Komatsu
27. Asahi Glass
28. Apollo Tyres
29. TVS
30. Unipres
31. Terex
32. PSA Peugeot Citroen
33. JK Tyre



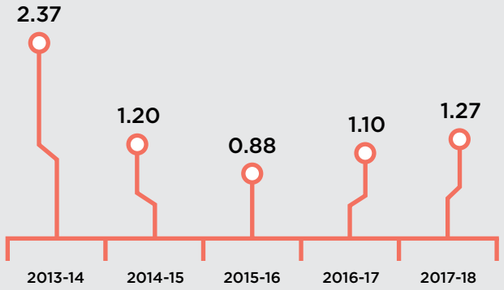
Strong Position in Electronics Exports

Tamil Nadu exported electronics worth US $1.27 billion in 2017-18. Telecom instruments, electronic instruments and electronic components contributed 38%, 33% and 11% respectively to the total exports in 2017-18. Electronics includes optical items, telecom instruments, electronics instruments, electronics components, AC, refrigeration machinery, computer hardware peripherals, consumer electronics, accumulators and batteries.

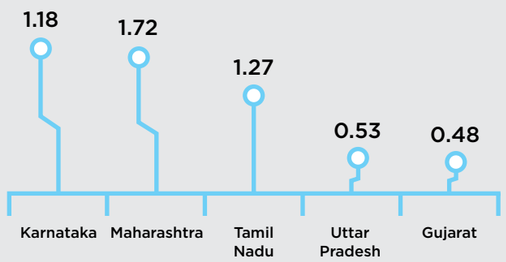
Although, exports shrunk to US $1.27 billion in 2017-18 as compared to US $2.37 billion in 2013-14. Despite the reduction in electronics exports, the state secured third position after Karnataka and Maharashtra in 2017-18. Some of the major players who are contributing to the production of electronics in the state are Nokia, Motorola, Dell, Samsung, Foxconn, SCI, Delta, Flextronics, Nokia Siemens Networks among several others. Majority of them are on the peripheries of Chennai city.

The city has more than 20 electronic hardware technology parks which are situated in major IT-centric SEZs of Sriperumbudur (West Chennai), Oragadam (West Chennai), and Mahindra World City (South Chennai). This region emerged as a preferred destination owing to the availability of large land parcels and fiscal incentives announced by the government.

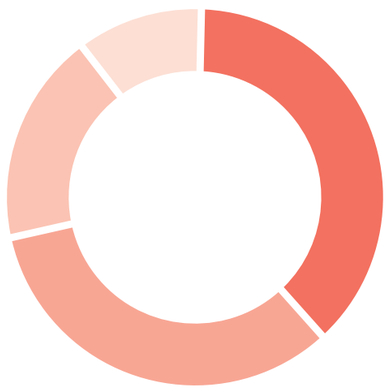
Tamil Nadu - Electronics Exports (US$ billion)



Electronics Exports of Key States in 2017-18 (US$ billion)



Source: DGCIS



Product contribution in electronics exports (2017-18)

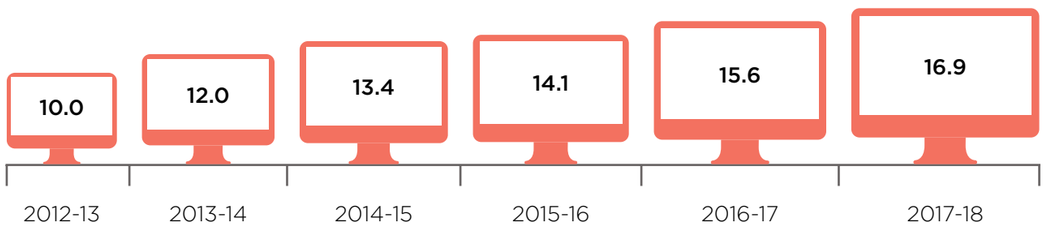
- Telecom Instruments - 38%
- Electronic Instruments - 33%,
- Other - 18%
- Electronic Components - 11%

Source: Tamil Nadu Global Investors Meet 2019

IT-ITeS Industry

Apart from being a manufacturing hub for automobiles and ably supported by the auto ancillary units, the city also has a significant presence of IT-ITeS companies. Tamil Nadu has 18 operational IT-ITeS SEZs, out of which 13 are in and around Chennai. Rest are scattered across the state in Navalpattu, Coimbatore, Madurai and Jagir Ammapalayam. The state's IT-ITeS exports stood at US $16.93 billion in 2017-18, growing at a CAGR of 9.17% since 2012-13. The state has more than 1,800 registered IT units as of 2017-18 which creates direct employment of around 5 lakh and an indirect one of around 7.5 lakh.

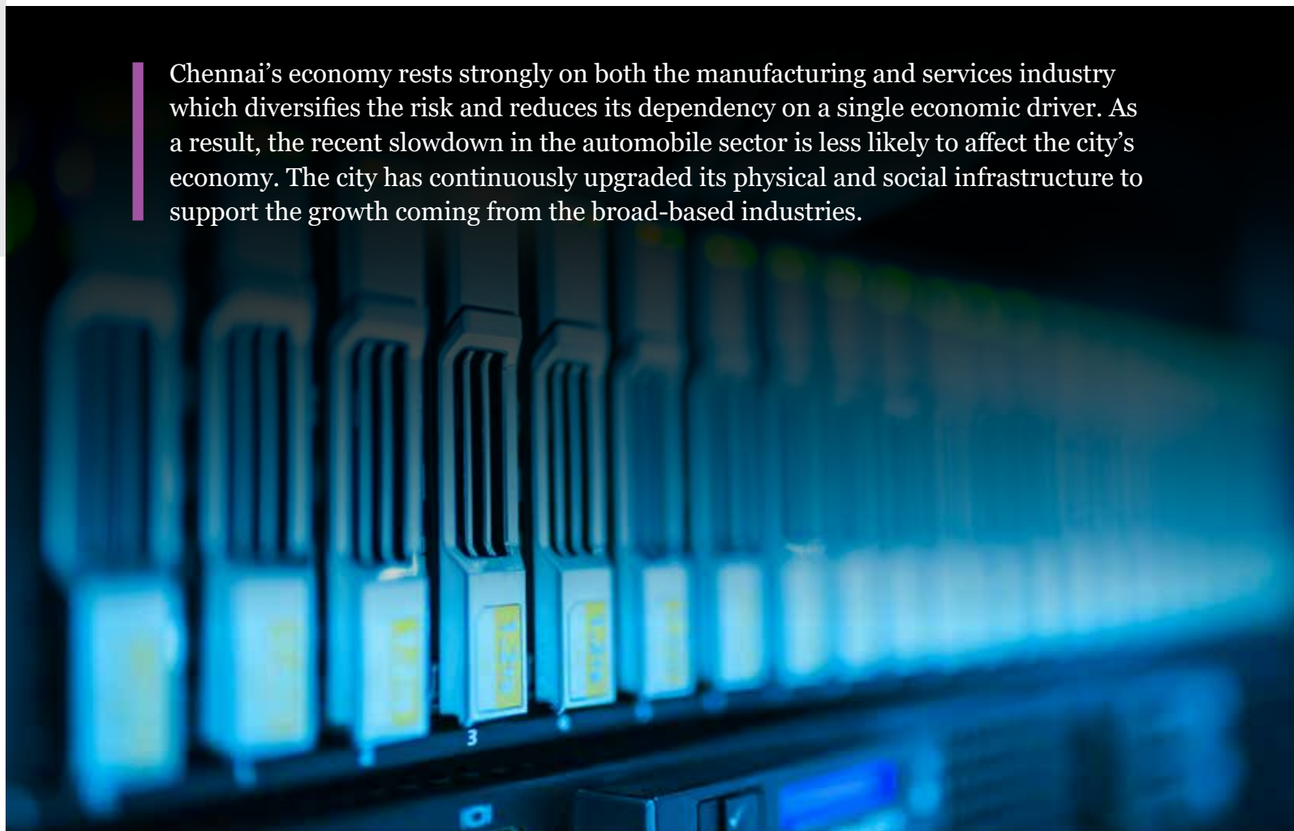
IT Exports from Tamil Nadu (US$ billion)



Source: Tamil Nadu Global Investors Meet 2019

Earlier Old Mahabalipuram Road (OMR) was the preferred location for IT-ITeS companies across the Chennai city. However, with the development of Mahindra World City in Chengalpattu and DLF Cybercity in Manapakkam, IT-ITeS companies have spread out a bit, albeit remain concentrated in South Chennai.

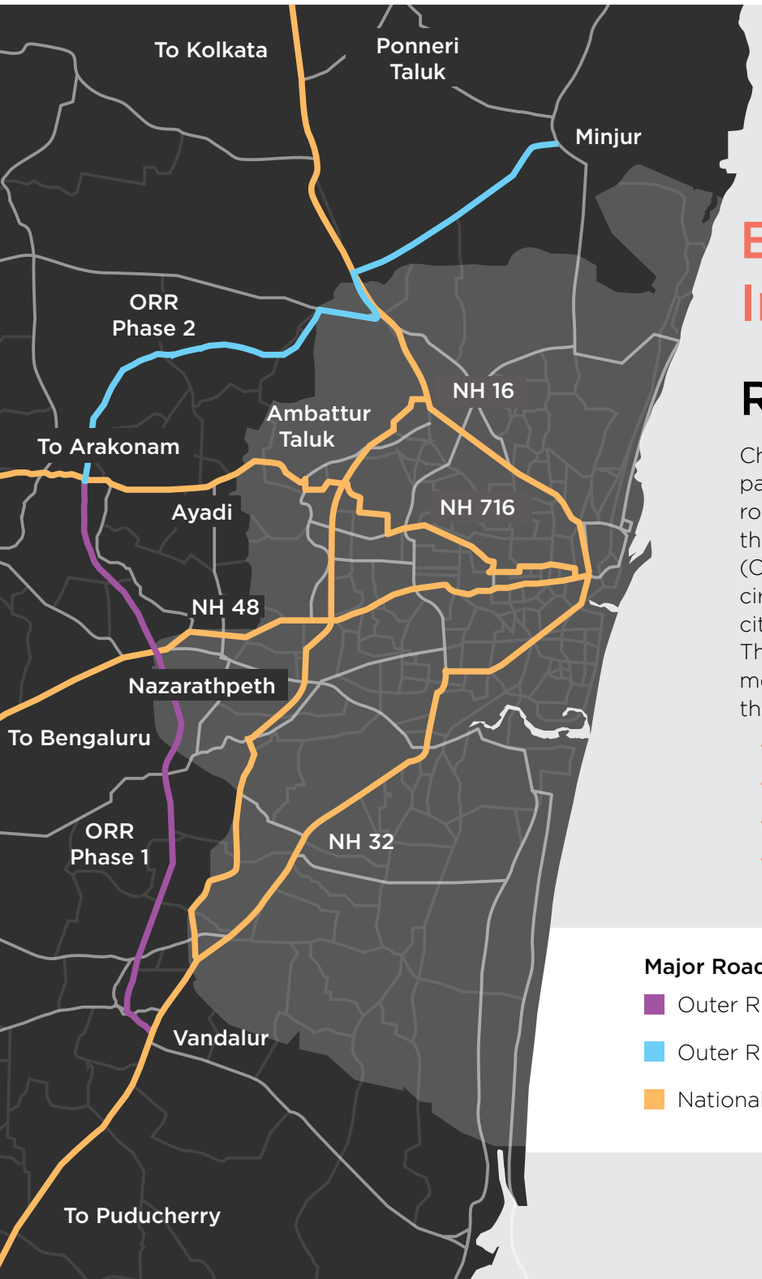
> Chennai's economy rests strongly on both the manufacturing and services industry which diversifies the risk and reduces its dependency on a single economic driver. As a result, the recent slowdown in the automobile sector is less likely to affect the city's economy. The city has continuously upgraded its physical and social infrastructure to support the growth coming from the broad-based industries.



