



Prahladrai Dalmia Lions College of Commerce & Economics  
Sunder Nagar, S.V. Road, Malad (West), Mum-64  
"ISO 9001:2015 CERTIFIED"

**Date:** 1<sup>st</sup> October, 2021

**NOTICE**

All the students are hereby informed that BAMMC and BBI programme in association with IQAC is conducting an Intercollegiate Conference on Nishichitam: "Positive Impact of Pandemic on every aspect of our lives" on 02<sup>nd</sup> December 2021 at 10:30am. Also the launch of B.A.(M.M.C) tabloid, "Scoop Bulletin" will be conducted.

A workshop will be held before the conference on "How to make a research paper".

Date - 02<sup>nd</sup> December 2021

Time - 10.30am

Prof. Bhavana Singh	CA Durgesh Kenkre	Prof. Subhashini Naikar	Dr. Kiran Mane
B.A.(M.M.C) Co-ordinator	BBI Coordinator	Vice Principal SFC	I/C Principal

DI/N-STD/GEN/00





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## **STUDENT RESEARCH CONFERENCE**

### **PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE AND ECONOMICS.**

**DATE:- 2nd DECEMBER, 2021.**

**TIME:- 10:30 AM**

The B.A(M.M.C) & B.B.I Program of Prahladrai Dalmia Lions College of Commerce and Economics in association with IQAC jointly organized The Intercollegiate Student Conference on 2nd December, 2021. The medium of the workshop was online on Google meet. The student attendees in the meeting were quite good in number for the conference.

The Conference began by welcoming everyone present and announcement of the Topic of Inter-collegiate student Conference "NISHCHITAM: Positive Impact of Pandemic on every aspect of our lives. Followed up by playing the Sarasvati Vandana to start the occasion with blessings of Goddess of Education. After that there was an introduction of all the Dignitaries in order starting from Principal I/C – Dr. Kiran Mane, Vice Principal (Self-Financed Courses) Prof. Subhashini Naikar, Vice Principal(Degree College) Dr. Madhavi Nighoskar, IQAC Co-ordinator Prof. Emelia Noronha, B.A.(M.M.C) Coordinator Prof. Bhavana Singh, - B.B.I Coordinator C. A. Durgesh Kenkre and other mentors. Dr. Kiran Mane enlightened the conference with his words and thoughts about evolution of the conference throughout the year and welcomed The Chief Guest Dr. Shekhar Chandratre and asked him to share his thoughts on the conference. Dr Shekhar Chandratre himself listed how the pandemic affected in a really wide scope. His words filled the air around with enthusiasm and energy. After chief guest Dr. Shekhar Chandratre, the anchoring team supervised by Prof. Mohini Nadkarni acted in linking the presentation process. Firstly, they felicitated The Guest of Honour Ms. Jasbir Kaur and asked her to share her views to which Ms Jasbeer Kaur gladly started and told her journey and learnings in short. Lastly people in chair for the presentation evaluation were named, firstly CMA Dr. Natika Poddar and Dr. Surekha Mishra were who was in attendance for the Conference with counting the feathers of their cap like they were the national level research paper presenter, they also teach people on how to make and present research paper on all levels. They were welcomed to judge the presentations and the conference began on a high note with energy by the presentations and throughout the course of it the Students as well as the Judges were positive, students with a vibrant smile and formal attitude presenters presented one by one to which judges also complimented each presentation adequately. After all 15 presentations the conference reached to it's climax where the judges were asked their feedback, to which they said that they were happy to see the students who tried and it was really heartwarming to see the talent, They said as the subject of COVID was sensitive and to count out the positive impacts also was tough as COVID being unbiased changed everyone's life at all parts.



Towards the climax of conference the air was filled with warm hearts and smiles of everyone associated with it. Lastly Anchors ended the Conference with National anthem. After National Anthem Prof. Mohini Nadkarni thanked everyone from dignitaries to students who attended the conference and also mentioned Prof. Priyanka Radhakrishnan who was with the participants throughout to guide them. The conference ended with nothing but smiles on everyone's faces and longing in everyone's foreseeable memory.

**BY:- ALOK B. BAIRAGI,**

**F.Y.B.A.(M.M.C.).**





## Prahladrai Dalmia Lions College of Commerce & Economics

Sunder Nagar, Malad (West), Mumbai, 400 064

ISO 9001: 2015 Certified

### Activity Report – Detailed – 2021-22

Date : 2 <sup>nd</sup> December 2021.	Name of Activity : <b>Nishchitam: “Positive Impact of Pandemic on Every Aspect of Our Lives”.</b>	
Prog:	Dept/ Committee: <b>B.A.(M.M.C) and BBI department</b>	No of participants: 69 students

### Detailed Activity Report for the year 21 -22

#### Objectives / Need / Context of organizing the activity:

To enhance the knowledge of students regarding the research papers.

To understand about the various topics in depth, by exchanging information and presenting papers in front of everyone.

**Methodology / Procedure / Practice followed while conducting the activity: Presentations, Webinar, Seminar, Virtual meet.**

**Names of Resource persons / Speakers with their designations and affiliations (if invited):**

**Guest of Honour: Dr. Jasbir Kaur (Wellness Expert- Yoga Nutrition and Mind Control)**

**Chief Guest : Shekhar Vasant Chandratre (College Development Committee Member)**

**Chairing the Session: Dr. Surekha Mishra (HOD of Commerce)**

**Chairing the Session: CMA DR. Natika Poddar (Associate Professor)**

#### Outcome/ Result / Effect of the activity:

Better understanding of the students in which they developed their skills of presenting the papers and engaged other participants.

Name of Coordinator/ Convener / Organizer of Activity : Prof. Bhavana Singh

Signature :

Date: 10. 12.2021





## Prahladrai Dalmia Lions College of Commerce & Economics

Sunder Nagar, Malad (West), Mumbai, 400 064

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### Activity Report – Detailed – 2021-22

Date : 2 <sup>nd</sup> December 2021.	Name of Activity : <b>Nishchitam: “Positive Impact of Pandemic on Every Aspect of Our Lives”.</b>	
Prog:	Dept/ Committee: <b>B.A.(M.M.C) and BBI department</b>	No of participants: 69 students

**Analysis of Feedback of the activity:** The feedback was satisfactory according to all the students. They gained maximum information through this session.

#### **Details of the organizing committee:**

Prof. Bhavana Singh (BAMMC Coordinator)

Prof. Minu Paul (Core Faculty)

Prof. Kritika Rao (Core Faculty)

**Words of appreciation / recognition regarding contribution to the organization of the activity:** The webinar was successfully done with all the participants, teachers and students. Students emphasized about all the topics which was helpful for all the people present in the event.



Name of Coordinator/ Convener / Organizer of Activity : Prof. Bhavana Singh

Signature :  
Date: 10. 12.2021



## Prahladrai Dalmia Lions College of Commerce & Economics

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IQACdoc -1

<b>NAME OF THE ACTIVITY: Nishchitam: "Positive Impact of Pandemic on Every Aspect of Our Lives".</b>			
<b>DATE</b>	<b>Name of Program</b>	<b>DEPARTMENT/COMMITTEE</b>	<b>Name of COORDINATOR of Activity</b>
2 <sup>nd</sup> December 2021.		<b>B.A.(M.M.C) and BBI department</b>	Prof. Bhavana Singh
<b>TIME</b>	<b>VENUE</b>	<b>NUMBER OF PARTICIPANTS</b>	<b>NATURE: Outdoor/Indoor</b>
10.30 am to 2.00 pm	Google Meet	69 students	Indoor
<b>SUPPORT/ASSISTANCE:</b>			

BRIEF INFORMATION ABOUT THE ACTIVITY (CRITERION NO. ): \_\_\_\_\_

<b>TOPIC/SUBJECT OF THE ACTIVITY</b>	<b>Nishchitam: "Positive Impact of Pandemic on Every Aspect of Our Lives".</b>
<b>OBJECTIVES</b>	<ul style="list-style-type: none"> <li>To enhance the knowledge of students regarding the research papers.</li> <li>To understand about the various topics in depth, by exchanging information and presenting papers in front of everyone.</li> </ul>
<b>METHODOLOGY</b>	Seminar / Webinar/ / Conference / Virtual meet/ Presentations
<b>OUTCOMES</b>	Better understanding of the students in which they developed their skills of presenting the papers and engaged other participants.

