



INDIAN RAILWAY

MUMBAI LOCAL TRAIN TICKETS**ROLL NO. -14****DIXIT JAIN****9/20/2021**

Mumbai is the financial and commercial capital of India. Mumbai wouldn't have achieved this without the lifeline of the city –its local trains. For any large densely populated urban area, the local trains are essential for a speedy cross-over of a large population over long distances. Lakhs of people travel regularly and commute by local trains over varying distances ranging from 10 to 60 kilometer a day. The Mumbai local railway network branches out through three main lines – Central, Western and the Harbor, each connecting a distinct part of the city to another. Most commuters use this means of transport to reach the places of their job, profession, business and educational purposes. Most travelers commuting on a daily basis hold season passes that makes the local train travel even more cost-efficient. . The online survey tried to capture the various aspects of suburban local train travelers in terms of number of family members travelling by the local trains, the purpose of their travel, average distances covered and number of hours spent per day, number of years travelled by the local trains, extent of socialization that takes place among the regular commuters, the safety and security aspects and provisions for any kind of emergencies that arise in the regular train travel. Around 22 students' respondents were covered in the online survey. The recent initiatives to ease out the pressure on the suburban local trains and the possibilities of alternative modes of speedy transport for the regular commuters of Mumbai also have been analyzed in this paper.

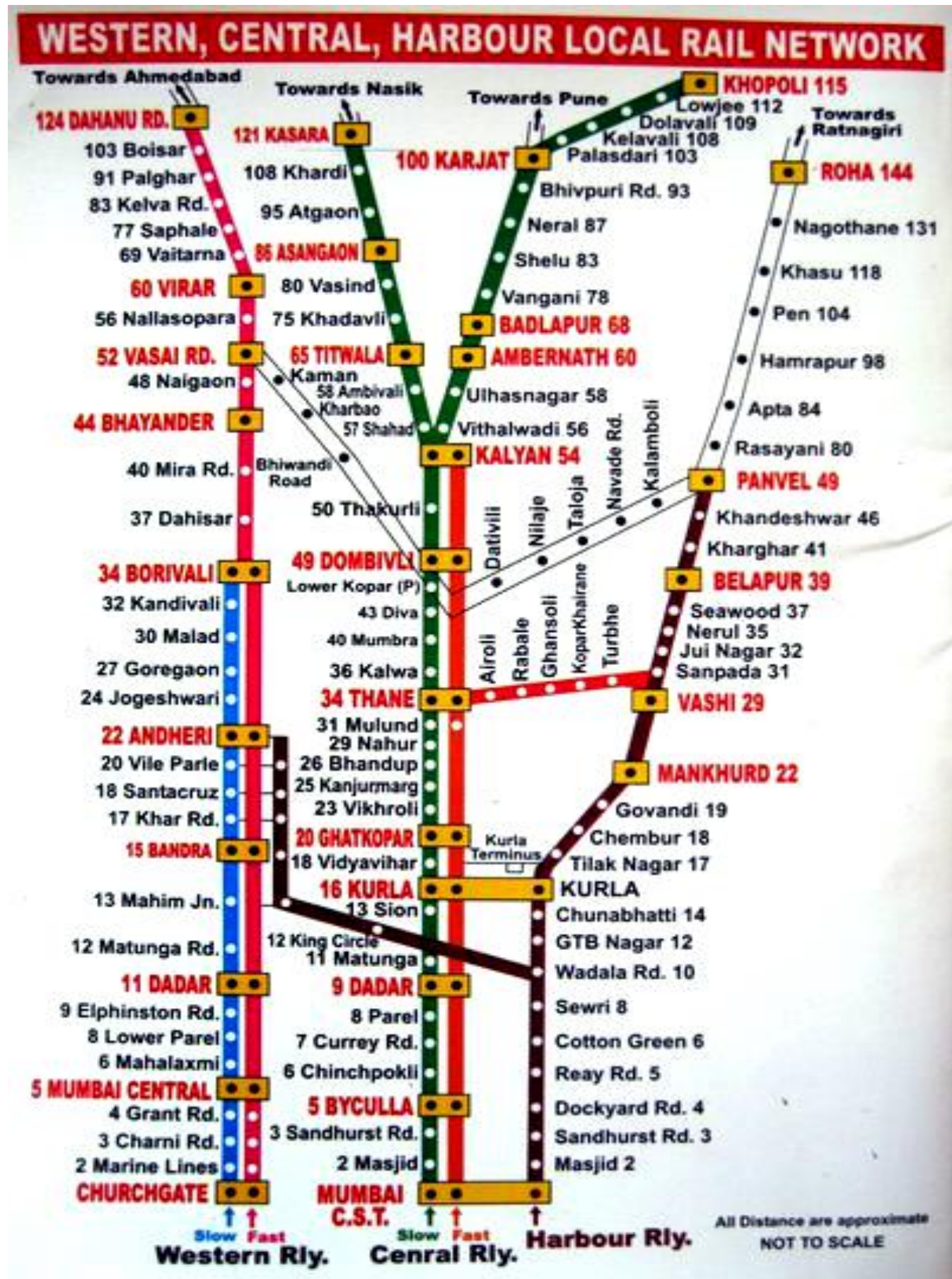
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INTRODUCTION



