

# Lockdowns have lowered mobility in India

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The increase in caseload of covid infections has led to several versions of lockdowns in different states. India today is the country which has had the second highest level of cases since the pandemic started. The daily addition at around 400,000 is the highest in the world. The idea of a lockdown is to restrict the movement of people in their locations so that the infection does not spread. This leads to lower probability of transmission. How can one gauge whether these lockdowns have worked in terms of their impact on movement? This is important because the economy for sure is pushed back on this score and from a policy perspective the government must analyze whether lockdowns stop people from moving around.

One indicator here is the google mobility indicator which collects data from various related applications and provides clues on whether mobility has decreased or not. The Google Community Mobility Report aims to provide insights into what has changed in response to policies aimed at combating COVID-19. The reports chart movement trends over time by geography, across different categories of places such as retail and recreation, groceries and pharmacies, parks, transit stations, workplaces, and residential. The data shows how visitors to (or time spent in) categorized places change compared to the baseline days. A baseline day represents a normal value for that day of the week. The baseline day is the median value from the 5 week period Jan 3 – Feb 6, 2020. How effective have these policies been in reducing human movement? What impact has it had on how people across the world work; live; and where they visit?

Insights can be gotten from this data which is based on anonymized information provided by apps such as Google Maps. Updated datasets are provided daily which show how people movements have changed throughout the pandemic.

The analysis is in three parts:

1. First part looks at May 5th, 2021 and then compares how mobility has fared on these 6 parameters across the ten most infected nations in terms of cumulative covid cases. India has registered the second highest number of cumulative infections since the pandemic started last year.
2. The second part looks at a single point of time, May 5, 2021 and shows how various states that have large active cases fare on these counts.
3. The third part looks at how these mobility indicators for India have moved over the last 15 months or so and looks at 7 different points of time to gauge how people’s mobility has been affected.

## 1. India in the global context

India is presently the most infected country registering over 400,000 cases a day. Lockdowns have been imposed in almost all major states in the country. But lockdowns persist in other nations too albeit of different intensity. The table below presents the mobility indicators for the top ten countries as of May 5 2021.

**Table 1: Mobility rates across ten largest caseload countries (%)**

Country	Infections mn	Retail and recreation	Grocery	Parks	Transit stations	Workplace	residence
USA	33.45	-4	3	18	-27	-29	7
India	22.29	-59	-20	-44	-44	-48	24
Brazil	15.15	-21	24	-30	-16	-3	8
France	5.78	-38	12	16	-25	-24	8
Turkey	5.02	-62	1	-38	-48	-42	19
Russia	4.88	-5	3	37	-9	-44	3
UK	4.43	-29	2	30	-40	-32	11
Italy	4.1	-18	10	24	-25	-16	6
Spain	3.57	-22	11	13	-18	-14	4
Germany	3.52	-38	5	16	-33	-23	11

Source: Google Mobility reports

The table shows that mobility has fallen by high rates in 5 of the 6 parameters for India and was the highest on the one relating to being at home. When it comes to visiting retail stores or recreation there has been a fall of 59% which compares with Turkey. US has fallen by 4% which is the lowest in this set. All other nations too have witnessed a decline in movement which means that in general there is no recovery in this area and people are either not shopping or doing online transactions through the ecommerce modes. For grocery, India is the only country which had a decline in mobility indicating that the restrictions put by the government of shopping for just 4 hours a day had hit the physical visits to the stores. In all the other countries, people are back to shopping given by the positive increase in mobility.

Lockdowns in India has closed parks and gardens which gets reflected here. The only other country which has witnessed a decline is Turkey. In all other countries this has increased which also indicates that there are fewer restrictions on people going to the parks. In India it has been observed that people do not maintain the prudential norms that have been set when going out which does support blanket bans on parks.

Transit stations have witnessed decline in mobility across the board with India having witnessed 44% decline. People are evidently doing so out of choice and it is more a decision taken at the individual level. In India however, the decision is also from above as only selected groups can travel by public transport in most states. This does not give option to people.