**PROOFS & DOCUMENTS ATTACHED (Tick mark the proofs attached):**

<b>Notice &amp; Letters</b>	<b>Student list of participation</b>	<b>Activity report</b>	<b>Photos</b>	<b>Feedback form</b>
<b>Feedback analysis</b>	Video clip with details	Certificate	Receipts	Any other

IQAC Document No:	Criterion No:	Metric No:
Departmental file no:	IQAC file No:	

*Bhavana Singh*








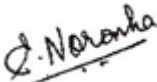


## Prahladrai Dalmia Lions College of Commerce & Economics

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NAME OF TEACHER & SIGNATURE	NAME OF HEAD/ COMMITTEE INCHARGE & SIGNATURE	IQAC COORDINATOR (SEAL & SIGNATURE)
 Prof. Minu Paul  Prof. Mohini Nadkarni	  Prof. Bhavana Singh, Prof. Durgesh Kenkre	
Prof. Bhavana Singh 	Prof. Bhavana Singh <b>B.A.(M.M.C) Coordinator</b> 	Prof. Emelia Noronha 

For Reference

Criterion I	Curricular Aspects (planning & Implementation)	Criterion V	Student Support & Progression
Criterion II	Teaching Learning & Evaluation	Criterion VI	Governance
Criterion III	Research, Innovations & Extension	Criterion VII	Institutional Values & Best Practices
Criterion IV	Learning Resources and Infrastructure		





Name	college	Topic
SHRUTI BRIJMOHAN OJHA	Prahladrai Dalmia Lions College	Economic consequences of covid-19
ARSHIYA SAYYED	Bhavans	CORONA...CRUHSING BLOW TO DREAMS OF MILLIONS
farheen Abdul jabbar mansoori	Vidya Vikas College	IMPACT OF COVID ON EDUCATION
Shirsat Nandesh	Prahladrai Dalmia Lions College	Impact of covid-19 on education
Komal Jagdish Shukla	St.peter institute	covid-19 impact on education
Suchita seth	Prahladrai Dalmia Lions College	SOCIAL IMPACTS OF COVID-19
Celestina Patel	Prahladrai Dalmia Lions College	Impact of covid in India
Aasiya Patel	Prahladrai Dalmia Lions College	THE IMPACT OF CORONA VIRUS IN INDIA.
Ronak Patel	Prahladrai Dalmia Lions College	THE IMPACT OF CORONA VIRUS IN INDIA.
Priya Rathod	Prahladrai Dalmia Lions College	THE IMPACT OF CORONA VIRUS IN INDIA.
Khushboo Rajpal	Hinduja college	Indian stock market reaction to covid-19 crisis is surprisingly muted
Maya Rajbhar & vedant pawar	Prahladrai Dalmia Lions College	Entertainment Industry In The Age Of Pandemic
Harsh Vinay Shukla	Prahladrai Dalmia Lions College	TECHNOLOGY FOR THE FUTURE
Krupa Nimavat	Prahladrai Dalmia Lions College	TECHNOLOGY FOR FUTURE
Monika Maurya	Prahladrai Dalmia Lions College	The outbreak of COVID-19 pandemic and its impact on stock market volatility: Evidence from a worst-affected economy
Archie Negi	Prahladrai Dalmia Lions College	impact of covid-19 on education
Manish Kamti	Prahladrai Dalmia Lions College	THE IMPACT OF CORONA VIRUS IN INDIA.
Aafiya Patel	Mithibai	Behavioural Changes in the Hygienic of elderly people in India
Ajay Shivekar	St. Xavier's Technical Institute	Density based traffic light signal using microcontroller
Abhishek Mishra	Prahladrai Dalmia Lions College	Coronavirus, COVID-19

BAMane



**NAME:-** SHRUTI BRIJMOHAN OJHA

**COLLEGE :-** Prahladrai Dalmia Lions College

## ECONOMIC CONSEQUENCES OF COVID-19

### ABSTRACT

COVID-19 is not only a global pandemic and public health crisis; it has also severely affected the global economy and financial markets. Significant reductions in income, a rise in unemployment, and disruptions in the transportation, service, and manufacturing industries are among the consequences of the disease mitigation measures that have been implemented in many countries. The outbreak of COVID-19 brought social and economic life to a standstill. In this study the focus is on assessing the impact on affected sectors, such as aviation, tourism, retail, capital markets, MSMEs, and oil. International and internal mobility is restricted, and the revenues generated by travel and tourism, which contributes 9.2% of the GDP, will take a major toll on the GDP growth rate. Aviation revenues will come down by USD 1.56 billion. Oil has plummeted to 18-year low of \$ 22 per barrel in March, and Foreign Portfolio Investors (FPIs) have withdrawn huge amounts from India, about USD 571.4 million. While lower oil prices will shrink the current account deficit, reverse capital flows will expand it. Rupee is continuously depreciating. MSMEs will undergo a severe cash crunch. The crisis witnessed a horrifying mass exodus of such floating population of migrants on foot, amidst countrywide lockdown. Their worries primarily were loss of job, daily ration, and absence of a social security net. India must rethink on her development paradigm and make it more inclusive. COVID 19 has also provided some unique opportunities to India. There is an opportunity to participate in global supply chains, multinationals are losing trust in China. To 'Make in India', some reforms are needed, labour reforms being one of them. It has become clear that most governments in the world underestimated the risks of rapid COVID-19 spread and were mostly reactive in their crisis response. As disease outbreaks are not likely to disappear in the near future, proactive international actions are required to not only save lives but also protect economic prosperity.

### KEYWORDS

COVID 19, economic impact, GDP growth rate, sectoral impact, COVID relief measures.

### LITERATURE REVIEW

- Citation: Pak A, Adegboye OA, Adekunle AI, Rahman KM, McBryde ES and Eisen DP (2020) Economic Consequences of the COVID-19 Outbreak: the Need for Epidemic Preparedness. Front.



*SRM*

Public Health 8:241. doi: 10.3389/fpubh.2020.00241, Received: 30 March 2020; Accepted: 18 May 2020; Published: 29 May 2020.

- “Coronavirus: the economic impact”, released on 28 March 2020.
- 19 Outbreak Affecting on Vietnamese Social-Economy. Available online at: <http://b-company.jp/en/corona-affect-on-vietnam/> (accessed April 27, 2020).
- Vu, M., and Tran, B. T. (2020). The Secret to Vietnam’s COVID-19 Response Success. Available online at: <HTTPS://thediplomat.com/2020/04/the-secret-to-vietnams-covid-19-response-success/> (Accessed April 22, 2020).

## HYPOTHESIS

In Covid pandemic, countries across the globe implemented stringent measures such as mandatory national lockdown and border closures. No doubt, addressing the public health consequences of COVID-19 is the top priority, but the nature of the equally crucial economic recovery efforts necessitates some key questions as governments around the world introduce stimulus packages to aid such recovery endeavours: Should these packages focus on avenues to economic recovery and growth by thrusting business as usual into overdrive or could they be targeted towards constructing a more resilient low-carbon CE? To answer this question, this paper builds on the extant literature on public health, socio-economic and environmental dimensions of COVID-19 impacts .global economic boom in a resilient post-COVID-19 world. It is conceived that the “accidental” or the pandemic-induced CE strategies and behavioural changes that ensued during coronavirus crisis can be leveraged or locked in, to provide opportunities for both future resilience and competitiveness. The negative effects have ranged from a severe contraction of GDP in many countries to multi-dimensional environmental and social issues across the society.

## OBJECTIVES OF RESEARCH

- TO KNOW about the Lockdown has put great stress on the supply chains of essential commodities, and therefore, many of the Indian companies have focused on the production and supply of essential items only, thereby stopping all other production activities, thereby bringing down the production graph.
- TO UNDERSTAND the consequences of economics.



- TO AIM minimise the effect in the economy caused by the COVID -19 outbreak, the Union Finance & Corporate Affairs Minister.
- TO ANALYSE the Case Study of Research.
- TO EXAMINE the steps taken by the Indian government.

