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Surviving the COVID-19 Pandemic

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IMI Konnect, published quarterly from International Management Institute Kolkata, is an open access Scholarly Publication in Management. It started its journey in December 2012, and publishes original research articles (non-technical) by scholars in the field of management and firsthand perspectives from business thinkers and practitioners on contemporary issues. *IMI Konnect* provides an intellectual platform for the national and international scholars and the industry experts to discuss and debate their opinions and thus contribute to the knowledge of management. It also publishes interviews with eminent personalities in the field of business.

The articles will go through a review process before publication. The issues are themed on Marketing, Finance, Organisational Behaviour & Human Resources (OB & HR), Information Technology & Operations (IT & Operations), Strategy, Economics and Management. The publication caters to academicians and practitioners in corporate and government organizations and departments.

Contents

Manuscript Submission Guidelines

The article should be non-technical and should be of around 2500 - 4000 words. The research articles may be upto 7000 words. But no mathematical expressions or technicalities of methods should be contained in the main text. It should be typed in MS Word in Times New Roman 12 with paragraph spacing 1.5. Figures and simple, small tables can be incorporated. There should not be any notations or equations, at least in the main text. If required, it may be put in Appendix. The article should also contain a short abstract of 150 – 200 words. Full forms of each abbreviation should be mentioned at first instance. All figures and diagrams should be in black and white. Send your manuscript along with your name, institutional affiliation, email ID and contact number to the editorial office at imikonnect@imi-k.edu.in mentioning the area viz. Marketing, Finance, OB & HR, Economics, Strategy, IT & Operations, Management Education, Others or Themed Issue.

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Managing and Surviving a Pandemic

With COVID-19 spreading across India and the globe alike, the challenge of managing such a pandemic is way more difficult in developing countries than the developed ones for several factors. It is not only the density of population, the rate of spread in a particular climate, average immunity level and composition of the population, but also a gamut of factors like the health infrastructure, the scope of social security and the nature of employment in organised and unorganised sectors and the general level of governance that decide how successfully a nation would be able to manage and survive a pandemic like this.

Lockdown, complete or partial, is the most widely used step followed by developed and developing countries worldwide to prevent the spread of the pandemic and create the required infrastructure to fight the pandemic. But lockdown has huge economic cost, especially for a country like India which lacks social security benefits and where the majority of employment is in unorganised sector. Extending the lockdown may prevent the spread, though it is debatable with studies showing insignificant benefits; but, is India going to be able to afford the economic cost of jobs lost and further decline in the already sluggish economic growth? With extended lockdowns the benefit of containing the spread of the virus is largely outweighed by the huge economic cost and that is why we have already started to see the easing of lockdown in a phased manner, despite COVID cases peaking across the country.

The government has announced the economic package, but the way it is going to be provided, is not in line with what experts in the field suggest. It has been iterated by a number of economists that the need of the hour is to boost demand by providing money in the hands of the lower economic classes, who have lost jobs or are not having income for survival. Very little has been announced in that context in India so far and hardly any mechanism exists to identify these beneficiaries, too. Most of the announcements are related to supply-side measures.

Businesses, too are bearing the cost of lockdown. Barring a few like the IT industry and the essential goods, most of the sectors are not in operation for several weeks. One of the fallouts might be the increasing dominance of big businesses with such companies acquiring the smaller ones which have less capability to survive such a crisis. There are instances that organisations like Uber, Swiggy etc. already have gone for lay-offs, despite the announcement by the government that no such measures should be taken during these trying times. In countries like UK, in an attempt to prevent loss of jobs, the government has announced that it would pay 80 per cent of salary for staff who are kept on by their employer, covering wages of up to

£2,500 a month during the pandemic. Similar support measures have been announced by the government of Canada and Australia, too.

Considering the pandemic, there are several changes the businesses are adopting or are thinking to adopt in near future, viz. focusing more on work from home and more automation in the context of de-globalisation. Businesses, wherever possible, have gone online to carry on their operations as far as possible and a new culture of work-from-home is emerging. Organisations like Facebook, Twitter, Amazon, Microsoft and Google have extended the work from home at least till fall 2020 or the end of 2020. In the context of coronavirus disrupting the global value chains connecting producers in different countries, there is another perspective that speaks of the possibility of reverse globalisation. Currently, not only a number of countries is facing supply shortages of critical medical equipment, especially from China, but also, risks associated with protectionist trade policies in the form of high import tariffs. In this context, discussions are on that firms may try to relocate their bases to other countries or focus more on self-reliance to combat such disruptions in future. But, as long as efficiency and low cost are the keys to sustain profitability, businesses are likely to operate globally.

The other issue widely talked about in this context is the possibility of more automation. It is thought that in an attempt of re-nationalisation, firms may adopt more automation to reduce costs. Automation and reshoring have the advantage of more flexible adjustment to changing demand and thereby mitigate firms' risks in the event of a shock. This may happen for goods deemed critical to national security. However, it should be kept in mind that many big firms have already gone for robots, 3D printing, smart factories etc. before COVID-19. This pandemic may accelerate such technology adoption, in certain cases. However, studies observe that in labour-intensive global value chains that target consumers in emerging markets, such automation and reshoring seem to be less likely, at least in the short to medium-term.

Automation is used to fight the COVID-19 pandemic in South Korea. Automatic testing for COVID-19 that implies samples analysed by a diagnostic machine rather than by humans, has proved that automation speeds up the testing process and reduces the risk of error and contamination. However, surviving the COVID-19 pandemic will be more challenging as the virus is going to stay, at least in the near future. Organizations are now busy in designing the new norms to keep their employees safe while running their businesses. Policymakers are also trying to find a solution that balances between fighting the pandemic and sustaining the economic progress in the near future. Gradually the human race has to embrace the "new normal" in life inevitably, in the days ahead.

Paramita Mukherjee

Editor, IMI Konnect

Management of COVID-19 in India: Can Subnational Finances Tell a Story?

Simanti Bandyopadhyay* and Sahana Roy Chowdhury**

Abstract

This article is an attempt to find the link whether better subnational finances and governance help in better COVID management in Indian states. We intend to build up a simple methodology by comparing state's relative position in terms of select fiscal and governance indicators, and then match the performace with the COVID performance indicators. We ranked the states as 'top 5', 'middle' and 'bottom 5' categories based on their relative positions in terms of each of the indicators we chose, and depict the same in colour coded maps for better visualization. Thereafter, on comparing COVID performance as on mid-March, when COVID cases just started taking-off in most of the states with the same as on mid-May, we finally group the states in four broad categories: consistently best, worst transition, deteriorating and consistently worst performers. We find positive indication that a sound fiscal health can help COVID management endeavours to yield better results. Notably, state's own revenue both as a share of state's total revenue and own revenue per capita, are important indicators to explain better COVID management performance in Indian states.

Introduction

For the past few months, the entire world has been threatened by COVID-19 crisis. Its management is becoming more and more challenging day by day. The present pandemic has claimed lives all over the globe. Some of the countries are out of the peak incidence period now, while others are grappling with the same. More or less, the whole world is affected. While the extent of the problem differs, every nation is waiting for a solution so that we see an end. Nearly 213 countries and territories around the world have reported a total of 4,454,735 confirmed cases of the COVID-19 that originated from Wuhan, China, and a death toll of 298,847 as of 10th May, 2020.

Researchers have been working hard on a vaccine to prevent the infection and also on drugs to cure the infection. Most of the countries went on 'lockdown' of economic and social activities, at least partially, to control the spread of infections. It took a toll on livelihoods of the people but in the absence of

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proper preventive and curative solutions, closing down economic and social activities, safe distancing and staying home seemed to be the only strategy left for survival.

Though some countries relied on massive testing to detect infections and eventually quarantine the carriers to control the spread, the choice might not be implementable in countries with large population and high population density. Resources to finance these tests and also the availability of test equipment and kits were not adequate in many countries. While closing down the economy to restrict movement of the virus through restricted movement of people, India had to opt for a hard choice in terms of a much slower paced economy, loss of jobs and productivity, which is likely to continue for quite sometime even after the pandemic is over.

Political leaders face a very tough challenge, a tradeoff between saving lives or saving the economy. Needless to say, it is not confined to only the health aspect of it, as any pandemic is. The economics of the aftermath is very complex and not fully predictable. On the health side, we hear discussions about the testing costs, medical and paramedical personnel and infrastructure cost, the research cost involved in inventing newer molecules to save lives and preventive vaccines. On the economic side, the estimated loss in the economy for the duration of the pandemic and thereafter is also enormous.

Financing a pandemic has to be done by the government largely, at different levels. We are talking about fiscal stimulus. We are talking about different ways, we have unique names for each fund. Sometimes the old system of cash transfers is being used to compensate people for their losses during this pandemic. Sometimes altogether new funding handles are being constructed. None could agree more that the subnational governments have to be proactive in managing the situation, no matter whatever assistances are forthcoming from the national level governments. For multi-tier government economies, this becomes all the more relevant and to play an effective role, a fiscally sound or stable subnational government would be more confident in framing their strategies.

It is to be noted that for this kind of a pandemic it is very difficult to single out the causal variables explaining the outcomes as the explanatory factors would be a mix of exposure, health and immunity, socio-demographic, governance and economic factors.

At this juncture we thought of taking stock of the status of subnational finances and their role in indicating the extent of preparedness for COVID-19 management in India. So far, this has been an unexplored area. Experts have identified that states need to have adequate resources to manage the crisis. But there has not been any systematic analysis on whether and how the existing status of subnational finances play a role in this pandemic management. The main objective of this article is to analyse different aspects of subnational finances and explain a missing link between fiscal management and the preparedness for COVID-19 management at the subnational levels. The central question we deal with is whether better fiscal health and governance indicators of subnational governments have led to better COVID-19 management so far.

The paper is organised as follows. Section 2 gives an account of the status of COVID-19 management in different states of India so far. Section 3 touches upon a few indicators of fiscal health and governance in Indian states which are relevant for exploring a relationship with COVID-19 management indicators and seeks to discover the missing link between COVID-19 management and subnational finances and governance of Indian states. Section 4 concludes the paper.

Status of COVID-19 in Indian States

In India, the first case was reported in Kerala in January and the confirmed cases crossed 75,000 by mid May, recording more than 2500 deaths. For this analysis we have focussed on the transition from March 15 uptil May 10, 2020. March 15 sounds a sensible date to start with, as infections in India increased considerably after March 15. The data has been taken from https://www.covid19india.org/.

Table 1 gives the summary of the statewise status of COVID-19 in India and deaths recorded in the starting and the end date for

Table 1: State-wise COVID-19 Confirmed Cases and Deaths

State	Confirmed Cases May 10	Deaths May 10	Confirmed Cases April 10	Deaths April 10	Confirmed Cases Mar 15	Deaths Mar 15
Andhra Pradesh	1930	44	381	6	1	0
Arunachal Pradesh	1	0	1	0	0	0
Assam	62	1	29	1	0	0
Bihar	611	5	60	1	0	0
Chhattisgarh	59	0	18	0	0	0
Delhi	6542	68	903	14	7	1
Goa	7	0	7	0	0	0
Gujarat	7797	472	378	19	0	0
Haryana	675	9	176	2	14	0
Himachal Pradesh	52	3	28	2	0	0

State	Confirmed Cases May 10	Deaths May 10	Confirmed Cases April 10	Deaths April 10	Confirmed Cases Mar 15	Deaths Mar 15
Jammu and Kashmir	836	9	207	4	2	0
Jharkhand	156	3	14	1	0	0
Karnataka	794	30	207	6	6	1
Kerala	506	4	364	2	24	0
Madhya Pradesh	3457	212	451	37	0	0
Maharashtra	20228	778	1574	109	32	0
Manipur	2	0	2	0	0	0
Meghalaya	13	1	0	0	0	0
Mizoram	0	1	0	1	0	0
Nagaland	0	0	0	0	0	0
Odisha	352	3	50	1	0	0
Puducherry	10	0	7	0	0	0
Punjab	1762	31	151	11	1	0
Rajasthan	3708	106	561	3	4	0
Sikkim	0	0	0	0	0	0
Tamil Nadu	6535	44	911	9	1	0
Telangana	1163	30	487	12	3	0
Tripura	135	0	2	0	0	0
Uttar Pradesh	3373	74	433	4	13	0
Uttarakhand	67	1	35	0	0	0
West Bengal	1786	171	116	5	0	0

Source: https://www.covid19india.org/

this analysis. We have taken total number of confirmed cases on those dates and also the number of deaths to consider both aspects of the pandemic: the intensity of infections and fatality of infections in a state.

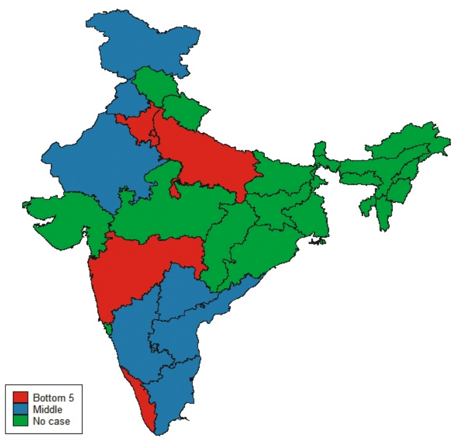
We have further demarcated this period with three dates: March 15, April 10 and May 10 for tracking the infections and deaths in Indian states. Since situations were changing too fast, in a period of roughly two months, we thought it might be useful to come up with an interim date and record the data which would help us understand situations better as to how infections spread in the states and with what intensity across these three dates.

The methodology for this analysis is very simple. We categorised the states as 'top 5', 'bottom 5' and 'middle' on the basis of the number of confirmed cases on a particular date and also the number of deaths on a particular date. Since lesser the numbers, better the performance of a state in COVID-19 management, 'top 5' states would indicate the minimum number of confirmed cases and deaths. We generate colour coded maps on the basis of performances of the states in COVID management on these guidelines. Maps 1-6 depict the statewise facts clearly. In these maps, states recording five highest number of confirmed cases and highest number of deaths in descending order on each date would be clubbed in Bottom 5 red colour coding. Similarly, by a reverse logic, the Top 5 (green colour code) states can be identified. The rest of the states are clubbed in the middle category (blue colour code).

When we compare these maps carefully, we find the trajectory of infections across states and across the two month period. The change in the ranking of the states reflected through the colour codes are naturally not uniform. On

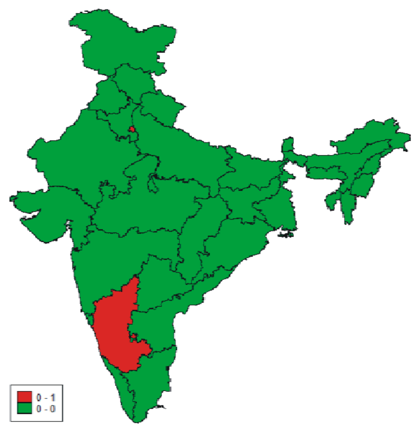
Map 1

Intensity of COVID-19 Confirmed Cases in Indian States (as of March 15, 2020)



Map 2[1]

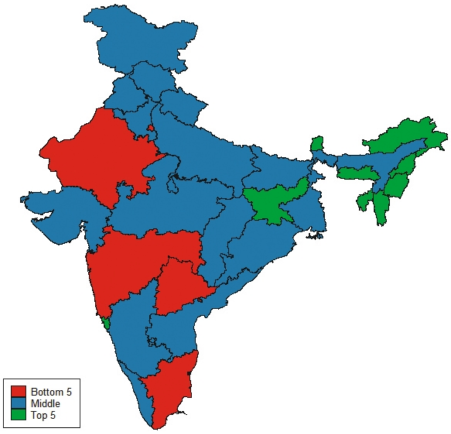
Intensity of COVID-19 Deaths in Indian States (as of March 15, 2020)



[1] As of March 15, 2020 there was only one death in Delhi and one in Karnataka, no death was recorded in any other states.

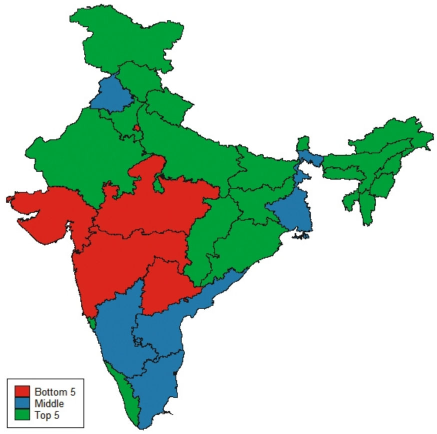
Map 3

Intensity of COVID-19 Confirmed Cases in Indian States
(as of April 10, 2020)



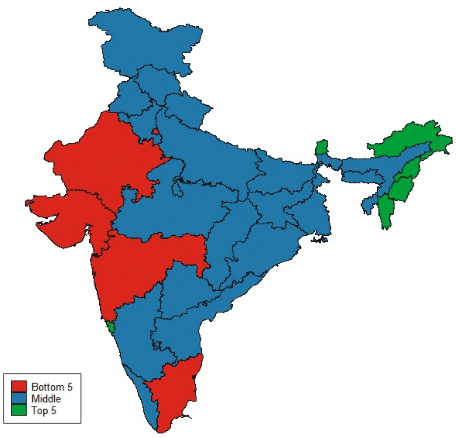
Map 4

Intensity of COVID-19 Deaths in Indian States
(as of April 10, 2020)



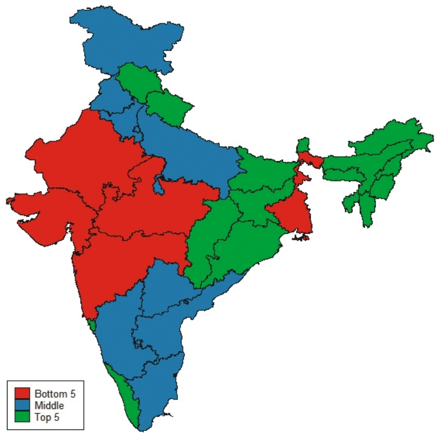
Map 5

Intensity of COVID-19 Confirmed Cases in Indian States
(as of May 10, 2020)



Map 6

Intensity of COVID-19 Deaths in Indian States
(as of May 10, 2020)



March 15 Haryana, UP, Maharashtra, Delhi and Kerala are the states that recorded highest number of infections, while 19 states (including union territories) did not record a single infection. Only two states, Karnataka and Delhi, recorded 1 death each.

If we analyse the changes in the relative ranking of states in terms of COVID management after roughly a month (April 10), we find there was a deterioration in performance of Gujarat, MP, Bihar, Chattisgarh, West Bengal, Andhra Pradesh, Himachal Pradesh and Odissa as they moved from the top performing category to the middle performing category.

If we do a category wise analysis, Haryana, UP and Kerala moved from red category to blue category marking an improvement. Delhi and Maharashtra remains in the same red category marking no improvement in terms of shift in category.

Amongst the middle category states on March 15, Jammu and Kashmir, Rajasthan, Telengana, Karnataka, Tamil Nadu, Punjab, there has been a remarkable deterioration for Rajasthan, Telengana and Tamil Nadu which belong to red category on April 10. Jammu and Kashmir, Punjab and Karnataka recorded no change in their category wise status. Amongst the 19 green category states on March 15, if we concentrate on the major states, we find there has been a deterioration in 7 states, Gujarat, MP, Bihar, Chattisgarh, West Bengal, Himachal Pradesh, Odissa which moved from green to blue category; there has been no change in category for Goa and Jharkhand.

If we analyse the states for which there has not been any change between the above two dates, we find that Delhi and Maharashtra under performed consistently; Goa and Jharkhand performed consistently well retaining their green category; Jammu and Kashmir and Karnataka retained their middle performers' status. Amongst the states for which there has been a change in status marking an improvement, we have Haryana, UP and Kerala. Whichever deteriorations were noted were in terms of change in category from green to blue, blue to red or green to red.

Considering the next phase from April 10 to May 10, we find there has been an improvement in the status of Telengana from red to blue category; Rajasthan, Maharashtra, Tamil Nadu and Delhi retained their red category status; 13 major states viz. Jammu and Kashmir, Himachal Pradesh, Punjab, Haryana, UP, Bihar, Madhya Pradesh, Chattisgarh, Odissa, Andhra Pradesh, Karnataka, Kerala, West Bengal retained their blue category status; for Gujarat there has been a deterioration in performance which recorded a change in status from blue to red category.

If we compare the outcomes of both the phases[2], we find that Haryana, UP and Kerala are stable performing states retaining their blue middle category status; Tamil Nadu and Rajasthan show deteriorating performance reflected in a move from blue to red category; Delhi and Maharashtra underperform consistently reflecting red category status.

If we bring the death tolls in states and a similar ordering of status (Map 2, Map 4 and Map 6), we find Karnataka improves in the performance between phase 1 and phase 2 of

[2] First phase March 15-April 10, Second phase April 10-May 10.

our study period, but conditions in states like Rajasthan, Gujarat, MP, Maharashtra, West Bengal, Delhi deteriorated; worst transition being noticed in MP and Gujarat.

We find nine states on the basis of the above analysis particularly interesting and relevant as far as the COVID management status is concerned. We categorise Haryana, UP and Kerala in 'consistent performance' category, Madhya Pradesh and Gujarat in 'Worst Transition' category, Tamil Nadu and Rajasthan in 'Deteriorating Performance' category, and Delhi and Maharashtra in 'Worst Performance' category. Table 2 summarises the record for these nine states.

Kerala sets a good example with the highest recovery rate, two and a half times more than that of the world recovery rate[3] and three times

Table 2 : States' Categorisation by COVID-19 Outcomes

	State	Confirmed cases on Mar-15	Confirmed cases on May-10	10 May, deaths	Confirmed cases per lakh population	Proportionate increase in confirmed cases (15 Mar-10 May)	Recovery	Recovery rate (%)	Case fatality rate (%)
Consistently Best	Haryana	14	675	9	2	47	289	42.8	1.3
	Uttar Pradesh	13	3373	74	1	258	1499	44.4	2.2
	Kerala	24	506	4	1	20	485	95.8	0.8
Worst Transition (by Confirmed Case)	Gujarat	1	7797	472	11	7796	2091	26.8	6.1
Worst Transition (by Death)	Madhya Pradesh	0	3457	212	4	3456	1480	42.8	6.1
Deteriorating	Tamil Nadu	1	6535	44	9	6534	1824	27.9	0.7
	Rajasthan	4	3708	106	5	926	2162	58.3	2.9
Consistently Worst	Delhi	7	6542	68	33	934	2020	30.9	1.0
	Maharashtra	32	20228	778	17	631	4199	20.8	3.8

Source: Authors' computations

[3] World Recovery rate: 35.4 and Case-fatality rate: 6.84 as of 10th May, 2020 (https://www.worldometers.info/coronavirus/#countries).

as high as the recovery rate for India[4]; and only 0.1 percentage point higher than the lowest fatality rate in the sample of nine states for our analysis. Excepting for Maharashtra, Tamil Nadu and Gujarat, the recovery rates of the remaining states are higher than (at par for Delhi) that of the overall recovery rate for India and that for the world. As far as the fatality rates are concerned, Gujarat and MP record an exceptionally high number, almost double of that of the all India average which is 3.35 per cent.

If we consider proportionate increase (confirmed cases on May 10 minus confirmed cases on March 15 divided by confirmed cases on March 15) in confirmed cases during this two-month period, Kerala records the lowest proportion of 20 whereas Gujarat records the highest proportion of increase. The confirmed cases per lakh population also can be one yardstick to compare the states in terms of COVID management performance. We find here also Kerala performs the best and Delhi performs the worst.