Mumbai is the financial capital in India. It is situated in the state of Maharashtra and is connected internally and externally by roadways, railways and airways. Mumbai is an island city in which 88% of the people travel by the local trains. The first train in Mumbai ran from Chatrapati Shivaji Terminus (CST) to Thane on 16th The Mumbai Suburban Railway branches out into three lines, the Central, Western and the Harbor. The Central local train network connects Mumbai CST in South Mumbai to distant suburbs of Kasara and Karjat, Khopoli. The Western railway, covers the areas from Churchgate to Virar, carries about 2.6 million Passengers per day which is almost 33% of the total suburban Railway traffic. The Harbor line runs between CST and Panvel and CST- Andheri April 1863. It covered a distance of about 34 kilometers and took about 1 hour and 15 minutes. The Mumbai railway is about 150 years old and it caters to the transport requirement of a population of about 22 million every day. The south Mumbai Fort area is the down town of the city and all the major Government offices, Secretariats, bank headquarters, corporate offices are located in that area. Due to extremely high real estate prices, people have no option but to stay in the distant suburbs of Mumbai and travel long distances to reach their work places in south Mumbai daily. **But this survey and report is conducted and made is according to keeping in mind the new rules and regulations after the pandemic outbreak. And has been analyzed on the basis of the majority of teenagers who are students, amid covid outbreak situation and lockdown updates**



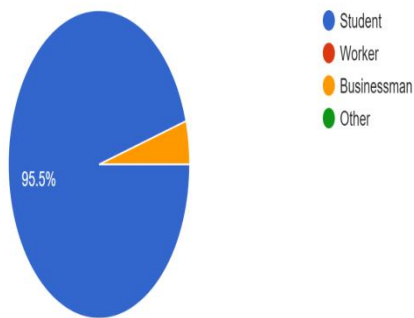
• METHODOLOGY

This our data of our sample population based on our online survey conducted amongst students

The graphs include the income, travelling status, vaccination status and occupation of a total of 22 responses

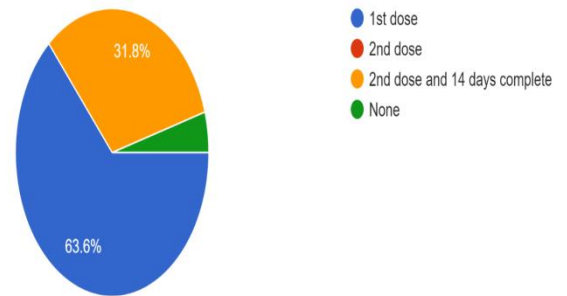
Occupation of the consumer

22 responses



Your vaccination status

22 responses

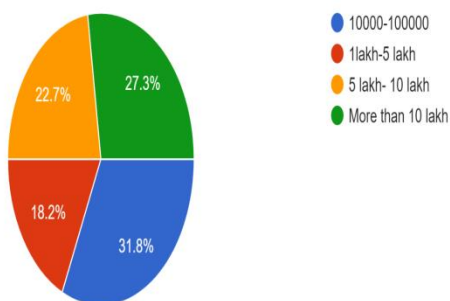


Occupation-

The one response of the businessman is an outlier

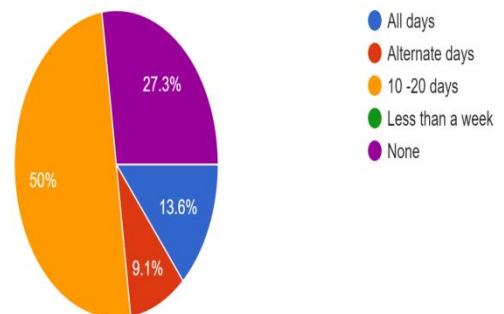
Annual Income of the consumer ?

22 responses



how frequently are you travelling in trains per year?

22 responses



- **PRODUCT ANALYSIS**

- Type of good – it is a public good and an inferior good due to its low price and abundance
- Features of local trains - Mumbai's local trains are in many ways a defining feature of the city. There is almost no one who has lived in the city, who has not travelled by the local trains. While most of the inhabitants gripe and grumble about the train service, everyone appreciates how impossible life would be without it, some of its features are

1. Part of a Rich Legacy
2. Size of the Rail Network
3. Scale of Train Services
4. Managing the Impossible
5. No down Time
6. The Local Network Includes 4 Corridors
7. Remarkable Frequency
8. Seating in Locals
9. Part of Mumbai's Food Supply-Chain
10. Symbol of Mumbai's Resilience
11. Accessible to Rich and Poor
12. First class compartment
13. Overcrowding and Overflowing
14. Mortalities from Train Travel
15. Types of Train Services

- Pricing – this varies as per the requirement of the consumer , if the consumption is just for a round trip ticket and not a pass then the pricing is as follows

Fare for 10kms is 10rs (one round trip)

For 25 kms is 20 rs

More than 50 kms is 20rs

More than 100kms is 40rs

More than 200kms is 75rs

If it's for seasonal pass as it's feasible for most of the students and people going for jobs