## INTRODUCTION

The outbreak of COVID-19 has impacted nations in an enormous way, especially the nationwide lockdowns which have brought social and economic life to a standstill. A world which forever buzzed with activities has fallen silent and all the resources have been diverted to meeting the never-experienced-before crisis. There is a multi-sectoral impact of the virus as the economic activities of Nations have slowed down. What is astonishing and worth noting is an alarm bell which was rung in 2019 by the World Health Organization (WHO) about the world's inability to fight a global pandemic. A 2019 joint report from the WHO and the World Bank estimated the impact of such a pandemic at 2.2 per cent to 4.8 per cent of global GDP. That prediction seems to have come true, as we see the world getting engulfed by this crisis. In another report entitled 'COVID-19 and the world of work: Impact and policy responses' by International Labour Organization, it was explained that the crisis has already transformed into an economic and labour market shock, impacting not only supply (production of goods and services) but also demand (consumption and investment). International Monetary Fund's (IMF) chief said that, 'World is faced with extraordinary uncertainty about the depth and duration of this crisis, and it was the worst economic fallout since the Great Depression'. The IMF estimated the external financing needs for emerging markets and developing economies in trillions of dollars. India too is groaning under the yoke of the pandemic and as per news reports in Economic Times published on 23 March 2020, the economists are pegging the cost of the COVID-19 lockdown at US\$120 billion or 4 per cent of the GDP. This COVID-19 pandemic affected the manufacturing and the services sector—hospitality, tours and travels, healthcare, retail, banks, hotels, real estate, education, health, IT, recreation, media and others. The economic stress has started and will grow rapidly. While lockdown and social distancing result in productivity loss on the one hand, they cause a sharp decline in demand for goods and services by the consumers in the market on the other, thus leading to a collapse in economic activity. However, lockdown and social distancing are the only cost-effective tools available to prevent the spread of COVID-19. Governments are learning by doing.

### Impact on Tourism, Aviation and Retail

The tourism industry is the worst affected due to the COVID crisis, internationally. The World Tourism Organization (UNWTO) (2020) estimations depict a fall of 20–30 per cent in international tourist arrivals. These figures too are based on present circumstances and are likely to increase or decrease in future. Millions of people associated with industry are likely to lose their jobs. In India, the travel and tourism industry is flourishing and is contributing sizably to the economy. The FICCI-Yes Bank report titled 'India Inbound Tourism: Unlocking the Opportunities' described India as a tourism powerhouse and the largest market in South Asia. Tourism in India accounted for 9.2 per cent of GDP and had generated US\$247.3 billion in 2018,

with the creation of 26.7 million jobs. Currently, it is the 8th largest country in terms of contribution to GDP (JaganMohan, 2020). According to the report, by 2029, the sector is expected to provide employment to nearly 53 million people. Foreign Tourist Arrivals (FTAs) crossed 10 million in 2017. However, the coronavirus pandemic has restricted international mobility and the revenues generated by this sector will take a major toll on the GDP growth rate. It may bring a downfall of 0.45 per cent in the growth rate of GDP. The aviation sector in India currently contributes US\$72 billion to India's GDP. Foreign tourist arrival has been down in the first quarter. The lockdown will have a significant impact on arrivals in the second quarter. If we estimate a conservative 25 per cent decline in the contribution of the aviation sector, it will amount to 18 billion. Railways contributed US\$27.13 billion in 2019 to GDP. A 21-day lockdown period will bring down the revenue by US\$1.56 billion. The Indian retail industry was worth US\$790 billion in FY 2019. It accounts for over 10 per cent of the country's GDP and around 8 per cent of employment. In the past few years, online retail has seen a very rapid growth and the market projections had indicated a 30 per cent growth in online retail in 2020 (National Investment Promotion and Facilitation Agency, 2020). A month-long shutdown for retail will affect the Quarter 2 revenues. In the retail sector, the suppressed demand has a tendency to revive very fast and this will enable the sector to recover the losses once the lockdown is lifted. Online retail was operational in some parts of the country during the lockdown period and this will help in offsetting some of the losses for the industry.

### Impact on GDP Growth Rate

While the COVID-19 pandemic is constantly growing and showing little signs of containment as of 15 April 2020, its adverse impact on economic growth of the country will probably be very serious. The UN warned that the coronavirus pandemic is expected to have a significant adverse impact on global economy, and most significantly, GDP growth of India for the present economy is projected to decline to 4.8 per cent.

### Impact of COVID-19 Pandemic on Migratory Labour

The International Labour Organization in its report describes the coronavirus pandemic as 'the worst global crisis since World War II'. About 400 million people (76.2% of the total workforce) working in the informal economy in India are at a risk of falling deeper into poverty due to catastrophic consequences of the virus. As half of the world is in lockdown, it is going to be a loss of 195 million full-time jobs or 6.7 per cent of working hours globally. Many are in low-paid, low-skilled jobs where sudden loss of income is catastrophic. Seasonal migration of labour for work is a pervasive reality in rural India. A migration of millions of people happens from rural areas to industries, urban markets and farms. Major migration corridors in India are from UP and Bihar, to Punjab, Haryana, Maharashtra and Gujarat. Newer corridors from Odisha, West Bengal and North East to Karnataka and Andhra Pradesh, from Rajasthan to Gujarat, from MP to Gujarat and Maharashtra and from Tamil Nadu to Kerala are also being created.

### Health Sector

In an effort to sustain these challenges, hospitals have begun implementing measures to reduce or defer costs, with a view to reserve cash in hand. In the context of consumables, supplier consolidation for better rates and renegotiation of credit periods for pharmacy and consumables are some measures instituted by hospitals to conserve their cash flow. The rampant rise in the total number of people reported worldwide as of writing is 12,170,408 while the world has seen an untimely death of 552,112 humans worldwide, and the overall recovery number has been 7,069,188. The high surge in the numbers of cases worldwide led the WHO to declare it as Pandemic (public health emergency) On January 30, 2020 where the overall mortality rate is 3.4%.

## DIGITAL/IT SECTOR

Nowadays, the technology progress has given the opportunity to industries to provide people with huge amounts of products. Digital marketing uses channels like internet to open new avenues for industries to advertise and sell their products to customers. Digital marketing includes all marketing tactics and ways that use an electronic device or the internet to show, promote, sell products or services and industries use internet channels that will help them succeed that. Websites, social media pages, targeted advertisements and email tend to keep current and increase prospective customers. Digital marketing includes all the methods that can create a massive impact on people at certain time, at certain place and through certain channel [1]. Digital marketing industrial progress is an outcome of combining big data and academic scientific research on intelligent systems. In this article digital marketing methods are thoroughly analyzed and explained through an artificial intelligence (AI) research perspective. However, the number of scientific publications remain in intermediate level when at the same time business sector seems having moved forward. This paper highlights the technical components of digital marketing techniques in scientific research to optimize the performance of them through artificial intelligence (AI) methods. Despite the vast research area and a certain number of publications, it seems that there is a lack of scientific publications regarding specifically digital marketing and artificial intelligence (AI). Never the less, there are some very extensive research attempts on specific digital marketing fields like search engine optimization, search engines ranking factors, consumer behavior, web development and targeted ads that gives hope for the future of artificial intelligence (AI) impact on digital marketing research [2]. Customers, resellers, competitors, suppliers, promoters, the overall: economy, positioning, segmentation, expansion, growth, products, brands, advertising, Market share, price, advertising expenditures, number of resellers, churn, customer value, etc. are some of the main variables that affect decision making. It is certain that decision making is a matter of multiple variables based on analysis, experience and judgment [3, 4]. In order to define the key role of artificial intelligence (AI) on digital marketing research we must map the current situation of digital marketing scientific research and compare it to the business sector. Then we will know in what scale digital marketing in academia falls short of the development in business sector.

We propose a data-driven approach for automatic prediction of deterioration risk using a deep neural network that learns from chest X-ray images and a gradient boosting model that learns from routine clinical variables. Our AI prognosis system, trained using data from 3661 patients, achieves an area under the receiver operating characteristic curve (AUC) of 0.786 (95% CI: 0.745–0.830) when predicting deterioration within

96 hours. The deep neural network extracts informative areas of chest X-ray images to assist clinicians in interpreting the predictions and performs comparably to two radiologists in a reader study. In order to verify performance in a real clinical setting, we silently deployed a preliminary version of the deep neural network at New York University Langone Health during the first wave of the pandemic, which produced accurate predictions in real-time. In summary, our findings demonstrate the potential of the proposed system for assisting front-line physicians in the triage of COVID-19 patients.

## POSITIVE IMPACT OF COVID - 19 ON SECTORS

### IT services

Many businesses were forced to make their employees work from home spurring a surge in the requirement for IT solutions. In particular, businesses needed to update companywide security systems to protect critical data and employees from cyber attacks.