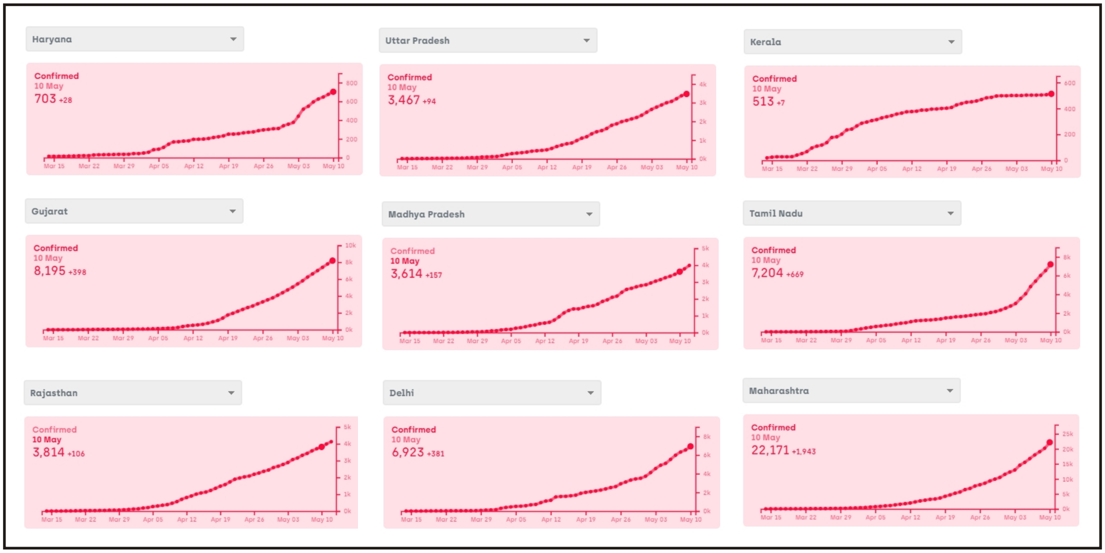
To sum up, Kerala so far has managed COVID better than any other states in India, with highest recovery rate, almost lowest fatality rate, lowest proportionate increase in confirmed cases and lowest number of confirmed cases per lakh population. Amongst the worst performers, Maharashtra records lowest recovery rate, case fatality rate higher than the all India average, high proportionate increase in confirmed cases in the study period and higher numbers of confirmed cases per lakh population; for Delhi the number of confirmed cases per lakh population is the highest, with high proportionate increase in the confirmed cases in our study period, recovery rate slightly higher than all India average and somewhat low fatality rate.

As we have already mentioned, the date on which the first case had been reported in a state would differ across states. The first confirmed case of COVID-19 in India was reported in Kerala in January, 2020. We have also looked into the outcome trajectories of this contagion, their curvatures and peaks, across the nine states reported above over the disease timeline (Box 1 below[5]). We notice that Kerala could clearly flatten the curve by May 10 (our benchmark date), whereas, the states categorised as "Deteriorating", "Worst transition" and "Consistently Worst" performers have steep growth curves with steadily growing number of COVID-19 cases and deaths; they are yet to reach their peaks. A closer look at the trajectories of the states for each category according to COVID management status clearly indicates a difference in the nature of these trajectories between the consistently good performance category and the other categories.

[4] India's Recovery rate: 30.7 and Case-fatality rate: 3.35 as of 10th May, 2020 (https://www.thehindu.com/news/national/coronavirus-india-says-covid-19-recovery-rate-has-crossed-30/article31552949.ece).

[5] **Source:** https://www.covid19india.org/

Box 1



After taking a stock on the COVID status in Indian states we would like to relate the performance with some important indicators of state finances and see whether we can build up a story of these indicators being able to explain a part of the performances in COVID-19 management.

Subnational Finances, Governance and COVID Management in India

After a number of trials and errors[6] with many more variables, we finally orient our analysis on six fiscal and one governance index for Indian states to understand and explore how these variables can explain the COVID-19 management performances of the Indian states. The analysis is purely exploratory at this stage devoid of any statistical significance which cannot be attempted due to restricted size and availability of data.

We start with social sector expenditures as a percentage of GSDP, and its different components like education, medical and public health expenditures, funds for relief of calamity. In a preliminary analysis we find a negative significant correlation between the COVID-19 management parameters and development sector expenditures as a percentage of GSDP and social sector expenditures as a percentage of GSDP. Social sector expenditure and its components, mainly education expenditures, medical and public health expenditures and relief funds for

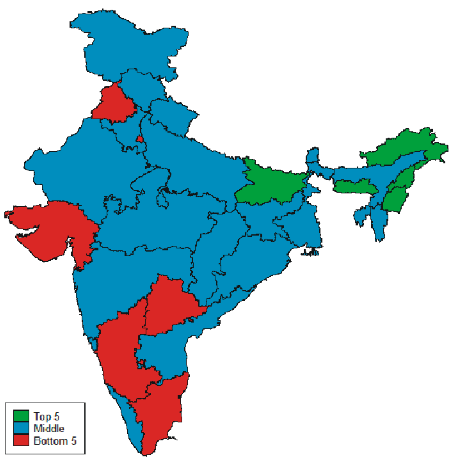
[6] Development expenditures as a percentage of GSDP, Deficits (Fiscal, Revenue and Primary) as a percentage of GSDP, and other state finances indicators were also considered for the analysis which we dropped to maintain the focus of the study

calamities, can play an important role in this pandemic management as they can be treated as direct inputs for generating favourable outcomes in COVID management. So, we consider them for our analysis. We skipped development sector spending and considered social sector expenditure only. We also consider own revenues and per capita own revenues as two indicators measuring the strength of the fiscal health of states. The data for all these indicators are collected from Reserve Bank of India website[7]. We work with budget estimates for the FY 2019-20.

Apart from fiscal indicators, an impactful role can be played by governance captured through a comprehensive index. For this, we used the PAI Governance indices for 2019 estimated by Public Affairs Centre[8]. The methodology builds upon three pillars, growth, equity and sustainability. Well established five themes of the World Governance Indicators viz. voice and accountability, governance effectiveness, regulatory quality, rule of law and corruption constitute the variables of interest which are included for the construction of the index. The PAI index identified 49 indicators to construct the governance index, and it has incorporated 13 relevant Sustainable

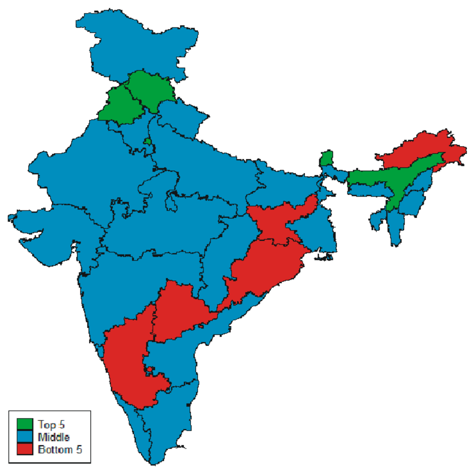
Map 7

Indian States by Social Sector Expenditure (2019-20 BE, % GSDP)



Map 8

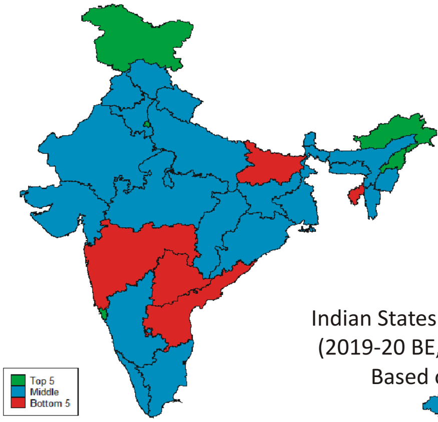
Indian States by Education Expenditure (2019-20 BE, % Social Sector Expenditure)



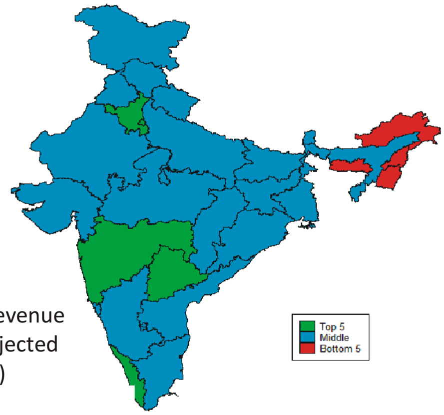
[7] https://www.rbi.org.in/Scripts/AnnualPublications.aspx?head=State%20Finances%20:%20A%20Study%20of%20Budgets

[8] http://pai.pacindia.org/

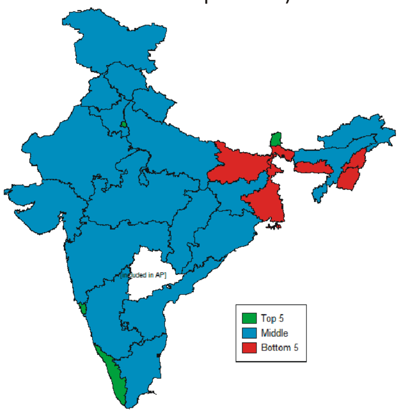
Map 9
Indian States by Medical and Public Health Expenditure
(2019-20 BE, % Social Sector Expenditure)



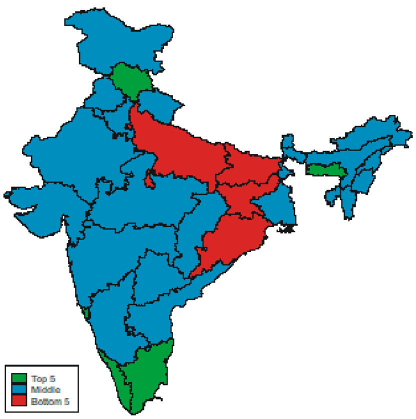
Map 10
Indian States by Own Revenue
(% share of State's Total Revenue, 2019-20 BE)



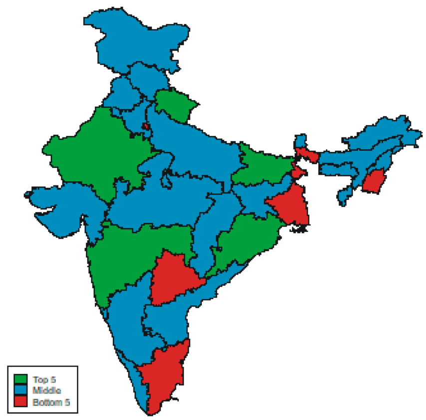
Map 11
Indian States by per Capita Own Revenue
(2019-20 BE, 2020 Population Projected
Based on Census Population)



Map 12
Indian States by Governance Index
(2019, Public Affairs Index)



Map 13
Indian States by Relief on Account of Natural Calamities
(2019-20 BE, % Social Sector Expenditure)



Development Goals (SDGs)[9] to align their index with the global standards.

We generate maps for Indian states depicting three categories: top 5 (green), middle (blue) and bottom 5 (red), on the basis of the fiscal and governance indicators we choose. The rule for defining categories remains the same as we followed while generating maps for COVID performances of Indian states. For each indicator we choose, we generate one map. Maps 7-13 give the fiscal, financial and governance indicator-wise classification of Indian states.

In order to bring in the role of subnational finances in explaining the performance in COVID management in India, we build up a simple methodology. The simple question we want to address is, whether in India better fiscal, financial and governance health of a state has led to its better COVID management? Do states which rank higher with respect to fiscal and governance indicators, also have a higher rank in COVID management status?

So, we 'match' the performance in the COVID-19 management status and the status of each of the state finances and governance performances indicators we have selected through the uniform colour codes designed in the maps depicting COVID management status and maps depicting fiscal and governance health status in India. We 'pair' the COVID management status of a state with the status of that state with respect to each of the seven indicators of performance we have selected for subnational finances and governance, separately. In the process we generate 63 'pairs' of colour codes.

We can compare the colour codes of Map 5 (based on COVID confirmed cases recorded as on May 10) and Map 6 (based on COVID deaths recorded as on May 10) with those in each of the Maps 7-13. We have already summarised the status of COVID management and pinpointed the performances of nine states categorised in four groups in Table 2. We consider these nine states for this 'matching' exercise. We define a 'mismatch' in the colour codes if we get a pair of drastic difference in colour codes, i.e. a combination of a state having placed at top 5 category for COVID management and bottom 5 category of any fiscal or governance indicator. So, pairing 'red' (in COVID management) and 'green' (in any state finance or governance indicator) colour codes are defined as a mismatch according to our definition. But we do not consider pairing COVID management outcomes in the middle performing states (blue colour code) with either the top 5 category (green colour

[9] GOAL 1: No Poverty, GOAL 2: Zero Hunger, GOAL 3: Good Health and Well-being, GOAL 4: Quality Education, GOAL 5: Gender Equality, GOAL 6: Clean Water and Sanitation, GOAL 7: Affordable and Clean Energy, GOAL 8: Decent Work and Economic Growth, GOAL 9: Industry, Innovation and Infrastructure, GOAL 10: Reduced Inequality, GOAL 11: Sustainable Cities and Communities, GOAL 15: Life on Land, GOAL 16: Peace and Justice Strong Institutions.

code) or the bottom 5 category (red colour code) of any of the fiscal or governance indicators as a 'mismatch'. We also separate out the cases of mild mismatches (all blue-green or blue-red pairs) and exact matches (all blue-blue, red-red and green-green pairs) in the subsequent discussions.

Table 3 summarises the results for these matching exercises of the nine states we selected in the previous section on the basis of their COVID management performances.

What we find is interesting. Social sector spending as a percentage of GSDP explain the COVID management in states without any mismatch of the categories, that is to say our expectations that states spending more on social sectors tend to manage the COVID situations better in their states. In Maharashtra and Rajasthan, the status in terms of social sector spending is slightly better than the COVID management rankings: both the states belong to Bottom 5 category for COVID management while middle category for social sector spending.

We intend to look at the composition of social sector spending and whether it plays a role in explaining COVID management status in Indian States. We consider three important components of social sector expenditures: Education, Medical and Public Health and Calamity relief as these components would likely to have an impact on COVID management.

In Delhi, both education and medical and public health spending status are better than that of COVID management status. There is a mismatch as Delhi is amongst the top 5 states when ranked according to education and medical and public health spending as a proportion of social sector spending. It might be the case that the other spending ratios are so low (or the GSDP is so high) that Delhi as a state records comparatively lower spending in social sector as a percentage of GSDP and thus belongs to the bottom 5 category when it comes to social sector spending as a percentage of GSDP.

There are two mismatches in the relief expenditure for calamity category in social sector expenditures. Both Rajasthan and Maharashtra are in the top performing category as far as ranking according to this indicator is concerned, coupled with bottom 5 category level performance in COVID management.

We also analysed the indicator for percentage of own revenues in total revenues of states and per capita own revenues in states. These measures indicate the extent of reliance on the upper tier of government. Delhi and Maharashtra both show mismatches if we compare the rankings in the percentage share of own revenues in total revenues and that in COVID performances; Delhi also shows a mismatch in its per capita own revenue ranking and COVID ranking. While Maharashtra is in the top 5 category for the indicator own revenue as a percentage of total revenues, Delhi is amongst the top 5 category for both the indicators involving own revenues; whereas both the states rank in the

Table 3: Matching the COVID Management Performance and Subnational Finance and Governance Performance: A Summary

States	COVID-19 confirmed case as of 10 May	Social Sector Expenditure (SSE) in GSDP	Education expenditure in SSE	Medical and Public Health Expenditure in SSE	Relief Expenditure on account of natural calamity in SSE	Own Revenue in Total Revenue	Per Capita Own Revenue	PAI Governance Index 2019
Haryana	Blue	Blue	Blue	Blue	Blue	Green	Blue	Blue
Uttar Pradesh	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Red
Kerala	Blue	Blue	Blue	Blue	Blue	Green	Green	Green
Gujarat	Red	Red	Blue	Blue	Blue	Blue	Blue	Blue
Madhya Pradesh	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Tamil Nadu	Red	Red	Blue	Blue	Red	Blue	Blue	Green
Rajasthan	Red	Blue	Blue	Blue	Green	Blue	Blue	Blue
Delhi	Red	Red	Green	Green	Red	Green	Green	Red
Maharashtra	Red	Blue	Blue	Red	Green	Green	Blue	Blue
Number of mismatches		No mismatch	1 mismatch: Delhi	1 mismatch: Delhi	2 mismatches: Rajasthan and Maharashtra	2 mismatches: Delhi and Maharashtra	1 mismatch: Delhi	1 mismatch: Tamil Nadu

Source: Authors' Computations

bottom 5 category as per COVID indicator. Out of the six indicators we chose on state finance, Kerala belongs to the middle performing category for four indicators and belongs to the top 5 category for the two indicators related to own revenue of the state.

We find one mismatch for the governance index in case of Tamil Nadu, which is amongst the top 5 states as far as the governance indicator is concerned whereas it belongs to the bottom 5 category as far as the COVID management is concerned. Our governance index can also explain the cases for Kerala and Delhi. In Delhi, bad governance can result in a failure to gear up the management of the crisis. Kerala, being one of the top 5 states as per the governance index, could pull through because of better governance in the state.

To sum up, out of 63 pairs, 30 report exact colour matches (blue-blue, green-green, red-red), 25 report mild mismatches (blue-green or blue-red) and 8 report mismatches (red-green or green-red). This implies that in 48 per cent of the cases, we can actually establish a strong link between the subnational financial management performance and COVID management performance; in 40 per cent of the cases, we can establish a slightly weaker link between the subnational financial management performance and COVID management performance; only for 12 per cent of the cases, we were unable to establish a link between good / bad performance in COVID management with good / bad performance in subnational finances and governance in the state. The performances are drastically different in COVID crisis management and subnational financial and governance.

Conclusions: Way Forward

This article is an attempt to establish a link between the COVID-19 management performance and subnational financial and governance performance of Indian States. We intend to build up a simple methodology to establish this link by 'pairing' the ranks on the basis of indicators of performance in COVID management with a group of indicators explaining subnational finances and governance parameters, separately. We then inspect and analyse the degrees and extents of mismatches in the pairs to infer about whether better subnational finances and governance parameters help in better COVID management. We find positive indication that a sound fiscal health can help COVID management endeavours to yield better results.

Two points need to be mentioned. First, we are not establishing a causal relationship in this article. At this juncture, the analysis is exploratory. But the methodology we have spelt out has the merit to go further to build up a more rigorous framework as continued research on these lines, once availability of data is ensured.

Second, subnational finances and governance indicators can prove to be tricky in nature in the sense that they can act both as good 'facilitator' for and good 'fighter' against COVID-19 management, if we see COVID crisis through the lens of exposure. They can act as a facilitator because a good finance and governance management in a state can result in more exposure on account of trade and commerce, business, education, health, tourism and many other channels. This can aggravate the infections. At the same time, better fiscal, financial and governance health can help in controlling the crisis better. So, a state wise analysis would have to address both sides of the problem, and come up with a detailed analysis of this tradeoff.

COVID-19: Is Social Distancing an Effective Measure in India? An Exploration

Pooja Sengupta*

Abstract

The COVID-19 outbreak in India and many other nations in the world has wreaked havoc. It has disrupted economic, industrial and social activities. It has brought down the economy of even the strongest of nations to its knees. On the 11th of March 2020, WHO declared COVID-19 outbreak as a pandemic. Since then, India has been proactively taking preventive measures to arrest the spread of the virus. This article makes an endeavour to study the background of the COVID-19 attack in India. A scenario analysis has been used to follow the growth curve of COVID-19 in few of the states of India that were most badly affected. Impact of this outbreak has also been discussed in some detail.

Introduction

The Corona Virus Disease 2019 (COVID-19) caused by the novel corona virus SARS-CoV-2, originated at Wuhan in the Hubei province of China and has rapidly spread across the globe. It first unfurled in selected parts of South-East Asian countries like South Korea and Japan and then to entire Asia, Europe and the USA and other parts of the world. Its global reach and devastation are unmatched to any disaster that humanity has witnessed in recent times. It continues to incessantly escalate leading to loss of life and global interruption of all economic and social activities. As the COVID-19 pandemic creates chaos across continents, vigorous public health responses are now being put in place in all the countries hit by the virus. Articles have been appearing in the mainstream media explaining the importance of such public health interventions in *flattening the curve.* https://www.covid19india.org/, a crowd sourced initiative, manages a patient database and provides the updated numbers of active, recovered and deceased cases of COVID-19 for the Indian states. Data from the website have been very useful in following the growth of COVID-19 curve in the country. At this time of crisis, a detailed look into the data provides us with useful insight about COVID-19 outbreak in India. In India the first case of COVID-19 was reported on 30th January, 2020. As of 1st May, 2020, the total number of confirmed cases in the country is 34,901, out of which 24,670 are active, 9,047 have recovered and 1,154 are

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deceased. A comparison of these figures with that of the US and other European countries like Italy, UK, Spain, etc. shows that India has done well so far in controlling the spread of the virus. All the data related to COVID-19 in India presented in this article are sourced from https://www.covid19india.org/.

Figure 1 shows the number of confirmed cases of COVID-19. Among the Indian states, Maharashtra, Gujarat, Delhi, and Rajasthan have the maximum number of COVID-19 positive cases. As of 29th April, 2020 morning, around 7,500 individuals in Maharashtra, 3,200 individuals in Gujarat, 2,500 in Delhi have been tested positive for COVID-19. Other states are Uttar Pradesh and Madhya Pradesh where the number of positive cases are 2,880 and 3,049 respectively.

In figure 2 we compare the recovery rates of COVID-19 positive patients across Indian states. It is clear from the plot that the North Eastern states of Arunachal Pradesh, Tripura and Manipur have the highest recovery rate. However, these were the few states that were least affected by the COVID-19 outbreak.

Figure 3 depicts the percentage of fatal COVID-19 cases across all Indian states. Notably in the states/UTs where COVID-19 confirmed cases are high, like Delhi and Maharashtra, the death rate is still quite low. However, severe measures are being taken to arrest the increasing number of positive cases. The aggregate death rate for India is a little over 3 per cent which compared to the US (5.8 per cent) and Europe (7.01 per cent) is much lower. This can be attributed to the strict preventive measures taken by the government of India at the very onset of this pandemic.

In the next section, a detailed overview of the pandemic in India and the steps taken so far are described. The following section provides a state-wise analysis. The next section presents the impact of the pandemic on economy and environment. The final section concludes.

Steps Taken by the Government to Contain the Spread

Since the early days of this pandemic in India, the Government had taken some strict measures to contain the spread of this pandemic. The Government of India advocated practising social distancing, and advised against mass gathering. To enforce social distancing a day long Janata-curfew was declared on 22nd March, 2020 following which, the Prime Minister declared a nationwide lockdown for 21 days. All international and inter-state borders were closed with a ban on any kind of travel. All activities, economic, agricultural, manufacturing industries and the service sector headed for a complete shutdown. As soon as the first few cases of COVID-19 came to light, some initial steps were made mandatory by the Health Ministry. Thermal screening of passengers arriving in international flights was undertaken and biometric attendance in offices was suspended. People were advised against mass gatherings. Some hospitals were already suggested to augment their isolation facilities.