EXISTING AND UPCOMING INFRASTRUCTURE

Chennai is connected with different parts of the country as well as internationally through various modes of transport. The city has excellent road, rail, air, and port infrastructure. With the completion of the first phase of metro rail, the intra-city commute has also become more convenient and comfortable.


Ripon, Chennai



Existing Infrastructure

Roads

Chennai has a radial and ring pattern of road network. Radial roads (NH-16, NH-48, NH-716) run through the city whereas ring roads (Outer Ring Road, Inner Ring Road) circle the city. The total length of the city roads is approximately 2,847 km. The city is well connected with other metro cities of the country through the national highways network.

- NH 16 - Connecting to Kolkata
- NH 48 – Connecting to Bengaluru
- NH 716 - Connecting to Tiruvallur
- NH 32 – Connecting to Puducherry

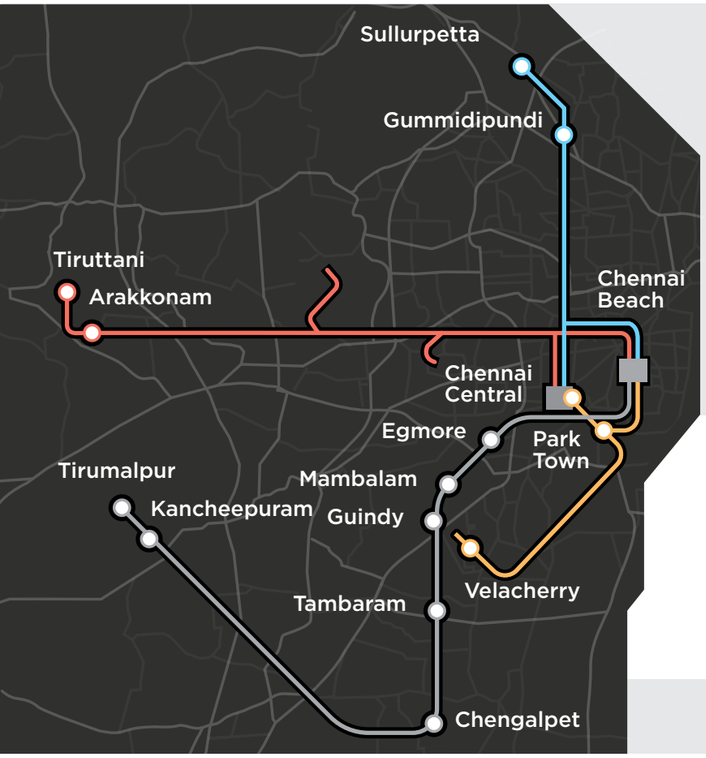
Major Roads of Chennai

- Outer Ring Road (ORR) Phase 1
- Outer Ring Road (ORR) Phase 2
- National Highway

The city is connected through various radial roads. A few prominent ones are listed below:

NAME	CONNECTIVITY	DESCRIPTION
Anna Salai-GST Road	Fort St. George to the southwest via the airport to Mahindra World City	It provides connectivity from city centre to Southern Chennai
Bypass Road	From Krishna Nagar on GST Road to Mettupalayam on NH 5	It connects Southern Chennai to Northern Chennai
Chennai-Bengaluru Highway	From Chennai Central railway station via Sriperumbudur to Bengaluru	It connects Western areas such as Poonamallee and Sriperumbudur with the city centre
Chennai-Kolkata Highway	From Basin Bridge to Kottur	It connects Chennai Port with the Northern parts of Chennai
East Coast Road (ECR)	From Thiruvanmiyur via Uthandi to Mahabalipuram	It is parallel to the OMR and connects the coastal locations of South Chennai
Inner Ring Road	Connects SH 94A (OMR/Rajiv Gandhi Salai) in Thiruvanmiyur and joins SH 104 near Manali	It runs close to Central Chennai through locations viz. Koyambedu, Villivakkam, Anna Nagar
Old Mahabalipuram Road (OMR)	From Madhya Kailash junction to the south via Sholinganallur to Mahabalipuram	Also known as the IT Corridor, it connects the City Center with Southern Suburbs, such as Perungudi, Siruseri, and Kelambakkam
Outer Ring Road	From Vandalur to Nemilichery	The six-lane highway connects GST Road with the Chennai-Bengaluru Highway and NH 716


Napier Bridge



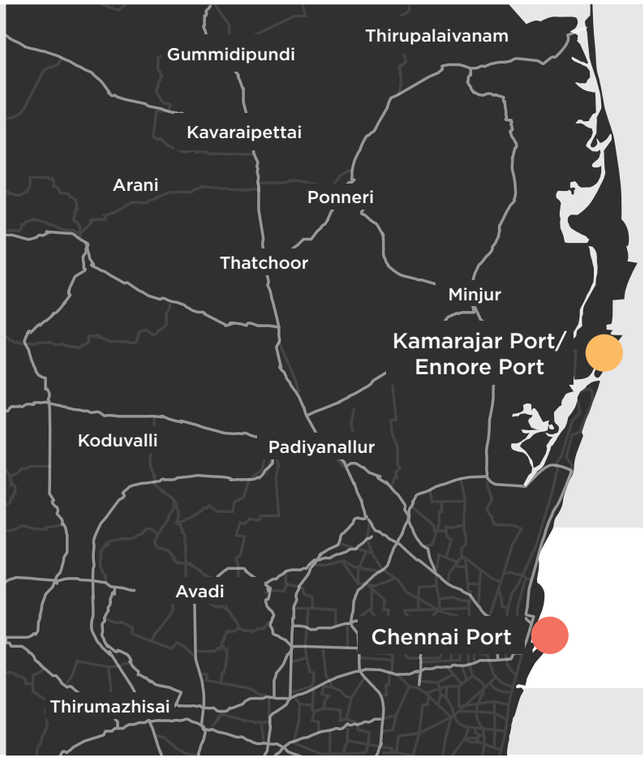
Railway

The Southern Railways headquartered at Chennai has two main railway stations – Chennai Central and Chennai Egmore. These two main railway stations along with other small railway stations provide seamless connectivity to other major cities and other small towns across the country.

Chennai Suburban Rail Network

- Velacherry - Chennai Beach
- Chennai Central - Tiruttani
- Tirumalpur - Chennai Beach
- Sullurpetta - Chennai Beach

NAME	CONNECTIVITY	DESCRIPTION
MRTS	Chennai Beach - Thiruvanmiyur - Velachery	It connects Velachery via TIDEL Park to the Central part of Chennai
Suburban Rail: West Line	Chennai Central - Avadi - Tiruvallur- Arakkonam	It connects the North-Western areas of Ambattur and Avadi with Central Chennai
Suburban Rail: North Line	Chennai Central - Ennore - Gummidipoondi-Sullurpeta	It connects Northern Chennai with Central Chennai via Tondiarpet
Suburban Rail: South Line	Chennai Beach - Chengalpattu-Villupuram	It connects Southern Chennai with Central Chennai via St. Thomas Mount
Suburban Rail: South-West Line	Chennai Beach - Tambaram - Chengalpattu	This line runs parallel to GST Road, connecting the Central Chennai with Mahindra World City via Tambaram
Suburban Rail: West-North Line	Chennai Central- Tiruvallur- Arakkonam- Tiruttani	It connects the Central part of Chennai with the West-Northern parts via Villivakkam
Suburban Rail: West-South Line	Chennai Beach- Royapuram- Washermanpet- Perambur- Arakkonam	It is the longest line running in the West-South direction from Central Chennai.



Ports

India has approximately 7,517 km long coastline which holds 12 major and 200 non-major/intermediate ports. The major ports in India collectively handled 679.4 MMT of cargo during 2017-18 compared to 648.4 MMT a year ago; thereby registering a growth of 4.8%. Tamil Nadu is the only state which has 3 major ports – Chennai Port, Ennore Port, and V O Chidambaranar. A fourth major port is proposed at Enayam near Colachel. Out of three operational major ports two are in Chennai.

Major Ports of Chennai

- Kamarajar Port/Ennore Port
- Chennai Port

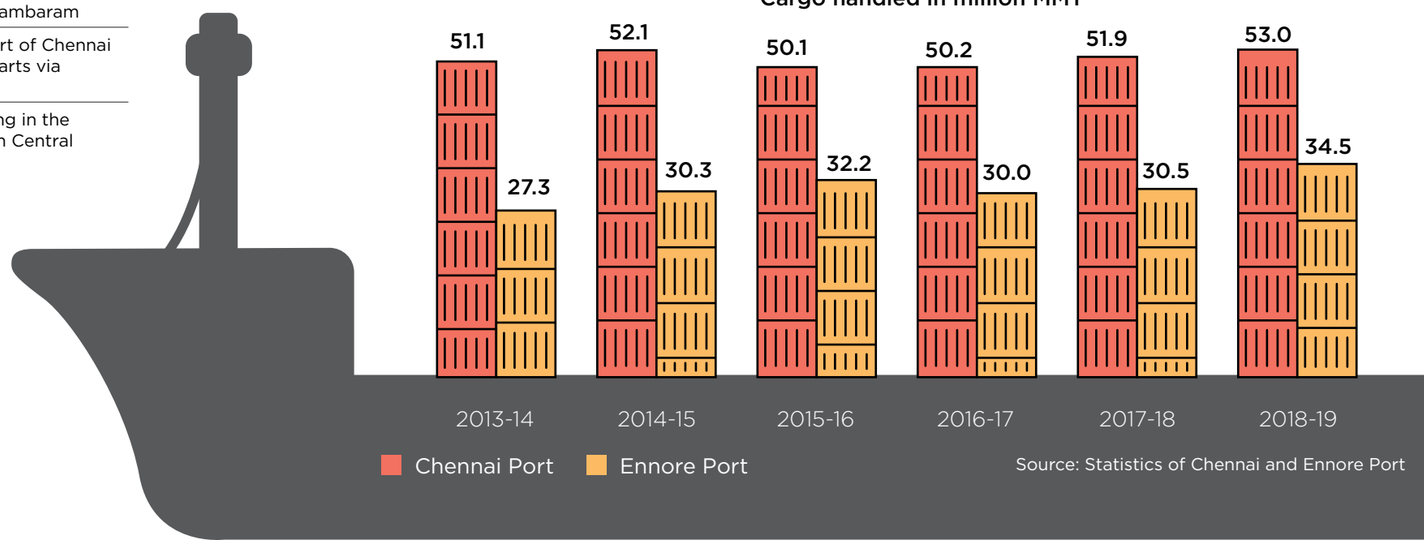
Kamarajar Port/Ennore Port

- Located on the Coromandel Coast about 24 km north of Chennai Port
- Handled 34.5 MMT of cargo in 2018-19 as compared to 30.45 MMT in 2017-18, an annual growth of 13%
- Handled 877 cargo vessels in 2018-19 as compared to 794 in 2017-18

Chennai Port

- One of the biggest and oldest port of India
- Handled 53.01 MMT of cargo in 2018-19 as compared to 51.88 MMT in 2017-18, an annual growth of 2%
- The total value of the commodities handled in 2017-18 is INR 65,755 crores
- Competition from new private ports such as Krishnapatnam and Kattupalli