### Education

When schools closed, many students were required to quickly move towards online learning. This caused a huge increase in demand for online learning education providers such as Mathletics, iVET and Education Perfect. Online learning has now become an integral part of a school curriculum and assessment of student performance, and this is expected to continue into the future. It has also led to a huge increase in demand for computer hardware such as laptops and servers, as well as home office equipment such as screens, ergonomic chairs and standing desks.

### Essential Government services

Companies that provide services to essential government institutions such as prisons, medical centres, and hospitals will continue to operate and service the community regardless of the economic conditions. These organisations tend to see an increase in activity due to community changes where increases to unemployment create more requirements for certain government-provided services. This would include service providers under the National Disability Insurance Scheme (NDIS).

### People working from home

More people than ever are now working from home due to the COVID-19 restrictions imposed. Once restrictions ease, we will see people gradually going back to the office. However, it is likely that a large portion of the business community will continue to encourage employees to work from home as it becomes part of the standard working arrangement. This will see a rise in the demand for:

### Home office setups

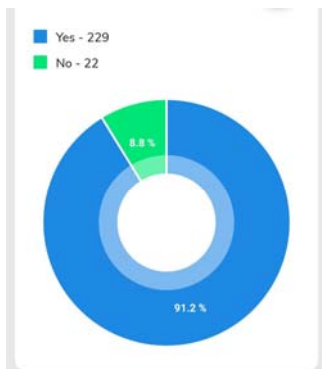
Communication software  
The protection of sensitive data  
With people working from home, there will be less demand for public transport, and traffic in the city centres should reduce. It will also mean that people will have more time for leisure activities as they do not have to deal with the lost time from the daily commute into the office.

## RESEARCH MYTHOLOGY

I had taken primary data through survey forms and total responses I got of 250 people. I also Taken Secondary Data.

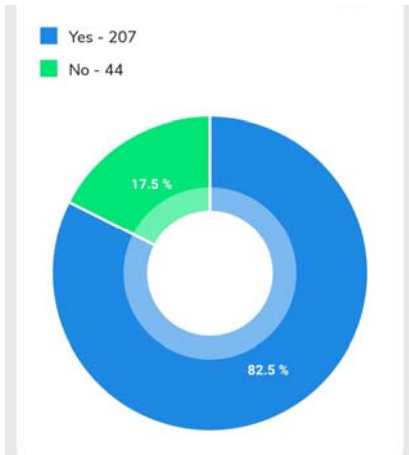
1) what you think 2020 is Worst year for economy?

In my survey 91.60% people said the count of people is 229, and 8.40% has said No the count of people is 21.



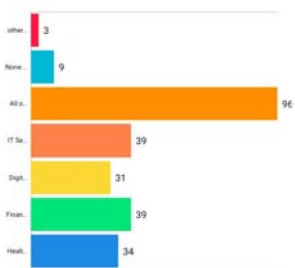
2) Do you agree that Once lockdown is lifted, our productivity will rise?

In my survey 82.40% people has said yes the count is 206, and 17.60% people has said No the count of people is 44.



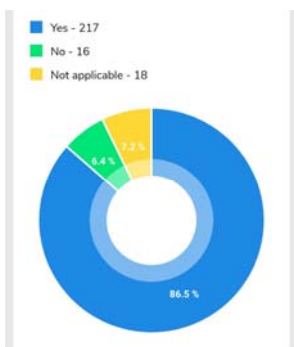
3) Which sectors of the Indian Economy will grow faster?

In my survey 13.60% people has said Health sector the count of people is 34. Financial sector is said by 15.60%, the count of people is 39. Digital marketing is said by 12.40% the count of people is 31. IT sector is said by 15.60%, the count of people is 39. people said All of the above are 38% the count of people is 95. None of the above is said by 3.60% the count of people is 9. and some people had specify other sector they are Education sector, oil sector, etc is said by 1.20% the count of people is 3.



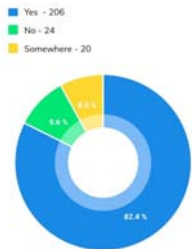
4) Did you loss Your Job from this Pandemic?

In my research 87.20% people has said yes the count of people is 218. people said No are 6% the count is 15. Not applicable is said by 6.80% the total count of people are 17.



5) According to you "Work from Home" is the best for our Economy development?

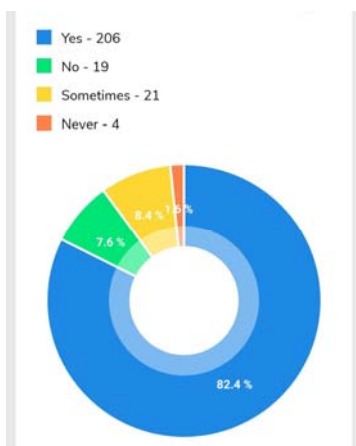
In my research people said yes are 82.40% the count is 206. people said No are 9.60% the count is 24. people said somewhere are 8% the total count of people are 20.



6) India Economies have suffered worst GDP fall due to COVID-19?

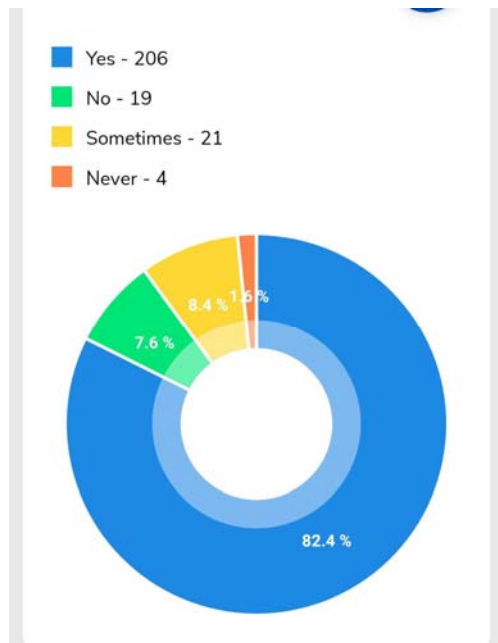
In my research People said yes are 76.80%

the count of people are 192. People said No are 19.60% the count of people are 49. Not Applicable is said by 3.60% and the total count of people are 9.



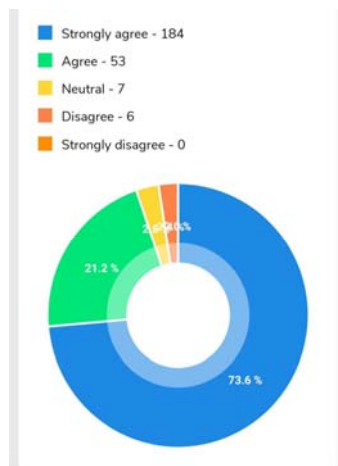
7) Can you Visualised this picture ? And agree that this Coranavirus is a depression for Many people because of unemployment?

In my research people said yes are 82.80% and the count of people are 207. people said No are 7.60% the count of people are 19. sometimes is said by 8% and the count is 20. Never is said by 1.60% ,the count of people are 4.



8) Just because the economy is down, doesn't mean that your spirit has to be down with it.

In my research people said strongly agree are 73.60%, the count of people are 184. People said agree are 21.20%, the count of people is said by 53. Neutral said by 2.80%, the count of people is 7. people said Disagree are 2.40%, the count of people are 6. and no one said strongly disagree.

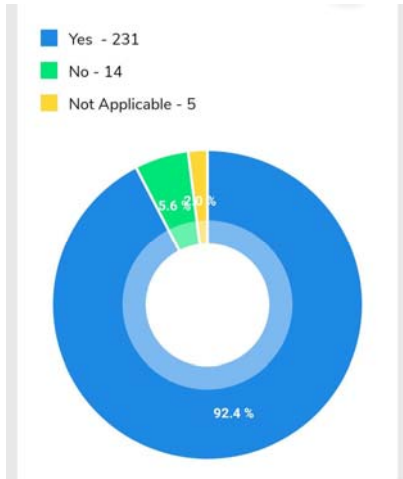


9) Do you agree that COVID-19 is not only a global pandemic and public health crisis; it has also severely affected the global economy and financial markets?



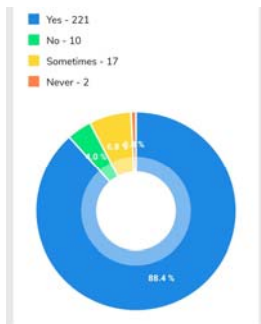
In my research People said yes 92.40%, the count of people are 231. people said No is 5.60%, the count of people are 14.