Figure 1

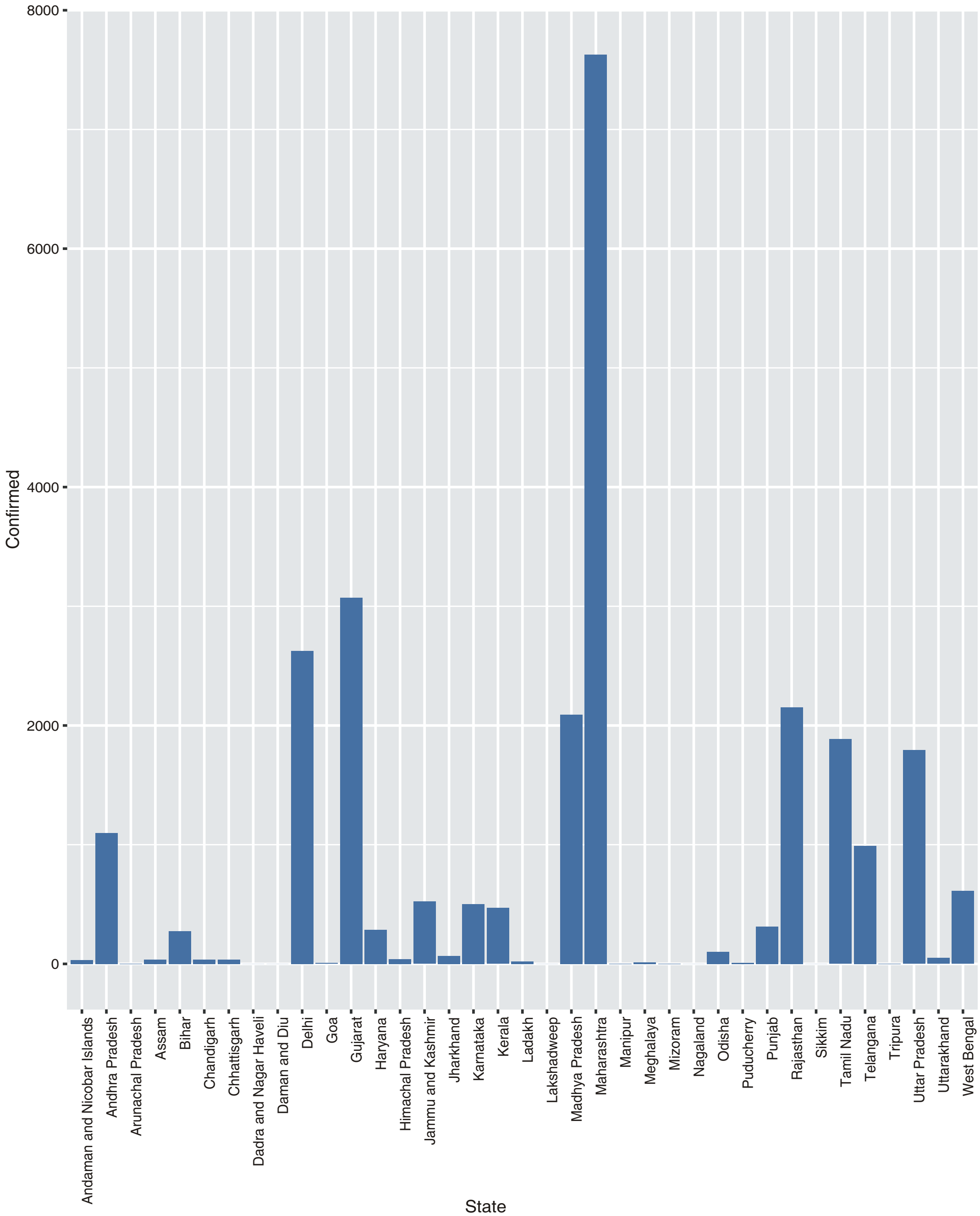

8000
6000
4000
2000
0
Confirmed
Andaman and Nicobar Islands
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chandigarh
Chhattisgarh
Dadra and Nagar Haveli
Daman and Diu
Delhi
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu and Kashmir
Jharkhand
Karnataka
Kerala
Ladakh
Lakshadweep
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Puducherry
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttar Pradesh
Uttarakhand
West Bengal
State

Figure 2

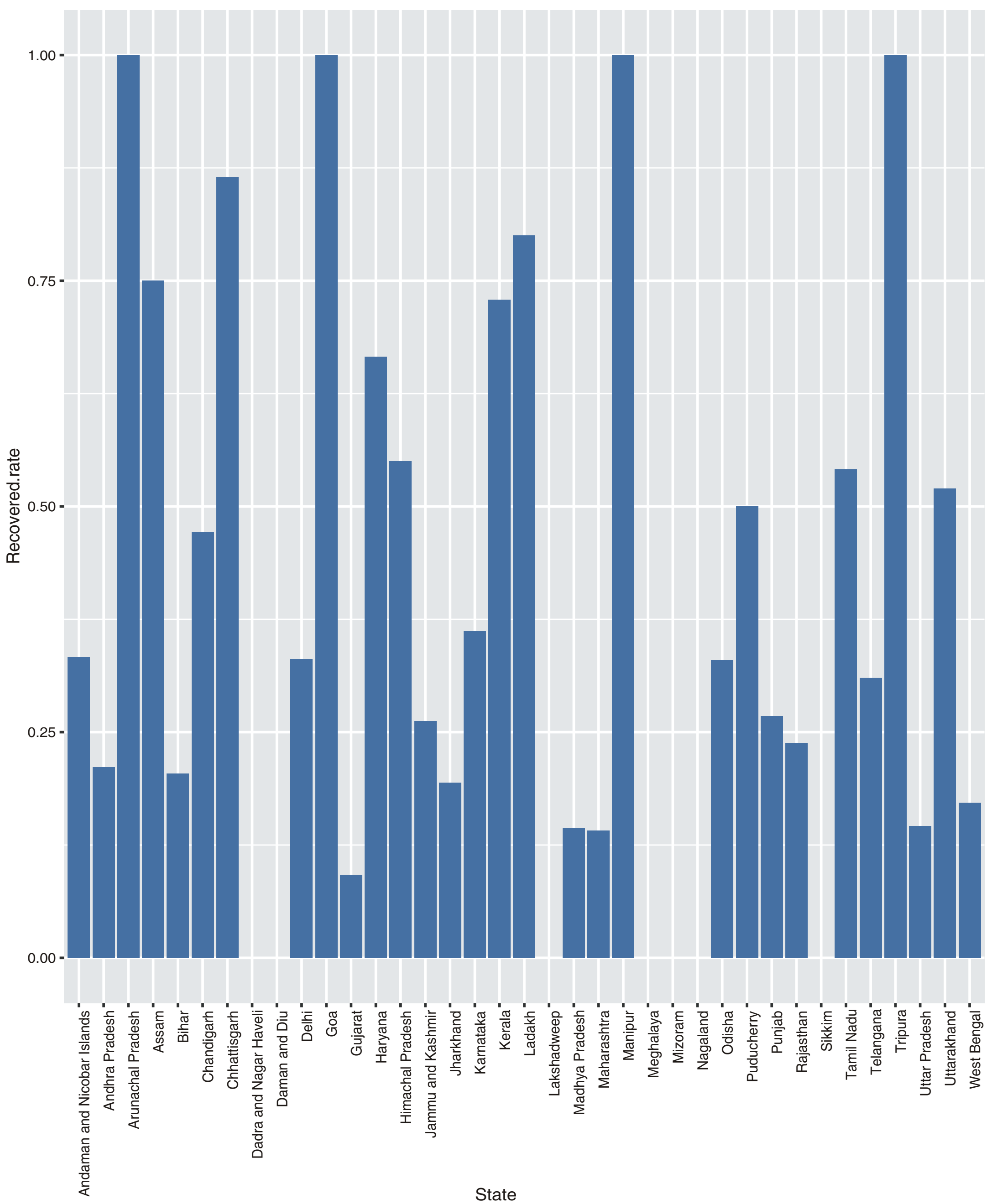
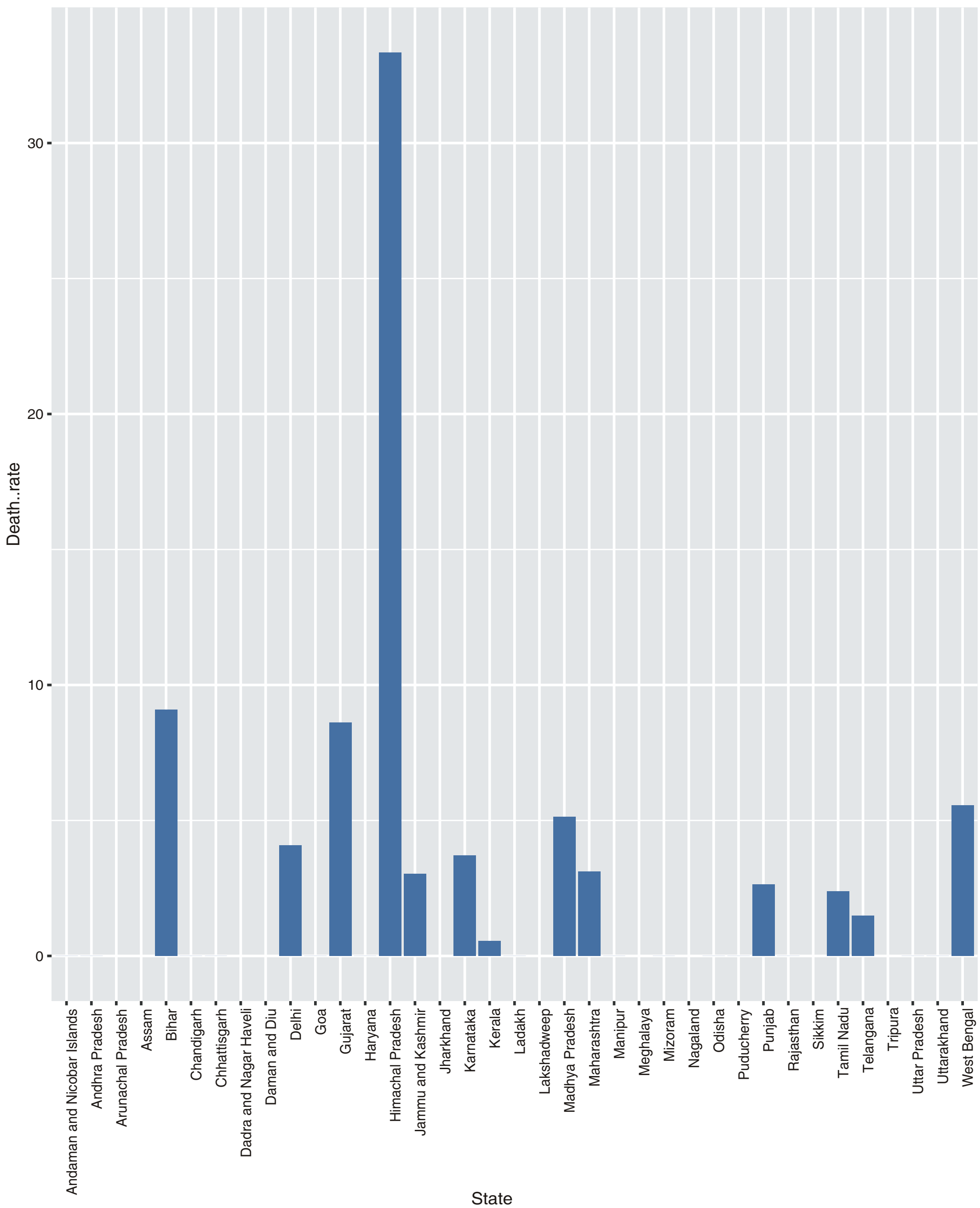

Recovered.rate
1.00
0.75
0.50
0.25
0.00
Andaman and Nicobar Islands
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chandigarh
Chhattisgarh
Dadra and Nagar Haveli
Daman and Diu
Delhi
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu and Kashmir
Jharkhand
Karnataka
Kerala
Ladakh
Lakshadweep
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Puducherry
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttar Pradesh
Uttarakhand
West Bengal
State

Figure 3



Death..rate
30
20
10
0
Andaman and Nicobar Islands
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chandigarh
Chhattisgarh
Dadra and Nagar Haveli
Daman and Diu
Delhi
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu and Kashmir
Jharkhand
Karnataka
Kerala
Ladakh
Lakshadweep
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Puducherry
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttar Pradesh
Uttarakhand
West Bengal
State

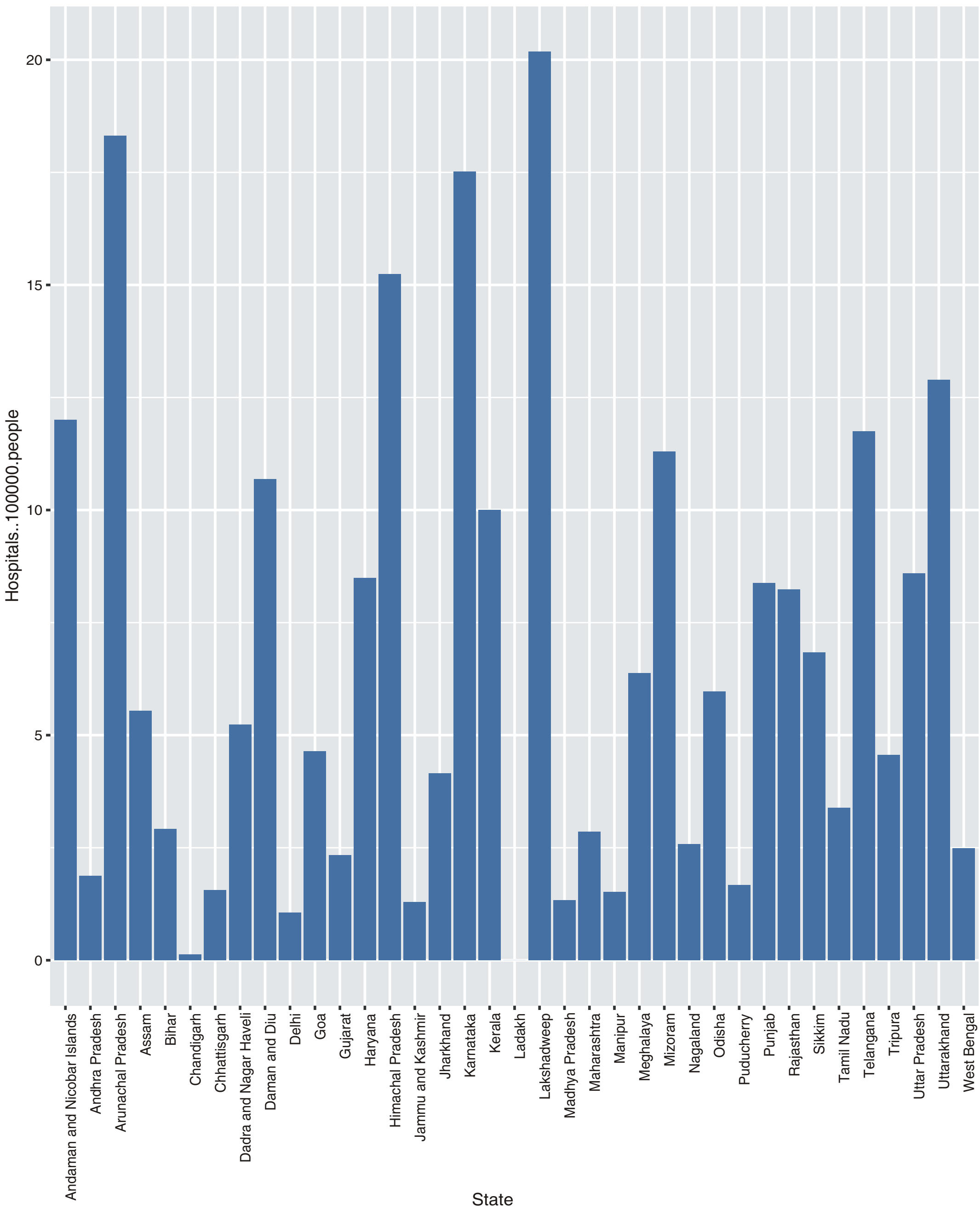
Inventory of number of ICU and ventilators were made so that if and when time came they would be ready for the patients. The healthcare infrastructure in India consists of primary, secondary, and tertiary health care. India has a pluralistic healthcare system. The healthcare at all these levels is provided by both public and private health care providers. India has a total of 18,99,228 hospital beds, 94,961 ICU beds and about 47,481 ventilators[1]. Figure 4 and 5 show the state-wise distribution of number of hospitals and ICU beds per 10,000 people in India. In figure 4 we can see that some of the states like Arunachal Pradesh, Himachal Pradesh and Lakshadweep have more number of hospitals per 10,000 people. These states have comparatively low population. Thus, with fewer number of hospitals in total, in comparison to other states, their number of hospitals per 10,000 is much more. Whereas, states/UTs like Maharashtra and Delhi have very low hospitals per 10,000. In figure 5 we see that again Lakshadweep has the highest number of ICU beds per 10,000 people whereas, Bihar and Chhattisgarh have minimum number of ICU beds per 10,000 people among all Indian states/UTs.

The Ministry of Civil Aviation instructed Airlines to make in-flight COVID-19 announcements. The passengers, who were picked through thermal screening at the airport, were sent for further test and self-isolation and some were also directed to the designated hospitals for treatment if necessary. After taking these initial precautionary measures, by the end of February only few cases of COVID-19 were reported. However, from the first week of March, the number of cases started increasing exponentially. It was also noted that there was a lag of 8 to 10 days in both time to recovery and time to death. Commensurate with the time since the increase in number of confirmed cases, the number of recovered and fatal cases increased from the second/third week of March.

In India, there have been mostly two types of COVID-19 cases that have come forth, the symptomatic and the asymptomatic. The former showed flu-like symptoms with muscle pain, tiredness, throat irritability, and breathing problem. At the first sign of any of the above, individuals were urged to go to the designated hospitals to get tested for COVID-19. However, the latter came to light later on. Through random testing it was noticed that some individuals who had no visible symptoms of COVID-19 were found positive for the novel coronavirus. These individuals were called the silent positives or the silent carriers. The problem with asymptomatic patients was that they mostly go undetected and thus expose others in contact to the virus. Recently, two types of strains for COVID-19 have been identified, the S-strain and the L-strain. The latter is considered to be more virulent of the two.

[1] **Source:** Indiastat

Figure 4


20
15
10
5
0
Hospitals..100000.people
Andaman and Nicobar Islands
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chandigarh
Chhattisgarh
Dadra and Nagar Haveli
Daman and Diu
Delhi
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu and Kashmir
Jharkhand
Karnataka
Kerala
Ladakh
Lakshadweep
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Puduchery
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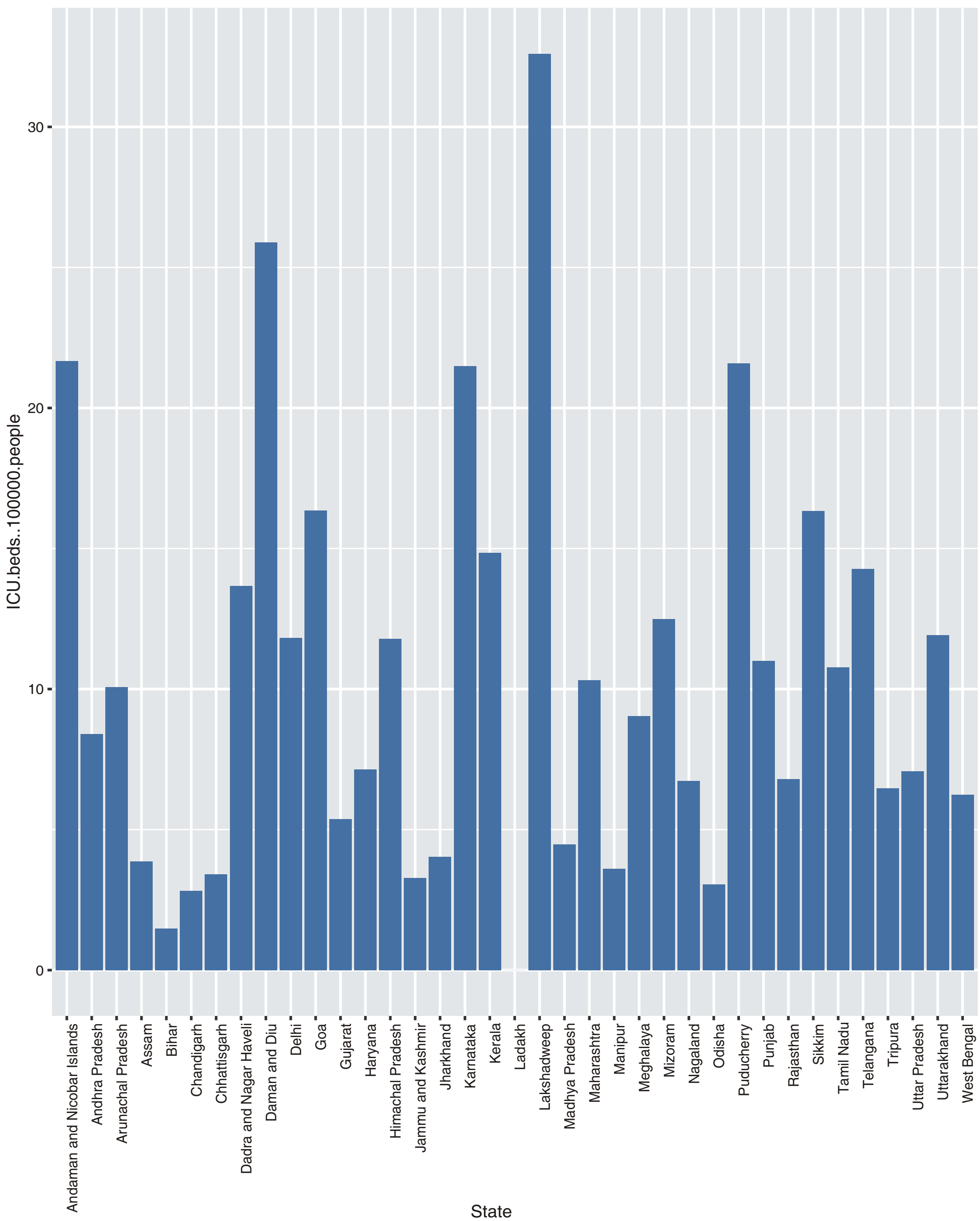
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttar Pradesh
Uttarakhand
West Bengal
State

Figure 5



ICU.beds..100000.people
30
20
10
0
Andaman and Nicobar Islands
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Chandigarh
Chhattisgarh
Dadra and Nagar Haveli
Daman and Diu
Delhi
Goa
Gujarat
Haryana
Himachal Pradesh
Jammu and Kashmir
Jharkhand
Karnataka
Kerala
Ladakh
Lakshadweep
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Odisha
Puducherry
Punjab
Rajasthan
Sikkim
Tamil Nadu
Telangana
Tripura
Uttar Pradesh
Uttarakhand
West Bengal
State

Currently there is no treatment protocol for COVID-19. However, apart from the standard medicine given to patients with flu-like symptoms, in some hospitals in India, patients have been subjected to plasma therapy with some positive results, although this is being done experimentally. The final results of such treatments are not confirmed yet.