Cargo handled in million MMT

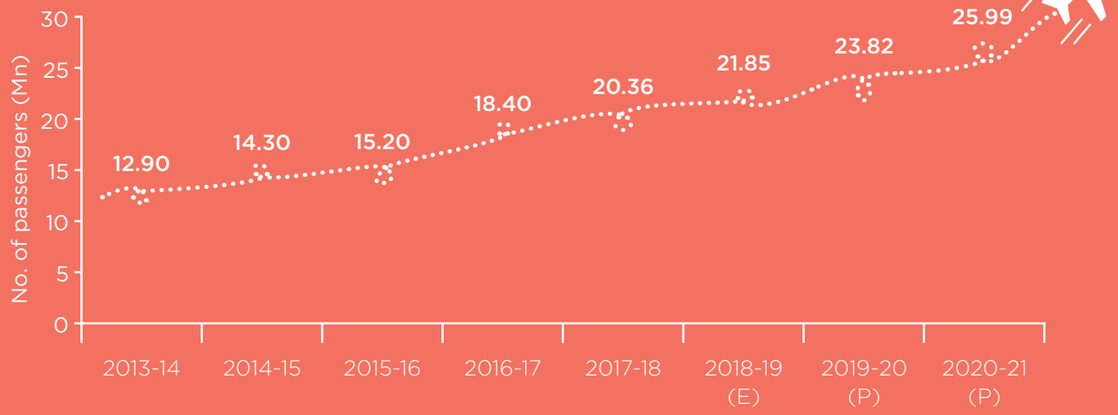


Source: Statistics of Chennai and Ennore Port

Airport

Located about 21 kms southwest of the city centre, Chennai International Airport is the 4th busiest airport in India after Delhi, Mumbai, and Bengaluru. It was the first airport in India to have both international and domestic terminals adjacent to each other. The airport has three terminals, one for domestic operations and the other two are for international flights. At present, the passenger capacity of Chennai airport is close to 23 million annually, which is expected to rise after the inauguration of terminal 4. The Chennai Airport handled nearly 20.36 million passengers in 2017-18, up from 18.4 million in 2016-17. As per a report by Airports Economic Regulatory Authority of India, air traffic is expected to reach nearly 26 million passengers by 2020-21. The airport constituted 6.7% share in India's total aircraft movement in 2017-18. It recorded a 16.3% growth in terms of freight handling in 2017-18.

Air Traffic handled by Chennai Airport



Source: Airports Economic Regulatory Authority of India, Tamil Nadu Industrial Development Corporation





Metro Rail

The first phase of the metro comprising two corridors became fully operational in February 2019. Corridor 1 of Chennai Metro rail is 22.96 km long which starts from Chennai Airport and ends at Washermenpet, connecting 17 stations in between. Corridor 2 is 21.57 km long and starts from St. Thomas Mount to Central Chennai. This corridor has a total of 15 metro stations, some of the major stations being Egmore Metro, Nehru Park, and Koyambedu. These two corridors improved North and South Chennai's connectivity significantly. The total cost of the project has been INR 14,750 cr.



Upcoming Infrastructure

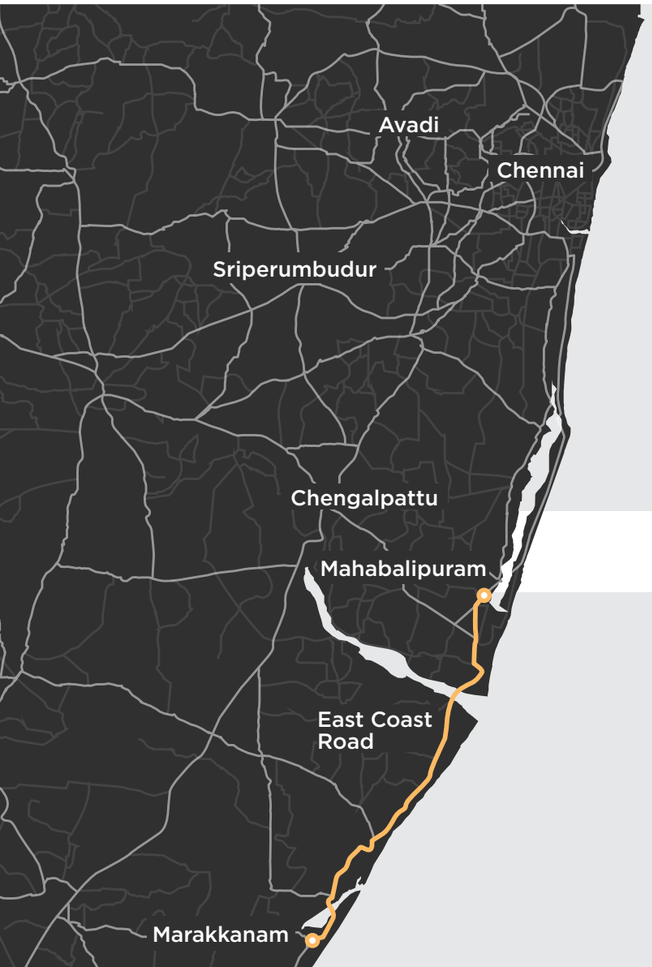
As per 2011 census, the population of the city was 4.65 million, recording a decadal growth of 7%. The current density is 26,553 persons per sq km. To accommodate the increasing population the city boundaries have expanded to include new areas. These have created the need to augment and upgrade the city's infrastructure.

The catastrophic floods of 2015 in Chennai halted the development for a while. However, with the government's push for providing better and convenient infrastructure to everyone, it took no time for the city to attain the expected growth trajectory. New infrastructure initiatives were seen across the city ranging from new additions to increasing capacity of the existing ones.

Roads

Outer Ring Road (ORR)

The project is 62 km long, 6 lanes highway. The first phase of the project, connecting Vandalur and Nemilicherry, has already been opened for public in 2014. The second phase of 32.8 km from Nemilichery to Minjur is still under construction and expected to be completed soon. The project will significantly benefit the auto ancillary and automobile industry as it connects outer areas of the city and will ease the movement of goods.



East Coast Road (ECR)

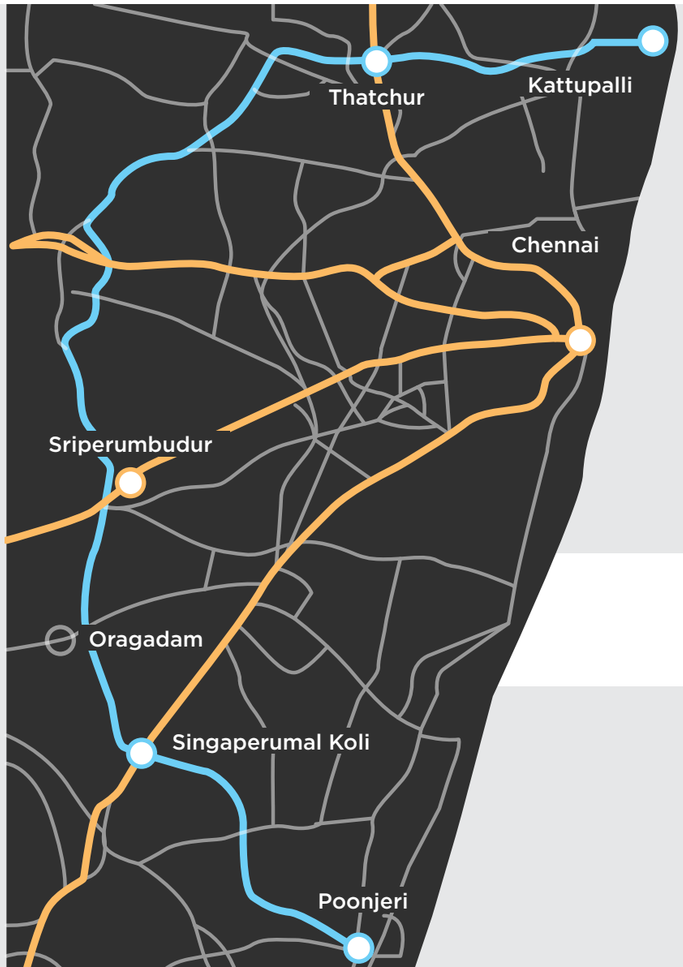
The National Highways Authority of India (NHAI) plans to widen the 61.4 km stretch from Mahabalipuram to Marakkanam into a four-lane road. The in-principle approval for this project has been provided by Tamil Nadu government. In the first phase, 31 km stretch between Mahabalipuram and Mugaiyur will be widened at a cost of INR 617.47 cr. The rest will be widened in the second phase of the project at a cost of INR 592.44 cr. The state government is also planning to link ECR with OMR to ease traffic congestion and have efficient connectivity.

East Coast Road

Chennai Port-Maduravoyal Elevated Corridor

This 19-km long corridor is expected to connect Chennai Port with Maduravoyal. The project faced many hurdles as 14.2 kms of this corridor will run along the banks of River Cooum. After the nod from the state government, NHAI formed a committee to study the feasibility of the mode of funding for the project. Currently, NHAI is waiting to get the hand-over of land from the Navy for floating tenders to construct the corridor.





Chennai Peripheral Ring Road (CPRR)

This 133.65 km long peripheral ring road aims to connect Ennore port to Mamallapuram near Poonjeri junction of ECR. The project is estimated to cost INR 12,301 Cr. with funding from Japan International Co-operation Agency (JICA). The project has already got environment clearance.

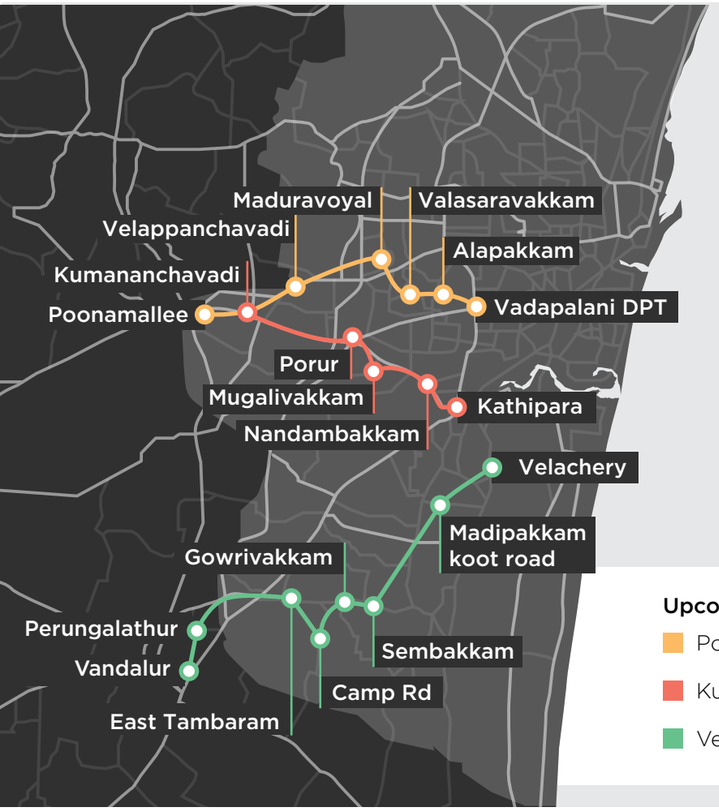
Peripheral Ring Road
Main Road

Metro Rail

After the success of phase 1, the Tamil Nadu government has geared up for the second phase of the Chennai metro. The government has planned to complete the 118.9 km long second phase by 2026 with a total cost of approximately INR 69,180 Cr. The second phase is expected to have 128 stations out of which 80 stations are going to be elevated. The government has decided to construct 50.7 km long Madhavaram Milk Colony to Sholinganallur stretch (metro corridor 3) and Madhavaram to CMBT stretch (metro corridor 5) on priority.