Not applicable is said by 2% and the count is 5.



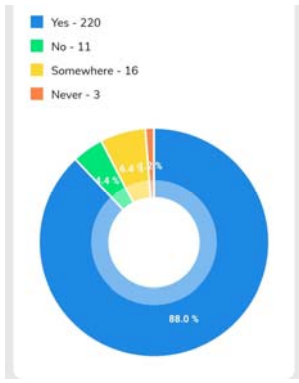
10) Is Health crisis translate to an Economic crisis?

In my research people Yes are 88.80%, the count of people are 222. No is said by 4%, the count of people are 10. Sometimes is said by 6.40%, the count of people are 16. Never is said by 0.80% and the total count of people is 2.



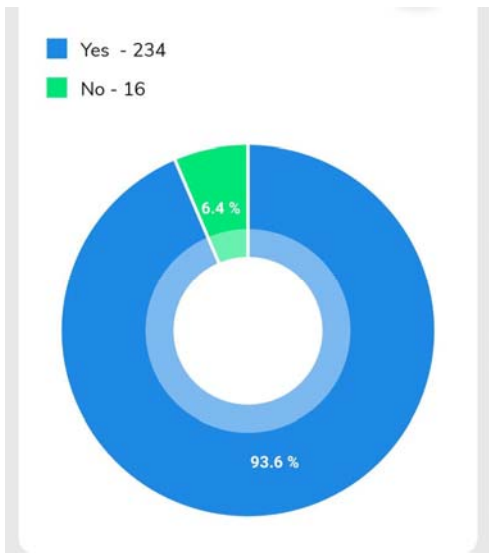
11) The pandemic of COVID-19 has disrupted every aspect of life?

In my research people Said yes are 88.80%, the count of people are 222. No is said by 4.40%, the count of people is 11. Somewhere is said by 5.60%, the count of people is 14. Never is said by 1.20%, the count of people is 3.



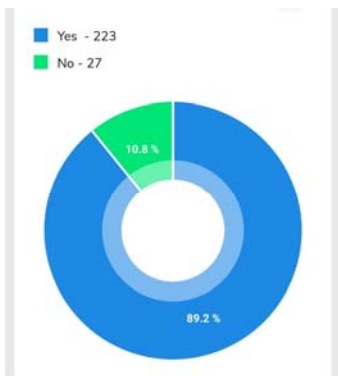
12) Do you think that because of pandemic people are more towards digitalization?

In my research People said yes are 93.20%, the count of people are 233. No is said by 6.80% and the total count of people are 17.



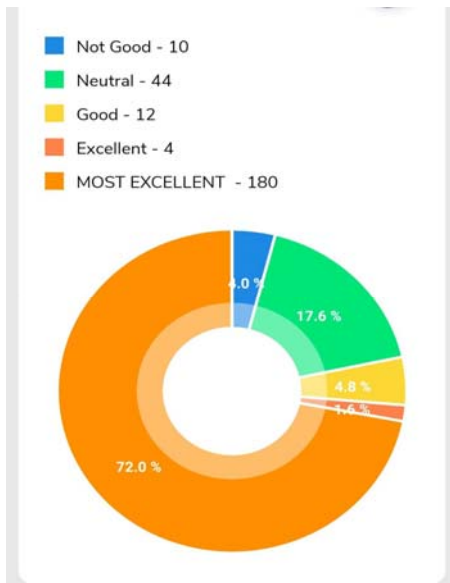
13) Did you earned more money because of Covid-19 ?

In my research people said yes are 89.60%, the count of people are 224. No is said by 10.40, the count of people is 26.



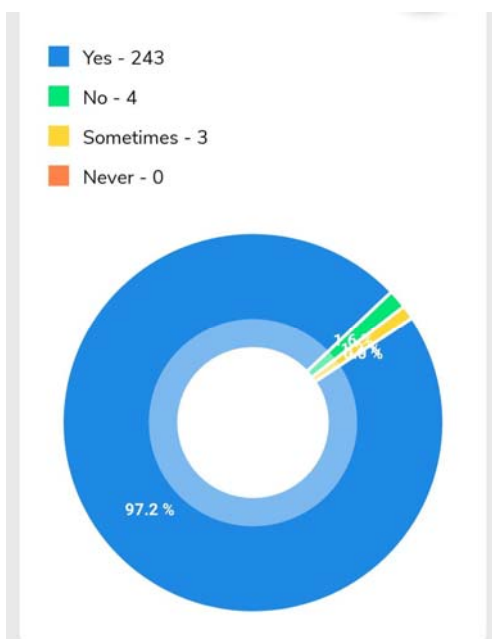
#### 14) Overall your ratings for our Economy?

In my research People said Not good are 3.20% the count of people is 8. Neutral is said by 17.60% and the count of people are 44. Good rating is gave by 4.80% the count of people is 12. Excellent is gave by 1.60% and the count is 4. Most excellent is said by total 72.80%, the count of people is 182.



#### 15) What do you think about digitalization is it important for Economy?

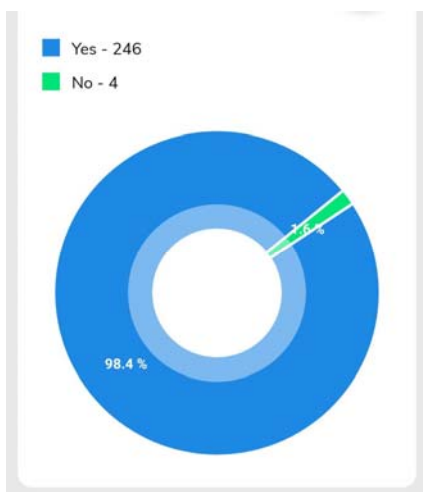
In my research People said yes are 97.20%, the count of people are 243. No is said by 1.60% and the count is 4. Sometimes is said by 1.20%, the count people is 3. Never is said by no one.



16) Do you think that the below mentioned few impacts are also there due to this pandemic?

- 1) Impact On Education
- 2) Impact On Environment
- 3) Impact On Banking
- 4) Impact On Society

In my research people said are 98.50% and the count is 246. No is said by 1.60% and the total count is 4.



### STEPS TAKEN BY THE INDIAN GOVERNMENT:

The Central Government, amongst others, has taken the following decisions in these directions:

#### a) Income Tax

- i. Extension of last date for income tax returns for financial year 2018-2019 from 31.03.2020 to 30.06.2020.
- ii. Aadhaar-PAN linking date to be extended from 31.03.2020 to 30.06.2020.
- iii. Due dates for issue of notice, intimation, notification, approval order, sanction order, filing of appeal, furnishing of return, statements, applications, reports, any other documents and time limit for completion of proceedings by the authority and any compliance by the taxpayer including investment in saving instruments or investments for roll over benefit of capital gains under Income Tax Act, Wealth Tax Act, Prohibition of Benami Property Transaction Act, Black Money Act, STT law, CTT Law, Equalization Levy law, Vivad Se Vishwas law where the time limit will be expiring between 20.03.2020 to 29.06.2020 shall be extended to 30.06.2020.

iFor delayed payments of advanced tax, self-assessment tax, regular tax, TDS, TCS, equalization levy, STT, CTT made between 20.03.2020 and 30.06.2020, reduced interest rate at 9% instead of 12%/18% per annum (i.e. 0.75% per month instead of 1/1.5 percent per month) will be charged for this period. No late fee/penalty shall be charged for delay relating to this period.

## B.GST/Indirect Tax

i.Those having aggregate annual turnover less than Rs. 5 Crore can file GSTR-3B due in March, April and May 2020 by the last week of June, 2020, without any interest, late fee, and penalty.

## CASE STUDY

Present crisis faced by Biyani — known for making Big Bazaar a household brand name since early the 2000s — is the most serious. This is not the first time Biyani's group is facing a debt crisis. "Biyani is to India what the Walton family of Walmart is to the US. Through the deal made in August with Reliance Industries, the Ambani-led firm will acquire Future Retail that owns the BigBazaar that sells everything from groceries to cosmetics and apparel, and Future Lifestyle Fashions Ltd that operates fashion discount chain Brand Factory. Reliance Retail has announced that they have acquired Future Group's retail, wholesale, logistic business for Rs 24,713 crore. Big Bazaar, which was facing acute inventory crunch due to non-payment or late payment of dues to supplier, has received a fresh lease of life from JioMart, an arm of Reliance Retail. Future Group founder Kishore Biyani on Wednesday said the homegrown retail major lost nearly ₹7,000 crore revenue in first three-four months of the COVID-19 pandemic due to closing of stores, which led him to sell his business to Reliance Industries.