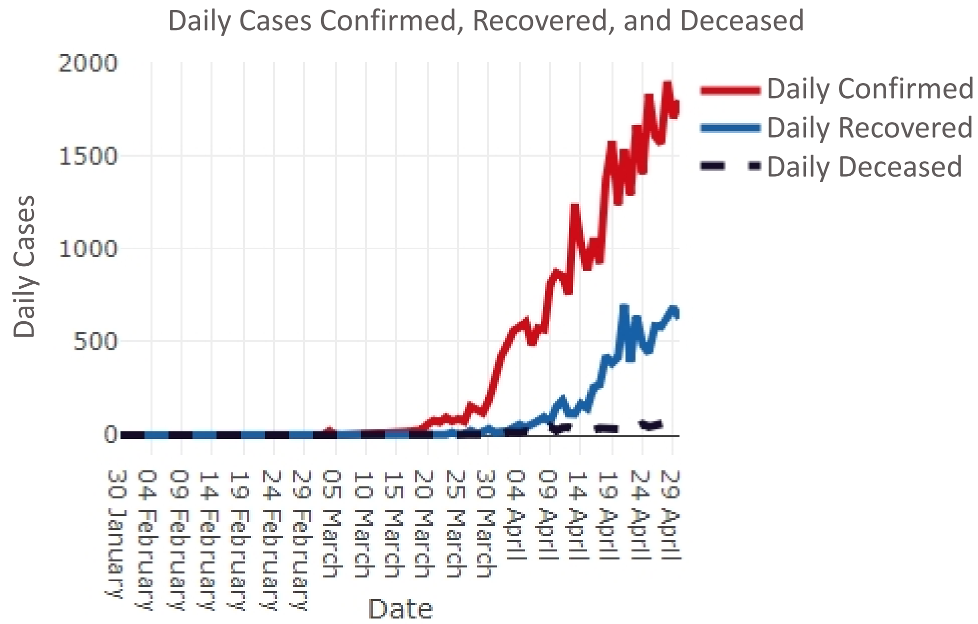
India is the world's second highest populated country with a population of 1.3 billion. The land area of India is 3.28 million sq. km. This makes India's population density of around 460 people per sq. km. In comparison, China, the world's most populated country, has a density of 153 people per sq. km. and the US, world's third most populated country, has a density of about 36 people per sq. km (United Nations, 2019). Population densities become important when discussing the spread of a pandemic like COVID-19, especially because it spreads through human to human transmission (Chandramouli & General, 2011). Thus closing of borders and complete ban on any form of travel between states and also between districts of a state is expected to help arrest the spread. High density of a population makes it all the more vulnerable as the risk of interaction with another person is high. The Indian states/UTs have varied population densities. In Delhi, the density is almost 12,000 people per sq. km. However, there are some states in the Northeast, where the density is as low as 30 people per sq. km. Thus, the spread of this pandemic is also varied in different states of India.

Figure 6 shows the daily data of number of confirmed, recovered and deceased cases. There is an increasing trend in number of confirmed COVID-19 cases starting around 10th March, 2020. Barring a few days when there was a decrease in the number of positive COVID-19 cases, mostly we find an increasing trend in daily confirmed COVID-19 cases. Figure 6 shows the increase in the number of recovered cases and deceased cases from around 25th March, 2020. There is an overall increasing trend in both recovery and death, due to the increased number of confirmed cases.

State-Wise Scenario Analysis of COVID-19 Cases

In India, Maharashtra and Kerala were the first two states with many COVID-19 reported cases, as many as 150. Initially, these states were followed by Karnataka, Telangana and Uttar Pradesh. At the end of April, Maharashtra still tops the list of confirmed and deceased cases in India. Kerala however has done quite well in containing the spread, with 500 confirmed cases of which 4 have succumbed to the disease. So far Kerala is one of the very few cases in India where the recovery rate (92.4 per cent) is much more than death rate (0.8 per cent). The state government in Kerala has been very strict in implementing social distancing and the nationwide lockdown declared by the Government of India. With recent study bringing to light two different strains of COVID-19 in India, the low death rate in

Figure 6



Kerala can be probably because the less virulent S-strain might be more predominant in the state[2]. In most of the North-Eastern states like, Arunachal Pradesh, Assam, Meghalaya, Mizoram and Nagaland, very few cases of COVID-19 has been reported so far. This part of the country is majorly connected to the mainland by air and to some extent by rail. The early closure of internal state borders had put a stop to any travel to and from these states. Also, majority of the North-Eastern states are sparsely populated thereby reducing the risk of interaction between individuals, and thus reducing the spread of the virus.

A scenario analysis to simulate the number of susceptible, infected, hospitalized and deceased cases is done using the S(usceptible)-E(xposed)-I(nfected)-Q(uarantined)-H(ospitalized)-R(ecovered)-F(atal) model. Susceptible-Infectious-Recovered (SIR) models are popular in predicting the course of epidemics (Smith & Moore, 2004; Allen *et al.*, 2008; Korobeinikov, 2009), where the population is divided into 3 compartments of Susceptible (S), Infectious (I) and Removal (R) (through recovery or death) groups with a defined rate of transition among them. Variation of SIR model is the SEIR model

[2] *The Times of India.* (2020, April 26). Wuhan's L-Strain May Be Behind Gujarat's High Death Rate: Experts Retrieved from https://timesofindia.indiatimes.com/india/wuhans-l-strain-may-be-behind-gujs-high-death-rate-experts/articleshow/75390504.cms

which includes another compartment as Exposed (E) population in the model (Stehlé *et al.,* 2011; Li *et al.,* 1999; Röst, 2008). Recently an extension of the SEIR model has been proposed (Churches, 2020; Ghosh *et al.*, 2020), where apart from the above mentioned 4 stages, two other stages viz. Quarantine (Q) and Hospitalization (H) are considered to take into account the healthcare capability and the R stage has been segregated to usual Recovery (denoted by R) and fatality (denoted by F). One of the main parameter considered in the model is the "ACT" parameter, which is the average number of persons an infected person might interact with in a day. SEIQHRF model, an extension of the SEIR model proposed by Churches (2020) sets the "ACT" parameter, i.e. exposure-to-infection rate at 10 times per day. The model used in Churches (2020) is applied to the Australian population data. The population density of Australia is 3 people per sq. km. Thus, for our model we have scaled the parameter value with the help of population density of respective Indian states. We have simulated the number of susceptible, infectious, hospitalized and fatal cases for each state, and compared their variability across states. With the intention of studying what the impact of Government interventions has been, we have run the simulation under four different experimental set-ups;

- Increasing hospital capacity to triple the normal capacity available, starting at day 15.
- Step up social distancing (decrease exposure opportunities), starting from day 15 since the first outbreak, for everyone except the self-isolated, who are already practising it.
- Strict social distancing starting from day 30 since the first reported case of COVID-19.
- Increase both social distancing and self-isolation rate starting at day 15.

In order to compare the impact that each of the above experimental set-up has on the prevalent number of infected/asymptomatic cases, cases requiring hospitalization and fatal cases, we produce a panel of five plots. The impacts of the four interventions are compared with the baseline prevalence plots for cases where no measures were taken to stop the spread of COVID-19.

Figure 7 shows the prevalence plots of susceptible, infectious, hospitalized and fatal cases of COVID-19 in Delhi. The plot on the top of the panel shows the baseline simulation of each of these compartments, i.e. without any policy intervention from the government. The number of infected/asymptomatic (yellow line) almost reaches a peak of 5000 cases in Delhi, whereas the infected/infectious reaches a peak of over 3000. The next four panels are simulation under the assumption of various government interventions. Out of the four different intervention set-up, increase in social distancing starting day 30 since reporting of the first case of COVID-19 seems to produce the best possible result. The curve is flattened by almost one third of that of

Figure 7: Delhi Prevalence Plots

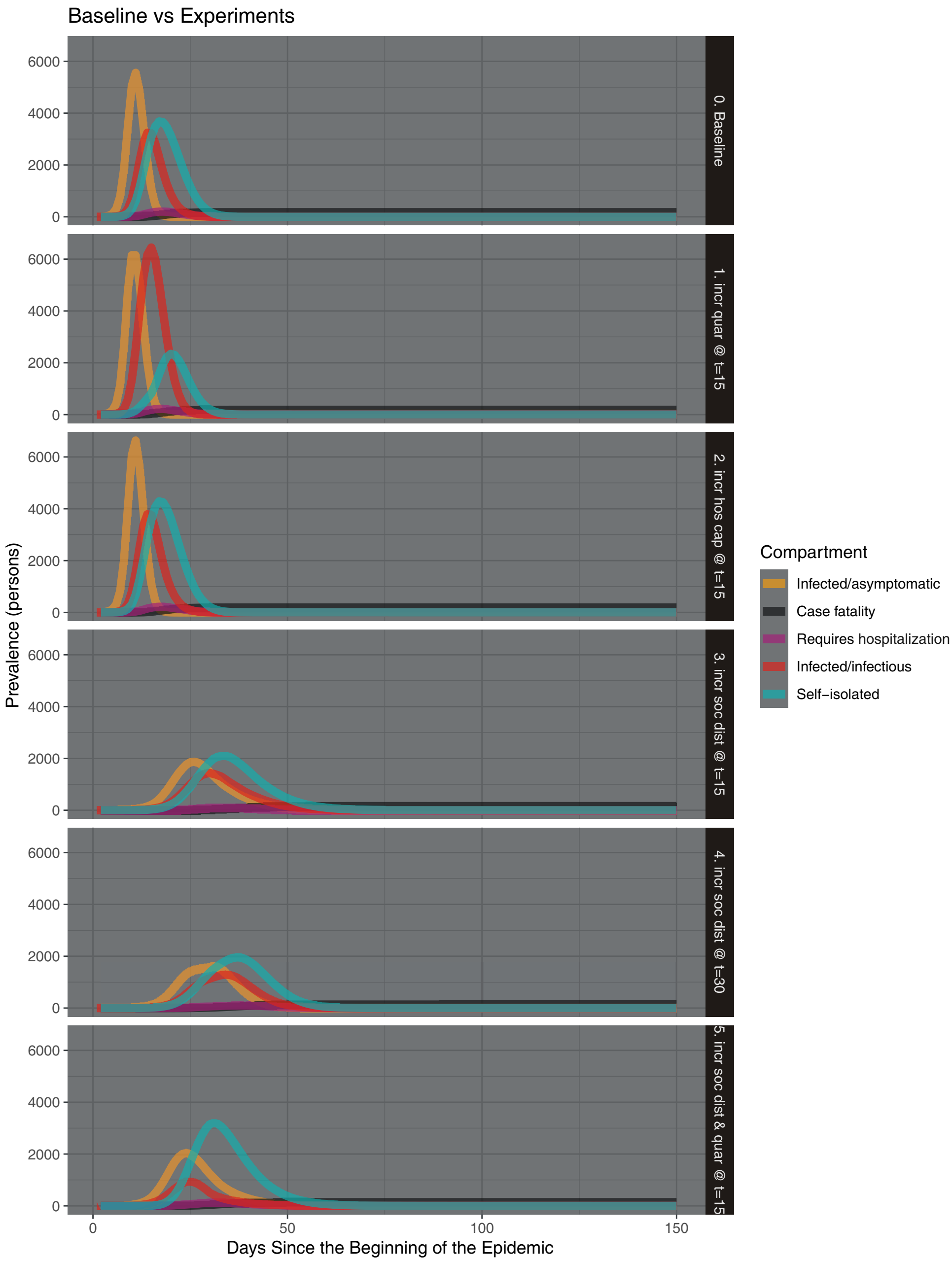


Figure 8: Maharashtra Prevalence Plots

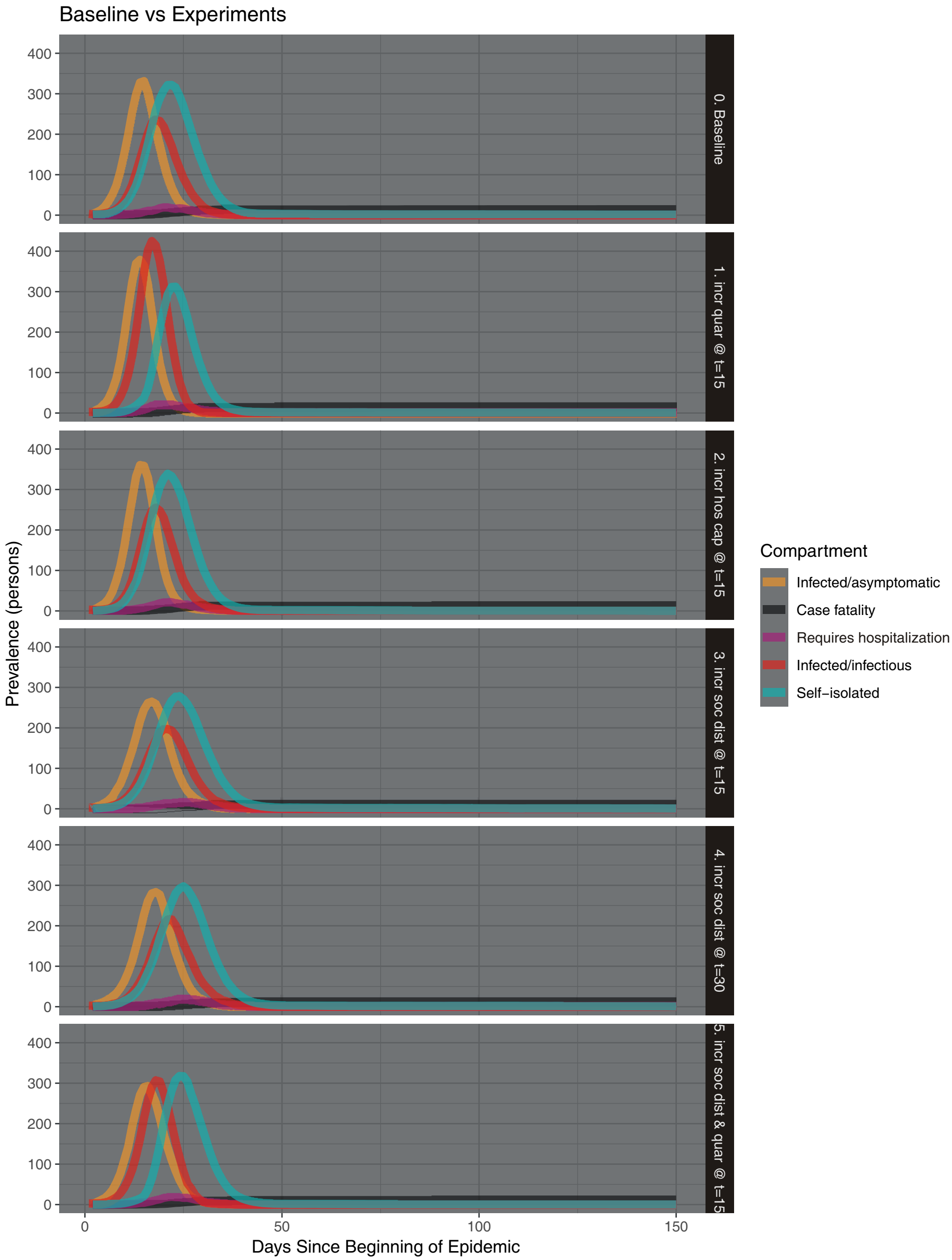
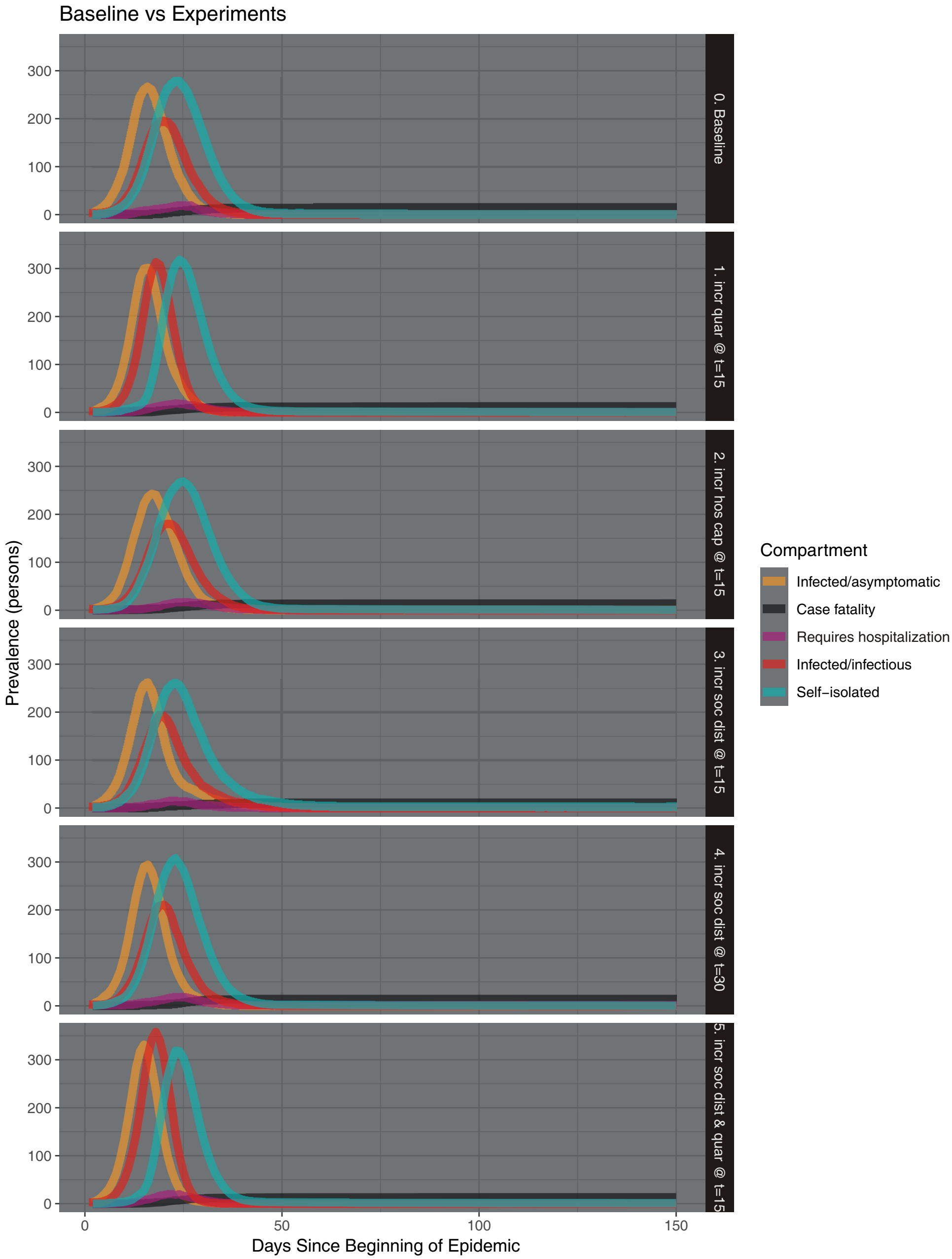


Figure 9: Gujarat Prevalence Plots



the baseline (about 2000 infected/asymptomatic) by implementing strict social distancing especially from day 30 after the first case report.

Figures 8 and 9 represent the prevalence plots for Maharashtra and Gujarat. If compared with the prevalence of COVID-9 cases in Delhi, Maharashtra and Gujarat, it is observed that in the latter two states, the highest number of infected/asymptomatic people reaches about 350 and 300 respectively. This can mostly be attributed to the population density of the states which is comparatively lower than Delhi. However, confirmed cases per 100000 people in these two states are very high. Thus, both Maharashtra and Gujarat have very high rate of COVID-19 cases.

The general observations from the scenario analysis projected that around two months' span is required to arrest the epidemic with the present strategy of lock-down and social distancing that includes phased withdrawal of such measures depending upon the identified hot spots. The population density of some states like Delhi, and Maharashtra being very high, more number of people are infected, although asymptomatic. Also it is noted that prevalence tends to start with exponential growth, but then tapers off. The number in the case fatality compartment is monotonically increasing, as expected, but at a much lower rate.

Impact of COVID-19 Economic and Environmental

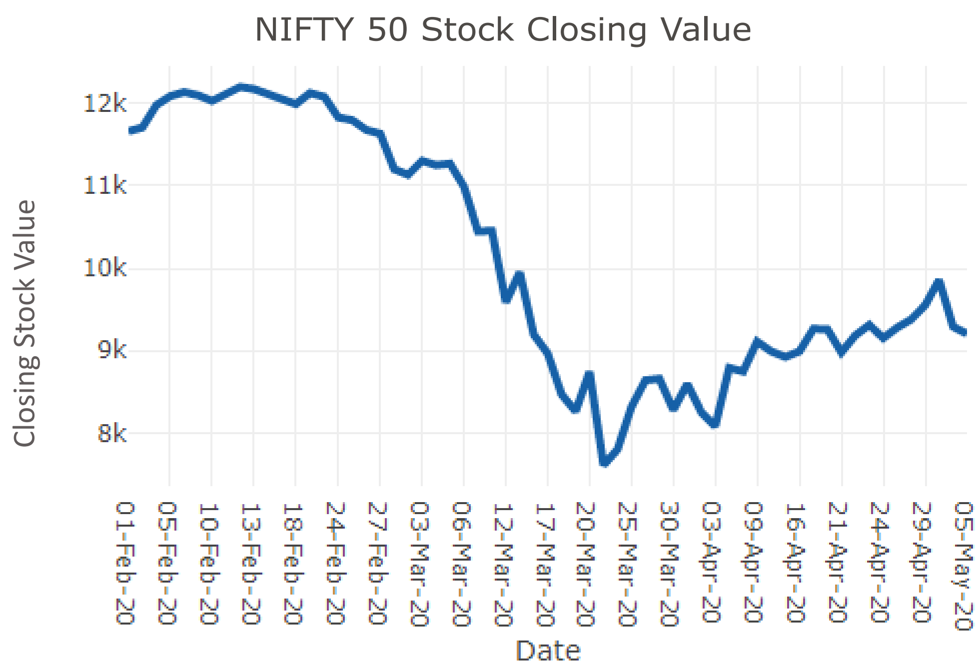
The outbreak of this pandemic has affected many nations across the globe and the impact has been felt in many sectors. In India, the COVID-19 outbreak has been hugely disruptive. Under complete lockdown less than a quarter of India's $2.8 trillion economy is functional. Supply chains have been under distress with the lockdown restrictions being effective across the country. Those in the informal sectors and daily wage groups face a major threat to their livelihood. Farmers, especially those who grow perishables face a tough time. The agricultural farmers in India are mostly poor, without the necessary capacity to hoard their produce for a long period of time. Many major companies in India such as Larsen & Toubro, Bharat Forge, UltraTech Cement, Grasim Industries, Aditya Birla Group and Tata Motors have suspended or significantly reduced operations since the declaration of nationwide lockdown. Major FMCG (fast-moving consumer goods) companies in India have significantly reduced operations and are focusing on essentials. Online retailers like Amazon, Flipkart and Snapdeal only focused on delivery of essential items, like grocery and pantry. According to a news report[3], an Amazon executive claimed that profits fell to $2.5 billion, down from $3.6 billion in the same quarter last year. So far a financial emergency has never been imposed

[3] *ETtech.* (2020, May 01). Amazon Says India Business Most Affected Due to Covid-19. Retrieved from: https://tech.economictimes.indiatimes.com/news/internet/amazon-says-india-business-most-affected-due-to-covid-19/75484094

in the recent past for India yet. However, on 4th April, 2020 former RBI chief Raghuram Rajan said that the COVID-19 pandemic in India may just be the "greatest emergency since Independence". The Government of India has since announced a variety of schemes to address the situation, from food security and extra funds for healthcare, to sector-specific incentives and extensions on tax deadlines. On 26th March, 2020 a number of economic relief measures for the poor were announced that amounted to over ₹1,700 billion (US$24 billion). On 27th March, 2020 the Reserve Bank of India also announced a number of measures which would make available ₹3,740 billion (US$52 billion) to the country's financial system. On 29th March, 2020 the government relaxed the movement of all essential as well as non-essential goods during the lockdown. On 3rd April, 2020 the central government released more funds to the states for tackling the COVID-19 outbreak totalling to ₹28,379 crore (US$4.0 billion). The World Bank and Asian Development Bank have also approved support to India to tackle the COVID-19 pandemic[4].

