

# “To study the economic achievements and development of resolved through the metro projects of Pune, Maharashtra.”

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## **Abstract:**

India's achievements are in varied sectors, such as agriculture and science and technology. Ideas of good physical infrastructure not only helps in generating employment but ensures sustainable economic growth with the help of high quality technology.

After India's independence, country growth and development is going linearly. As India being an underdeveloped country, we observe that only metro cities like Delhi, Kolkata, and Mumbai amongst others have infrastructure of metro rail. It means Pune Maha-Metro is a very big achievement for India's growth and development. Pune city is known on the world map because of its educational, research and development institutions, IT Parks and automobiles industry in western Maharashtra.

In Pune the population is 6,987,077 in 2022 and 2.63% is the growth rate and people migrating from a different part of the country for job opportunities. However, the sustainable infrastructure to facilitate easy commute to the citizens was missing. Average travel time for citizens using public transport in Pune is over ~100 minutes a day. This makes more and more citizens use their personal vehicle, which causes traffic chaos and congestion issues.

After Prime Minister Narendra Modi inaugurated the Pune Metro services on March 6, the services became operational for the public. Pune Metro is a 12-km stretch of the project with 10 stations. PM Modi is slated to take a ride on the Pune Metro on Sunday from Garware Station to Vanaz to launch operations of the metro rail service.

Maha-Metro is a Special Purpose Vehicle (SPV), a 50:50 jointly owned company of Government of India and Government of Maharashtra.

The Maharashtra Metro Rail Corporation (MahaMetro) has received a safety clearance certificate from commissioner of metro railway safety (CMRS) to run Pune Metro on a 12 km route from Vanaz to Garware College and then to PCMC to Phugewadilines. Here in, Ideas of Pune Metro, will help tackle all these issues: provide comfortable and convenient commute in the city by significantly reducing the travel time by 75%. It will facilitate many youths, students, professionals, etc. travelling to their destination. Metro rail will act as the back bone of the public transport system of the Smart City Project that is the big achievement.

Thus there is a need for a safe, reliable, efficient, affordable, commuter friendly and environmentally sustainable rapid public transport system for the Pune Metro Region.

## **Vision and Mission of metro project:**

### **Mission:**

To provide a safe, reliable, efficient, affordable, commuter friendly and environmentally sustainable rapid public transportation system for Maharashtra Metro Regions (Nagpur & Pune).

### **Vision:**

To create an energy efficient Metro Rail System of International standard, which will enhance the quality of life of the citizens of Nagpur & Pune and be instrumental in the overall development of the city by making it more vibrant and attractive and utilize the full potential of “Green Energy” in the form of solar, wind, etc?

## **Advantages of Metro System:**

- Requires 1/5th energy per passenger km compared to road-based system.
- Causes no air pollution in the city.
- Causes lesser noise level
- Occupies no road space, if underground and only about 2 metres width of the road, if elevated.
- Carries same amount of traffic as 5 lanes of bus traffic or 12 lanes of private motor cars (either way), if it is a light capacity system.
- Is more reliable, comfortable and safer than road based system

- Reduces journey time by anything between 50% and 75% depending on road conditions.

#### **Objective:**

To study the ideas of Pune metro project.  
 To study how metro rail project contributed in economy.  
 To help in transportation of Pune citizen.  
 To evaluate the achievements of metro rail till June 2022

#### **Hypothesis:**

- The Ideas of Pune metro rail will be helpful in changing the Pune city.
- Metro is going to be cheapest, fastest and safest way for commutation and Punekar's standard of life shall improve.

#### **Research Methodology:**

Primary and Secondary data has been taken from internet, related books, Newspaper etc.

#### **Importance:**

- Metro Rail Project is a very good for Pune population (students, youth, entrepreneurs, men-women's).
- Metro rail is helpful in reducing the burden road transportation.
- This is very big achievement for Pune growth and development.

#### **Limitation:**

This study is only applicable for Pune city.

#### **Data Observation:**

##### **Employment:**

Metro rail project is providing large number of employment in form of different post. Like manager, contractors, contractor and sub-contractors providing job to labour on contract base, this labour force come from different area of state in India.

Contractors and sub-contractors they complete their tasks/job within the given period of time. According to getting information during covid-19 near 6500 labours enrolled and completed their vaccinations, it means minimum 6500 labour force worked in the maha-metro project. It huge employment generated by maha-metro project. Project employed over 4500 workers at its numerous sites, during covid-19 while the project employed over 4500 workers at its numerous sites, now only 1040 workers have stayed back; it means the labours went back home to their state, contractors are desperately trying to rope in fresh lots of labourers from north India.

##### **Economy:**

The total cost of the Pune metro project is over Rs. 11,400 crores. The PM had laid the foundation stone for the project on December 24, 2016.