## CONCLUSION

This Corona Virus pandemic may wreck the Indian economy. The level of GDP may further fall, more so when India is not immune to the global recession. Infact, it is believed that India is more vulnerable, since its economy has already been ailing and in a deep-seated slowdown for several quarters, much before the COVID-19 outbreak became known. The Prime Minister of India has already spoken of setting up an Economic Task Force to devise policy measures to tackle the economic challenges arising from COVID 19, as also on the stability of Indian economy. However, the concrete plans would have to be kept in place to support the economy and its recovery. As my Suggestion/opinion is that disruption from the virus progresses globally as well as within India, it is for us to forget, atleast for the time being, all talking only about economic recovery, and instead join hands whole heartedly to tackle the outcome of COVID-19. As the spread of the virus is likely to continue disrupting economic activity and negatively impact manufacturing and service industries, especially in developed countries, we expect that financial markets will continue to be volatile. There is still a question as to whether this unfolding crisis will have a lasting structural impact on the global economy or largely short-term financial and economic consequences. financial costs on regional and global economies. Because of high transportation connectivity, globalization, and economic interconnectedness, it has been extremely difficult and costly to contain the virus and mitigate the importation risks once the disease started to spread in multiple locations.

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## CORONA...CRUHSING BLOW TO DREAMS OF MILLIONS

Paper presentation by:

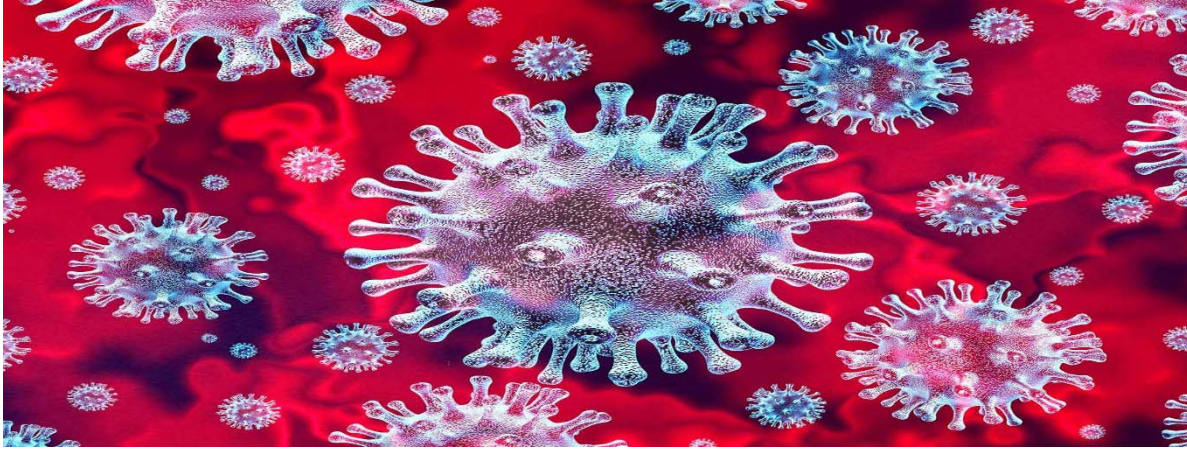
NAME: ARSHIYA SAYYED

INSTIUTION: BHAVANS COLLEGE, ANDHERI (WEST)

ABSTRACT:

"Covid" the devastating phases of human life. By end of the year 2019 world faced the biggest trauma in history, starting from the Wuhan city of China it spread all over the world. Over 5,074,148 people lost their life

worldwide. Covid effected every strata of society whether it be rich or poor but the most affected strata was middle class(who earn from Rs.2500 to Rs.700 daily). "Middle class is a fluid category, people constantly move in and out of it, mainly because of the precarious nature of work in India and the informal economy," for living a simple and respectful life middle-class faced many problem in this phase. This paper will discuss the impact of covid on life of middle class.



## INTRODUCTION:

Indian middle class is estimated to be 150 million before the onset of first coronavirus wave. Corona effected world economy severely. It pushed poverty sharply. Taking the upper middle class to lower middle class, making poor more poor .Compromising at every step of life, the middle class somehow spent the first wave of covid but the second wave came like destroyer. Till now the savings ended, the saved grocery ended, due to constant lockdown the daily wagers sat helpless. Many lost jobs, unemployment was a big threat now! Many families migrated back to their villages. Families managed to spent their day only in one meal. This was really a tough time for each and everyone in the society but the middle class suffered the most.

## REVIEW OF LIERATURE:

As per research paper of Punjab University as the situation stands, covid has sharply divided the Indian middle class and its impacts, it has been varied as North and South poles

The first section comprises of those who are in government jobs and government pensioners or are working in private sector business houses or retired from the private sector with good future security schemes for unemployed in research sectors of private enterprise which are not affected by restrictions like Pharma IT and healthcare.

Somehow, the current virus has rendered this section of the middle class as the privileged one as it is least affected and rather were financially benefited with restrictions and lockdowns. This section comprises 30% of the total middle class.

Second section comprises small shopkeepers, or who are associated with service sectors like transport, catering, hospitality, entertainment; lawyers, self employed professionals like architect & CA etc, teachers in private schools & colleges, running coaching centers etc. Two waves of the virus has left this section as vulnerable as it experienced great financial stress due to the restrictions and lockdowns. Many from this section lost their jobs, managed to spend a day only having one meal, lost their dear and near ones due to poor treatment, financial issues. Fact of matter is that this section is affected even more severely than the lower class as the latter continues to get government help in one way or the other like free 'ration' and monthly funds transfers. This vulnerable section has a much higher presence of 70% amongst the middle class.

Such is the difference in the impact of Covid that whenever lockouts are proposed or declared, the first section rather feels relieved as they are saved from going to offices/ workplaces which itself results in 20-30% savings as expenditure on transport/travel, outside eating and outings etc. has come to almost nil with exception of essential service class like health department, top administration officers or police who rather slogged and displayed great courage during this period of virus. No wonder, this class has financially prospered during the pandemic.



It is this second class which bore the brunt of two coronavirus waves. While with lockdowns and closures, their earnings completely dried up, the expenses in the form of family running cost, fee of school and college going children, rents, electricity bills, EMIs etc kept on piling. With the result, apart from financial stress, they have mental as well as physical stress too. They slogged for years to graduate from the lower to middle class but these two waves of coronavirus pushed one third of them back to the lower class with earnings less than Rs 700 per day.

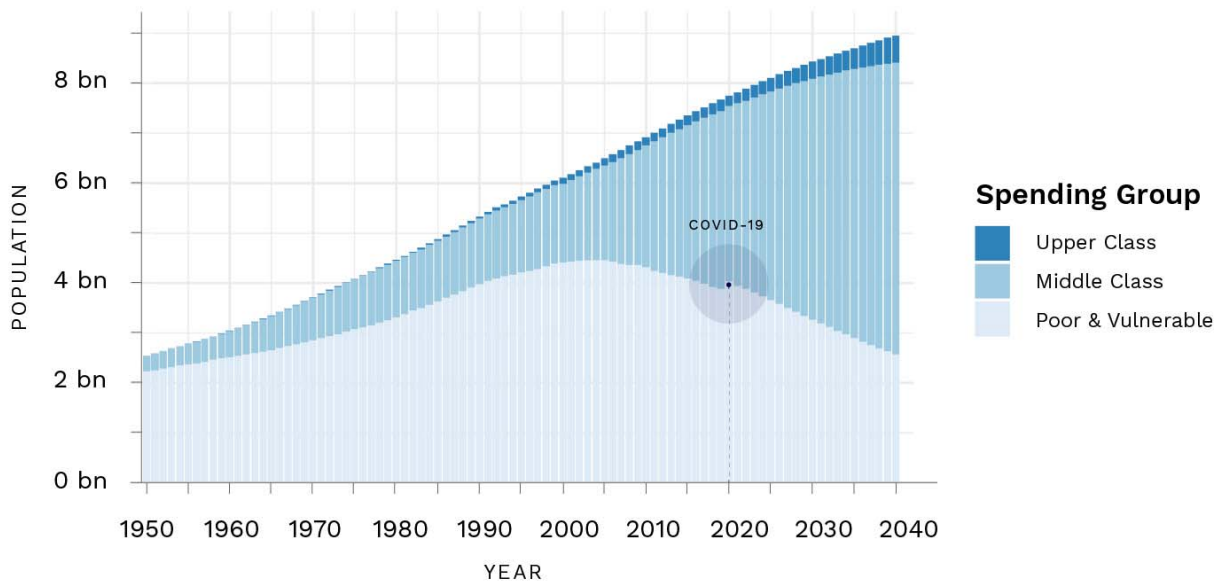
#### OBJECTIVES OF STUDY:

This paper will discuss the following points:

1. To study the financial condition of middle class people during covid-19.
2. To study unemployment caused due to covid-19.
3. Role of government and NGOs during covid-19 for helping middle class people.