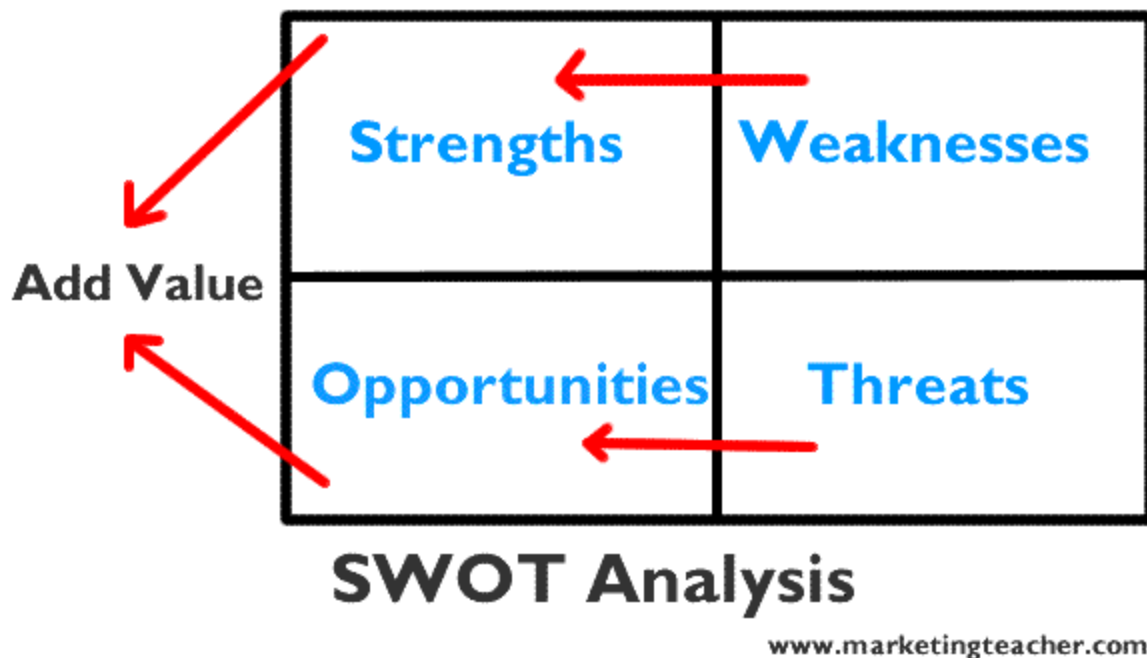
The monthly pass on the AC local train will cost (from Churchgate) between ₹570 (US\$8.00) (till Mumbai Central) to ₹820 (US\$11) (till Bandra) to ₹1,235 (US\$17) (till Andheri) to ₹1,635 (US\$23) (till Borivali) to ₹1,740 (US\$24) (till Bhayander) to ₹1,970 (US\$28) (till Vasai Road) to ₹2,035 (US\$29) (till Virar)

And the platform tickets costs rs 5.

- Utility - as many as 30 lakh people on an average travelled in Mumbai local trains per day in August, said Indian Railways officials. This is less than half of the size of pre-COVID commuters. On an average the daily passengers in Mumbai locals were 80 lakh in pre-COVID times (Before March 2020).

SWOT ANALYSIS

SWOT analysis of Indian Railways analyses the brand by its strengths, weaknesses, opportunities & threats.



Railways Strengths –

Availability of abundant low cost land near stations provides possibility for development
 less damage of goods compared to other modes of transport
 Better connectivity across the length and breadth of India
 More carrying capacity. Largest commercial employer with almost 1.5 million staff

Railways Weaknesses-

Accidents and delays cause a dent to the image
 Facilities not comparable to international standards still

Railways Opportunities-

It's 70% of revenue and most of its profits comes from freight sector and there is a tremendous growth in emerging companies, hence has a great future for freight sector. Operating ratio has been decreasing drastically in last 2 years

Railways Threats-

Increase in allowable gross weight of road vehicles
 possible introduction of double road trailers
 High accident rates

- Reasons people travel in train over other substitutes is classified in our survey through a table

Why do you select trains over metro and uber or ola?

I don't

It is cheaper than uber or ola

It's cheaper and faster

No specific reason

Cheaper for long distances

Trains are relatively faster and lower in price.

They are fast

They are convenient, cheap and less time consuming

Less time n more travel and no traffic

Less availability of metro stations and higher prices for uber and ola

Station close to home

No

I don't

In order to avoid traffic

I don't

more frequency, saves time

N/A

I don't.

I don't select trains due to its inconvenience when compared to the two.

ac and convience

Cheap

Cause they are comfortable

- DEMAND FOR THE PRODUCT**

NOTE- As we know we had a total of 22 responses out of which 1 is outlier of one businessman and others are students

And since all are students the average no. Of tickets bought is 2 per student daily

We do not include seasonal pass to avoid variance

Fare for 10kms is 10rs (one round trip)