NAME	CONNECTIVITY	LENGTH (KM)	DESCRIPTION
Metro Corridor 3	Madhavaram Milk Colony - Sipcot 2	45.8	Madhavaram Milk Colony to Sholinganallur on priority
Metro Corridor 4	Lighthouse – Poonamallee Bypass	26.1	Connectivity between Central and West Chennai
Metro Corridor 5	Madhavaram Milk Colony – Sholinganallur via Porur Junction	47	Madhavaram to CMBT on priority





Monorail

As the government has already started working on the second phase of metro rail, monorail project has been put on the back burner. As per the comment of Pankaj Kumar Bansal, Managing Director, Chennai Metro Rail Limited in Times of India, "A comprehensive study on passenger flow revealed high traffic density between Porur and Poonamallee that metro rail, not a monorail, is capable of handling it."

Three corridors have been planned under the first phase of the monorail project. The project is still in the initial stage of implementation.

Upcoming Monorail Corridors

- Poonamallee - Vadapalani DPT
- Kumananchavadi - Kathipara
- Velachery - Vandalur

NAME	CONNECTIVITY	DESCRIPTION
Monorail Corridor 1	Vandalur - Kathipara	Connects Vandalur and Tambaram with central Chennai via Velachery
Monorail Corridor 2	Poonamallee - Kathipara	Connects West Chennai via Porur
Monorail Corridor 3	Porur - Vadapalani	It will increase connectivity between Porur and Vadapalani





Airport

Expansion of current airport

Chennai airport terminals are under a redevelopment project which is expected to be concluded by 2021. After the expansion, the airport will be able to host 30 million passengers annually from the current capacity of 23 million passengers annually. The expansion plan has already received environment clearance and expected to cost INR 2,476 Cr.

Second International Airport at Chennai

The city might get its second airport as the current airport is expected to reach saturation even after the expansion. The site for the second airport is not yet decided. It is expected to come at either Mamandur or Sriperumbudur. The Tamil Industrial Development Corporation (TIDCO) is currently searching for a consultant to do Techno-Economic Feasibility study for the project, identification of sites for the development of new Greenfield airport near the city and for preparing a Detailed Project Report (DPR).

Chennai's economy was majorly driven by manufacturing and port related businesses. Eventually, the city has shown the shift from traditional manufacturing jobs to white collar jobs in the service sector. While development of major national highways, ports and airport helped in the migration to the city, phase 1 of metro rail and MRTS made the city commute comfortable. Upcoming infrastructure such as monorail, phase 2 of metro rail, new greenfield airport and CBIC is expected to open new avenues of growth for the city.

Chennai Aerospace Park

TIDCO has planned to set up an exclusive integrated aerospace and defence park in 250 acres (expandable to 600 acres) of land in Sriperumbudur Industrial Park to support the growth of the aerospace industry. The land has been selected in Vallam Vadagal village where all the internal infrastructure including roads, stormwater drainage, electricity, etc have already been created. Eighteen companies such as Vinmn Aerospace, Minerva Aviation Services, Balaa Harconn-Aerospace Services, etc have already been allocated land in the aerospace park.

Chennai-Bengaluru Industrial Corridor (CBIC)

The corridor between Chennai-Bengaluru-Chitradurga (around 560 km) would have an influence area spread across the states of Karnataka, Andhra Pradesh, and Tamil Nadu. Three nodes were taken up on priority - Tumkur (Karnataka), Ponneri (Tamil Nadu) and Krishnapatnam (Andhra Pradesh).

The details of the CBIC node in Tamil Nadu (Ponneri Node):

AREAS	PROJECT DETAILS
Greenfield area of the node	13,581 acres
Node vision	Engineering hub for auto & machinery
Industrial sectors impact	Chemical, Petrochemical, Machinery, Pharmaceuticals and Medical Equipment
Land usage	Industrial land – 67%, Residential – 16% and Others – 17%
Distance from Chennai city centre	36 km
Nearest ports	Ennore Port (part of this node) Chennai Port – around 20 km from the node
Projected node population by 2025	1.29 million

Source: Department for Promotion of Industry and Internal Trade

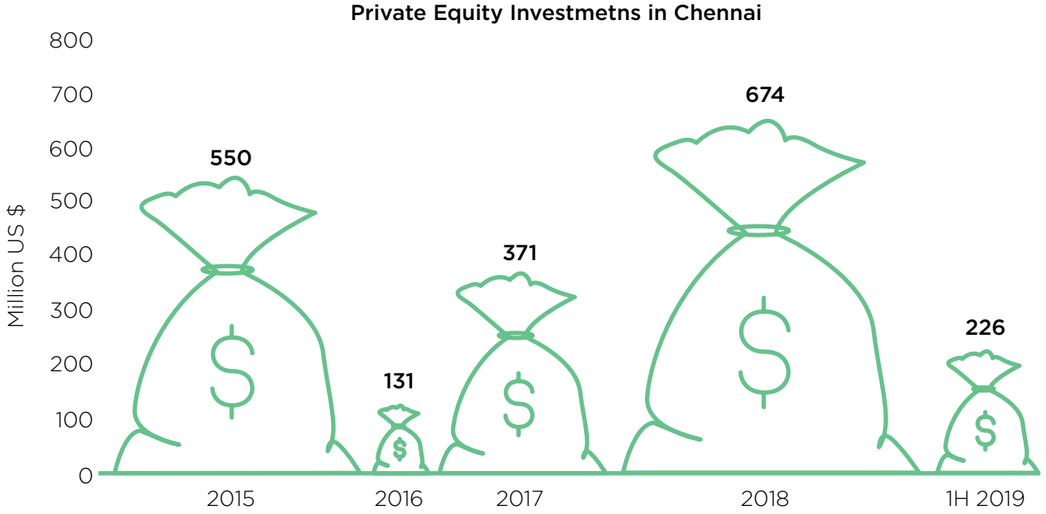


Mandaveli, Chennai

PRIVATE EQUITY INVESTMENTS IN CHENNAI

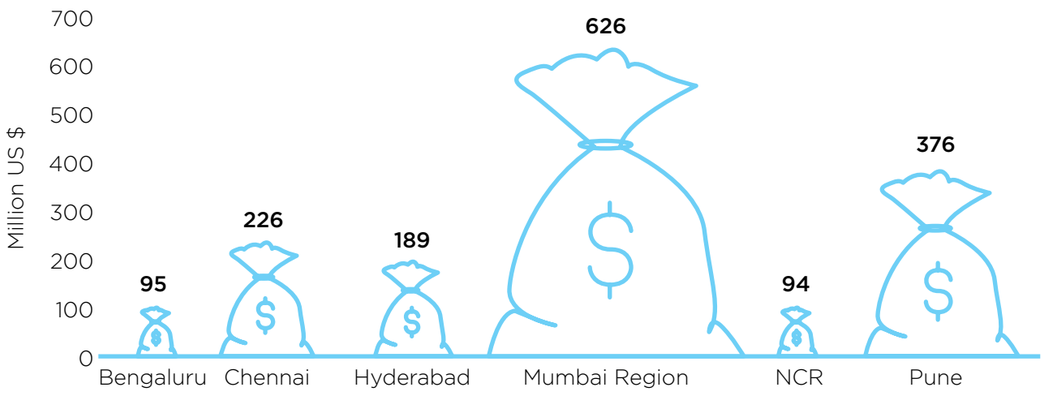
The real estate sector in Chennai has been successful in attracting institutional investments for the past few years. Since 2015, nearly US$ 2.0 billion have been invested in the city, which accounts for nearly 14% of the capital deployed in the country. The highest volume of infusion was recorded in 2018, which was US$ 674 million.

Private Equity Investmetns in Chennai



Compiled by ANAROCK Research

Private Equity Investments in 2019



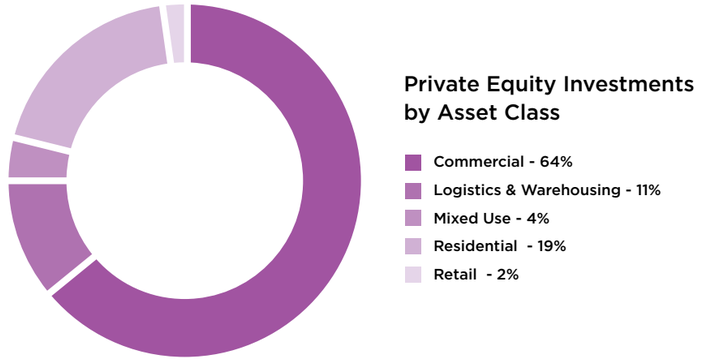
Compiled by ANAROCK Research



Equity investments account for nearly 86% of the total which not only depicts the confidence of the investors, but also the underlying potential of the city's real estate sector.

An analysis of the deals in this year shows that the quantum of investments received in Chennai has exceeded those of Bengaluru, Hyderabad, Pune and NCR. Chennai accounts for 14% share of the total investments across the major cities.

The commercial segment accounts for the highest level of investments in Chennai and accounts for 64% of the total in the last four years (2015 – 1H 2019). This is followed by the residential segment at 19%. It is interesting to note that the logistics and warehousing segment is also generating interest among investors owing to the high volumes of exports and manufacturing services spread across the city. Investments in the logistics and warehousing have commenced from 2018 and have been successful in generating capital of US$ 218 million.



Compiled by ANAROCK Research

Significant Private Equity Investments

INVESTOR	COMPANY	TYPE	SECTOR	AMOUNT (US$ MN)
Apollo Management	Olympia	Commercial	IT-ITeS	107.47
LOGOS India	Casagrand Distripark	Logistics & Warehousing	Logistics & Warehousing	98.28
Mitsubishi	Shriram Properties	Residential	Luxury	25

Note: Transactions above are from 2018 onwards

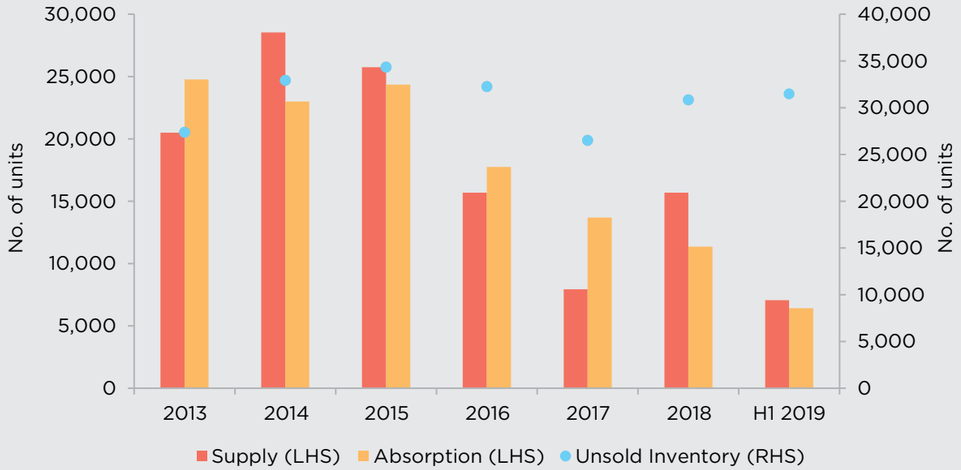
RESIDENTIAL REAL ESTATE DYNAMICS

Chennai's residential real estate market is on the path to recovery as evident from real estate activities across the city. The preference for low-rise developments is giving way to high- rise apartments predominantly in the peripheral regions of the city. Also, the budget segment of less than INR 40 Lakh is gaining prominence amidst rising demand and policy push to develop affordable housing.

The real estate market of Chennai is primarily driven by the automobile and IT-ITeS industries. From manufacturing to white-collar jobs, the city has tasted every flavour. It is observed that the majority of residential real estate demand in Central and South Chennai emanates from IT-ITeS sector whereas demand in the peripheral areas of Chennai is driven by the manufacturing industry.