**DATA COLLECTION:** The data is collected from internet after searching on multiple website, various news articles and gathering information based on the topic.

## DATA ANALYSIS :



**FINDINGS:** The above graph shows the growth of global middle class. It shows that during the covid phase there is a rapid increase in the middle class globally and lowered rate of upper class as well as lower class.

**CONCLUSION AND SUGGESTION:**

For decades, India's vast middle class population has been a key engine to drive the economy, contributing to the growth of several sectors. This correlation is the reason why the coronavirus pandemic has toppled the country's growth trajectory. While incomes of economically weaker sections suffered during the months of strict lockdown, middle income households took the biggest knock. "Middle income households, particularly at the higher income levels, have suffered much more, because they had a lot more to lose. Their loss is in excess of 30 percentage points," CMIE highlighted in the report.

Then came various government organizations, NGO's and many individual for helping the people. Provided them free ration, money for daily expenses, tickets for boarding back to the villages, helping financially for

treatments, compensation for death in the family, etc. People fought together to overcome this tough situation and finally won over it!

The government needs to take cognizance of this vulnerable section of the middle class which is long sufferer, has no voice, are helpless and live under tremendous stress. They are prepared to do anything to fill their belly even after acquiring higher degrees. As I see, our government is already doing a lot in this covid phase for the helpless. It will be more helpful if some attention is paid to this class too.

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self collected data and self observations

## **IMPACT OF COVID ON EDUCATION**

Paper presentation by:

Name: FARHEEN ABDUL JABBAR MANSOORI

INSTITUTION : VIDYA VIKAS UNIVERSAL COLLEGE MALAD (WEST).

**ABSTRACT:**

The COVID-19 pandemic has created the largest disruption of education systems in human history, affecting nearly 1.6 billion learners in more than 200 countries. Closures of schools, institutions and other learning spaces have impacted more than 94% of the world's student population. This has brought far-reaching changes in all aspects of our lives. Social distancing and restrictive movement policies have significantly disturbed traditional educational practices. Reopening of schools after relaxation of restriction is another challenge with many new standard operating procedures put in place.

Within a short span of the COVID-19 pandemic, many researchers have shared their works on teaching and learning in different ways. Several schools, colleges and universities have discontinued face-to-face teachings. There is a fear of losing 2020 academic year or even more in the coming future. The need of the hour is to innovate and implement alternative educational system and assessment strategies. The COVID-19 pandemic has provided us with an opportunity to pave the way for introducing digital learning. This article aims to provide a comprehensive report on the impact of the COVID-19 pandemic on online teaching and learning of various papers and indicate the way forward.



## INTRODUCTION:

Covid-19 affected higher educational institutions not just in Wuhan, China where the virus originated but all other higher educational institutions in 188 countries as of April 06, 2020. Educational countermeasures are taken to continue educating the students despite the COVID-19 predicaments. Based on the author's experiences, research, observations in the academe, COVID-19 guidelines, and the need for alternative solutions, this article introduces how higher education is affected and how it can respond to future challenges. This article recommends to educational institutions to produce studies to proliferate and document the impact of the pandemic to the educational system. There is also a greater need for educational institutions to strengthen the practices in the curriculum and make it more responsive to the learning needs of the students even beyond the conventional classrooms.

## REVIEW OF LITERATURE:

A sudden implementation of online teaching and learning due Covid-19 and lockdown by many universities has proven to bring numerous challenges into higher education industry. Although there are remarkable successes especially for higher learning institutions who already had well established online teaching and learning systems, it has been recognised that the shift from class-based to

online learning has not been smooth for most universities and colleges. The literature shows that, among others, academics' and students' difficulties to adjust; connectivity, network and internet issues; unconducive physical space and environment; mental health related issues; lack of basic needs; and lack of teaching and learning resources are the major challenges associated with the sudden change to online learning. These challenges are discussed below.

### **OBJECTIVES OF STUDIES:**

This paper will discuss the following points :

- 1 Changing roles of teachers and technologies amid of covid.
- 2 Challenging in front of quality Ed in the times of pandemic.
- 3 Impact of covid 19 on education and children.
- 4 Rise in online learning courses.
- 5 Information and digital library.
- 6 Skilling , upskilling and reskilling by students.

### **HYPOTHESIS:**

Considering this background, the present study aimed at testing the anxiety-buffer hypothesis during the COVID-19 pandemic. More in detail, self-esteem should buffer the relationships from both a fear of COVID-19 and dispositional loneliness to anxiety symptoms – that in turn lead to depressive symptoms. Moreover, specific hypotheses about each path (relationship) between variables were formulated:

H1: fear of COVID-19 and dispositional loneliness are positively associated with depressive symptomatology;

H2a: fear of COVID-19 predicts depressive symptomatology through anxiety symptoms (simple mediation) – without considering the buffering effect of self-esteem;

H2b: dispositional loneliness predicts depressive symptomatology through anxiety (simple mediation) – without considering the buffering effect of self-esteem;

H3: fear of COVID-19 and dispositional loneliness predict depressive symptomatology through anxiety symptoms (mediation) – without considering the buffering effect of self-esteem;

H4: fear of COVID-19 and dispositional loneliness predict depressive symptoms through self-esteem (buffering effect) and anxiety symptoms (multiple mediation).

In other words, it was hypothesized that a fear of COVID-19 and loneliness are associated with depressive symptomatology, but this relationship should be mediated by both anxiety and self-esteem. In particular, self-esteem should play a buffering role.

#### **DATA COLLECTION:**

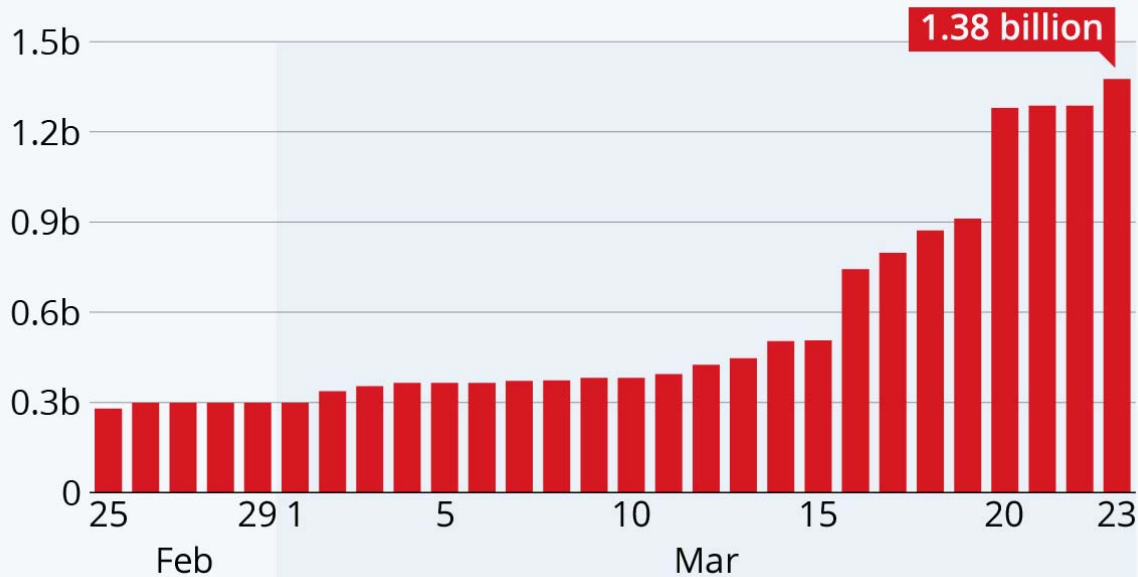
Data is collected from internet after searching on multiple, website ,various news articles and gathering information based on the topic.