For 25 kms is 20 rs

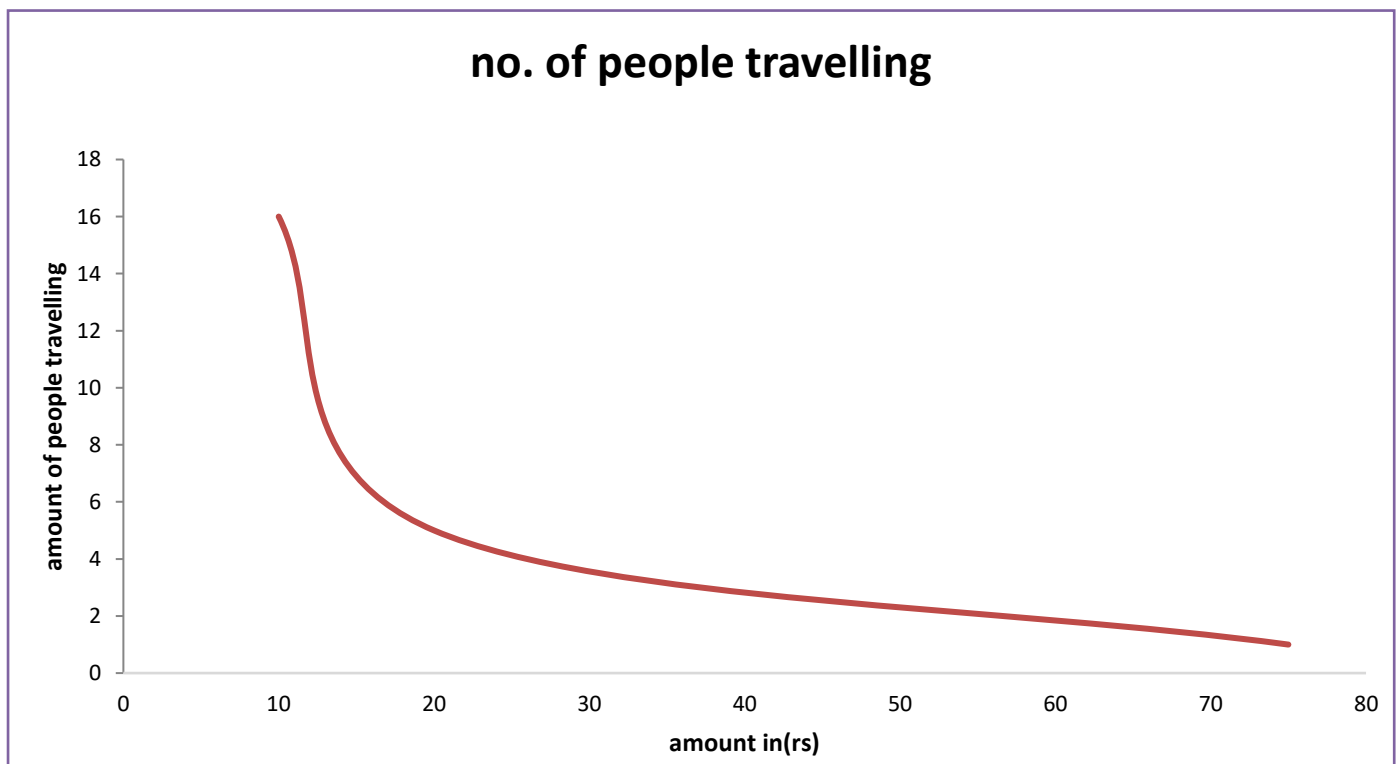
More than 50 kms is 20rs

More than 100kms is 40rs

More than 200kms is 75rs

DEMAND SCHEDULE

Aggregate daily market demand for local train tickets	
Amount (in ₹)	no. of people travelling
10	16
20	5
75	1

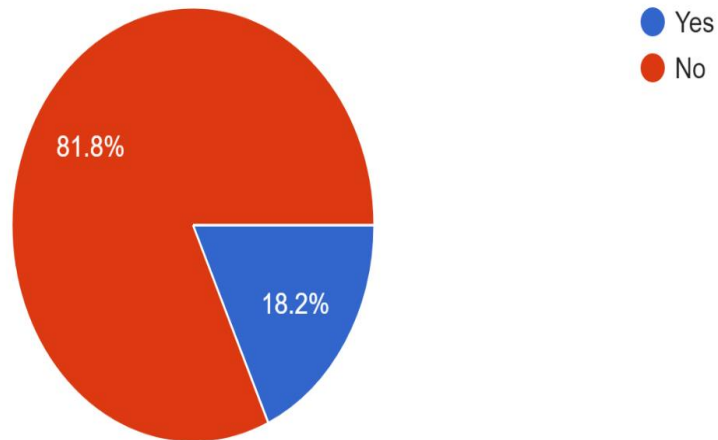


This data and graph is according to a small survey and data, so you see elastic demand but we know either ways we don't see a decrease or increase in demand as per our other survey.

If prices of tickets decreases then will you increase your frequency of travelling?	If prices of tickets increases then will you decrease your frequency of travelling?
No	No
No	No
No	No
No	No
No	It will be same
No	Train is still relatively feasible compared to other means of transport
No	No
Yes	Depends
Yes	Yes
No	No
No	Yes
Yes	No
No	Yes
No	No
No	No
No	No
No	No
No	No
Yes	No
No	No
No	No
No	No

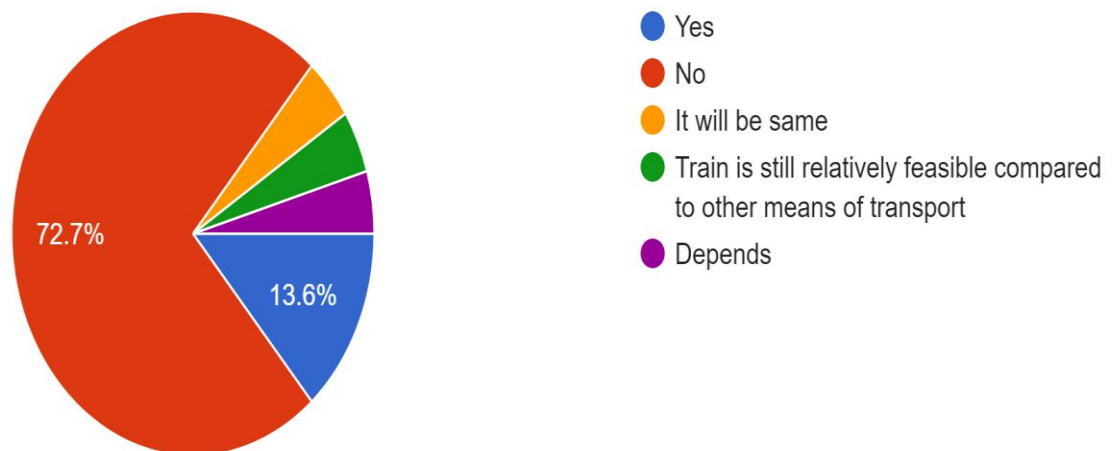
If prices of tickets decreases , then will you increase your frequency of travelling?

22 responses



If prices of tickets increases , then will you decrease your frequency of travelling?