To get an overview of the economic condition in India, Nifty stock value has been collected

Figure 10

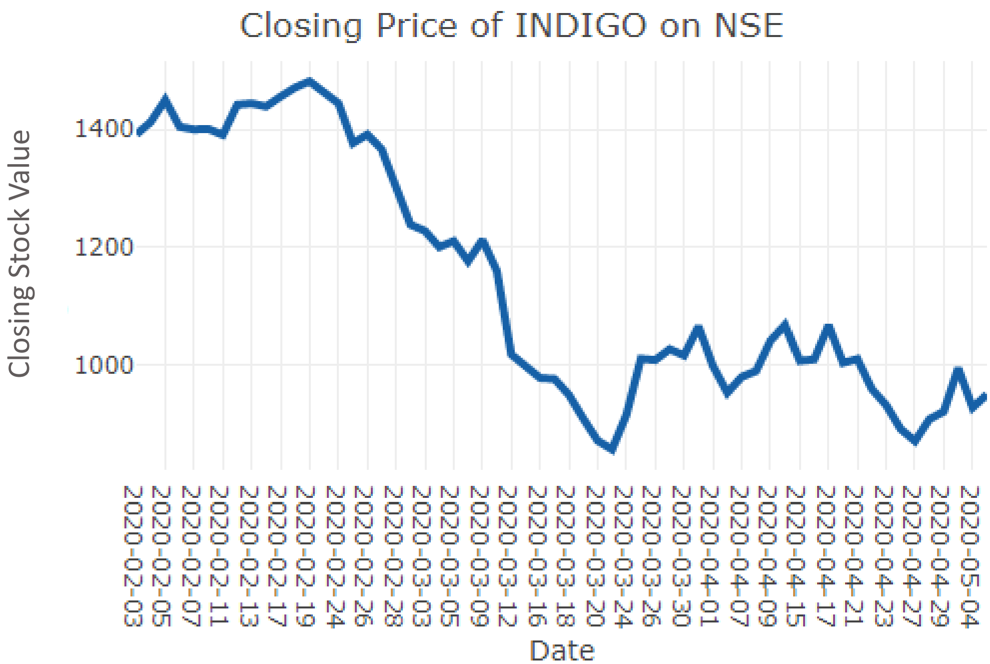


[4]Aiyer (2020); Press Trust of India (2020, March 30); Web Desk (2020)

from 1st February, 2020 to 5th May, 2020. It is observed from figure 10, that Nifty stock value started falling after first covid-19 case confirmed in India on 30th January, 2020. Stock price fall rate increased from 11th March, 2020 when WHO declared the outbreak as a pandemic. After janata curfew on 22nd March, 2020 and announcement of lockdown on 24th March, 2020 stock price saw a massive fall due to manufacturing companies announcing shutdowns.

In the following few plots we look at the trend in the closing price of some select firms. The COVID-19 pandemic had led to complete shutdown of any air travel. Passengers cancelled their travel plans, and their hotel reservations. During the early days of lockdown in India, many major IT firms had decided to shut down before they could come up with a work-from-home regime for their employees. The retail sector also saw some steep ups and downs in the last couple of months. In the initial days due to the lockdown a lot of retailers lost a lot of business. However, this sector saw some improvement when the government relaxed some of the lockdown measures and allowed retail stores to open for making essential goods available to the public. In our study we have followed the closing prices of some select firms from

Figure 11



airlines, hospitality, IT and retail sector.

From figure 11, it is observed that stock value of IndiGo Airlines fell steeply after announcement of pandemic by WHO on 11th March, 2020. After janata curfew and lockdown announcement by Government of India on 22nd and 24th March, 2020 respectively, price fall continued due to cancellation of international and domestic flights.

From figure 12, it is found that stock value of Tata Consultancy Services fell after announcement of pandemic by WHO on 11th March, 2020 and after janata curfew and lockdown announcement by Government of India on 22nd and 24th March, 2020 price fall continued due to shutdown of offices and COVID-19 attack in most of the developed nations specially in the USA and Europe.

From figure 13, it is found that stock value of Taj Hotels & Resorts fell after announcement of pandemic by WHO on 11th March, 2020. After janata curfew and lockdown announcement by Government of India on 22nd and 24th March, 2020 price fall continued due to cancellation of international, domestic flights and less numbers of foreign tourists as well as Indian tourists and also mass cancellation of hotel bookings.

From Spencer's Stock price graph in figure 14,

Figure 12

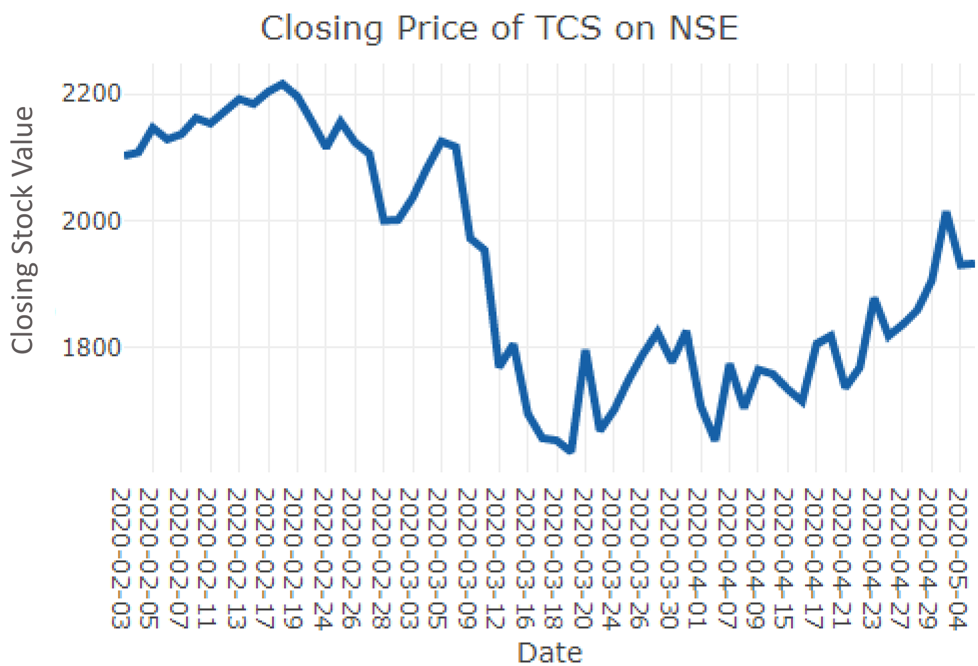
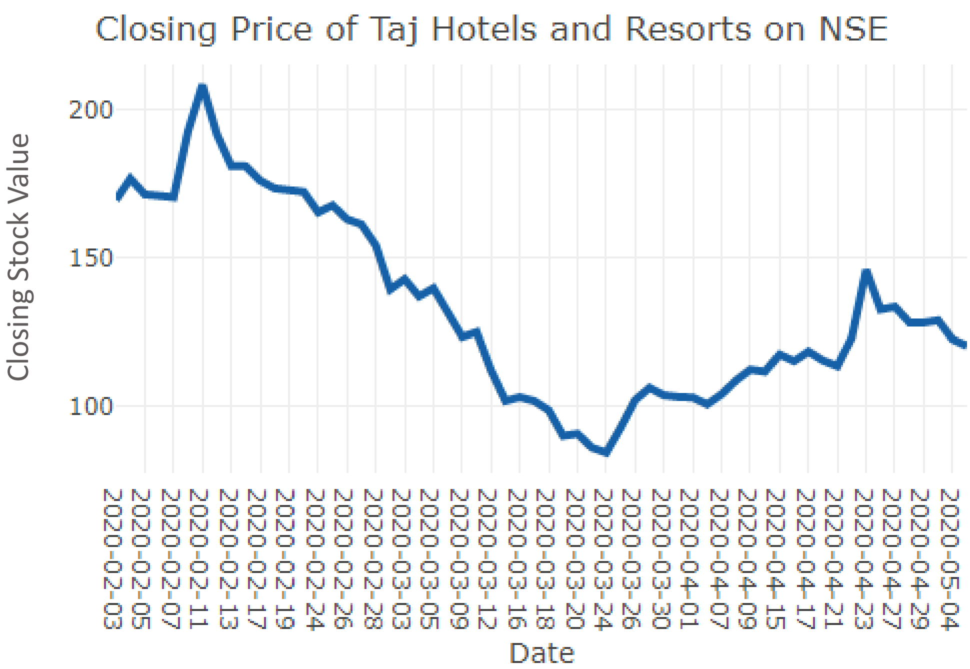


Figure 13

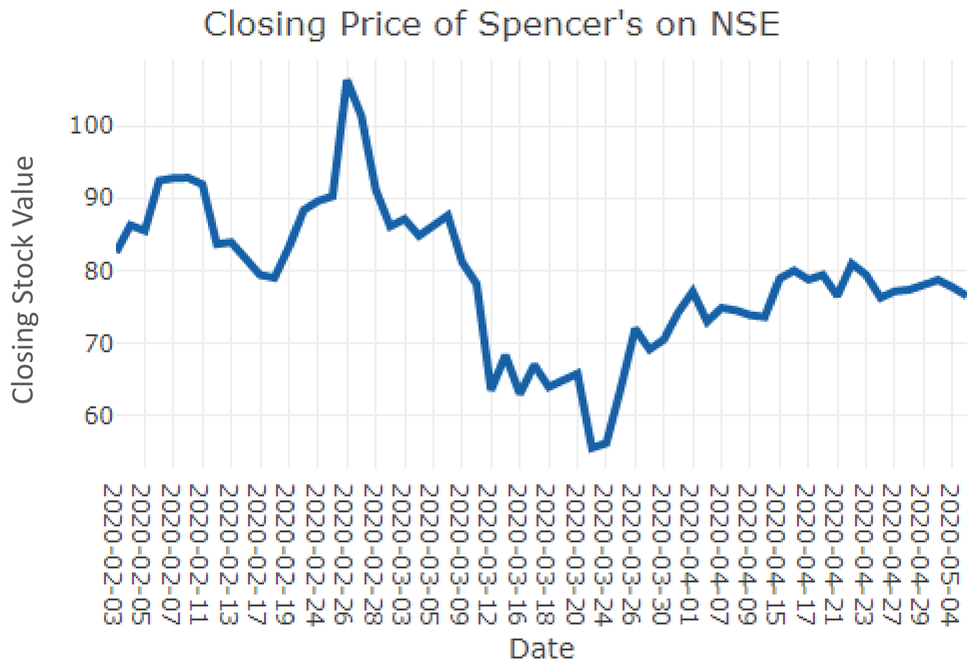


it is observed that Nifty stock value decreased after WHO declared the outbreak as a pandemic. After janata curfew on 22nd March, 2020 and announcement of lockdown on 24th March, 2020 stock price fell due to shut down of market. But after 27th March, 2020 Government of India declared some moderation in the retail business for public. Especially, online retailers were given some relaxation in supply of essential items. So, the stock value rose slightly.

Due to the nationwide suspension of economic activities in India, the hospitality and tourism industry were instantly affected. In future the government is planning on phase-wise removal of lockdown in the nation where opening of businesses related to the tourism and hospitality industry will probably take the longest to return to normal. Thus, it remains to be seen how large a loss they will face.

The impact of COVID-19 has been felt in all economic and social activities. It is needless to say the pandemic has majorly unsettled our way of life. However, there are a few silver linings to the cloud of this pandemic. The environment, for instance, has taken a turn for the better. It has been observed recently that air pollution levels have started to drop dramatically as the second-most populated

Figure 14



nation endures the third phase of a nationwide lockdown amidst coronavirus fears. If we consider looking at air pollution indicators as proxies for industrial activity, the suspension of industrial activity has helped reduce air pollution. It is observed that air quality index (AQI) decreased after janata curfew on 22nd March, 2020 in India. After announcement of lockdown from 24th March, 2020 value of average AQI dropped drastically and reached to a satisfactory level (Sharma *et al.*, 2020) Especially for Delhi, Greater Noida, Kolkata and Bengaluru AQI level changed from poor or severe level to good or satisfactory level. Similarly NO_2 level of some densely populated and industry based cities also decreased after janata curfew and announcement of lockdown due to less numbers of vehicles, shut down of industries etc. According to recent reports most of the major cities in India have reached a satisfactory level AQI due to the lockdown.

Conclusion

This article endeavours to make an in-depth study of available data on COVID-19 pandemic outbreak in India. A crowdsource initiative https://www.covid19india.org/ makes state-wise data available for everyone's perusal. Based on that dataset, this article has analysed the COVID-19 scenario in majorly affected states and the simulations show that social distancing comes out to be an effective way to fight the pandemic. Since the very onset of the pandemic, it has been the agenda of the government to make people aware of the symptoms of COVID-19. Also, basic precautionary measures such as washing hands at regular interval, use of face mask, use of alcohol based hand sanitizers have been advised. With no vaccine available yet for the virus, awareness, social distancing and augmented medical facilities are the ways to fight this pandemic.

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Livelihood under COVID-19 Anxiety: Role of HR

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Abstract

COVID-19 pandemic has placed the whole world in an unprecedented situation. Unlike other epidemics, here human being itself is the carrier of this COVID-19 virus and that is why the rate of spreading of this virus is very high. As there is no specific vaccine or medicine available till date, to stop the community spread of this virus, most of the countries in the world have adopted the lockdown policy. This lockdown policy cannot be considered as a long-term solution; as it is a big threat to our livelihood. Considering COVID-19 will remain as a part of our life, in this article, an attempt has been taken to identify how HR practitioners can create a balance between lives and livelihoods within any organizational set up. In this delicate balancing process communication plays a very vital role. Apart from communication, bringing a change in organizational structure, culture and individual's habit will remain a big challenge for HR practitioners.

Introduction

COVID-19 continues to spread rapidly around the world with different intensities; that is why countries are at different stages of the pandemic. Some countries could contain the spread at the initial stage, while some appeared to be at the peak of infection and are urgently building capacities of their health system.

India is also experiencing a significant increase in the number of cases since the beginning of April and has taken up the lockdown strategy to deal immediately with the pandemic situation. From the country's economic perspective, this pandemic challenge is unprecedented. COVID-19 threat pushed the country to choose between lives and livelihoods and the obvious decision is taken in support of lives; rather than livelihoods. The threat of COVID-19 to lives and livelihoods will be fully resolved only when people will develop the immunity either through vaccine or direct exposure. Therefore, it is impossible to believe that COVID-19 impact will be fully removed from the country, once the lockdown is withdrawn.

To create a balance between lives and livelihood in a hugely populated country like India, it is not possible for any government to continue the lockdown for an indefinite

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period. Therefore, strategies are taken up to identify between infected and non-infected zones. Decisions were taken to start economic activities in the non-infected zones through step-by-step manner, following the healthcare guidelines. However, it should be noted that infection can happen at any moment in a non-infected zone, which turns a non-infected zone to an infected one very quickly. In this condition, it is really a challenging task before any organization to protect and support their employees and customers from COVID-19 threat and run the business.

In COVID-19 situation, the essential focus is on people, who are driving the organizations. As the situation is life threatening, it is expected that there will be a change in priorities within the employees from work-related issues to health issues for self and the family. It is very common that when there is a threat to our basic need for safety, it is difficult for the people to give appropriate focus to other needs. In this situation, it is a really big challenge before the organization to motivate the workforce towards productivity. Here, the role of the organization is very crucial and delicate; it has to balance between the need for human safety and organizational growth.

Even if the lockdown period is over, there is a chance to be infected; so, the anxieties will remain very high among the employees. Therefore, there must be some appropriate strategies from the organizational side to support and protect the employees from COVID-19 infection. The strategies may include three major factors: identification of actual work, addressing the whole workforce and setting a hygiene-focused work culture[1].

Identification of actual work incorporates the people to focus mainly on the most important tasks as per their work goals and empowering the work team to be creative to innovate the ways to deliver non-essential tasks with minimum exposure or to distribute the exposure equally among the teammates to reduce individual burden. Recently, TCS has adopted the HR policy of work from home in next two years, unless it is absolutely required to come to the office.

When we talk about the next strategy to address the entire workforce, it essentially incorporates all stakeholders associated with the business. Here, the organization may include vendors, contractors, unions, partners along with the direct employees. The main purpose of this inclusion is lying majorly with workplace safety. Addressing the entire workforce incorporates the issues like social distancing within work set up, providing the awareness of COVID-19 symptoms and most importantly giving the information regarding immediate medical support system, which can be availed by the employees under organizational health support scheme. As

[1] Adapted from Deloitte, COVID-19: Practical Workforce Strategies that Put Your People First, 2020. Retrieved from https://www2.deloitte.com/global/en/pages/about-deloitte/articles/practical-workforce-strategies-that-put-your-people-first.html

long as the chances for infection are there, an organization must have to prepare themselves for sudden work disruption. Therefore, there should be a second operational plan for work re-activation and that should be communicated properly. Organizational communication should address the change in leave policy, in case of COVID-19 infection. Here, it should be noted that even after all possible communication regarding the organization support system, COVID-19 anxieties might not be removed fully. As a result, an organization may have to face the problem of higher absenteeism, lower productivity, refusal from the workforce etc., until the situation is normalized.

Finally, it is most important for the organization to think about a culture that promotes workplace hygiene. This culture incorporates frequent disinfection of the workplace, providing adequate facilities to the employees for proper sanitization, use of protective equipments like masks, gloves etc. In the event of a suspected COVID-19 case within the workplace, proper protocol of isolation should be followed along with in-house contact tracing. In a country like us, it is very difficult to set such a protective environment within the workplace. Therefore, it will be an extremely challenging task for any organization. In the whole process, monitoring is an important issue where organizations have to pay much attention. To make the monitoring process more fruitful, an organization must develop clear guidelines by adapting the guidelines of concerned authority like the health ministry or the World Health Organization.

If an employee is considered as one of the main pillars of business, then the other pillar must be the customer. In COVID-19 situation, there is a dramatic shift in consumer perception. Similar to employees, they are also focusing on basic needs like safety, security and health; rather than focusing on emotional needs. The way employees are expecting empathy from their employers; customers are also expecting the same from an organization. Activities that are targeted to the basic needs of safety, security and health may be helpful to enhance customer satisfaction. Here, some small but thoughtful steps from the part of the organization may create a big difference. One of the important ways to deal with this issue is continuous communication by projecting their effort on protecting health related safety and security issues towards their customer. Once the lockdown period is over, if the companies concentrate more on promotional activities by giving discounts, or by giving other benefits, customer perception towards the company may be very negative. Some might perceive it as an opportunistic behaviour to capitalize in crisis period (Quelch & Jocz, 2009). On the contrary, if the activities are more directed towards protecting the health related safety and security issues, like visible use of sanitization practice both for the sales staffs and customers, maintaining strict social distance within or outside the store, gifting safety equipment etc., it may appeal to the customer more deeply than any other marketing effort. In the lockdown period, we have already noticed that how online essential service providers like Amazon, Swiggy, Apollo Pharmacy, Frank Ross etc. are projecting their behaviour towards customer health care by delivering their products at the doorsteps without directly handing it over to the customers. This activity may be very small but shows a sensible gesture from the part of an organization towards their customers which may enhance the satisfaction. Therefore, in COVID-19 situation, some thoughtful considerations are required from the part of the organization to hold their customer base.

To develop this different set of work environments, there are some key requirements from the part of the organization. These key actions may help to materialize the above strategies. These key actions may be as follows:

Developing Trust Through Communication: During crisis period, trust plays a very vital role. As a whole, trust is the function of transparency, relationship and experience. Transparency includes the honest confession of what we really know and what we do not know. Relationship is the internal understanding between an organization and the different stakeholders. Finally, experience is the accumulated form of positivity or negativity that a stakeholder received over the years by dealing with the organization. At the time of crisis, it is very crucial to reinforce the trust relationships between the organization and different stakeholders. Communication is one of the powerful measures to arrest the fears that naturally surface during the period of crisis. Besides this, internal exchange between the stakeholders may also provide the platform to ease anxieties and fear. Many psychologists are of the opinion that the non-verbal part of our communication plays an important role in building the credibility of narratives. In case of building trust through communication, it is very important to add the elements like voice intonation; eye contact and body language etc. that can be helpful in developing emotional connect. Therefore, in this crisis period, communication through video is much preferable than any other mode of communication like emails, texts or tweets.

Adapting with the Structural Changes: Time to time, depending upon the business environment, structural change is an inevitable part of an organizational life. However, COVID-19 crisis is likely to accelerate fundamental and structural changes within the organization far faster compared to any other situational crisis (Hagel *et al.*, 2008). Today, the concept of "virtualization" of workplace is evolving rapidly. Today, all around the world, organizations and their employees are learning to communicate, collaborate and co-ordinate through virtual platforms and trying to understand how to incorporate more efficiency and efficacy into such platforms. This kind of structural changes put some pressure on the organization to alter their pre-existing plans and strategies. For example, the concept of "workplace virtualization" leads towards decentralization of work model. Obviously, the decentralized work model must have some challenges from a business perspective, therefore, now it is very important for the organization to do proper planning in this regard. This planning must incorporate a different type of management training, communication policies and cyber security protocol. The need for operating in a different manner, provides an opportunity for the organization to think about what they can do differently. Once the organization identifies the way of doing the activities in different forms, then only it can understand the pros and cons of those actions, which will help the organization to decide whether to continue those actions.

Empowering Employees for Taking Quick Decision: In COVID-19 crisis, organizations are facing such situations that were never anticipated before. Assuming that people who are deeply involved in dealing with the problem are better decision makers, the organization has to encourage them to come up with innovative ideas to deal with issues. Here, organizational trust is essential to those teams and individuals who can come up with creative approaches to address the unanticipated needs. These teams and individuals may be allowed to have some local autonomy to take some quick decisions. Many organizations have already set up crisis response teams in order to develop enterprise wide understanding as well as co-ordination within different functions. Some sub-teams have also been created in order to manage the areas like communication, legal, finance etc. These teams are operating under the clear guidelines of the management but they are also empowered to take quick decision if needed. It is not necessary for them to follow the traditional protocol of decision-making; in case of unanticipated situations, they can take the unconventional route as well. This approach has long-term impact on business; it helps the organization to learn how to conduct the business in case of extreme uncertainties.

Strengthening Digital Platform: The recommendations for maintaining "social distance" impels the organizations to move into the virtual space and ask the employees to work from home. If an organization is preparing for increased remote work, it must ensure the technological capacity to support the virtual mode. Bandwidth, VPN infrastructure, authentication, access control mechanism, security tools must have the capacity to fulfill the demand (Khalid, 2020). Organizations must have to think about providing the remote access to the contractors and the third parties who play critical roles in the business. Here, it should be mentioned that a sudden increase in online demand may have big implications on system stability, network robustness and data security, especially in the remote places where telecommunication infrastructure is not well developed. To ensure smooth functioning in such remote areas, organization has to act quickly to restore the connection with their employees. It has been observed that many companies have already set up the remote access for their employees in this crisis period, at a very fast pace, but a very few of them have cybersecurity protocol in place. Therefore, proper cybersecurity establishment is highly required at this stage; otherwise, it may lead to another big crisis (Rundle *et al.*, 2020).