Chennai has shown a preference for low-rise apartments and standalone houses after a multi-storey under-construction building at Moulivakkam collapsed in 2014, raising apprehensions towards high-rise apartments. With the growth of the IT-ITeS sector and manufacturing industries in the city, working professionals from various parts of the country flocked to Chennai. This, along with limited land availability in the core areas, resulted in a change in housing requirement and the emergence of high-rise apartments. The mindset of the populace changing gradually. High-rise development is becoming a necessity after a steep increase in the population density of Chennai district to 26,553 people per square km in 2011 from 24,963 people per square km in 2001, as per the census data.

Supply, Absorption & Unsold Inventory Dynamics

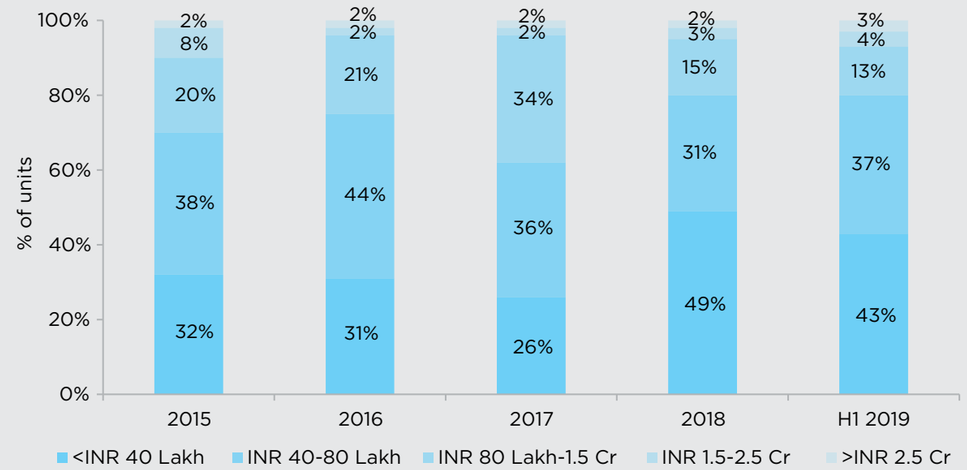


Source: ANAROCK Research

Chennai's residential real estate market had ample supply and demand until 2015. In 2015, catastrophic floods paused the real estate activity temporarily. Major policy changes such as demonetization and RERA in 2016 almost crippled the real estate market of Chennai. Till now we are witnessing the efforts to recover from the catastrophic event. As a result, the supply dropped significantly in the consecutive years and bottomed out in 2017. But the supply almost doubled in 2018 as compared to the previous year. This may be attributed to the improving sentiment of buyers due to the implementation of Tamil Nadu RERA in 2017.

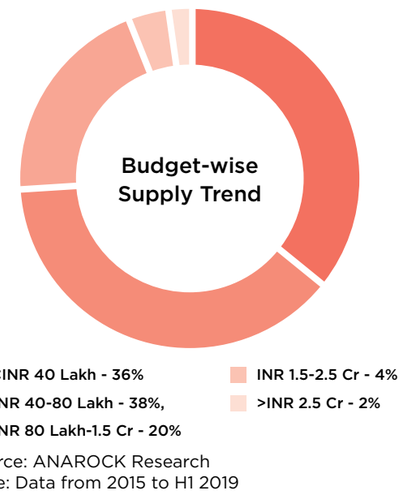
Although the supply dropped significantly, absorption surpassed the new supply resulting in a reduction in unsold inventory in 2017. Since then unsold inventory increased gradually as fresh supply was added but sales struggled to keep pace. As of June 2019, the total unsold inventory is estimated to be around 31,500 units and it may take approximately 32 months to liquidate it. This is significantly high compared to Bengaluru and Hyderabad where the inventory overhang is 15 and 16 months, respectively.

Budget - wise Supply Trend



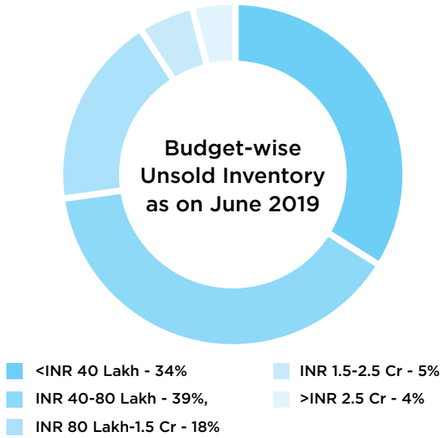
Source: ANAROCK Research; indicates ticket prices on BSP only

Chennai has a large share of mid-level IT professionals who drive the majority of the demand in the budget segment of sub INR 80 Lakh which accounts for nearly 74% of the total supply since 2015. More than 72,000 units were launched since 2015 in the city, out of which 38% were in the budget range of INR 40 lakh – INR 80 lakh followed by 36% units in less than INR 40 lakh budget segment. However, the share of units costing less than INR 40 lakh in overall supply increased to more than 40% over time. This trend is expected to continue for the budget segment owing to central government's constant push for affordable housing through various incentives and subsidy schemes.



Source: ANAROCK Research
Note: Data from 2015 to H1 2019

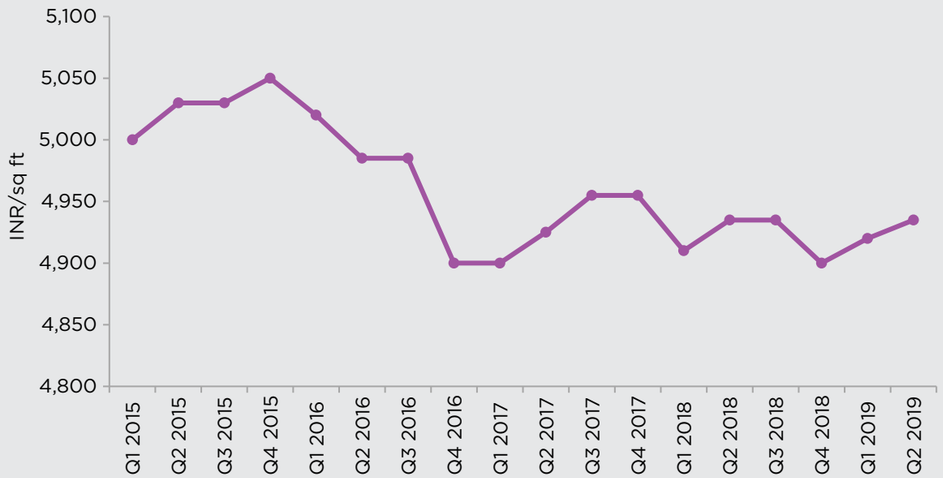
The city has around 31,500 units of unsold inventory out of which close to 40% is concentrated in the budget segment of INR 40 Lakh – INR 80 Lakh. Majority of these units are in South Chennai, which is dominated by the IT-ITeS industry. The city has nearly 8,500 units available for sale in the segment of more than INR 80 Lakh.



Source: ANAROCK Research

Like any other metro city, Chennai also witnessed a correction in prices owing to policy changes and slump in real estate investment. The city's average prices reduced marginally by 2% in the last 4 years from the peak. Currently, the average city prices (BSP on BUA) are nearly INR 4,950 per sq ft.

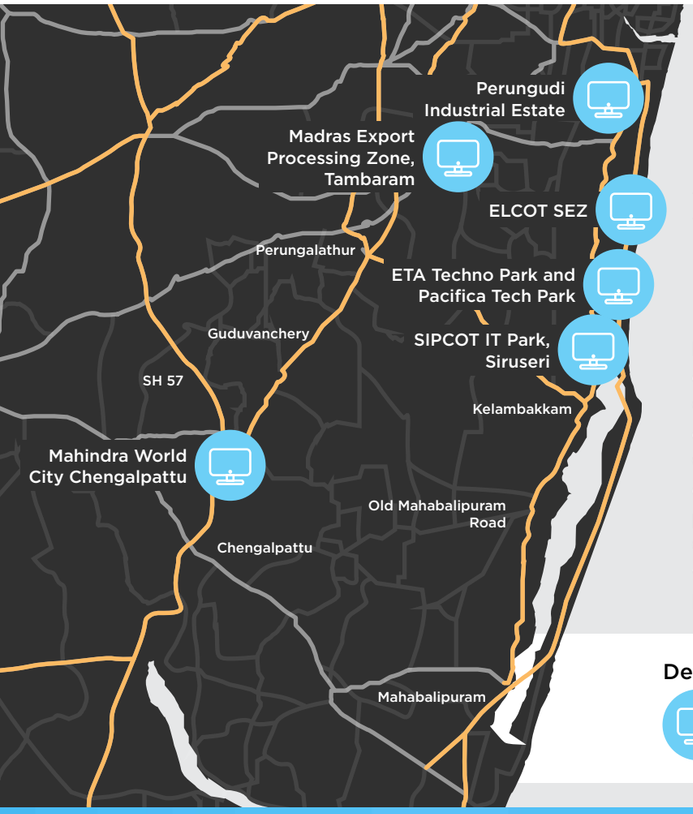
Chennai - Price Trend



Source: ANAROCK Research



CHENNAI ZONAL ANALYSIS



South Chennai

A Hub for White-Collared Professionals

Post liberalization in 1991, many IT-ITeS companies set up their base in South Chennai which is now the hub for white-collared professionals. Development of OMR and ECR improved the connectivity of South region with Central Chennai and pushed the city to grow in that direction. Chennai airport's strategic location has also worked as a catalyst for the development of IT-ITeS industry in South Chennai.

Demand Drivers of South Chennai

IT-ITeS Units — Major Roads

> The initial growth of South Chennai was driven by economic factors and the region emerged as a significant employment zone. It was the hub of numerous IT-ITeS campuses and developments which attracted large scale developments. The next phase of growth in the region is going to be led by the upcoming infrastructure which will offer easy connectivity to employment hubs and other parts of the city.



Chennai City

Demand Drivers

Major industrial/IT-ITeS areas across South Chennai:

INDUSTRIAL/ IT PARKS	MICRO MARKET	MAJOR COMPANIES	TYPE OF INDUSTRIES
Madras Export Processing Zone (MEPZ)	Tambaram	Cognizant, HTC, Godrej & Boyce, Avalon Technologies, TCI Chemicals, APA Engineering	IT-ITeS, Chemical, Auto Ancillary
Mahindra World City	Chengalpattu	Mahindra, Infosys, BMW India, Musashi Paint, Netafim, Federal Mogul, Force Motors	IT-ITeS, Automobile
ELCOT SEZ, Sholinganallur	Old Mahabalipuram Road	Tech Mahindra, HCL, Wipro, Accenture, Siemens Gamesa	IT-ITeS
ETA Techno Park and Pacifica Tech Park, Navallur	Old Mahabalipuram Road	HCL, Fujitsu, Data Patterns, Nokia, Global Analytics	IT-ITeS
Perungudi Industrial Estate	Old Mahabalipuram Road	Coramandel Electronics, Alstom, Infoplus Technologies	IT-ITeS, Manufacturing
SIPCOT IT Park, Siruseri	Old Mahabalipuram Road	TCS, Cognizant, Hexaware, Vodafone, Atos Syntel	IT-ITeS, Telecommunications

Source: MSME Report on Chennai District, Compiled by Anarock Research

OMR which is widely known as the 'IT Corridor of Chennai' hosts IT giants such as Tech Mahindra, HCL, Wipro, Accenture, Siemens Gamesa, Nokia, TCS, Cognizant, etc. Some of the companies such as HTC, Godrej & Boyce, Infosys, BMW India, Ford, Musashi Paint, Netafim, Federal Mogul, Force Motors have their bases in Chengalpattu and Tambaram which are connected to the city through NH 32. Being the home for many big IT companies, South Chennai still has nearly 43 million sq ft of commercial space which is the highest as compared to West, North and Central Chennai. The prevailing rental values are in the range of INR 50-75/sq ft/month.