22 responses



- **INDUSTRY ANALYSIS**

This is according to the new market conditions amid coronavirus

After covid outbreak, the local trains had restarted in July with only about 45% of the estimated passenger traffic. The footfall of essential workforce has increased since. Entry is given at stations strictly through ID cards of essential staff, as identified by the State Government. The government has also introduced a QR code reader at the Chhatrapati Shivaji Maharaj Terminus (CSMT) and 14 suburban railway stations. *The process of issuing passes began on Wednesday after the Maharashtra government allowed those who have taken two doses of coronavirus vaccines to travel by local trains from August 15.* As many as 17,759 monthly passes for travel by local trains were issued in Mumbai on Wednesday after verification, the Brihanmumbai Municipal Corporation (BMC) said.

As shown earlier the average amount of people travelling in local train was around 30 lakhs, but this month it rose to 40 lakhs for the first in one year.

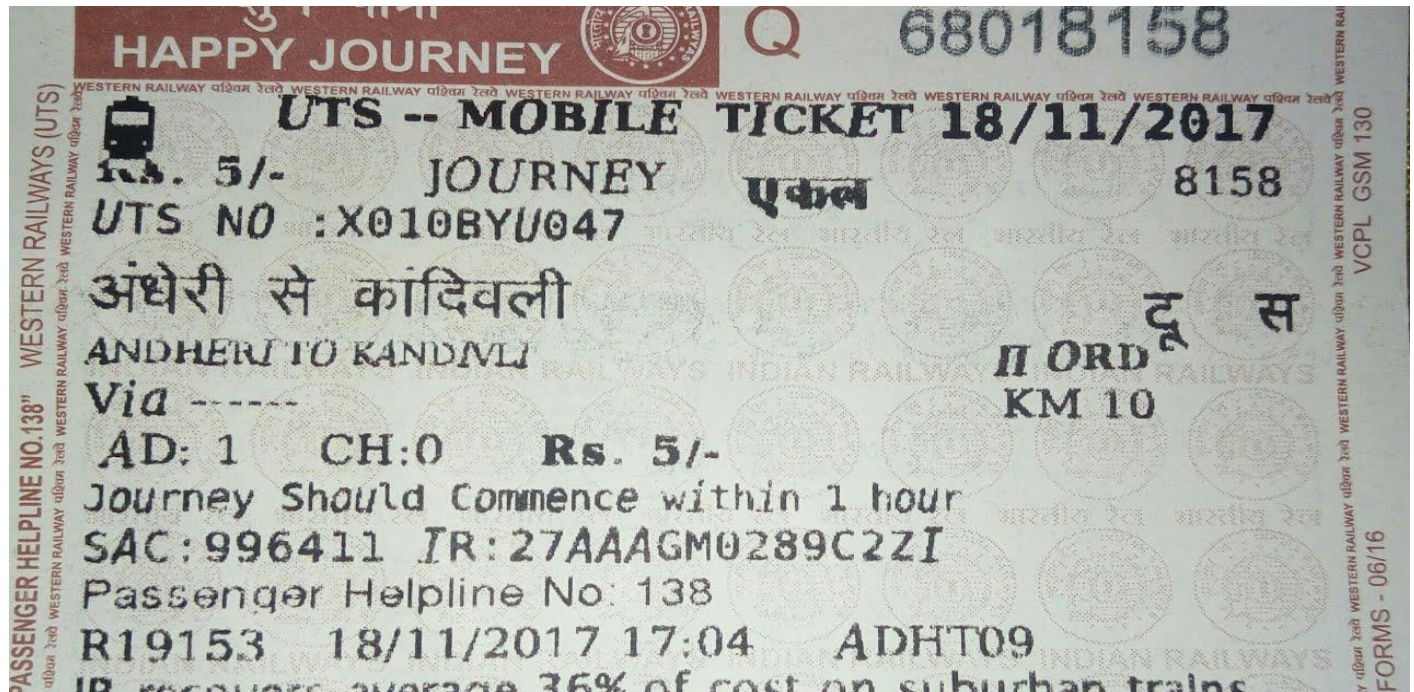
Economic indicators - the GDP had drastically fallen after the shutdown in March 2020 until the relaxations in March 2021

Unemployment also had a drastic fall

Inflation did not cause any effect on local trains demand or supply

Tax- there is no tax applied to local train tickets, it can be counted as subsidy.

- **SUPPLY OF THE PRODUCT**



A TOTAL OF 146 STATIONS ARE THERE IN MAHARASHTRA UNDER LOCAL TRAINS SECTOR

And at each and every station tickets are available in abundance. There is no scarcity of the product.