Bringing Resilience in Leadership Role: As the leaders confront the situations that were never anticipated, it is very important to deal with the situation by using emotional intelligence. In this uncertain situation, only resilient leaders can transform organizational outlook from negative to positive and at the same time, they may motivate and prepare the people for facing future challenges, which are likely to occur in post COVID-19 period[2]. In fact, COVID-19 is an acid test for leadership roles also. Here, the leaders have to act without having perfect information, guide the organization through numerous challenges and decisions, which have significant implications on all stakeholders of the company as well as on the whole society. The clarity in decision making and communication with empathy are the most powerful instruments at this stage that may bring the resilience in a leadership role. Leaders with the quality of resilience can inspire the organization to persevere through this crisis, position their brand image in better place and prepare the workforce to fight back. In case of crisis like COVID-19, navigation route is very deep which provides the platform for learning and developing deep trust and bondages within all the stakeholders of the organization. Reaping the benefits from these opportunities entirely depends upon how much resilience is there in leadership roles. If it is truly present within organizational leadership, it will definitely add value to all the stakeholders of the company as well the whole society.

Conclusion

COVID-19 is an unprecedented phenomenon all over the world. It has already created a massive impact on our lives and livelihood. The increasing number of death cases is creating an uncanny fear within us. As of now, there is no appropriate medicine or vaccine available to deal with this virus. Even if, we get a vaccine at the end of 2020, which is again a speculation, it will take a long period to complete the vaccination process in case of a hugely populated country like India. Therefore, we should have to accept that we would not get rid of this life-threatening virus very soon. It will remain in our society may be at a lower rate of infection, if we take proper protections. In a country like India, lockdown might be a temporary solution but not affordable for a longer period. No government can support the whole country without having any economic movement. Therefore, it is high time to start the economic activities at least in no or low containment

[2] Adapted from Deloitte, The Heart of Resilient Leadership: Responding To COVID-19, 2020. Retrieved from https://www2.deloitte.com/us/en/insights/economy/covid-19/heart-of-resilient-leadership-responding-to-covid-19.html

zones. In this context HR role is very serious. As of now, HR people deal with the issues like individual growth and organizational growth. Right now, another very delicate dimension is added in the area; that is the protection of workforce from COVID-19 infection. To deal with this issue, a major change in organizational structure, culture and individual's habit is required, which is a very big challenge for the HR practitioners.

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Impact of COVID-19 on Indian Equity Markets

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Abstract

COVID-19 is not only a health pandemic but has also severely impacted the world economy including India. Economic activity has come to a virtual halt because of the lockdown announced by the government. This has resulted in severe decline in revenues and earnings of companies not only in the short term, but also future forecasts have been slashed. Impact of COVID-19 goes beyond the lockdown period, and expected to have a long lasting impact on companies' revenues, earnings and stock prices. In this article, we discuss the impact of COVID-19 on financial performance (both short term and long term) of firms and its second order impact on prices of few selected stock indices representing different sectors of the Indian economy.

Introduction

COVID-19 or the novel coronavirus is having an unprecedented impact on all aspects of life including the financial markets. While the participants of financial markets anticipate and incorporate risks and uncertainty in forecasting corporate earnings and revenues, they often fail to calibrate the impact and associated risks arising out of a pandemic of such proportion and thereby fail to distinguish the severity of the impact on different sectors resulting in *knee jerk reaction.*

In this backdrop this article aims to discuss the impact of COVID-19 on financial performance (both short term and long term) of firms and its second order impact on the stock prices. COVID-19 is likely to impact a company's financial performance because of the following factors:

Demand Drivers

- Short term demand will be affected due to the lockdown of economy. This would impact almost all sectors of the economy (impact may vary across industries though), barring a few classified as essential.
- Impact on long term demand due to shift in buying behaviour of consumer. Post the lifting of the lockdown, discretionary spending is likely to be more impacted than spending on staples and essentials.
- Realignment of global manufacturing hubs as a result of change in geopolitical

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environment because of COVID-19. Many countries (including USA) would start scouting for shifting their manufacturing plants out of China and may start sourcing from India, leading to increased demand in the long run.

Supply Drivers

- Short term supply disruption due to manufacturing and supply chain disruption as a result of lockdown. Companies which are heavily dependent on migrant labour, may take more time to restore their production to pre-COVID-19 levels.
- Long term supply disruption due to migrant labour issues, imported raw material availability issues, new norms of work places notified by regulatory bodies etc.

Policy Drivers

- Increasing focus on de-globalisation and thrust on self-reliance. Government of India is likely to announce several measures to make the economy more self-reliant and less dependent on imports. This may have a meaningful impact on the future revenues and earnings of the companies.
- The world is looking at alternatives to China to shift their manufacturing plants because of perceived linkages of COVID-19 to China. In response to this, the Indian Government has announced several measures to incentivise foreign direct investment in India. If more global companies shift their production base to India or start sourcing from India, it will have a positive impact on the revenues and earnings of Indian companies.

However, the impact of COVID-19 would widely differ across industrial sectors as well as across companies. Industries or sectors which are most likely to be adversely impacted and unlikely to recover completely in the short run are Travel & Tourism, Airlines, Construction, Banks and NBFCs.

Industries which may recover quickly once the lockdown is lifted include consumer staples and capital goods. There are also certain industries which may benefit from COVID-19 because of the long lasting impact on consumers' behaviour, preferences, priorities, like pharmaceuticals and health & hygiene companies.

Methodology

To study the impact of COVID-19, we have selectively used certain S&P BSE sectoral indices and analysed the likely impact of COVID-19 on the revenues, earnings and valuation multiples of firms both from a short term and long term perspective based on qualitative factors. Two dimensions based on which the impact of COVID-19 on revenues and earnings have been measured in this study are:

i. **Severity of Impact:** It measures the extent to which a company's revenues and earnings are impacted because of

COVID-19. It also measures whether the COVID-19 impact is positive or negative.

ii. **Impact Duration:** It measures the expected time period for which COVID-19 might have an impact on the company's financial performance. Some sectors may be impacted only during the lockdown period and may recover immediately after the lockdown is lifted, while other sectors may suffer a long lasting impact in terms of companies' future revenues and earnings.

Valuation multiples of a company may expand, contract or remain unaffected because COVID-19 may impact future growth rates and risk of a company. Impact on valuation multiples has been measured by using the following terms: 1. Likely to contract; 2. Not impacted significantly; and 3. Likely to expand.

This section next discusses the impact of COVID-19 on the selected indices and summarizes the results (Table 1).

S&P BSE Basic Materials

This index comprises housing related companies, chemical and petrochemical companies, agriculture related companies etc. Since this index comprises diverse sectors having different demand and supply drivers, it is difficult to analyse a generalised impact of COVID-19 on this index. However, for agriculture related companies both input and output are relatively immune to COVID-19 impact because of their *essential* nature. Chemical and petrochemical companies have suffered due to lockdown, however the impact is likely to be transient and there is a likelihood of a V-shaped recovery after the lockdown is

Table 1: Impact of COVID-19 on Select Indices

Index	Severity of Impact	Impact Duration	Valuation Impact
S&P BSE Basic Materials	Moderately negative	Medium	Likely to contract
S&P BSE Consumer Discretionary Goods & Services	Severely negative	Long	Likely to contract
S&P BSE Fast Moving Consumer Goods	Marginally negative	Short	Likely to expand
S&P BSE Information Technology	Moderately negative	Long	Likely to contract
S&P BSE Realty	Severely negative	Long	Likely to contract
S&P BSE Metal	Severely negative	Long	Likely to contract
S&P BSE Auto	Severely negative	Long	Likely to contract
S&P BSE Healthcare	Positive	Long	Likely to expand

Source: Author

removed. Housing related companies which include ceramic tile manufacturers, sanitary ware, plywood companies, and paints are likely to suffer severe long-term impact on their revenues, earnings and cash flows. Consumers are likely to defer their home buying decision leading to negative outlook for housing related companies both in the short term as well as in the immediate foreseeable future.

From an investor's point of view, investors can avoid this sector or reduce their exposure to this sector. Impact due to COVID-19 is moderately negative and the duration of impact is medium. The valuation multiples are likely to contract because of lower growth estimates and margin contraction.

S&P BSE Consumer Discretionary Goods & Services

This index comprises companies in the travel & tourism sector, entertainment, retail, etc. The impact of COVID-19 on these sectors is likely to be too severe for the following reasons:

- Consumers are likely to defer discretionary spending and prioritise staples over discretionary items. Consumers may be less keen to borrow and spend on discretionary products and services. This behavioural change may persist even after the lockdown is lifted as consumers' fear of income loss and income decline in future may persist. Government restrictions on these sectors are likely to remain for a longer period than other sectors because of its non-essential nature and higher vulnerability to social interactions. Thus, future revenue and profitability of these sectors are likely to be under severe pressure for long.
- The valuation ratios of companies in the sector were very high prior to COVID-19 because of higher historic growth rates and high expected future growth rates. However, because of downward revision of revenues and profitability, valuation ratios are likely to suffer a severe knockdown.

Larger companies with higher market share, lower debt, and better management bandwidth may survive this tough phase but smaller companies with high fixed costs and bloated balance sheet may find it difficult to survive during this period of crisis.

From an investor's perspective, it is advisable to avoid these sectors till the time there is more clarity over consumers' buying behaviour and better visibility of revenues and earnings. Also, the impact on stock prices could be severe because of a combination of decline in future earnings and contraction of valuation multiples.

Hence the impact of COVID-19 on this sector is likely to be severe and recovery period could be longer.

S&P BSE Fast Moving Consumer Goods

COVID-19 impact on this industry is likely to be less severe (in some cases even positive) and recovery period would also be fast owing to the following reasons:

- Demand of FMCG products is unlikely to get impacted by COVID-19 because of the essential nature of the products. Consumers are unlikely to cut down on staples and essential products even during periods of crisis. In fact, demand for health and hygiene products may receive a boost because of COVID-19. In the short run, consumers may also buy and stock more of essentials keeping in view the crisis period.
- In the short run, supply of FMCG may get impacted because of disruption in supply chains, unavailability of labour, limited availability of raw material. However, the government has taken several timely initiatives to ensure that production and supply of essential products are restored to normalcy.
- Valuation ratios may also marginally expand because investors may prefer to invest in this sector because of its secular nature, low leverage and lower sensitivity to economic cycles. On a relative basis, because of higher liquidity flows, valuation multiples may also expand.

From an investor's perspective, FMCG sector is a relatively safe sector to invest as future earnings is largely immune to COVID impact. FMCG companies also provide the additional comfort of strong brands, lower leverage and good corporate governance. However, higher valuations may cap the upside potential of stock prices in this sector.

S&P BSE Information Technology

This index comprises the Information Technology (IT) companies. Indian IT industry is tied to global economic growth and any impact on global economy adversely impacts this sector.

COVID-19 could impact both the demand and supply drivers of this sector. The IT industry derives its revenues from global companies across different verticals viz Banking, Financial Services, Retail, Telecom etc. COVID-19 induced slowdown in these sectors could lead to slashing of IT budgets impacting the revenue and earnings of this sector. Also, shift towards de-globalisation, could result in loss of export business to companies in the client countries. Lower demand could also result in stiffer negotiations adversely impacting the profit margins.

In short, revenues and earnings of the IT sector are likely to be adversely impacted in the medium to long term and future growth rates are also likely to be trimmed, resulting in contraction of valuation multiples.

S&P BSE Realty

The real estate sector is likely to be worst hit due to COVID-19. Even prior to COVID-19, demand slowdown, inventory overhang, financing issues were causing stress in the sector.

Now, due to COVID-19, induced lockdown and a complete standstill on construction activity, these problems will get exacerbated and the problems of realty companies would compound. The impact on revenues and earnings of the real estate companies would not be restricted to the lockdown period. Post lockdown, demand is unlikely to recover fast (buyers would become risk-averse and are unlikely to commit EMIs), construction activity will pick up only gradually (because of migrant labour issues). Work from Home (WFM) would reduce demand for commercial space and home buyers are likely to prefer smaller homes. Liquidity issues because of NBFCs unwilling to lend to real estate companies would compound the problems further.

Within the realty pack, companies with clean balance sheets, better corporate governance and good execution track record are likely to perform relatively better.

Investors should avoid exposure to this sector or reduce weightage of this sector in their portfolio unless the valuations become extremely attractive and show signs of recovery. The impact on revenues and earnings on this sector is going to be severe and likely to last long. Also, with no signs of recovery and higher risk due to higher debt, valuation multiples will contract significantly, leading to steep correction in stock prices.

S&P BSE Metal

This index primarily comprises companies from the Iron & Steel, Aluminium and Zinc sector. Metal companies' stock prices are driven by metal prices which are impacted by global demand and supply, global trade barriers and tariffs. Global demand of metals is largely a function of world GDP growth. Because of COVID-19, the following impacts can be envisaged on this sector:

- The global economy is projected to contract sharply in 2020
- Demand for Ferrous and Non Ferrous metals is expected to fall as economy is likely to contract
- Production of Ferrous and Non-Ferrous metals is likely to fall in the short run because of lockdown but likely to recover once the lockdown is over.
- Inventories are likely to remain high because of demand and supply mismatch
- Raw material prices are likely to be subdued

Analysing the interplay of these factors, revenues and earnings of metal companies are expected to decline both in the short term and medium term. Valuation ratios are also expected to contract because of lower expected growth rates and higher risk due to higher leverage.

S&P BSE Auto

This index represents the automobile industry comprising two wheelers, four wheelers, commercial vehicles and auto ancillaries. Factors impacting the automobile industry are economic growth rate, level of interest rate and ease of financing, oil prices, regulatory framework etc. Even prior to the outbreak of

COVID-19, the automobile industry was reeling due to low demand, stricter regulatory laws (BS VI norms). COVID-19 has dealt a severe blow to the already tottering automobile industry.

On the supply side, COVID-19 induced lockdown has resulted in plants being shut down for more than fifty days now, resulting in supply disruptions and almost zero sales for the month of April 2020. Manufacturing is likely to be disrupted for the next few quarters because of labour and manpower issues and stricter manufacturing norms put forth by the government. Supply chains have also been disrupted and even optimists agree that normalcy in production is still few quarters away.

Notwithstanding short term supply disruption, the bigger problem is in getting the demand back. Job losses, pay cuts, loss in business income, uncertainty about future income, behavioural shift to defer discretionary and high ticket products are likely to dent the demand of automobile companies not only in the short term but also in the near future. Companies with high operating leverage are likely to suffer more than companies who have leaner balance sheets. The only silver lining is the benign raw material prices and low oil prices.

From an investor's perspective, the automobile sector is best to avoid at present owing to uncertain revenue visibility, margin compression (because of operating leverage) and not so cheap valuations.

The impact due to COVID-19 on revenues and earnings is likely to be severe and long lasting. On the valuations front, multiples are likely to contract on lower growth prospects, higher risk and lower visibility of future revenues and earnings.

S&P BSE Healthcare

This index represents the healthcare industry comprising pharmaceutical companies, hospitals, diagnostic chains and other health services related companies. The sector is dominated by pharmaceutical companies deriving bulk of its revenues from exporting generics, APIs (active pharma ingredients) and formulations. This sector is one of the few sectors on which COVID-19 is likely to have a positive impact because of the following factors:

- COVID-19 has resulted in disruption of pharma supply chains and global pharma companies considering Indian pharma companies as alternative sources of generics and APIs to China. This is positive for the Indian pharma industry in the long run.
- Increased focus and consumer spend on health is likely to benefit hospitals, diagnostic centres and pharmaceutical companies.

The health care sector is amongst the very few sectors where a positive impact on revenues and earnings is expected because of COVID-19. Valuation multiples are also likely to expand and remain elevated because of increased growth opportunities. Investors may increase their exposure to large API manufacturers who are likely to benefit because of the world's shifting of sourcing APIs from China to India.

Conclusion

The impact of COVID-19 is all pervasive on the economy, with GDP growth forecasts ranging from 1.5 per cent growth to a contraction of 3 per cent. The impact may be temporary or long lasting depending on the industry type and its drivers. As financial markets are forward looking, stock markets worldwide and India alike, have suffered significant losses and the investors are waiting for the time to have some signs of positive sentiment.

COVID-19 and the Changing Landscape of Labour Laws and HR Policies

Sayani Roy Chowdhury*

Abstract

Modern civilisation is experiencing an unprecedented danger, the effect and extent of which is threatening the shape of the civilisation. Important pillars of modern civilisation, industry, and its various components are facing a severe crisis. How this difficult situation may be handled? How things are taking their own path? How a socialistic state can interfere to minimise the width and depth of the dent, created by this evil microbe? What can be the effect of such interference? Labour issues and HR policies are important part of industrial production. How the evil effect of COVID-19 can cast an irreversible shadow on the entire production process and how the system can change its shape to cope with the paralysing scenario? The present article focuses on such questions to certain extent.

Introduction

The recent outbreak of the COVID-19 pandemic has forced various segments of the society to take measures for prevention from the deadly virus. Barring the essential commodities, news and media, medical facilities, all sectors were declared as locked down. Locked down means all persons will stay inside their houses; nonetheless, those who are in services which can be given from home, through online mode, were asked to continue with their job roles, as earlier, from home.

Work from Home: The Questions

Now a very simple question arises. Work from home requires certain basic amenities or one can say colloquially a 'set up'. For a woman working from home 'setup' includes a child-care facility during working hours. Likewise, an employee heavily dependent on maid and nurses for parental care may face difficulty in work from home on account of maid and nurses' service disruption in lockdown. Employers can say that this is absolutely their personal problem suggesting that either one has to serve as per changed service criteria or perish. But employees who choose to continue with their extant job, but unable to make the necessary changes in their homes, can they be terminated?

Legally speaking, they cannot be terminated solely for this reason. When the job contract was signed, the place of job, environment, etc.

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was specifically agreed upon between the parties to the contract. Unilateral changes and conditional continuance of the employment is itself a breach of the employment contract. Again it is true that, an employee, who can't work for some reason or other, is a burden to the company.

Now these two conflicting interests can be bridged through some Order by the Government making it mandatory to change the working condition because of certain unnatural disasters impending upon the nation.

As per the official notification published[1] by The Ministry of Home Affairs, Section 6[2] of the Disaster Management Act, the National Authority is enabled to take measures to contain the 'Disaster'. The guidelines established[3] that all types of transport services (air, train, and road travel) will not be operational during this period. Commercial and private establishments shall remain closed, except for ration shops, banks, ATMs, media services, and telecommunication companies.

The Lockdown and the Issues of Work from Home

The guidelines also said under paragraph 17 that any person who violates these containment measures will be liable under Sections 51 to 60 (Offenses and Penalties) of the Disaster Management Act, and under Section 188[4] of the Indian Penal Code which specifies punishment for disobedience to order duly promulgated by a public servant. An important point to be noted is that, the containment measure by lockdown was announced by Hon'ble Home Ministry. It is mandatory and thus leaving no space for flexibility. But all steps which are to be taken as a consequence of lockdown, like work from home, online company board meetings, etc are not mandatory, rather stated by the Government on advisory capacity thereby leaving space for flexibility and mutual understanding and negotiations.

Another important issue on work from home may be *security concerns*. Those who are working remotely using their own internet connections and own computers, may-be unknowingly leaking sensitive data to third party data theft experts. After all, there is a high probability of leaking sensitive data in the case of personal home PCs which are less protected than commercial machines that are

[1] Annexure to Ministry of Home Affairs Order No. 40-3/2020-D dated () 24.03.2020. Retrieved from: https://www.mohfw.gov.in/pdf/Annexure_MHA.pdf

[2] The Disaster Management Act, 2005. Retrieved from: https://ndma.gov.in/images/ndma-pdf/DM_act2005.pdf

[3] Ministry of Home Affairs, Government of India, Order No. 40-3/2020-DM-I(A). Retrieved from: https://www.mha.gov.in/sites/default/files/MHA%20order%20dt%2015.04.2020%2C%20with%20Revised%20Consolidated%20Guidelines_compressed%20%283%29.pdf

[4] Central Government Act, Section 188 in The Indian Penal Code. Retrieved from: https://indiankanoon.org/doc/1432790/

adequately equipped to fight such data thefts. Therefore, it is needed that home computers are also to be shielded and the expenses of such shielding are suggested to be borne by the office concerned. Thus, it is clear enough that a new set of organisational set-up will develop wherein the employees will not be actual persons; rather employee ids and email ids will play the role of an actual employee.

For this entire new set-up, few important points must be additionally there in the new agreements which will be entered into between the employers and the employees. Firstly, it must be specifically spelt out that if the employer thinks fit, employees may be required to work from home, and, in such circumstances, the technical setup necessary for the work to continue, without compromising data security will be liability of the employer. The employee shall have no objection in sharing a remote access password, in case necessary, to the employer. Secondly, the employees will not get the conveyance allowance, however, the electricity cost of running one PC and anything related to the running of work will be borne by the employer. Thirdly, the timing of work must be mentioned specifically.

This is the story in brief for white-collar workers. Their work can possibly be continued provided few things are modified. But the situation has thrown a much bigger challenge to the sectors mostly employing blue-collar workers.

In the case of blue-collar workers belonging to the organised sector, the challenge is both ways since their work cannot be done from home or through online mode. Employers are weighing between the risk of keeping the factory open and the gain coming out of the continuity of production. Nonetheless, employers may take suitable steps as a preventive measure to make the factory space secure and safe to face the COVID-19 outbreak.

As an alternative, employers may consider the payment of the legitimate claim on bonus during the month of April, 2020. As per the Payment of Bonus Act, 1965[5] the bonus should be paid in cash within 8 months from the close of the accounting year. Therefore, payment of 'bonus' in the month of April, 2020 will not go against the statute. Instead it will help the lowest earning rung to survive the price escalation on account of lockdown.

What Needs to Be Done

For those who are in essential service sectors and amongst them whose work involves more human interaction, if they contract COVID, certainly it can be presumed that it is because of their character of occupation, they have contracted so. Therefore, it would be apposite for the legislators to incorporate COVID under the list of Occupational Diseases in *Employees' Compensation Act*. Those who are contractual workers engaged in some big organisation, their engagement is on a daily

[5] Payment of Bonus Act - Payment of Bonus under The Payment of Bonus Act, 1965

basis. Lockdown will naturally render them workless. Anyway they are still within the ambit of compassion, if their employers wish to shower it on them.

But those who are in the unorganised and informal sector, be it skilled or unskilled, they are the worst sufferer of the consequences of lockdown. Neither they have any salary expectation nor can they get a work to earn a living. More than 85 per cent of the total workforce in India is under this category. Workers of this sector are mostly either slum dwellers or migrant workers. They neither enjoy any social security nor job guarantee. Since their identification is a major problem, out of 1.33 billion population, the 'method of elimination' (wherein elimination of all other types of workers will be done), can be the only solution to identify them. Since no employer can play the role of saviour to them, the Government may play the role of saviour to them by providing them extra-low priced rations.

Agriculture is a sector that employs more than 55 per cent of the nation's labour force on an average, but contributed only 16 per cent to the GDP. Clearly enough, the disguised unemployment is dominating the game. A large influx of returning migrant workers to their homes will render the scenario to a new high.

Under such circumstances, input availability both logistically and in a financially favourable manner may lead to good agricultural output. The post harvest collection, storage and market level distribution facility (it can be hoped that by then COVID will go), has to be very robust and effective. State involvement is highly necessary for such support and direct involvement of the state may pave the way for better profit distribution amongst farmers and lowest rung tillers.