South Chennai has a well-established existing infrastructure which connects it to other parts of the city seamlessly. The region has two main roads – OMR and ECR – which run along the coastal area. Apart from these roads, ORR and IRR connect it to the North Chennai through West Chennai. The region also has a matured rail network which connects it to the Central Chennai.

Existing airport at Meenambakkam is less than an hour's drive from any IT park situated along the OMR. The first phase of the metro rail has been completed recently which improved connectivity of this zone significantly. This led to the emergence of localities such as Alandur and Guindy as active micro-markets in the zone.

South Chennai has always been ahead of other parts of the city due to its economic profile. Several major infrastructure initiatives have been introduced to connect South Chennai with other parts of the city:

Expansion of ECR

The National Highways Authority of India (NHAI) to widen the stretch from Mahabalipuram to Marakkanam into a four-lane road. Mahabalipuram and nearby areas are expected to benefit from this project.

Expansion of existing airport

Chennai airport terminals are under a redevelopment project which is expected to be concluded by 2021. This expansion plan is expected to work as a catalyst for the growth of South Chennai.

Chennai Peripheral Ring Road (CPRR)

The project is expected to start from Poonjeri junction of ECR and runs through Singaperumal Koil to connect West and North parts of the city. The project to benefit nearby localities such as Mahabalipuram, Chengalpattu and Maraimalai Nagar.

Metro Rail

The upcoming metro corridors are expected to connect South Chennai to North Chennai running through West Chennai and Central Chennai. Some of the important metro stations in South Chennai are expected to be Perumbakkam, Medavakkam, Kovilambakkam, Madipakkam, St. Thomas Mount, Navallur, Sholinganallur, Perungudi, and Nehru Nagar. Sholinganallur, Perumbakkam, Medavakkam, and Kelambakkam micro markets are some amongst others which are expected to be benefitted maximum with the implementation of upcoming metro corridors.

Monorail

Corridor 1 of monorail connects Vandalur and Tambaram (South Chennai) with Central Chennai through Velachery. Vandalur, East Tambaram, Gowrivakkam, Velacherry localities are expected to benefit with this corridor of the monorail. But the project is still in the initial stage of implementation.

Social Infrastructure

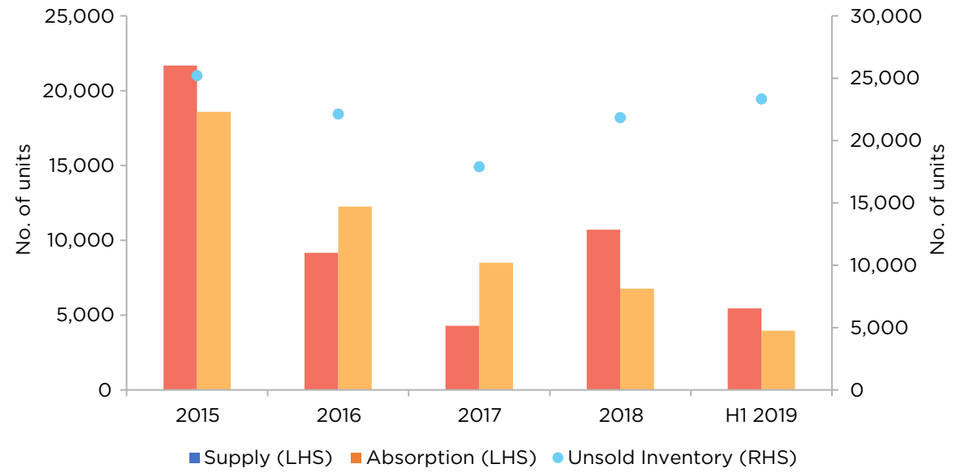
Apart from a well-established existing and promising proposed infrastructure, South Chennai has a rich social infrastructure. The region has many retail establishments such as BSR Mall, Grand Square, Phoenix Marketcity, Palladium, The Marina Mall, Vivira Mall, Grand Galada Centre Mall, and Gold Souk Grande. Most of the retail establishments of South Chennai are located at Guindy and OMR, rentals for which are in the range of INR 170-210/sq ft/month.

South Chennai has many renowned colleges such as KCG College of Technology, The Madras Christian College, The Madras Institute of Technology, Vel's College, Alagappa College of Technology, Agurchand Manmull Jain College, Jeppiaar Engineering College amongst others. The region also has well-known hospitals in the vicinity, some of the prominent ones are Chettinad Health City, Apollo Hospital, Gleneagles Global Health City, and Fortis.

Demand Driven by IT-ITeS Industry

Nearly 51,000 units were launched in South Chennai and more than 50,000 units sold since 2015. This indicates that the region has been an active real estate market for quite some time. The demand had risen as the physical and social infrastructure developed in the region along with several IT parks which catalysed the growth. However, the sales decreased continuously due to recent policy changes and natural calamities, but it has exceeded the launches in 2016 and 2017, resulting in significant reduction in unsold inventory, till 2017. Supply bottomed out in 2017 as developers were waiting to see the impact of introduction of RERA in the state. In the last one and a half year, the supply has started gaining momentum. This sudden increase in the supply could be because of the implementation of RERA in the state in 2017, due to which developers had to launch projects that had approvals in-place. As of June 2019, the region has more than 23,000 units available for sale which accounts for nearly 74% of the city.

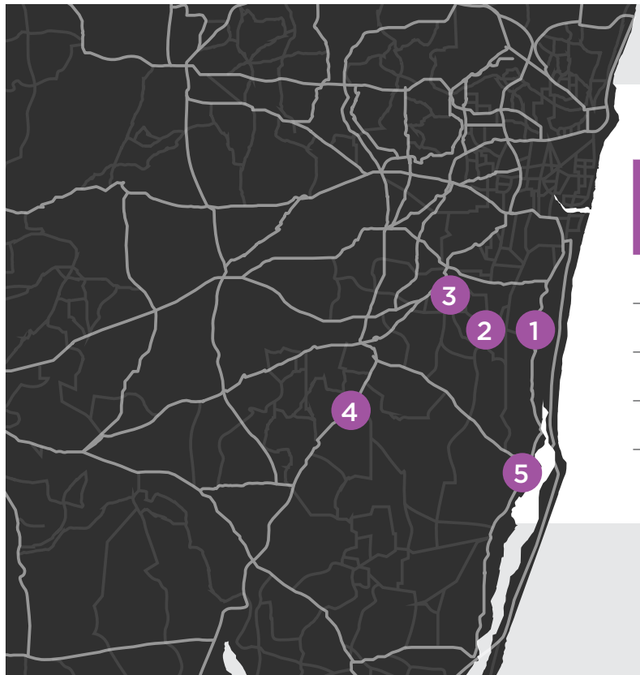
South Chennai - Supply, Absorption & Unsold Inventory Dynamics



Source: ANAROCK Research

Perumbakkam, Guduvanchery, Kelambakkam, Medavakkam, and Sholinganallur micro-markets witnessed most of the supply due to upcoming infrastructural developments such as Metro Rail, Monorail, Peripheral Ring Road, expansion of ECR.

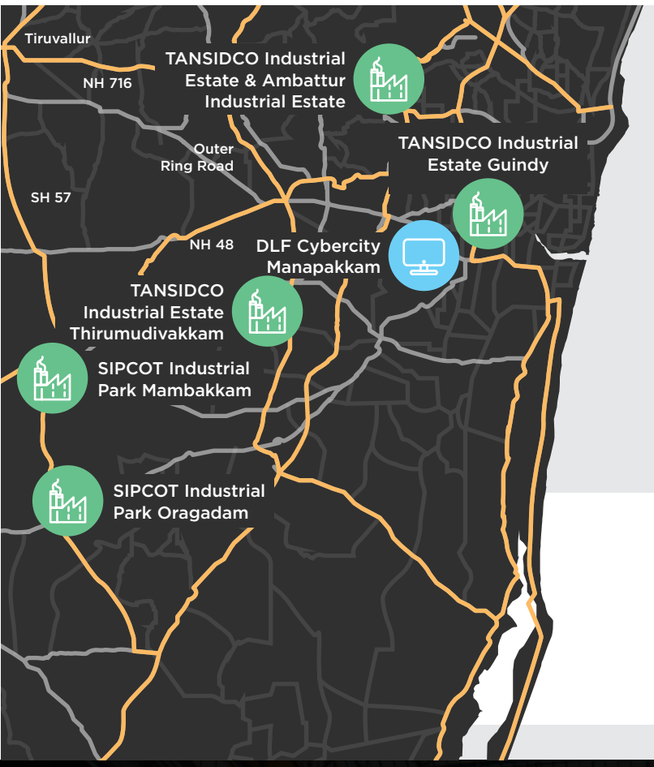
The average selling price of properties in Sholinganallur is more than the city average prices as two corridors of the second phase of metro rail are expected to pass through the locality. The locality witnessed more than 3,000 units of supply since 2013 but has less than 1,000 units available for sale as of Q2 2019. The prices at Medavakkam and Perumbakkam localities are selling at a weighted average price of INR 4,500/sq ft and INR 4,300/sq ft, respectively. The proposed metro connectivity is said to be the driving force in the region.



Micro Markets of South Chennai

NO.	AREA	TOTAL SUPPLY	UNSOLD INVENTORY AS OF Q2 2019	PRICE (INR/SQ FT) AS ON Q2 2019
1	**Sholinganallur**	3,200	964	5,125
2	**Perumbakkam**	6,000	2,450	4,375
3	**Medavakkam**	3,600	1,100	4,500
4	**Guduvanchery**	5,800	1,900	3,950
5	**Kelambakkam**	5,000	1,500	3,850

West Chennai



A Citadel of Manufacturing

West Chennai is a major manufacturing hub for the automobile and its ancillary units. The region's direct connectivity to Chennai port through various radial roads facilitated the growth of the region in the past. The state government has introduced many infrastructure initiatives such as Outer Ring Road, Inner Ring Road, Metro Rail to ease West Chennai's connectivity with North and South Chennai.

Demand Drivers of South Chennai

IT-ITeS Units — Major Roads

Manufacturing Units

> West Chennai is a manufacturing hub for automobile and auto ancillary units, but the economic profile of the region is expected to change with the proposed infrastructural initiatives. With the development of metro rail, peripheral ring road, monorail and second international airport, the footprint of IT-ITeS companies is going to increase in the region. As a result, the region may experience increased real estate activities in the future.