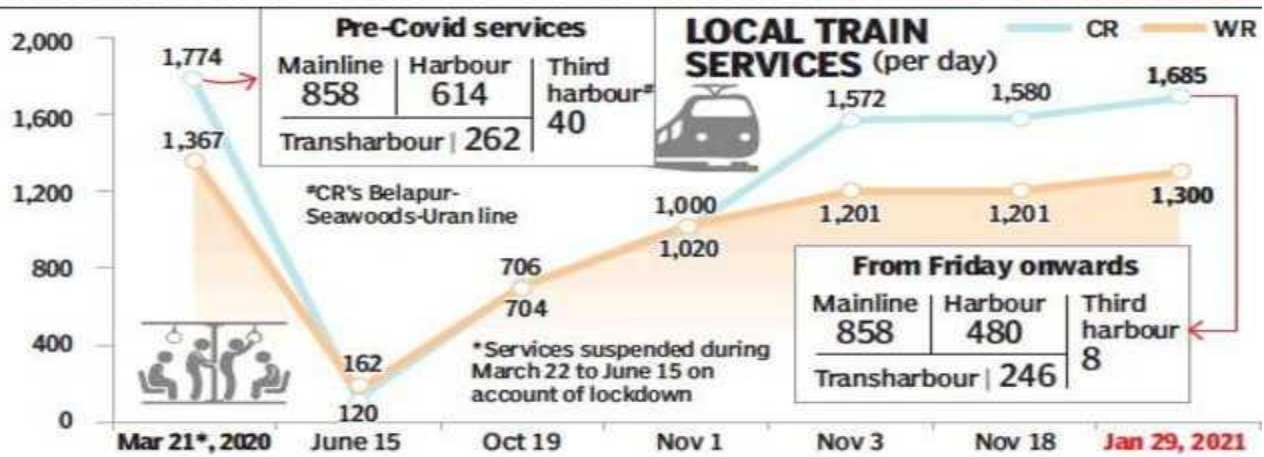
AVAILABILITY OF SUBSTITUTES

- Metro (not widely abundant)
- Indian railways are also used to drop off at local stations(rarely)
- Bus
- ola uber

But in a nutshell Mumbai local trains are only replaced by Metro trains. But Metro's are designed for shorter distance and lower passenger density. Metro is merely a smaller version of the local train with air conditioning.

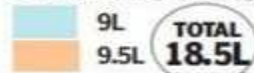
There is no complimentary to local train tickets, vaccines can be a complimentary but it's free.

RIDERSHIP STILL LESS THAN 4TH OF NORMAL



RIDERSHIP CR WR

Current daily average



Pre-Covid daily average



PERMITTED PASSENGERS

■ All women during off-peak hours |
Essential workers | Govt and bank
employees | Health workers | Lawyers |
Teachers | Employees of local bodies in
MMR | Staff of foreign consulates |
MbPT employees | Raj Bhavan staff |
Aircraft maintenance staff



DAILY PASSENGER COUNT

Pre-pandemic
time

75-80 lakh

Current
passenger count

38-40 lakh

Current passenger
count on CR

21-22 lakh

Current passenger
count on WR

17-18 lakh

23,794 Average of Monthly Season
Tickets (MSTs) sold daily



- **PRICE ELASTICITY**

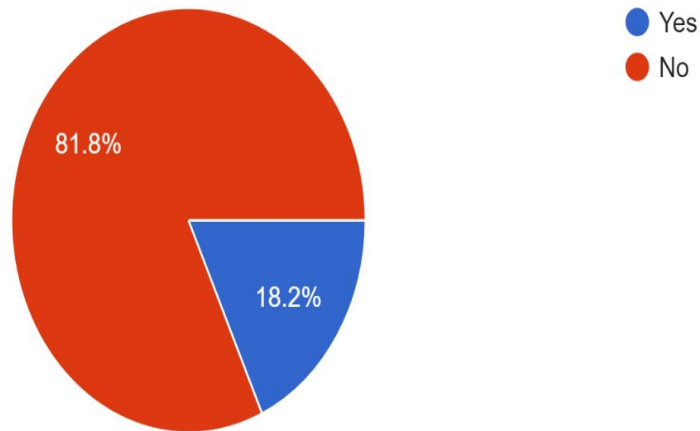
According to our survey which is amongst students we get to about the price elasticity of the product

This data and graph is according to a small survey and data, so you see elastic demand but we know either ways we don't see a decrease or increase in demand as per our other survey.

If prices of tickets decreases, then will you increase your frequency of travelling?	If prices of tickets increases then will you decrease your frequency of travelling?
No	No
No	No
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No	It will be same
No	Train is still relatively feasible compared to other means of transport
No	No
Yes	Depends
Yes	Yes
No	No
No	Yes
Yes	No
No	Yes
No	No
No	No
No	No
No	No
No	No
Yes	No
No	No
No	No
No	No

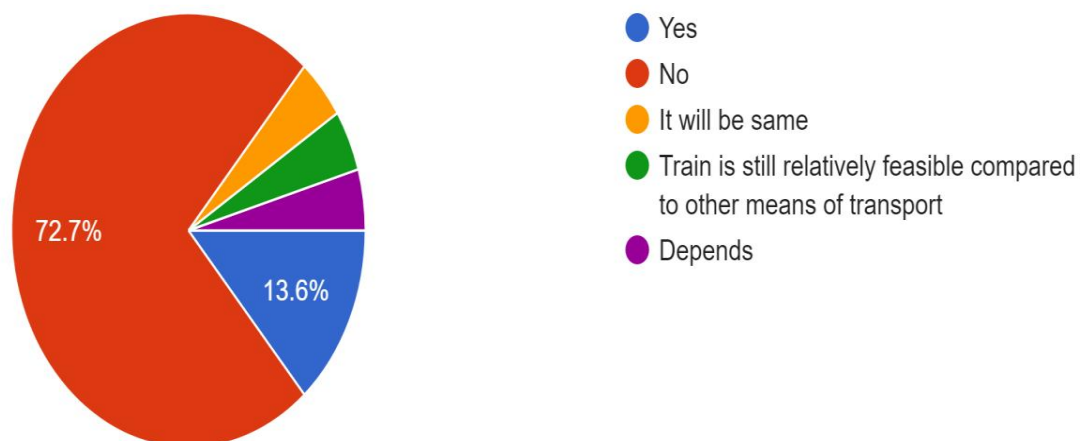
If prices of tickets decreases , then will you increase your frequency of travelling?

22 responses



If prices of tickets increases , then will you decrease your frequency of travelling?