The Labour Law in Some States

Another side of the story is that few of the State Governments like Uttar Pradesh, Madhya Pradesh, Gujarat and Maharashtra have taken decision to liberate industries from few of the features of the labour laws. For example, the UP government passed the Uttar Pradesh Temporary Exemption from Certain Labour Laws Ordinance, 2020, that exempts businesses, manufacturing mostly, for three years from labour laws barring the ones, viz. the Building and Other Construction Workers Act; Workmen Compensation Act; Bonded Labour System (Abolition) Act; Section 5 of the Payment of Wages Act, (employers to pay timely wages); Maternity Benefits Act. Major issues which are suspended are: a) Factories Act: The main objectives of the Factories Act, is to ensure safety measures on factory premises, and promote health and welfare of workers. The Shops and Commercial Establishments Act, on the other hand, aims to regulate hours of work, payment, overtime, weekly day off with pay, other holidays with pay, annual leave, employment of children and young persons, and employment of women. (Amongst other the main issue is working hour related; like ceiling of daily work hour to be raised from 8 to 12 hrs); b) Industrial Disputes Act: The law requires a 30- to 90-day notice period before retrenching "workmen". In the case of manufacturing units, plantations, and mines with 100 or more workmen, lay-offs also required government approval. These approvals will no longer be required.

The measures taken by Madhya Pradesh Government include inter alia the following: a) Establishments with up to 100 workers can hire according to needs; b) No registration for contractors with 50 labourers; c) No factory inspection for 3 months; d) No inspection for firms with less than 50 workers; e) Third-party inspection is allowed; f) Registration and licenses to be issued in a day; g) Renewal of a factory license once in 10 years; h) Startups need one time legislation; no renewal; i) Shift hours: Raised to 12 hours from 8 hours in factory.

According to the Central Trade Unions the steps taken by the state governments are violating the Right to Freedom of Association (ILO Convention 87), Rights to Collective Bargaining (ILO Convention 98) and internationally accepted norm of 8 hour working day – resolved by Core Conventions of ILO[6]. In addition, the undermining of tripartism and the exemptions allowed from the Industrial Disputes Act also go against the ILO Convention.

These measures were taken under an 'emergent' situation and loss of productivity arising out of non-functioning of production mechanism on account of lockdown. The loss on account of lower demand of already produced goods is also casting a wider shadow across the industries.

Conclusion

An analysis of the measures will clearly reveal that, the sole objective of the Government is to rejuvenate the economy through an industrial development. All the measures will definitely encourage the fresh entrants to operate in a business friendly environment. Law is for safety and protection and thereby for development in the long run in a sustainable framework. Be it the protection of human rights, wages, or livelihood, if law itself becomes the hindrance then the law is to be changed.

To avoid continuous loss and recover from the current negative impact, all the industries are thinking of hindrance free working environment wherein factories can produce quickly and efficiently. This will benefit both the employer and the employees. Any kind of labour trouble is unwanted and will pull the industry away from the recovery path. Though the measures were taken during lockdown, an overhauling labour law reform was under talk. These measures were to happen in the near future.

[6] *The Economic Times.* (2020, May 11). Central Trade Unions May Approach ILO on Labour Laws Suspension in Some States. Retrieved from: https://economictimes.indiatimes.com/news/economy/policy/central-trade-unions-may-approach-ilo-on-labour-laws-suspension-in-some-states/articleshow/75675621.cms

Oxygen, sunray and hope - these are the words that are echoing all around. Lockdown has improved the quality of the first two, undoubtedly. Let us improve the quality of the third one by a few of the measures that can be taken either individually, or at the corporate or state level. After all, there is no scope of denial that, be it natural calamity or consequential economic calamity, collective strength of mind and mutual trust amongst all the players , will decide when and how the smile will return on the face of the society.

Management Education: Strategies for Overcoming Challenges during COVID-19

Mohua Banerjee*

Abstract

In recent times, management education in India has gained remarkable prominence. The buoyancy has been short-lived this year with the widespread disruption caused by the COVID-19 pandemic that resulted in the national lockdown from March 2020 and its resultant impact on management education. With "new normals" of social distancing and restricted movements acknowledged as the way of life, the fundamental question is how the B-schools and MBA aspirants are emerging from this situation. A study was conducted online in May 2020 with MBA aspirants, to understand how COVID-19 has changed their perspective of management education. This study also outlines a blueprint of some innovative measures the B-schools are undertaking as a response to the crisis. Focus has been on identifying the constraints, developing a strategic roadmap for overcoming the constraints, and allocating resources in an innovative manner for the core functional areas of course curriculum and pedagogy, internships and placements, and quality of infrastructure. The institute's ability to focus on lasting changes – deploying digital technology at scale, stepping up and re-offering education, training and value to the student community in a healthy, safe and productive way will be the game-changer in the days to come.

Introduction

In recent times, management education in India has gained phenomenal prominence. Taking the number of CAT registrations as an indicator, for this academic year, the number has gone up by 3000 candidates with 2.44 lakh applicants, as compared to 2.41 lakh applicants in the previous year (Financial Express, 2019). Furthermore, this upward trend in registrations has been consistent since the last five years, reflecting the trust and confidence aspirants assign to the MBA degree, in anticipation of better career opportunities. However, such buoyancy and feelings of optimism this year have been short-lived with the widespread disruption caused by the COVID-19 pandemic resulting in the national lockdown that set in from March 2020 and its resultant impact on management education.

In what is to be a major coincidence, identification of the first few instances of

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COVID corresponded with the admission interview process cycles for business schools that are conducted pan-India. As the processes for B-schools gained momentum, the number of COVID cases escalated sporadically across various parts of the country. What followed is an indistinct haze of travel advisories, postponed interview schedules, overnight transformation to digital platforms, as the sector grappled with the onset of the *epidemic.* Gradually the virus gained proportions and assumed the *pandemic* status. Now with "new normals" of social distancing and restricted movements acknowledged as the way of life, people have accepted that the remnants of COVID are here to stay for a while. The fundamental question for management education in this situation is how the B-schools and MBA aspirants are going to emerge from the midst of these disruptions.

To gauge the MBA aspirants' sentiments and perceptions in this scenario, in an instance, a few sessions with 103 members of the student community from different parts of the country were conducted online over a span of a fortnight in May 2020. The interactive sessions were meant to understand how COVID-19 has changed their perspective of management education in this academic year as well as in near future. A set of questions were designed and based on their responses, this article tries to figure out the impact. The next section provides the summary of the findings from the analysis of the responses taken in the interactive sessions. The following section presents some innovations the B-schools are undertaking as a response to the situation. The final section concludes the article.

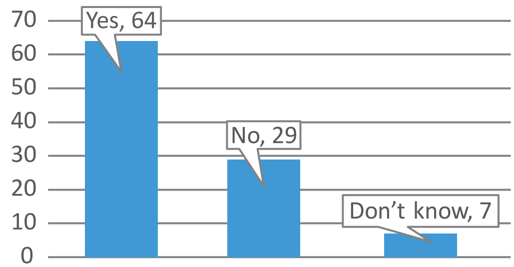
Findings

There were several questions covering different aspects of management education and students were asked about their perception. The findings are presented below.

Impact of COVID-19 on Plans for Management Education

While 64 per cent of the participants mentioned that they were aware that some tweaking in their plans would be necessary for pursuing management education, another 7 per cent were still confused about the evolving situation and unsure as to what their course of action should be. 29 per cent of the respondents, however, had not been swayed by the disruptions and intended on proceeding with their pre-existing plans for pursuing management education this year (Figure 1).

Figure 1: Has the Coronavirus Affected Your Plans for Management Education? (In Percentages)



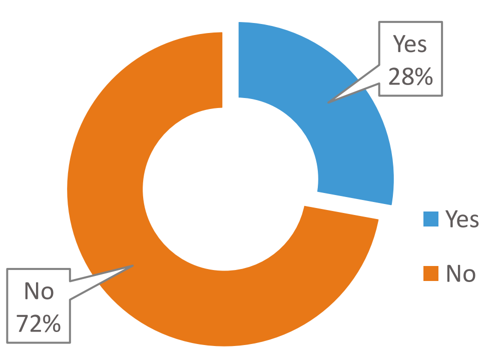
Preference for Studying in a Local Institute for Management Education

Amidst the nationwide lockdown, while 28 per cent candidates mentioned that they prefer to undertake the programmes in their respective hometowns (presumably owing to concerns for own safety and well-being); localization of management education is not a solution for the majority 72 per cent (Figure 2). Their underlying reasoning is that the decision of choosing a B-school, which they are taking in the current turbulent time, is a critical one that will have a career-defining, long-term impact. Approaching such decisions with a knee-jerk reaction to a situational crisis may not be prudent for achieving long-term career goals.

On Particular Information Critical for Decision Making This Year

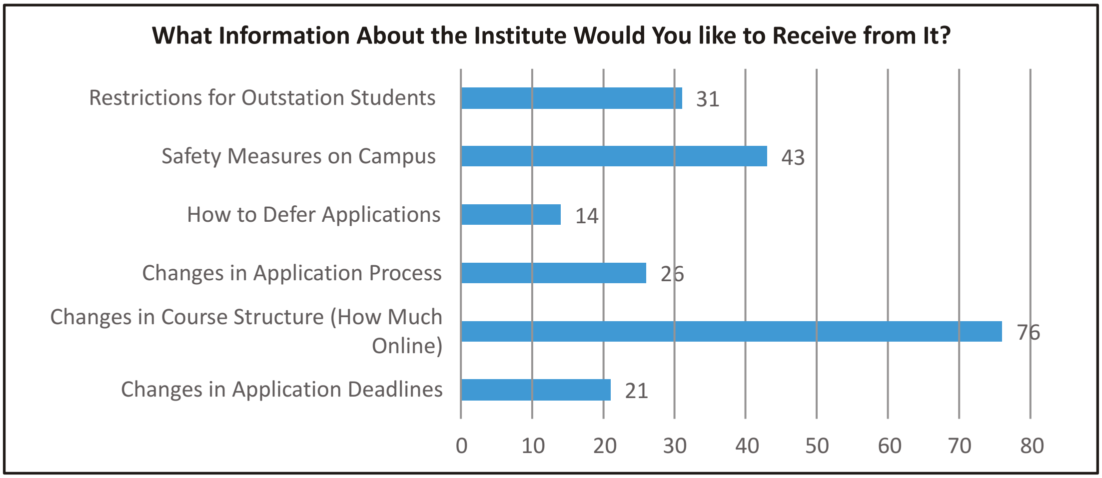
It is evident that apart from the usual parameters that guide the B-school selection process for the candidates, several contingent factors will affect their decision this year. To enable their decision-making, they are soliciting specific information from their preferred institutes on a number of aspects (Figure 3). First, almost 76 per cent of the participants are curious to know about the changes they will undergo in their learning methods in the post-COVID months – primarily, to what extent will it construe online sessions. Second, 43 per cent would like to be apprised on the safety and precautionary measures that will be implemented in the hostel, canteen and common areas of an institute, to reduce chances of accidental exposure. Third, as B-schools enrol students from different parts of the country, 31 per cent want information on whether any additional restrictions, such as quarantine measures, etc. will be mandated for outstation candidates. Fourth, notices on changes in application process that have taken place during the outbreak (26 per cent) and deadlines for applications, fees payment, etc. are coveted by them (21 per cent). Further, to a certain extent, they also seek information on whether the applicants can delay the admission process, in anticipation that they can delay their decision on choice of a B-school to a point of time when the situation has eased sufficiently (14 per cent).

Figure 2: Do You Prefer Studying in a Local Institute to Moving out for a B-School Education?



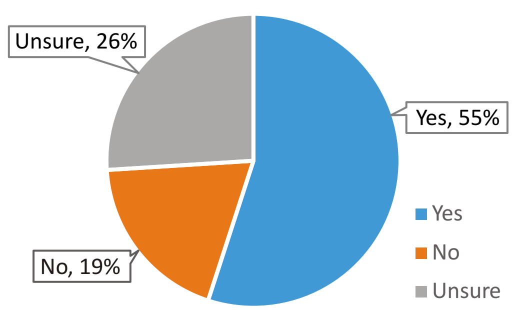
On Starting of Courses on Online Mode

Figure 4 highlights the consternations that the MBA aspirants still have towards the online learning mechanism, and perhaps its efficacy in gearing them with suitable skillsets for



being industry-ready and achieving their career goals. While 55 per cent are comfortable with beginning their courses online and shifting to physical classrooms with social distancing norms in due course, a substantial 45 per cent are in varying stages of apprehensions about online learning being equivalent to the traditional method of face-to-face classroom teaching.

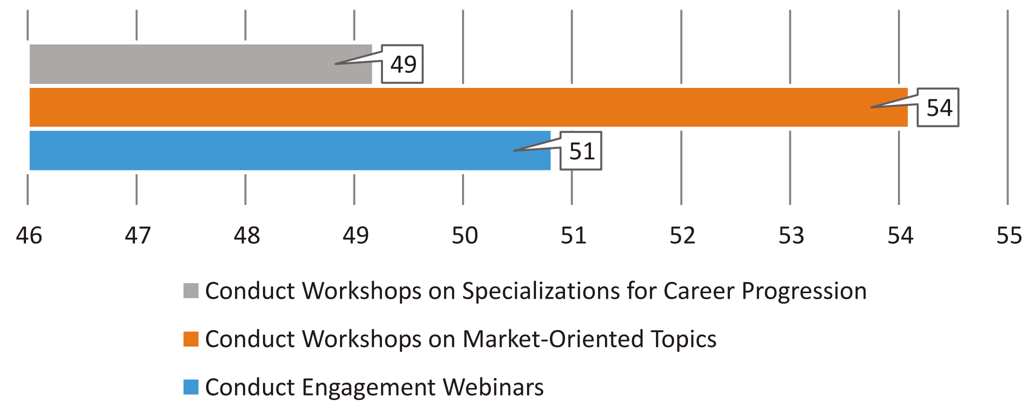
Figure 4: If Starting Your Studies This Academic Year Meant Doing the Beginning of Your Course Online, Would You Be Interested?



Expectation from an Institute to Plan Career

As is apparent from the responses depicted in Figure 5, prior to joining a B-school MBA aspirants look forward to receiving guidance and advice from the management institutes through workshops, on relevant market-oriented topics like Analytics, Digital Marketing, etc. (54 per cent). They are also keen to participate in workshops on specific functional areas like Big Data, Machine Learning using R or Python, Competency Mapping in HR, Investment Analysis, etc. for their career progressions (49 per cent). They equally welcome engagement webinars that address their queries and provide them generic inputs on industry outlook, etc. Institutes that are poised to reach out to the MBA aspirants and meaningfully engage with them in a solution-provider role through such modes in such periods of dishevelment and uncertainty, have a clear advantage in resonating with them as their preferred choice of a B-school (51 per cent).

Figure 5: How Can the Institute Help You to Plan Your Career? (In Percentage)



The Blueprint of Innovations in B-Schools

For B-schools, the disruption in the form of COVID-19 has caught all unawares. Needless to say, none had prior experience in it though, as a policy, all business schools worldwide chose to remain active in all fronts, for the better interest of the student communities. Focus has been predominantly on identifying the *constraints*, developing a *strategic roadmap* for overcoming the constraints, and allocating resources in an *innovative manner* for its core functional areas such as course curriculum and pedagogy, internships and placements, and quality of infrastructure. Analyzing the situation from both short-term (the immediate July-October quarter of 2020) and long-term (the following two quarters of the academic year November 2020 to June 2021 and beyond) perspectives, the study provides the blueprint for deciding the future course of action; as some changes that occur in times of contingencies are permanent and are accepted even after the crisis has passed.

Students' trepidations revolved around their career paths, learning methods and safety concerns in the COVID-world. Past studies by researchers have also identified similar enablers such as ***course curriculum and pedagogy***, ***internships and placements***, and quality of ***infrastructure***, among others, which help to brand business schools in India (Yeravdekar and Behl, 2017). The researchers also note that if an institution is unable to define its brand identity, it has a greater likelihood of securing limited student enrolments that can cause revenue challenges. The innovative strategies that can be imbibed by the B-schools for building their brands among the MBA aspirants and other stakeholders, on these three aspects in the current circumstance are described next.

Course Curriculum and Pedagogy

B-schools are re-designing their existing methods of teaching in the COVID world to ensure safe and secure learning environments. The central idea is not to expect digital experiences as replacing one-on-one classroom experiences. Rather, a bifurcation in teaching methodologies may be assumed where the courses, or its components, that are based on pure knowledge transfer can be substituted by technology and migrated online. This can be supplemented with physical interactions for developing capabilities like problem-solving skills in situations that use complex variables, critical soft skills, judgement, design thinking skills, persuasion, emotional intelligence, communication and creativity, among others. Institutes that use such a blended learning format – where topics are initially migrated to a digital mode and subsequently complemented with learnings in classrooms when basic restrictions are eased, will emerge as competitive and resilient. However, the class scheduling modality too will have to be re-worked, as the number of students accommodated in a classroom will change because of social distancing norms.

The Government is extending substantial support towards this end for making it all-pervasive. In a facilitating role, AICTE is providing free e-Learning Resources through the AICTE Platform for Students (http://free.aicte-india.org). Platforms such as NEAT (National Educational Alliance for Technology) are being developed by EdTech companies for providing online learning solutions at the grassroots level and improve the students' employability. As Dr. Abhay Jere (CIO, MHRD Innovation Cell) mentions, the rate of adoption is increasing substantially too and 1.3 crore students are currently registered on its SWAYAM platform for accessing the MOOCs (Massive Open Online Courses). The EdTech companies have also collaborated with AICTE through ELIS (Enhancement in Learning with Improvement in Skills) portal and developed competency-based programmes for upskilling the labour force. This is in line with the thought-process that to improve employability among the youth in India, honing competency-based skillsets is more relevant than acquiring degrees.

However, effecting this change – from a traditional method to that of blended learning – calls for a shift in the mind-set of all the stakeholders. The current youth are most resilient, tech-savvy and digital natives. With institutes establishing the technological infrastructure and faculty members delivering online courses, a certain part of this integrated approach is expected to remain constant even in a post-COVID world, and may prove to be an enduring business model in the long-term.

Internships and Placements

The development of an institute's brand and internships and placements is often a two-way street – an institute's brand is built over a sustained time-period by the quality of its placements and internships and in return, an enhanced brand also causes an increase in its quality of placements. The months of April to

June in an academic calendar are when the students embark on their Summer Internships and go to companies for working on projects. As the COVID-19 induced nationwide lockdown was enforced in March 2020, the HR heads in companies where the students were to intern, were in a quandary. Company HR departments were busy resolving how to sustain day-to-day functioning with work from home protocols for their staff, and planning for the summer interns to work on projects could only be done when some stability was reached. A study conducted by economic-research company Glassdoor has revealed that globally, internship opportunities declined by 52 per cent across sectors between March 9 – April 13 (Mendoza, 2020). A similar condition was observed in India. To mitigate this situation, a number of B-schools in India have adapted its internship model to virtual internships. Students communicate with their industry mentors through online platforms. While an element of doubt on its acceptability as 'industry exposure' is prevalent among the interns, gaining this experience may be an added advantage during placements as currently the companies are appreciating employees who can effectively work from homes (WFH).

The professional networking platforms and business papers have been replete with news of India's renowned B-Schools bracing for a tough year with COVID-19 impacting businesses and top recruiters revoking placement offers made to the B-school students. This has caused some consternation among the B-schools whose primary strategy is to avoid/minimize this revoking of the Placement Offers. Companies in sectors where the profiles entail widespread on-ground travel (predominantly FMCG, consulting sectors) have deferred their joining dates. Nonetheless, deferring joining dates of the students is preferable to revoking their job offers. Some organizations though, have already on-boarded students virtually in their respective organizations. COVID-19 transcends from being a pure health crisis to a bigger economic crisis and industry partners indicate that the process of hiring is gearing towards a freeze-mode or has slowed down already. Prolonged continuation of such a situation will have a direct impact on the final placement process next year.

From a B-school perspective, a strategic approach has to be initiated for a successful placement outcome. The outreach drive for recruiters has to be extended to include footfalls of more recruiters on campus, as each recruiter may reduce their individual hiring intake. Identifying new recruiters, or existing recruiters who are willing to offer upgraded profiles with commensurate packages to upskilled candidates, across sectors, will be beneficial. Simultaneously, from a students' perspective, it is pragmatic for them to focus on improving their profiles by acquiring a skillset over and above their functional knowledge and specialised courses, and gear up towards being industry-ready in the period of enforced lockdown. Networking digitally with alumni members and industry executives on professional platforms, utilizing the various webinars to interact with them, may also prove to be productive.

Quality of Infrastructure

For MBA institutes, in recent times the term infrastructure transcends buildings to include Wi-Fi enabled campuses, gymnasiums and playing fields, canteens and dining spaces (Jones, 2016). Quality of infrastructure that is provided to the students helps a B-school to develop its brand as it heightens the satisfaction level of its students. In the post-COVID era, B-schools are gearing up to be equipped for taking all necessary precautions to prevent any potential spread to students, faculty and staff on its premises. For example, converting facilities to single-occupancy rooms in the hostel accommodation are a step in that direction. Similarly, appropriately spacing canteen seats to maintain social distancing norm, staggering food timings to ensure that students interact and eat in small groups in the canteen, help to establish the quality of infrastructure. Monitoring mechanisms to ensure that systems and processes are followed meticulously help to reinstate the quality of its infrastructure and build the notion of brand for an institute.

Conclusion

In the days immediately following the spread of the pandemic and the national lockdown, B-schools have risen up to the situation and ensured business continuity. The psychological barriers to change have also reduced substantially among the stakeholders. What will be the game-changer in the days to come will be the institute's ability to focus on lasting changes – deploying digital technology at scale, stepping up and re-offering education, training and value to the student community in a healthy, safe and productive way.

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Drivers of Global Crude Oil Price: A Review

Jeevananthan Manickavasagam*

Abstract

Crude oil is considered as a major source of global energy. Many economies depend on crude oil for their development. The crude oil prices fluctuate due to various factors like demand, supply, stock markets, foreign exchange, geo-political tensions and so on. In the last five decades, there have been numerous studies that identified the important determinants of crude oil prices. The US Energy Information Administration (EIA) identified six determinants (three groups) as the major drivers of crude oil price movements. This article specifically, summarizes the significance of these determinants and intends to provide good insights about the recent findings on the factors driving the crude oil prices.

Introduction

Crude oil is one of the main drivers of an economy in comparison with the other commodities. It has the power to influence foreign exchanges, inflation and political stability. The increase in crude oil prices leads to an increase in basic commodity prices, resulting in inflation (Dey *et al.*, 2020). Despite the usage of renewable energy and the production of electric vehicles, the crude oil continues to be the primary commodity of the economy. Apart from considering crude oil as a commodity, it is also a financial instrument (Chai *et al.*, 2018). In the international market, West Texas Intermediate (WTI) and Brentblend (Brent[1]) crude oil prices serve as the benchmark and play a significant role in stabilizing the global economy. Thus, it is important to study about the determinants of crude oil prices.

If we look at the historical price of crude oil (Brent[1]) from the recession period of 2008 till date, the movements have been largely affected by factors such as demand, supply, financial markets, political tensions, trade uncertainty, investor's attention, business leaders and consumers' expectations on the economy, and the uncertain happening like COVID-19 pandemic (Jaffe and Elass, 2015; Kisswani, 2016; Aloui *et al.*, 2018; Tchatoka *et al.*, 2019; Dey *et al.*, 2020). Recently in April 2020, the outbreak of the COVID-19 pandemic and the request to cut crude oil production in the early part of March 2020, by

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[1] Brent is a blend of crude oil which is less dense and has less content of sulphur. It is obtained from the oil fields located in the North Sea between the UK and Norway.