Demand Drivers

Major industrial/IT-ITeS areas across West Chennai:

INDUSTRIAL/ IT PARKS	MICRO MARKET	MAJOR COMPANIES	TYPE OF INDUSTRIES
TANSIDCO Industrial Estate	Guindy	Wipro, Survey of India, Ingram Micro, Futuretech, FedEx, Hinduja Tech, NTT Communications, GI Technology, Karya Technologies	General Engineering, Auto Ancillary, Electrical/Electronic Components, Fabrication & Plastic Injection Moulding
TANSIDCO Industrial Estate	Thirumudivakkam	EUCARE, Benco Thermal Technologies, Phoenix Medical Systems, Wheels India, Teklight, CRP India	General Engineering, Auto Ancillary
SIPCOT Industrial Park	Oragadam	Renault Nissan, Posco, Daimler, Johnson Lifts & Escalators, Apollo Tyres, Royal Enfield, Nokia, Komatsu, Motherson Automotive, Bosch Electrical	Automobile, General Engineering, Electrical
SIPCOT Industrial Park	Sriperumbudur	Hyundai, Motorola, Saint Gobain, Ashok Leyland, Nippon Paint, Samsung, Flextronics, Yamaha, Royal Enfield, Caparo	Telecommunications, Auto Ancillary, Automobile
TANSIDCO Industrial Estate and Ambattur Industrial Estate	Ambattur	HCL, Tech Mahindra, Wabco India, Kemin Industries, Aavin Milk, Everup Battery, Sheenlac Paints, Rotork Controls	BPO, Chemical, Auto Ancillary, Plastic, Electrical/Electronic Components
DLF Cybercity	Manapakkam	IBM, Cognizant, L&T, TCS, Mphasis, WNS, Boeing, BNY Mellon, Accenture	IT-ITeS

Source: MSME Report on Chennai District, Compiled by Anarock Research

West Chennai's strategic location provides an advantage over the other areas of Chennai. Direct connectivity to Central, North and South Chennai through various radial and ring roads helped both the manufacturing and service industry to expand in the region. The region hosts big automobile companies such as Renault Nissan, Posco, Daimler, Royal Enfield, Ashok Leyland, Yamaha, and Hyundai along with some big IT-ITeS companies such as HCL, Tech Mahindra, IBM, Cognizant, L&T, TCS, Mphasis, WNS, and Accenture. West Chennai has approximately 3 million sq ft office space. The prevailing rental values are hovering in the range of INR 35-55/sq ft/month with a vacancy rate of more than 20%. Many auto components manufacturing companies can also be seen in the vicinity which provides parts to the above-mentioned automobile giants.

Recently, Royal Enfield has taken more than 0.2 million sq ft warehouse space in Oragadam. Average rentals for warehouses in West Chennai are in the range of INR 20-30/sq ft/month whereas rentals for the industries are in the range of INR 25-35/sq ft/month.

West Chennai is directly connected with the central part of the city through various modes of transport. A highway connecting Chennai to Bengaluru passes through Poonamallee and Sriperumbudur areas of West Chennai. The region can be easily accessed from North and South Chennai as well through Inner and Outer Ring Roads. The region also enjoys railway and metro rail connectivity with other parts of the city. The corridor 2 of metro rail starts from St. Thomas Mount and ends at Chennai Central running through the major stations of West Chennai such as Egmore Metro, Nehru Park, and Koyambedu.

To maintain the growth of West Chennai, the state government has planned many projects to ease the connectivity of the area. Some of them are as follows:

Outer Ring Road (ORR)

Starting at Vandalur and ending at Minjur, the project is expected to provide seamless connectivity from North to South through West Chennai. While Vandalur to Nemilicherry stretch of the project is already operational, the stretch between Nemilicherry to Minjur is yet to be completed and is delayed due to hurdles of land acquisition.

Chennai Port-Maduravoyal Elevated Corridor

The project is expected to connect Chennai Port with Maduravoyal which may reduce the travel time significantly. Maduravoyal and Koyambedu localities are expected to be benefitted with this project.

Chennai Peripheral Ring Road (CPRR)

The project is expected to start from Poonjeri junction of ECR and runs through Oragadam and Sriperumbudur in West Chennai to connect Northern parts of the city. The project to improve the connectivity of Tiruvallur, Oragadam, and Sriperumbudur localities.

Metro Rail

The upcoming metro corridor 4 is expected to improve West Chennai's connectivity with Central Chennai whereas the corridor 5 is likely to improve West Chennai's connectivity with North and South Chennai. Some of the important metro stations of West Chennai are DLF IT SEZ, Porur Junction, Anna Nagar Depot, Poonamallee Bypass, Kattupakkam amongst others. Anna Nagar, Mogappair, Poonamallee, Porur, Koyambedu, and Maduravoyal are some of the prominent localities on the upcoming metro corridors.

Monorail

Corridor 2 of monorail connects Poonamallee to Kathipara whereas corridor 3 connects Porur to Vadapalani. Poonamallee, Porur, Guindy, and Valasaravakkam are some of the localities which lie on the upcoming corridors.

Second International Airport

The second airport is proposed to be developed at either Mamandur or Sriperumbudur. This project may increase the footprints of IT-ITeS companies in West Chennai.

Chennai Aerospace Park

An aerospace park has been planned in Sriperumbudur Industrial Park to support the growth of the aerospace industry. This project is expected to increase the footfall of aerospace companies in West Chennai.

Social Infrastructure

Peripheral areas of West Chennai have no major retail establishments. All the malls of West Chennai are in the nearby localities of Central Chennai. Some of the prominent malls are Chandra Metro Mall, Forum Vijaya Mall, and VR Chennai. Average rentals for retail establishments in West Chennai hover around INR 160-200/sq ft/month.

West Chennai has many engineering colleges which offer various courses from aerospace engineering to general engineering. Some of the prominent colleges are Sri Sairam College, Hindustan Institute of Engineering Technology, Rajalakshmi Engineering College, Panimalar Engineering College, and Meenakshi College of Engineering. These colleges are scattered across the region and provide a skilled workforce to the well-established manufacturing industry of West Chennai.

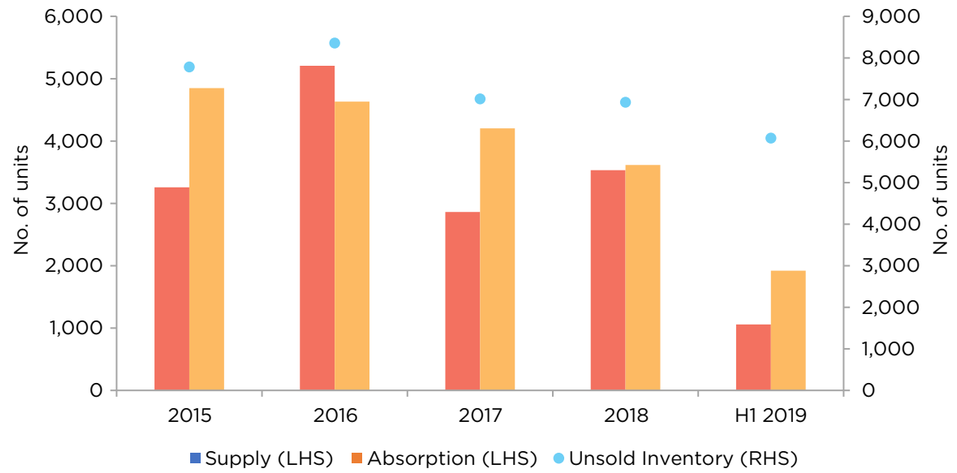
The peripheries of West Chennai have limited healthcare facilities. Majority of the hospitals are in the nearby localities of Central Chennai such as Ambattur, Maduravoyal, and Koyambedu. Some of the big hospitals of West Chennai are Fortis, Apollo Speciality Hospital, MMRV Hospital, and Scarf Hospital.

Demand driven by Manufacturing Industry

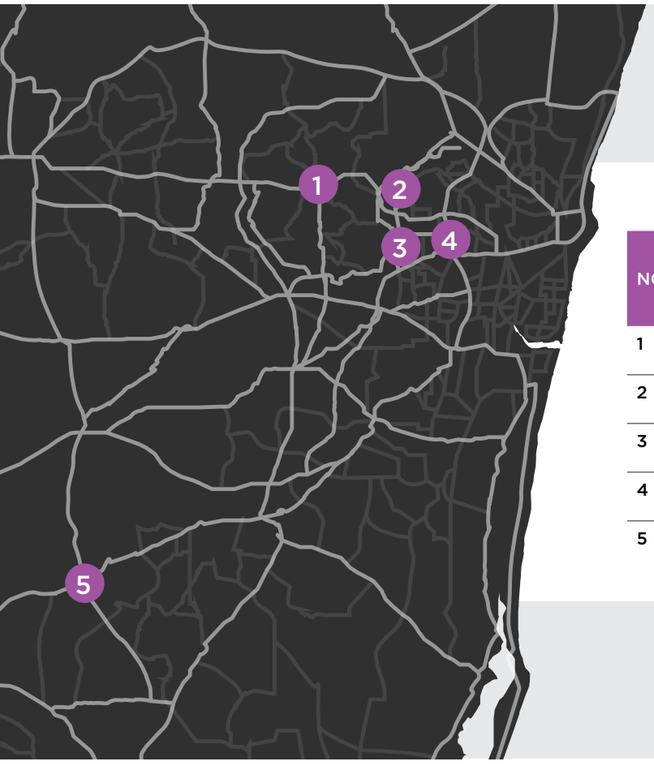
West Chennai launched nearly 16,000 units since 2015 out of which 33% were launched in 2016. Only 3,200 units were launched in 2015 due to catastrophic floods, but supply increased suddenly in 2016. The supply dipped again in 2017 but started reviving immediately after the implementation of RERA.

The region witnessed a gradual decrease in sales since 2015 with the absorption exceeding supply. This has caused the unsold inventory in the region to decrease by around 22% since 2015. As of Q2 2019, the unsold inventory across the western micro-markets was around 6,000 units which are approximately 19% of the units available with city. The supply and absorption levels in West Chennai are expected to rise with the development of major upcoming infrastructure projects.

West Chennai - Supply, Absorption & Unsold Inventory Dynamics



Source: ANAROCK Research



Micro Markets of West Chennai

NO.	AREA	TOTAL SUPPLY	UNSOLD INVENTORY AS OF Q2 2019	PRICE (INR/SQ FT) AS ON Q2 2019
1	**Avadi**	5,300	1,000	3,825
2	**Ambattur**	3,200	700	5,010
3	**Mogappair**	4,000	800	6,100
4	**Anna Nagar**	3,000	600	10,200
5	**Oragadam**	5,900	1,000	3,760

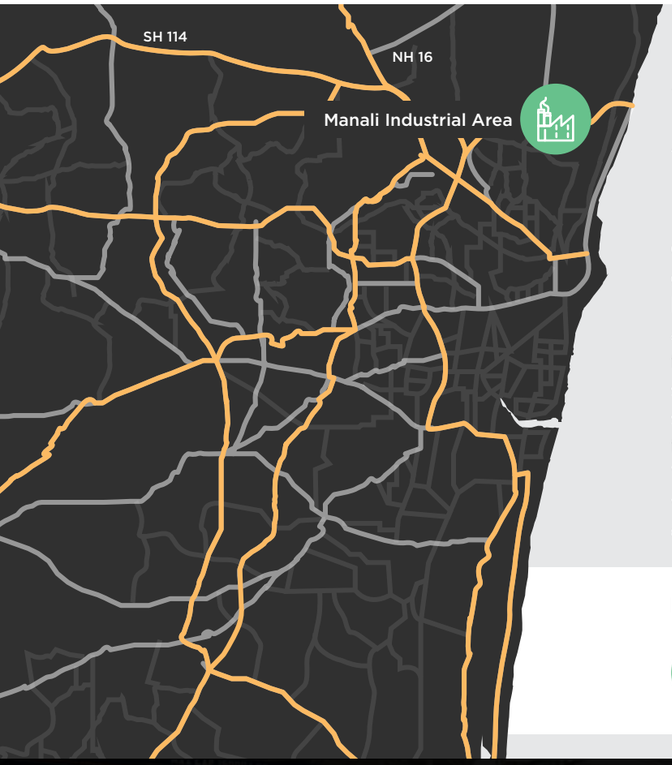
Oragadam, Avadi, Mogappair, Ambattur, and Anna Nagar micro-markets witnessed most of the supply due to the big upcoming infrastructural developments such as Metro Rail, Monorail, and Peripheral Ring Road. Oragadam, Avadi and Ambattur micro markets are major industrial hubs of West Chennai which benefit from phase 2 of metro rail.