22 responses



• INCOME ELASTICITY

Annual Income of the consumer

10000-100000

10000-100000

More than 10 lakh

10000-100000

More than 10 lakh

10000-100000

10000-100000

10000-100000

1lakh-5 lakh

5 lakh- 10 lakh

1lakh-5 lakh

5 lakh- 10 lakh

5 lakh- 10 lakh

10000-100000

More than 10 lakh

More than 10 lakh

5 lakh- 10 lakh

More than 10 lakh

5 lakh- 10 lakh

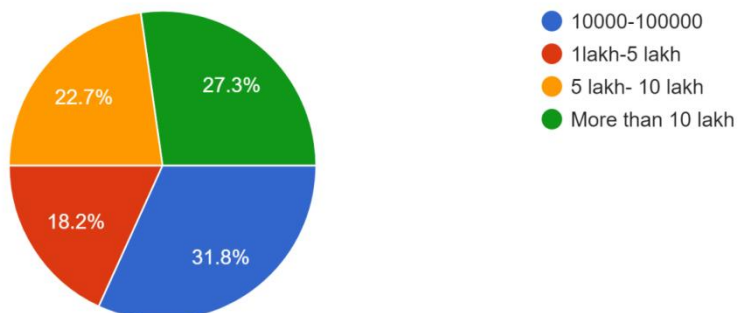
1lakh-5 lakh

1lakh-5 lakh

More than 10 lakh

Annual Income of the consumer ?

22 responses



There is no impact of the consumer impact on demand and supply on the product, as the demand and supply are inelastic (excluding the unforeseen circumstances eg. [Coronavirus outbreak](#))

THIS PRODUCT HAS ZERO INCOME ELASTICITY

IT ACT AS AN NECESSARY GOOD, EVEN IF THE THE INCOME CHANGES THERE WONT BE ANY CHANGE IN THE DEMAND OF THE PRODUCT

- **CROSS ELASTICITY**

Following are the substitutes of Mumbai local trains

1. Metro (not widely abundant)
2. Indian railways are also used to drop off at local stations(rarely)
3. Bus
4. ola uber
5. in this covid time personal vehicle can also be considered as substitute

What do you prefer in this pandemic as mean of transport?

Uber or ola

Personal vehicle

Personal vehicle

Personal vehicle

Personal vehicle

Uber or ola

Personal vehicle

Personal vehicle

Personal vehicle

Personal vehicle

Train

Personal vehicle

Personal vehicle

Personal vehicle

Personal vehicle

Personal vehicle

Personal vehicle

Personal vehicle

Personal vehicle

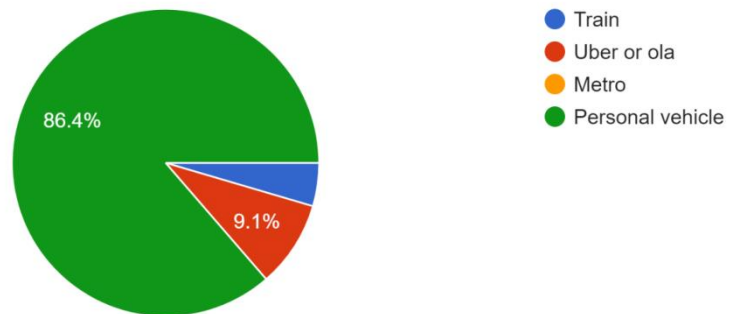
Personal vehicle

Personal vehicle

Personal vehicle

What do you prefer in this pandemic as mean of transport?

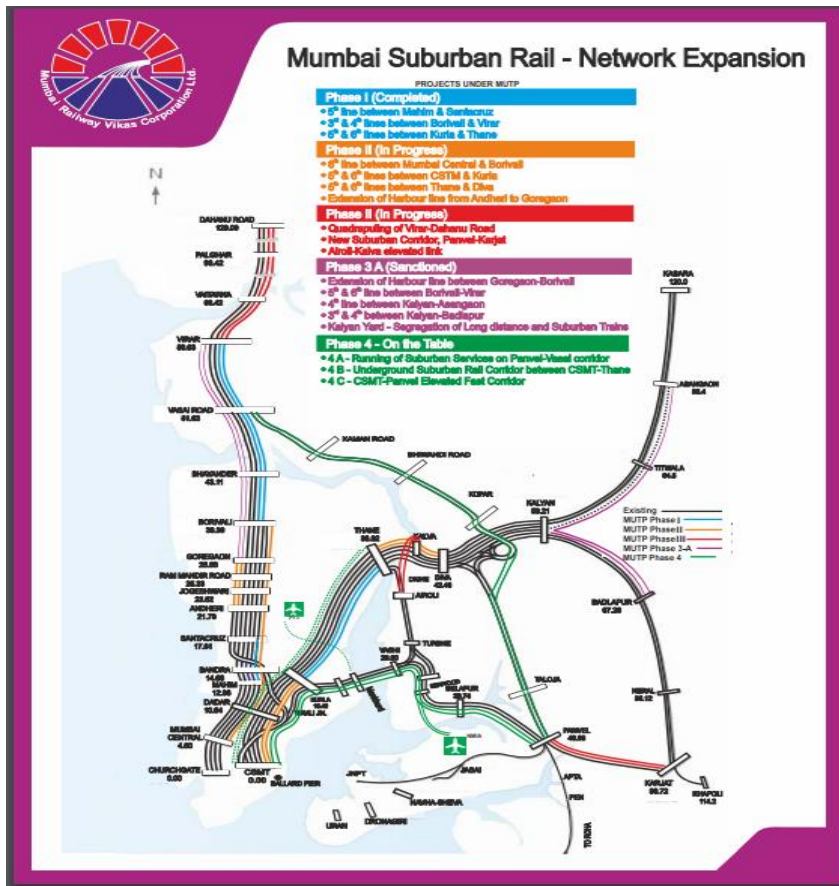
22 responses



There is positive cross elasticity amongst the substitute, but a price change in local trains would not increase or decrease in demand of its substitute except metro. (This is due to the pandemic outbreak)

• EXTRA INFORMATION

There has been a new extension plan in Mumbai local trains; here is map of the new plan that is in motion which will increase the footfall and supply of tickets.