OPEC+ countries was rejected by Russia which ends in price war between Russia and Saudi Arabia. To counter Russia, the Saudi Arabia produced more barrels of crude oil and reduced the prices, and this subsequently made Brent crude oil to trade at $21.65 which is lowest in the last two decades and WTI to trade around $8 per barrel in the spot market, which is the lowest price in the last five decades. The US Energy Information Administration (EIA) has projected that in 2050, the crude oil will trade at $212 per barrel (EIA, 2019). This article is a review of the studies focused on the drivers of the crude oil price identified by the EIA.

Influencing Drivers (EIA)

The major reasons for crude oil price fluctuations are (a) supply and demand factors (Perifanis and Dagoumas, 2019), (b) substitute commodities like US shale oil (Perifanis and Dagoumas, 2019), natural gas (Tiwari *et al.*, 2019) (c) macro-economic factors like financial markets (Aloui *et al.*, 2018), political tensions (Zhang *et al.*, 2018) and (d) behavioural factors like investor's attention (Han *et al.*, 2017) and expectations about the economy among the business leaders and consumers (Byrne *et al.*, 2019). This study focuses on the factors that EIA (2020) considers in a broad group (a) Fundamental (b) Financial Markets and (c) Inventories.

(a) Fundamental Factors (Supply and Demand)

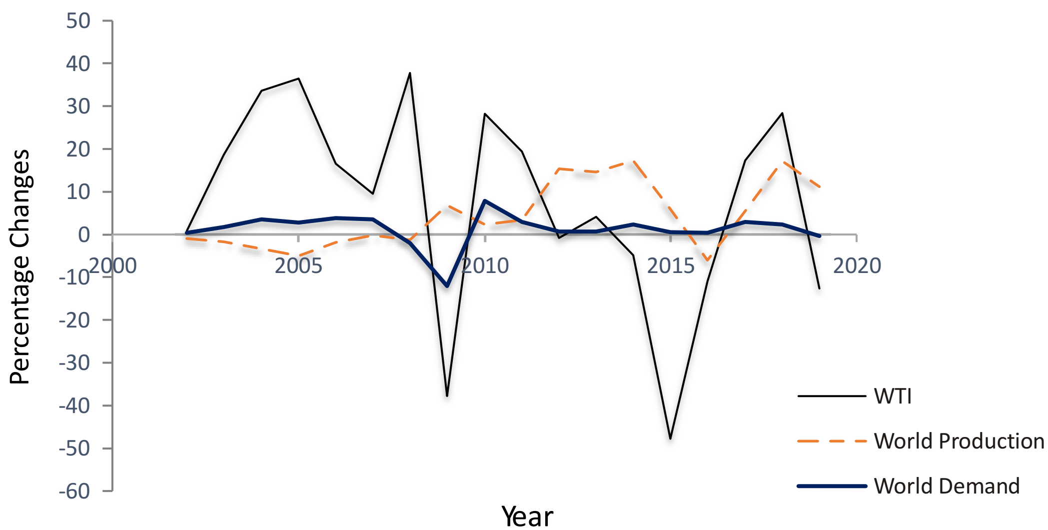
The major factors that affect any commodity's price are its supply and demand. The EIA divided the supply of oil into two categories, that from the Organization of the Petroleum Exporting Countries (OPEC) and Non-OPEC countries. The OPEC countries produce more than 40 per cent of the world crude oil (BP, 2019), making them play a significant role in fixing the global oil prices (Perifanis and Dagoumas, 2019). Both of the OPEC and non-OPEC countries alter their supply (world production) and prices in response to the global oil demand. Currently, we are witnessing that Saudi Arabia, the major producer of oil among the OPEC nations (BP, 2019) is striving hard to sell its stocks by reducing prices due to a fall in demand owing to COVID-19 and competition. This resulted in the oil (WTI) to trade at lesser than $8 per barrel in the spot market and around $45 negative per barrel in the futures market.

As per EIA, the demand factor is categorised as the one coming from the Organization for Economic Co-operation and Development (OECD) countries and the one from Non-OECD countries. While measuring the demand, some researchers consider the Kilian global real economic activity index (Perifanis and Dagoumas, 2019), OECD Production Industry Index (OPII) (Mitchell *et al.*, 2005; Kim, 2018) and the benchmark stock indices of oil importing countries as proxies (Perifanis and Dagoumas, 2019). Global demand for oil is growing due to the developing nations that are dependent on oil for their economic development. Especially, countries such as India, China and Brazil, where the current low income population are likely to become higher energy consumers in the future, are contributing to the increasing demand for oil. Sometimes, the refiners cut their production due to higher raw material cost (crude oil) which resulted in decrease in crude oil prices (Baumeister *et al.*, 2018). The oil production from shale is reducing the demand for crude oil in the U.S. The authors confirm that demand and supply factors may explain the movements in oil prices (Coleman, 2012; Aastveit *et al.*, 2015; Espinasa *et al.*, 2017; Liao *et al.*, 2019). The trends in WTI price, World crude oil production (OPEC and Non-OPEC) and world demand for crude oil (OECD and Non-OECD) are depicted in Figure 1. It documents that the world production and WTI moved together since 2012 and exhibited opposite trend before 2012. The world demand for oil for the period considered mostly moved in an opposite direction with respect to WTI.

(b) Financial Markets

The literature considers financial markets as one of the reasons for oil price volatility. It is not only that the stakeholders deal with physical oil, but they also trade on the futures contracts. Silverio and Szklo (2012) and Juvenal and Petrella (2015) found that the oil futures market influenced the oil prices. The expectations of the producers and customers get reflected in the futures contracts which tend to influence the spot prices. The researchers also found that the financial markets have a propensity to boost the oil

Figure 1: Percentage Changes Between WTI, World Crude Oil Production and World Crude Oil Demand.



Source: EIA (2020)

prices (Coleman, 2012). These financial markets often impact the movement of oil prices more than the fundamental factors (Miao *et al.*, 2017). Majorly the stock markets of growing economies like India and China have the ability to impact the global oil prices (Tchatoka *et al.*, 2019). Similarly, the S&P 500 index and MSCI World Index have also been found to drive global oil prices (Phan *et al.*, 2019; Yoon *et al.*, 2019). The impact of foreign exchange rates on the oil prices was also explored by the researchers. There are a good number of literature that confirm the existence of high correlation between US dollar exchange rates and oil prices (Singh *et al.*, 2018; Zhang *et al.*, 2018; Ma *et al.*, 2019).

(c) Inventories

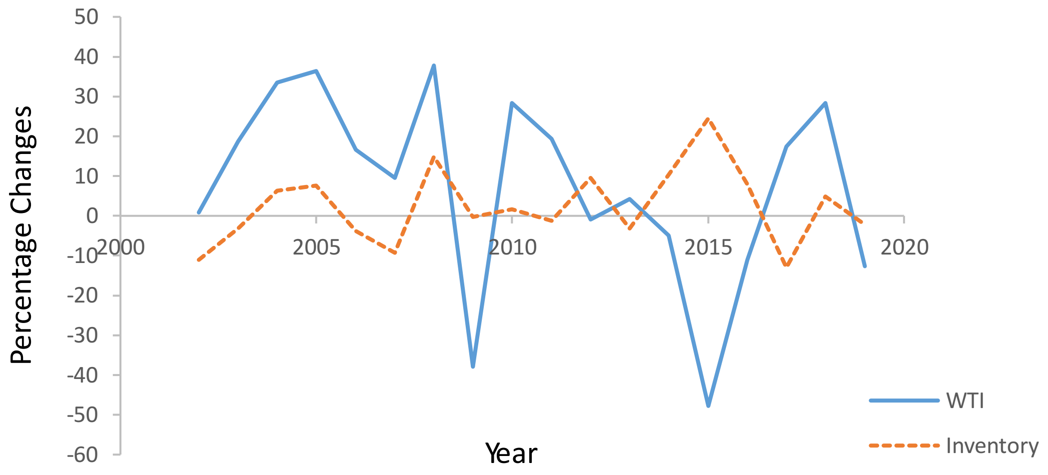
The theory of storage (Working, 1949) conveys that the oil price is negatively related to inventory levels. Khan *et al.* (2017) found that the level of inventories play a significant role in crude oil price dynamics. The inventory is classified as buffer and speculative inventories (Kim *et al.*, 2019). The oil producing firms can sell from their inventory (buffer) during the slack period which results in a marginal decrease in oil price initially. But, the sudden increase in demand cannot be met by the inventories or by producing the oil. So, for a certain period of time, the oil-producing countries increase the price to reduce the demand. The speculative inventories on the other hand are stocked and sold at higher prices to make profit. The studies of Hamilton (2009), Singleton (2014), Kilian and Murphy (2014), Kilian and Lee (2014) and Diaz-Rainey *et al.* (2017) found a significant impact of speculative inventories on the oil prices.

The current scenario in the global oil market due to COVID-19 is an example of how huge inventories affect oil prices. Here, the crude oil participants are aware of the increase in crude oil storage which indicates an increase in supply than the required demand. Consequently in the spot market, the crude oil prices drop to balance the demand and supply. Mostly oil inventories lie in ships and it takes time to get data from developed nations on crude oil inventories and the details might not be accessible at times. Such incomplete information leads to uncertainty and thus has an effect on the oil prices (EIA, 2020). The trend in WTI price and world inventory is depicted in Figure 2. It reveals that WTI and inventories follows same trend till 2009; from 2010 to 2017 both moved opposite to each other and from 2018 onwards both started to move together.

Conclusion

This article explicates the key drivers identified by EIA that influence the global oil prices. Here, few recent studies have been reviewed, emphasizing its relevance in determining the oil prices. Generally, the factors influencing oil prices changes over time but the fundamental factors are always the underlying drivers (Ma *et al.*, 2019; Perifanis and Dagoumas, 2019). While we cannot neglect the impact of financial markets and inventories on oil prices, sometimes the

Figure 2: Percentage Changes Between WTI and World Crude Oil Inventory



Source: EIA (2020)

global threats like COVID-19 and geo-political tensions explore the role of all EIA factors simultaneously in determining the oil prices. Recently, the researchers have started concentrating on investor attention impact on oil prices by using Google Search Volume Index (GSVI). It is also suggested to the researchers and practitioners to consider the expectations of consumers and business leaders while determining the oil prices. The researchers can also explore more about the effect of speculative inventories on the oil prices which is one of the hot topics of oil price drivers (Diaz-Rainey *et al.*, 2017). Furthermore, to extract more information about oil price drivers, the researchers can also use Gephi or Scientometric methods.

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On Nuances of New Market Entry

Reinhard A. Pfefferkorn*

Reinhard A. Pfefferkorn is associated with Panexio. With projects in many European countries, the Americas and Asia, Panexio is focusing on market entries in South and South East Asia. Before founding Panexio, Pfefferkorn served as Managing Director of several international companies with diverse experience in managing verticals like corporate development, mergers & acquisitions, sales, finance, and project management. Today, he is well regarded as a management consultant and a systemic business & management coach with a rich and diverse experience.

In this conversation with IMI Konnect, Pfefferkorn speaks about what drives a company to conquer new markets. He deliberates on the complexities involved in strategizing and planning an expansion process while discussing on the positive trends of international growth.

IMI Konnect: *Panexio has been helping its clients to enter Asian and American markets. What was the driving force behind setting up such an organization?*

RP: Working in an international environment excited me. After having completed the first projects within Europe, I had noticed how passionate I was about accompanying companies going international. I was clearly motivated to set up my own company as it would further help me develop and pursue my interest with a greater focus on individual client's needs. Presently, the companies we mainly work with are SMEs (small and medium-sized enterprises) who are experts in what they do. We learn a lot from them about new products, materials and services. There exists a pool of incredible ideas that deserve global distribution. Besides, we bring in our years of experience in going global and pass that experience on because we want to constantly improve, reflect and set ambitious goals for ourselves in our projects. In the context of international growth of a company, these factors can fit together perfectly. We do what we do because we like to connect people from different continents, develop business models and establish companies in new markets. Many companies have never or rarely thought of expanding into a global market, as market entry is not commonplace. We also help people in other countries get access to products that may not have been there before. The best part is that we create jobs with all our activities and effort. I think that alone is worthy of our commitments.

IMI Konnect: *Why did Panexio choose the Asian and American markets specifically?*

*CEO & Owner, Panexio

RP: The major growth markets have been and still are in Asia. Furthermore, the Asian markets are more complex (from the perspective of a European or American company) and there are many more differences that must be taken into account (compared to a western market). If we compare Asian and American markets, the cultural aspects and the way of doing business are somehow different, but the technical questions of a large market are identical. This variety excites me.

IMI Konnect: *Does Panexio's modus operandi vary with the cultural differences in the Asian and American markets? If so, how?*

RP: Our starting point is always an assessment of what the client really needs and what information and knowledge are already there. So, after an initial consultation, we identify how suited the organization is for internationalization. Then we work on the business plan and project management including the operational implementation of the expansion plans. That's the framework; you may call it methodical or fact-based. Within this process, we focus on thematic areas. Sometimes technical questions are more important, sometimes the relationship between parties needs to be built up more. Sometimes we just help in finding executives for an existing company. And yes, we adapt our modus operandi based on questions like how experienced a client is with other cultures, how open, tolerant and innovative are external conditions, are technical or financial aspects in the foreground, whether the personal relationship between the contract partners are crucial and so on. In a way, we are the differential gear and we balance different views and interests.

I know that you would love to hear examples. Although we have never completed a scientific study, there are some noticeable points here. North Americans or Chinese prefer an early dinner at maybe 6 p.m., while Brazilians or Italians want to eat late, not before 8 p.m. Seating order is much more important in Asia than in Europe or in the USA, not only for lunch or dinner but also for negotiation sessions. I didn't believe it would make a big difference where someone was sitting. But it is so. The technical details of the products are always important. Germans tend to discuss it in more detail whereas the Chinese want a better personal relationship with the contractual partners. They ask the same or similar questions more often, not to question the technical issues but to learn what the potential partners really think. We also notice differences in written and oral expression. Europeans and Americans are much more direct whereas Asians are more reserved and careful about what they say just to make sure not to be rude or offending, although the others do not notice that at all.

This is not the result of any scientific research but based on years of experience and it clearly depends on how great a cross-cultural awareness and experience exists amongst the project members or contract partners.

IMI Konnect: *What according to you are the most critical factors that an organization must consider while venturing into new markets?*

RP: We have just talked about cultural aspects which are neglected mostly. For example, competence and quality come first in the DACH region (Germany-Austria-Switzerland), while personal relationships are more important in Asian or Arab states. Companies from DACH countries often act the same way in foreign markets as they do in their domestic market and then wonder why they are seeing undesired results. Furthermore, good market access is crucial – meaning distribution partners and the sales network. This requires very close observation and must be considered in the decision involving the legal form to be adapted for the market entry. In practice, we often see overestimated sales figures and underestimated organizational costs. Although, it is hard to elaborate a realistic business plan for an expansion into a new market but it is crucial. Supposedly, small aspects are overlooked. In Munich or New York, it is easy to visit six customers in one day (at least in certain industries) but it is not possible in Jakarta or Sao Paulo, just because of the traffic. But one or two visits less per day have a huge impact on the annual sales figures. Besides these, the legal and tax risks are recognized early while HR and IT topics would be considered much later. So, it is important to have a clear project plan and to anticipate as many topics as possible because there will occur aspects you may not foresee anyway.

A lot of organizations and institutions offer information about foreign markets and support specific questions. They send out contact lists and market data for free. Although the information is available, the important matter is to filter them and analyze the relevant parts because a client has individual needs. If information is not exactly tailored for your company it can lead you astray instead of helping you in your expansion plans.

IMI Konnect: *Do you think innovation can be a strategic move by organizations seeking to enter new markets?*

RP: Absolutely. In innovation management, we see the push and pull effects. The focus on technical issues and problems drives many companies to search for solutions and new products evolve within the company. The development or the innovation, as the outcome, can be offered in markets. This technology-driven push effect is seen very often. Companies offer what is technically possible to potential customers. And what can be sold in their home market could also work abroad and this is a clear driver of expansion projects.

Pull effects are mainly initiated by the customers (or markets) asking for a solution. What a company develops is then an answer to an existing market need. Both strategies can work out well for new products and new customers, so why not for a successful entry into a new market?

IMI Konnect: *In the present global scenario, which according to you are the emerging markets and most promising market sectors?*

RP: Let me begin by saying that I am not a futurologist. Still, considering what we have seen in the past 15 years even with markets saturating in European and American countries there will still be many opportunities in niches and new technologies in these developed markets. But the rise of Asian markets was and remains obvious. I do not see for e.g. China as an emerging market; it is already an industrialized country with strong growth potential in many regions and sectors. There are other countries in Asia, where we see big population and good macro-economic numbers. Most of these markets are way bigger than European countries and offer huge potential. In Africa, some countries are already doing great of course but the general economic upswing is still to come. We get first inquiries from our clients for these countries, however, the main focus still remains on Asia (China, Hong Kong, Japan, India, and Vietnam).

Talking about sectors, I want to mention healthcare as an important industry and it has an evergreen trend; not only because of the growing number of older people in many countries but also because more and more people can afford medical treatments and supplies. Other promising market sectors deal with urbanization and mobility such as renewable energy, transportation, communication and infrastructure in general. On an industry level, it is digitization/automation including e-commerce.

IMI Konnect: *Although, the plan for each venture might be unique, can you explain the main phases that are involved in general in new market entry?*

RP: Entering a new market is always exciting and most interesting. Most importantly it should be specific to the individual client company. The main phases are to make sure that the expanding organization is stable enough to handle an internationalization process. Successful growth requires an appropriate internal organization and a clear strategy to avoid additional expenses and problems later on. Just like building a house from the bottom up, not the other way around. The first steps into a new market are critical to success.

After setting that starting point the market selection has to be questioned. Many entrepreneurs choose a country without examining other markets that maybe even more interesting. Here it is worth asking for important details and to have a second look at the map, followed by an individual market analysis.

Then a real-world business plan is necessary to define realistic revenue targets and cost estimates. In doing so, unpleasant surprises can be avoided. Economic decisions should be fact-based.

Everything that is always particularly important needs to be considered because this is where things are most likely to go wrong. For instance cultural differences, communication problems, unexpressed goals, bureaucratic hurdles, various technical standards, legal frameworks, etc. Those who enter a new market without having any experience there put their company at great risk, a risk that they would never expect in the home market.

It is very important to identify as early as possible internal people who continue to look after the subsidiary or distribution partner after the project is completed. Many company leaders have the perception that foreign companies run well on their own, but that is not the case! If you want an economically successful subsidiary, you have to take care of it, which requires suitable employees at both locations. This is a crucial factor for a successful expansion.

IMI Konnect: *During your tenure of establishing expansions, what has been the average time taken in executing an expansion?*

RP: Many factors play an important role in the timeline. Sometimes a lot of information about the foreign market is already available, so time for market analysis reduces. Other factors may be need for the involvement of a foreign partner, level of preparation of the organization for expansion, whether it is a pure distribution company, whether the production facilities have been planned or is it just export with no interest in conquering the market? M&A projects or joint venture (JV) projects with a foreign partner take longer, compared to finding distribution partners for export. Leaving a lot of competencies to the foreign partner saves time, but the desire to achieve operational excellence needs more involvement and helps to facilitate the company's long-term success. Export projects can be completed within a few weeks or months, M&A or JV may take years.

IMI Konnect: *According to you, what are the common market entry strategies adopted by the entrepreneurs?*

RP: We see many companies that decide quite fast that they want to start with an export of products, like a step-by-step approach. Enterprises with products that need service and training think longer about a foreign investment because they know that more time and money will be involved. Whoever wants to make use of large markets for sales purposes should be aware in advance about what options are there and what will no longer be possible later with a pure export approach. Our experience often shows that comprehensive market knowledge and customer proximity can only be built up in person and on-site. A step-by-step approach can be the right solution but generally, it is better to have a clear strategy and objectives right from the beginning.

IMI Konnect: *Forums on international trade have often been flooded with discussions on anti-dumping and countervailing effects. What are your takes on the same?*

RP: Free trade with low trade barriers and global commerce with fewer customs are important to develop our economies and allow people access to goods and services. This helped in the past to create jobs, increase wealth and living standards in many countries. Of course, countries must make sure their local industries do not get damaged or kicked-out. That's why countries and trade blocks have to follow the rules of the WTO. ASEAN, EU, EFTA, NAFTA, etc. are examples where advantages outweigh the disadvantages. International trade is important and positive and can only work when all apprehensions and disputes are discussed openly.

IMI Konnect: *In your opinion how significant a role can liberalization of cross-border trade play in new market entry?*

RP: As mentioned earlier, free trade is very important and helps both sides to develop positivity. Liberal, open markets are always an opportunity for the business partners and their customers and stakeholders. Whenever a new free trade agreement is signed and in place, we notice a higher interest in these markets. Sometimes it takes a little time until all the processes are running smoothly but, in the end, we see lower barriers and more exchange of goods and services.

IMI Konnect: *While planning for new market entry, how do you help organizations to effectively balance between their short and long term goals?*

RP: A very important point is, not to impulsively start working on an implementation plan but first to see the whole picture. What should be achieved in the long term? Is there any development steps involved? A pure export to a specific country could hinder a company in establishing a joint venture there later because of other market players being already aware of the new competitor and fighting for their market shares. So maybe a bigger investment makes more sense there. And it also happens that sometimes we recommend not going international. Sometimes it is better to further strengthen the brand in the local market, penetrate the home market more and wait for the right time to pursue expansion into new regions.

IMI Konnect: *What are the other aspects that Panexio considers while helping clients with their market entry?*

RP: Defining the strategy of market entry and elaborating the implementation plan have to include all relevant aspects a client has to deal with. Besides financial, technological and legal factors, we also focus on political and environmental aspects. Special expertise is either available among our professional network partners or we can identify an expert who can guarantee comprehensive information and consideration. We are aware that it is a common sentiment, mainly among emerging countries, that developed countries set high standards to avoid market access for those countries. It is very important to review and consider all legal details and to discuss these points openly. The clarifications made upfront help in establishing balanced business cooperation among the partners.

IMI Konnect: *Does Panexio have any future plans in educating entrepreneurs with the art of new market entry?*

RP: Transfer of know-how is a very important point. We know that many companies fear that consultants keep their experience and knowledge with them. What we do is that we discuss the objectives in detail and that we demand a representative who drives the project internally. So, we can make sure that the know-how transfer happens and the generated experience stays in the company. Also, we do not insist on working with our well-known external partners e.g. lawyers, executives, search partners, but offer to identify new experts who have the specific knowledge and industry expertise.

The more people and organizations talk and publish about other countries and the more companies are taking care of international business relations, the better it is, even for us. But it is difficult to make entrepreneurs aware of market entry possibilities as we do not know at what time they consider a market entry. Of course, many institutions like universities, colleges, etc. are offering business plan seminars and cross-cultural events. All these initiatives are mosaic stones towards more international businesses.

IMI Konnect: *As a leader, how do you plan to take your company to the next level?*

RP: On a practical level, I not only try to keep my knowledge up to date on what is going on in the world and different industries but also specifically in project management and other business areas, including the implementation of new communication tools because travelling is restricted at the moment.

On a strategic level, it is important to further expand the network of business partners and subject matter experts. This is time-consuming but by doing so it also ensures the ability to identify new partners quickly. Being open to other's opinions, considering each meeting a chance to learn something new and being able to find out the clients' requirements got us so far. It is important to maintain and improve that.

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