The average selling price of properties in Anna Nagar, Mogappair and Ambattur is more than the city average prices due to rich social infrastructure and proximity to Central Chennai. These localities have nearly 2,100 units available for sale as of Q2 2019. Average prices for Oragadam and Avadi were in the range of INR 3,750-3,850/sq ft.





North Chennai



Stagnant Due to Absence of Major Demand Drivers

Chennai port worked as a catalyst for the growth of North Chennai. Port related businesses such as fishing, transportation, and logistics can be easily spotted in the region. But the region's growth has stagnated due to poor infrastructure. The state government has planned many projects to improve the region's connectivity with West and South Chennai. It is expected that with this improved connectivity, the region's economic profile may also improve.

Demand Drivers of South Chennai

Manufacturing Units

Major Roads

> North Chennai has been a prominent location since 16th century due to its proximity to Chennai port. As the city developed, there was a significant change in the economic profile of the region. However, North Chennai's real estate market is stagnant in the absence of demand drivers and poor infrastructure. The region's poor infrastructure failed to attract a variety of industries, but the demand is expected to increase in future owing to the upcoming infrastructure initiatives.



Demand Drivers

Major industrial/IT-ITeS areas across North Chennai:

INDUSTRIAL/ IT PARKS	MICRO MARKET	MAJOR COMPANIES	TYPE OF INDUSTRIES
Manali Industrial Area	Manali	Manali Petrochemicals, Balmer Lawrie, Chennai Petroleum Corporation, Indian Oil Corp, Madras Fertilizers	Petrochemicals

Source: MSME Report on Chennai District, Compiled by Anarock Research

North Chennai's economy is majorly driven by industrial and port-related activities. The region has the presence of two major ports of India - Chennai port and Ennore port. There is one private port as well in the vicinity – Adani Kattupalli port.

A vibrant export-based economy provides opportunity for warehousing in the region. The average rental values for warehousing assets are in the range of INR 15-30/sq ft/month while the same for industrial spaces are in the range of INR 20-35/sq ft/month.

The region also has one industrial area – Manali Industrial Area - which hosts big petrochemical companies such as Manali Petrochemicals, Balmer Lawrie, Chennai Petroleum Corporation, Indian Oil Corp.

These industries set up their bases in North Chennai due to its direct connectivity with ports and other parts of the city. The region has easy connectivity with Central Chennai through railway and metro rail. North line of suburban railway connects Chennai Central to Sullurpeta through Tondiarpet and Ennore.

Commercial spaces in North Chennai are dominated by non IT-ITeS companies and offer only 0.5 million sq ft of office space in the rental range of INR 70-80/sq ft/month.

The recent completion of phase 1 of metro rail improved the region's connectivity significantly with South and West Chennai. Corridor 1 of metro rail starts from Chennai Airport and ends at Washermenpet, benefitting the nearby localities such as Washermenpet and George Town. Corridor 2 of metro rail connects St. Thomas Mount to Chennai Central, running through West Chennai. The corridor runs through Kilpauk and Purasaiwakkam localities in North Chennai.

To reap benefits of the superior economic profile of South and West Chennai, state government planned a couple of projects to improve the region's connectivity. Some of them are as follows:

Outer Ring Road (ORR)

With the completion of remaining stretch from Nemilicherry to Minjur, the project is expected to provide seamless connectivity to North Chennai with West and South Chennai.

Chennai Peripheral Ring Road (CPRR)

The project is expected to connect Poonjeri junction of ECR to Ennore Port, running through Thamaraipakkam, Thatchur and Kattupalli localities of North Chennai.

Metro Rail

Metro corridor 3 is expected to improve North Chennai's connectivity with South Chennai through Central Chennai whereas metro corridor 5 is expected to improve the connectivity through West Chennai. Konnur, Kolathur, Perambur, Madhavaram, and Purasaiwakkam are some of the prominent localities amongst others which are expected to be benefitted with the proposed metro corridors.

Social Infrastructure

Majority of retail establishments of North Chennai are concentrated in the nearby localities of Central Chennai - Purasaiwakkam, Jamalia, Perambur, Kolathur, and Washermenpet. A few are scattered across the other parts of North Chennai. Some of the prominent malls in the vicinity are Abirami Mega Mall, Spectrum Mall, The Grand Venus Mall, and SKLS Galaxy Mall.

Most of the colleges in this region are in the nearby localities of Central Chennai. VEL Tech College, Madras Medical College, Kilpauk Medical College, Sree Muthukumaraswamy College, Thiruthangal Nadar Arts College, Dr. Ambedkar Government Arts College, Tamil Nadu Veterinary and Animal Sciences University, RB Gothi Jain College, and Kumaran Institute of Technology are some of the prominent colleges of North Chennai.

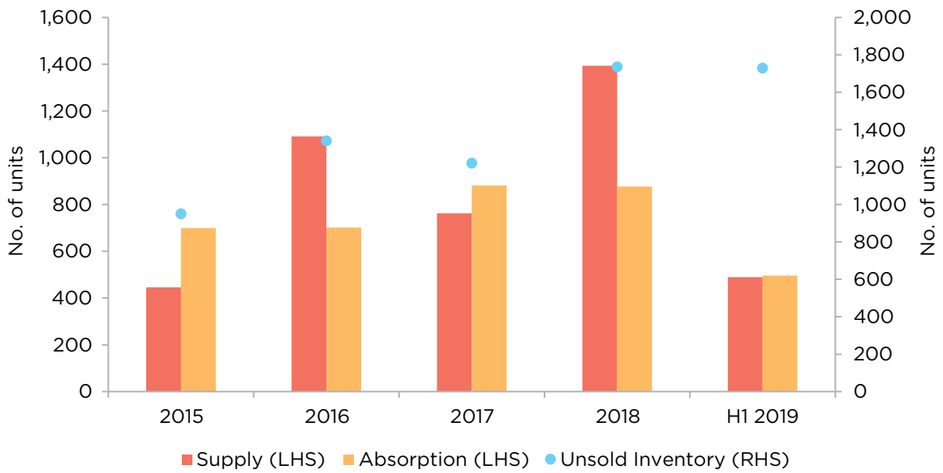
North Chennai also has many small hospitals scattered across the region. Some prominent names are Rajiv Gandhi Government General Hospital, Perambur Railway Hospital, MGM Healthcare, Billroth Hospital, Apollo Hospital, Srinivas Priya Hospital, KVT Speciality Hospital, and Sugam Hospital.

Demand in North Chennai remains Stagnant

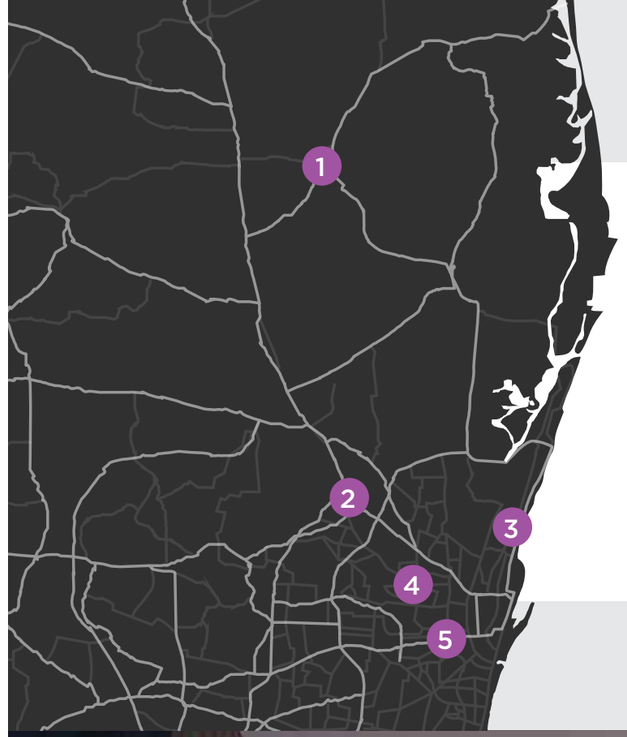
The real estate market of North Chennai has been stagnant due to poor infrastructure and lack of industrial development. Around 4,000 units were launched since 2015 which is 6% of the total launches of the city. The region sold 3,600 units in the last four and a half years which comes around 800 units a year on an average. In comparison, South Chennai sold more than 11,000 units a year on an average.

The market of North Chennai is passive, but new launches have started gaining momentum. As a result of the increase in new launches, the unsold inventory has also peaked in 2018. Unsold inventory increased by 82% in Q2 2019 as compared to 2015 owing to lower base in 2015. Currently, the region has nearly 1,700 units available for sale which is approximately 5% of the total unsold inventory of Chennai.

North Chennai - Supply, Absorption & Unsold Inventory Dynamics



Source: ANAROCK Research



Micro Markets of North Chennai

NO.	AREA	TOTAL SUPPLY	UNSOLD INVENTORY AS OF Q2 2019	PRICE (INR/SQ FT) AS ON Q2 2019
1	**Ponneri**	800	150	3,650
2	**Puzhal**	1,000	200	4,000
3	**Tondiarpet**	750	100	6,050
4	**Perambur**	2,600	550	6,220
5	**Purasawakkam**	1,250	200	7,600

Perambur, Purasawakkam, Puzhal, Ponneri, and Tondiarpet micro markets topped in terms of supply since 2013. Upcoming metro corridors and rich social infrastructure catalyzed the growth of these micro markets. These micro-markets are expected to gain traction in future due to their strategic location.

The average selling price of properties in Purasawakkam, Perambur, and Tondiarpet is more than the city average prices owing to improved connectivity through existing and upcoming metro corridors. All the top five localities combined have nearly 1,200 units available for sale.

LOCATION ATTRACTIVENESS GRID

(On the basis of existing and upcoming infrastructure)

PARAMETERS	SOUTH CHENNAI	WEST CHENNAI	NORTH CHENNAI
Connectivity			
Physical Infrastructure			
Presence of Manufacturing Industry			
Presence of Services Industry			
Retail Establishments			
Healthcare Facilities			
Educational Institutes			
Proposed Infrastructure Initiatives			
Future Employment Opportunities			
Expected Real Estate Growth			

 Good

 Moderate

 Needs Improvement

THE WAY FORWARD

Chennai is poised to continue its growth momentum despite the recent headwinds faced by the automobile sector. Since the economy is not dependent individually on the sector, the services and electronic hardware manufacturing are expected to keep the economy buoyant.

Most of the players across the three sectors have no intention to re-locate or wind-up their operations which depicts that the investments are thought-through and provide the much-required confidence to the citizens and their economic survival. The upcoming developments such as the aerospace park and CBIC are likely to be a major employment driver in the city. This is likely to have a favourable impact on the residential real estate in the city.

The planned and under-development infrastructure initiatives are likely to unlock the latent potential of several emerging localities and create opportunities for further real estate development, across the asset classes. As businesses thrive and expand, we are likely to witness the emergence of newer asset classes in the city. The growing IT-ITeS sector may create a demand for assets such as co-working spaces. This may also lead to the development of rental housing or co-living spaces which may emerge as the newer asset in the coming years.

While the social infrastructure in the city is adequate as of now, education and retail are likely to grow further in the near future as the city widens its contours along the lines of new infrastructure additions.

Over the years, Chennai has grown and expanded embracing expatriates from across the world, but the growth was not spread across evenly on all zones of the city. South and West Chennai witnessed exponential growth led by services and industrial sectors, respectively. With the recent infrastructural developments, North Chennai's connectivity with South and West Chennai improved significantly which may help North Chennai to get much-needed attention. All-in-all, Chennai is surely driven by a diversified economic base and the initiatives to reinforce its future surely look promising.

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