The work on the Pune Metro project which started in December 2016 was delayed owing to the Covid-19 pandemic. The Pune Metro project is funded through a bilateral loan from the European Investment Bank to the tune of 600 million and 245 million from AFD.

##### **Development:**

India, after independence is trying to resolve lots of problems of various sectors as well as trying to achieve growth and development in various sectors like agriculture, industry and services sectors. In agriculture sectors there are revolutions like green revolutions 1965, white- milk revolution, blue-fish revolution etc. India in 1991 accepted the globalisation, privatisation and industrialisation with free trade policy.

Now India's at 75 after independent, is making and running lots of govt. policies like Atmanirbhar Bharat. For the economic development, government started Atmanirbhar Bharat to give financial support to domestic ventures, encouraging small entrepreneurs to produce goods and service within the country. For that fast transportation and good infrastructure is needed. During the pandemic, as a nation, India has shown the entire world its reliability and capability to deal with extreme adversities. India has not only started the world's largest self-made vaccination drive, but it is also exporting it to many other countries. Pune is quite developed, now it is needed fast transportation, which is helpful for small entrepreneurs, students, youths, men, women and all type of population. Maha-metro rail project is very good idea, action and achievement and it is solving many problems.

The central government is focusing on improving mass transportation, including the metro rail connectivity, Prime Minister Narendra Modi said after inaugurating a metro project in Pune city of Maharashtra. The study area has been taken as the area comprising the present Pune Corporation (PMC), Pimpri Chinchwad Municipal Corporation (PCMC) and both the cantonment areas namely Pune and Khadki. The study area also includes the Hinjewadi and surrounding areas where the IT Parks are coming up.

Following table shows metro rail strengths on various parameters

Parameters	Existing	With Metro
Traffic Congestion	Bumper to Bumper Traffic visible on several roads in peak hours.	Commuters will get diverted to Metro reducing the congestion on roads.
Pollution	Air Quality of the city is going down.	Will improve as the no of vehicles on road will go down.
Road Accidents	Notably high due to higher no of vehicles on road.	Will drastically reduce as the congestion on road will reduce.
Convenience	Not very convenient due to traffic jams, bad roads, traffic signals, etc.	Very convenient as the mode is highly comfortable, reliable and timely.
Weather Extremities	Do affect the driver of individual vehicles causing discomforts.	Provides a comfortable and distraction-free movement.
Travel Time	Is excessive due to traffic congestions and traffic signals.	Will reduce the travel time by around 50%.
Cost	Is high due to high fuel consumption & high fuel cost & more running time due to traffic congestion.	Will be much less as compared to cost of running individual vehicles.
Energy Saving	Uses Fossil fuels and has high energy consumption.	Uses around only 1/5th of energy as compared to Road Transport

The very objective of constructing the metro rail system to provide an affordable mode of mass travel for public is defeated. Decreased air pollution and reduce in the number of road accidents. With projected increase in the population of the city strengthening and augmenting of transport infrastructure has assumed urgency. Because of Maha-Metro Pune will improve as the no of vehicles on road will go down. This will drastically reduce the congestion on road.

#### **Status of Education:**

Pune city is a quite develop for education, many colleges are developed. according to census 2011, average literacy in Pune is 86.15 and male literacy is 90.84 and female literacy is 81.05, it means highly literacy rate, students are very much interested to getting admission to the college, maha-metro rail travel those area which is covered many college in Pune city.

#### **CONCLUSIONS AND RECOMMENDATIONS:**

Pune city is known in the world map because of its educational, research and development institutions, IT Parks and automobiles industry in western Maharashtra. Automatically stress comes on infrastructure, transportation etc. So the Maha – metro rail project is very excellent achievement for Pune city and citizen.

Most of the population is youth which includes college going students, school students who are under the poverty line, so this can be affordable /economical charge for them.

After independence, Maha- Metro rail is very good opportunity for Pune city's growth and development.

Pune has witnessed enormous industrial growth during the last 30 years. Rapid urbanization in the recent past has put the city's travel infrastructure to stress.

Being highly populated area, Pune's traffic needs cannot be met by only road-based system. The existing urban transport system of Pune City which is road-based has already come under stress leading to longer travel time. Commuters will get diverted to Metro reducing the congestion on roads.

It's really a good achievement happened on 6th march 22, inauguration was done by PM modi. Metro started and helps to students in nearby areas of S.P. College, Garaware College, and SNTD College etc. by providing economical and safe travel.

Studies have brought out that a Medium Metro with carrying capacity of about 25,000 people will be adequate to meet not only the traffic needs for the present but for the future 30 to 40 years also.

Not yet getting the statically data of exactly travelled population by metro train. After completion metro project then getting the exact information about contributes in the Indian economy, right now getting the information how it will be developed and plan.

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