Work from home has caught on and with India putting several restrictions on private offices attendance as well as limited entry for public sector offices, there has been a fall by almost 50%. Turkey and Russia also have similar rates.

A corollary of mobility falling in the other five headings means there is an increase in terms of people being at home. It has increased across the board with India having the highest rate of 24%

The conclusion here is that mobility has been impacted across the world, but India has probably witnessed the sharpest decline due to the recent restrictions imposed by various states. In a way it can be said that lockdowns have helped to restrict movement of people in different activities.

## 2. How have states in India reacted top lockdowns?

The table below gives the mobility indicators of various states which have been listed in descending order of number of active cases in the country.

**Table 2: State-wise mobility rates as of May 5th 2021 (%)**

State	Infections						
	Active Ikhs 9 <sup>th</sup> May	Retail and recreation	Grocery	Parks	Transit stations	Workplace	Residence
Maharashtra	6.3	-66	-23	-52	-50	-50	26
Karnataka	5.5	-72	-33	-54	-54	-64	30
Kerala	4.2	-66	-14	-32	-51	-49	30
UP	2.4	-60	-20	-33	-51	-58	27
Rajasthan	2	-65	-30	-51	-48	-53	27
AP	1.8	-59	-10	-46	-43	-41	22
Gujarat	1.43	-59	-23	-55	-41	-42	22
Tamil Nadu	1.39	-26	39	-20	-13	-29	15
Chhattisgarh	1.3	-73	-49	-52	-66	-59	32
West Bengal	1.25	-50	-10	-36	-32	-31	18
Haryana	1.16	-65	-35	-56	-63	-58	25
Bihar	1.1	-57	-21	-21	-42	-48	22
MP	1.02	-70	-44	-51	-58	-59	30
Delhi	0.88	-76	-48	-68	-69	-73	28
Punjab	0.72	-48	-15	-38	-45	-36	13
Uttarakhand	0.71	-57	-19	-43	-37	-43	24
Telangana	0.68	-48	0	-38	-33	-42	20
Assam	0.38	-48	-20	-27	-36	-27	23
Goa	0.32	-70	-33	-72	-53	-48	26

It can be seen that mobility has fallen across all states almost uniformly. Tamil Nadu probably is the outlier which has relatively lower decline in mobility on these parameters with surprising increase in case of grocery. The interesting case here is that this has not been a trend but a pattern in this state where the mobility is positive on one day in a week. On the 6th of May the numbers were quite different. Maharashtra seems to be the most stringent state even one month post the lockdown was announced.

The positive takeaway is that almost all states have managed to contain the mobility of people by imposing lockdowns and hence it also shows that a national lockdown per se was not required as the same was being done by the states with their localized restrictions.

## 3. How has mobility behaved over the year?

**Table 3: Mobility in India over the last 15 months (%)**

	Feb 18 2020	May 31 2020	Sept 30 2020	Dec 31 2020	Feb 28 2021	March 31 2021	May 5 2021
Retail and recreation	0.5	-70	-41	-26	-22	-26	-59
Grocery and pharmacy	1.8	-15	-6	10	16	14	-20
Parks	3.3	-56	-43	-13	-12	-15	-44
Transit stations	2	-46	-28	-8	-6	-11	-44
Workplace	3	-36	-23	-18	-13	-20	-48
Residence	0	16	16	12	7	11	24

The table above provides the mobility indicators for the country at different points of time. Feb 18 is a random point chosen before the pandemic was known in India. May 31 was when we ended two months of the lockdown and a decision was taken to open the economy. September 30 has been chosen as this was the time when the infection cases peaked even as the country moved through more liberal stages of the unlock process. Dec 31 is the end of the calendar year when all celebrations ended post the festivals. Feb 28 was the time when we assumed that India was well past the pandemic and India was different from other nations. March 31 is the point when it sank in that the second wave was around in Maharashtra is full swing and was spreading to other states. May 5th is a more contemporary reference point with over 20 states having lockdowns of different intensities.