• GRAPHS OF ALL FINDINGS IN THE SURVEY

LINEAR REGRESSION

Linear regression cannot be conducted due to the small data, instead the factors are explained theoretically.

Rate these factors as per your requirement that triggers to prioritize trains over metro and cabs (1- low and 5- being the highest)

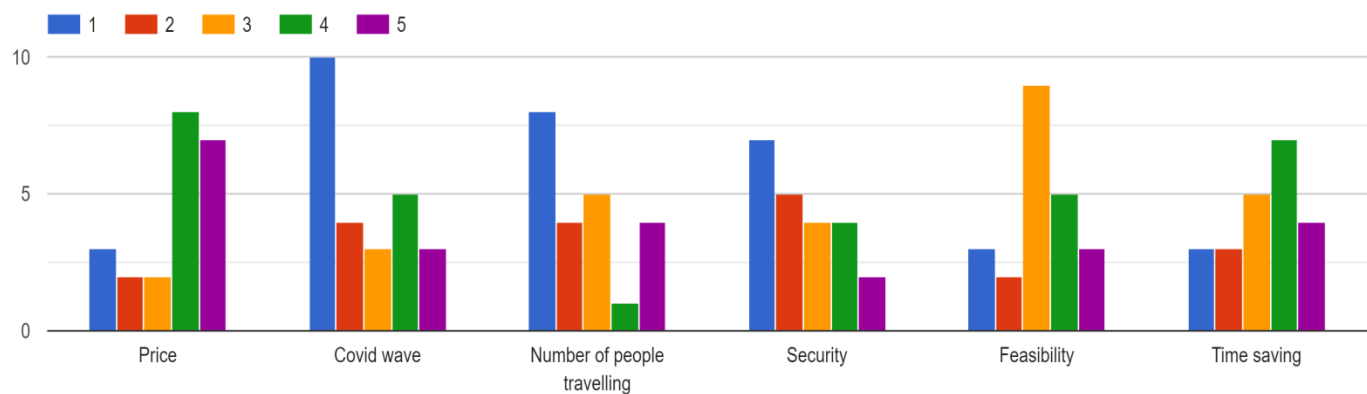
	[Price]	[Covid wave]	[Number of people travelling]	[Security]	[Feasibility]	[Time saving]
	5	1	1	1	3	3
	1	3	3	3	2	1
	4	4	2	2	3	4
	2	4	5	2	3	3

	4	1	1	1	2	3
	5	5	3	3	5	5
	1	1	1	1	1	1
	4	2	2	2	3	4
	4	3	3	4	4	4
	4	1	3	2	3	3
	3	1	1	1	4	4
	4	2	1	1	1	2
	4	3	3	4	4	5
	5	2	2	5	5	5
	5	1	4	3	3	4
	2	4	5	3	3	2
	5	1	1	2	4	4
	4	1	5	4	3	3
	5	1	1	1	3	2
	3	2	2	4	4	4
	1	1	1	1	1	1
	5	5	5	5	5	5
AVERAGE	3.63636364	2.227273	2.5	2.5	3.13636364	3.272727

THE AVERAGE RATING IN EACH OF THE TRIGGERS IS IN THE RANGE OF 2.2 TO 3.7

WE CAN SAY THAT THE TRIGGERS INFLUENCE THEIR CHOICES MODERATELY

rate these factors as per your requirement that triggers to prioritize trains over metro and cabs? (1- low and 5- being the highest)



- **CONCLUSION**

As we know that the current Government policy says that only passes to be issued between just two stations

SUGGESTION- according to the online survey if the board decides to issue usual tickets this would decrease the use personal vehicles and cab services. And also expand its accessibility.

LEARNINGS – this shows that how important is local trains to the people of Mumbai for fast travel and feasibility pre covid and post covid. It is like a necessity for travelling.

LIMITATIONS – even now many parts of Mumbai and Maharashtra do not have the advantage of local trains. .and you cannot increase its prices because the majority of people travelling are middle class and below the line people.

FURTHER SCOPE- Private Companies could run Mumbai's local trains in future

Days after the Centre proposed introducing private passenger train operators, the Indian Railways is studying the possibility of procuring 257 air-conditioned local trains that could be wet-leased for the Mumbai region.

80 lakh daily commuters in the city as the Indian Railways have begun working towards increasing the speed of trains to 110 kmph. This will give scope to add 20% more services to the existing system. Central Railway will increase its suburban services from the existing 1,580 to 1,685 services while Western Railway has decided to increase the existing 1,201 suburban services to 1,300 services

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- Mbaskool(April 12th,2020) swot analysis collected available at <https://www.mbaskool.com/brandguide/transport-and-logistics/3342-indian-railways.html>
- Money control(August 12th , 2021) market analysis collected from money control available at <https://www.moneycontrol.com/news/trends/current-affairs-trends/over-17000-passes-issued-for-mumbai-local-trains-on-first-day-7320531.html>
- Ozarkar Vallabh (September 12 ,2021) rules and regulations for local trains collected from Indian express available at <https://indianexpress.com/article/explained/explained-rules-for-travelling-by-mumbai-local-trains-monthly-passes-7456452/>