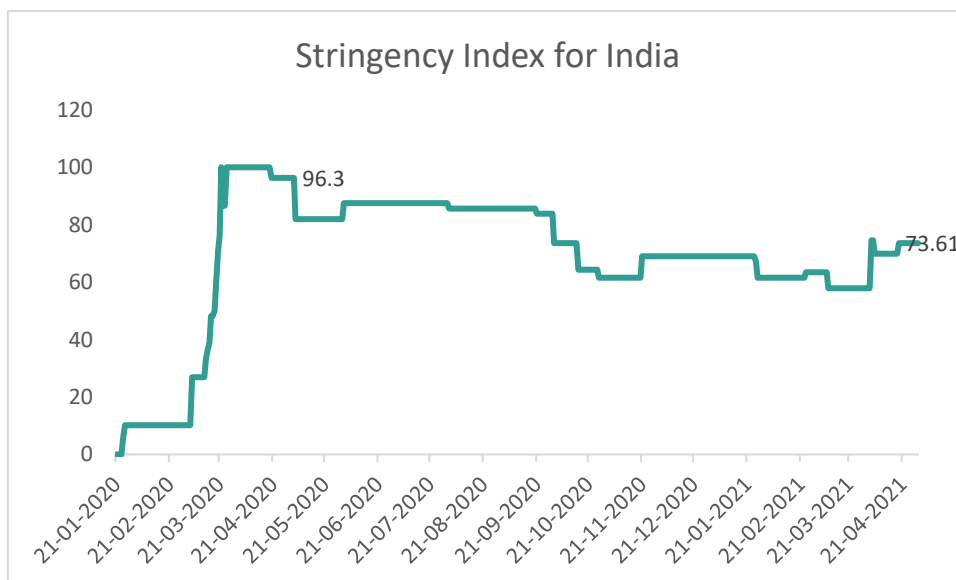
- Retail and recreation had witnessed the highest fall in May 2020 and improved right till Feb 28, 2021 though in the negative zone. As of date the mobility decline is comparable to that last year which is due to both the restrictions put as well as fear factor.
- In case of grocery and pharmacy the first lockdown in 2020 did reduce mobility till September, after which there was positive movement right till March 2021. There has been a decline subsequently.
- Visits to parks has been falling all through but by December had come down to -13% but fell sharply in May 2021 after a slight decline in March. A similar trend was noticed in public transport too.
- The trend in workplace mobility is interesting. Though it follows a similar path, it does mean that several offices were getting their employees back to work as the blended policy was being followed before the second wave shook the system.

### Concluding thoughts

The implications of the fall in mobility are that economic activity will be pushed back for sure. While some of the high frequency indicators such as GST collections and PMI for manufacturing show improvement the way bills generated fell in April to 58.7 mn which is the lowest in last five months. Therefore, there is reason to be sceptical on growth. The PMI for services has come down to 55.4 from 56 in March and 57.3 in February. Hence, while the lockdowns have had an impact on mobility of people, the same also gets reflected in the output of the services sector as well as the movement of goods which gets impacted when demand falls. The highest ever GST collections for April is a piece that does not fit in with the story as it indicates strong spending in this month. Interestingly April has always been a good month for collections having registered over Rs 1 lakh crore in 2018 and 2019.

### Another view

While human mobility appears to be in line with May 2020, the Global stringency index shows that the levels under national lockdown last year were more stringent as seen in the graph below. As of April 30, it was at 73.61 while in May 2020 it was 96.3. The Oxford Coronavirus Government Response Tracker (OxCGRT) project calculates a Stringency Index, a composite measure of nine of the response metrics. The nine metrics used to calculate the Stringency Index are: school closures; workplace closures; cancellation of public events; restrictions on public gatherings; closures of public transport; stay-at-home requirements; public information campaigns; restrictions on internal movements; and international travel controls.



Source: Oxford Coronavirus Government Response Tracker (OxCGRT)

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