#### **Data Analysis:**



# COVID-19's Staggering Impact On Global Education

Number of learners impacted by national school closures worldwide



## FINDING:

Figure refers to learners enrolled at pre- primary , primary ,lower-secondary, and upper secondary levels of education as well as at tertiary education levels.

## CONCLUSION AND SUGGESTION:

**CONCLUSION AND RECOMMENDATIONS FOR FURTHER RESEARCH** In conclusion, the Covid-19 outbreak has introduced a lot of challenges for higher education institutions across the world. Lockdown and other Covid-19 regulations has forced a sudden shift from face to face learning to online learning in many academic institutions. While this shift was considered a possible solution to higher education crises in the era of Covid-19, it is shown in this study that this shift came with numerous challenges for students and academics. As discussed in

this study, these challenges include; difficulties to adjust by lectures and students, connectivity issues, unconducive physical environment, mental health related issues, lack of basic needs, lack of teaching and learning resources. Despite these challenges, this study shows that there are Covid-19 induced opportunities such as innovation and capacity development. There is lack of scientific research evidence on the impact of Covid-19 on academic outcomes. It is therefore recommended that further research should be conducted to measure the impact (shortterm and long- term) of Covid-19 on academic outcomes.

#### **BIBLIOGRAPHY & REFERENCE:**

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SELF COLLECTED DATA AND SELF OBSERVATIONS.

# **IMPACT OF COVID-19 ON EDUCATION**

# NAME: NANDESH . V. SHIRSAT

CLASS:

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3042

## Abstract

Coronavirus affects the education system in the world. Schools, colleges, and universities are closed to control the spread of the coronavirus. School closure brings difficulties for students, teachers, and parents. So, distance learning is a solution to continue the education system. However, the lack of network infrastructures, computers, and internet access is challenging distance learning in developing countries. This paper aims to review the impact of the COVID-19 pandemic on the education system in developing countries. Hence, countries design a strategy to use educational technology, zero-fee internet educational resources, free online learning resources, and broadcasts teaching. During closures, educational institutions design curriculum, prepare teaching-learning strategies for post-coronavirus. The educational institutions design strategies to recover lost learning, and return students to school when schools reopen. Coronavirus has been impacting the face-to-face education system of developing countries. Therefore, developing countries should enhance broadcast teaching, online teaching, and virtual class infrastructures.

## Keywords

Coronavirus, Developing Country, Distance Learning, Education System, Impacts of COVID-19

## 1. Introductions

The coronavirus (COVID-19) is a pandemic disease that affects the education system of different income level countries. The United Nations Education, Scientific, and Cultural Organization (UNESCO) has been recognized that the coronavirus pandemic outbreak has impacted the education system in the world (UNESCO, 2020). A lot of pandemics have occurred in human history, and affected human life, education system, and economic development in the world (Editors, 2020). The World Health Organization (WHO) (WHO, 2020) on March 11, 2020, has officially announced that coronavirus (COVID-19) is a pandemic after it covers 114 countries in 3 months and infects more than 118,000 people in the world. The first COVID-19 case has reported by Wuhan Municipal Health Commission on December 31, 2019, in the Hubei Province, China (WHO, 2020). The coronavirus pandemic is quickly spreading and affecting 213 territories and countries throughout the world. In the world about 30,086,319 of total cases, 21,833,645 of total recovered and 945,962 of total deaths were recorded until September 17, 2020 (Worldometer, 2020).

## 2. Impact of COVID-19 on Education System

In the world, most countries have temporarily closed child-cares, nursery, primary and secondary schools, colleges, and universities to control the spread of the COVID-19 pandemic. COVID-19 impacts not only students but also it affects teachers and parents across the world. UNESCO reported that over 1.5 billion students in 195 countries are out of school in the world due to the school closures. As COVID-19 affects all over the education system, examinations, and evaluation, starting of new semester or term and it may extend the school year.

### 2.1 . Teachers, Students, and Parents

The pandemic of COVID-19 pandemic is affecting schools, students, teachers, and parents. The COVID-19 crisis increases social inequality in schools. Students from more advantaged parents attend schools with better digital infrastructure and teachers might have higher levels of digital technology skills. Some schools can be well equipped in digital technology and educational resources. Disadvantaged students are attending schools with lower ICT infrastructure and educational resources ([Di Pietro et al., 2020](#)). Following COVID-19 more advantaged students are attending schools to adopt online learning. Schools in disadvantaged, rural areas lack the appropriate digital infrastructure required to deliver teaching at the remote. Also, there is a significant difference between private and public schools in technology and educational resources. In most countries, private schools are more effective than public schools. Students' have not equal access to digital technology and educational materials.

### 2.2. Unequal Access to Educational Resources and Technology

The school's closure due to COVID-19 may not affect students equally. Students from less advantaged backgrounds highly suffered during COVID-19 than advantaged students. To control the coronavirus spread, most countries have been working to encourage parents and schools to help students continue to learn at home through distance learning. The governments advised students to learn from radio and television lessons that can be accessed at home. The radio and television lessons may work for some children and students in urban areas, but most parents in rural areas have not accessed to radios and television lessons. For example, in Ethiopia, more than 80% of the population lives in rural areas with limited or no access to electric power, so that it is challenging for students in rural areas to learn from radio and television lessons. The schools in urban areas are teaching their students from a distance by uploading assignments, books, and reading materials through Google Classroom, e-mail, social media, and other applications. In some urban areas, even if distance learning is provided due to a lack of monitoring strategies some students may not use it properly. Private schools sending learning materials directly to parents through social media platforms. There is a difference between rural and urban schools and the public and private schools to keep their students learning from home. Also, public school teachers and students have limited or no access to the internet.

### 2.3. Assessment and Evaluation

Distance learning is a good opportunity for teachers, students, and families. In developed actions such as introduced online learning platforms, use Blackboard, Zoom, TronClass, Classin, and Wechat group platforms, and conducted online training, and collected information about all courses. Online teaching and learning are not a new mode of delivery for developed countries and some developing countries. However, shifting from face-to-face class to online learning is challenging for teachers, students, families, and the countries government due to lack of finance, skill, ICT infrastructure, internet access, and educational resources. Furthermore, computers and other IT equipment, at home are difficult for most parents, children, and students in developing countries. Additionally, some courses

are difficult or impossible to teach and learn through online learning methods such as sport, nursing, laboratories, music, and art courses.

#### 2.4. Mental and Physical Health

The closures schools and higher education negatively affect the mental and physical health of children, students, parents, and teachers in the world, especially in developing countries. Since during school closures, both boy and girl students in most rural areas may be forced to fully support their families in cattle herding and farming. Girl students from low-income families and rural areas can be at a higher risk of sexual abuse, and forced labor, and early marriage. The infected cases rapid increase has created a sense of anxiety and uncertainty about what will happen. The lockdown due to coronavirus may people are feeling stress, fear, and anxiety, such as a fright of dying, a fear of their relatives dying. This stress may affect the students, mental, and physical health of students. The pandemic may have a serious influence on the careers or may have not to graduate of this years' higher education undergraduate students. All students may not have good interaction with online learning applications and platforms, because some of the students are active and some may take a longer time to familiarize themselves with the system.

### 3. Continuity Education System during COVID-19

The COVID-19 pandemic has not clear investigation when the virus will be controlled, but there is an indication it will at for two years and the virus will occur again and challenge the world. So, the countries should plan different strategies to continuity the education system through distance learning. Regarding this, the country designs a strategy to scale educational technology during pandemics, establish zero-rating educational resources on the internet, universal service funds and connecting schools to the internet, prepare online teaching and learning resources, utilizing free online learning resources, practice mobile learning, practice radio and television teaching and grow up ICT infrastructures. Then identify each distance learning challenges and opportunities for children, students, teachers, and families. This helps to determine and control the bottleneck of online teaching and learning challenges.

### Education in Developed and Developing Countries during COVID-19

The governments of different income level countries are using different distance learning methods to continue education during school closures. About 90% of high-income countries are delivered online learning and 20% are using a combination of broadcast and online learning. The upper-middle-income countries, over 70% provides a combination of broadcast and online learning. Also, about 66% of the lower-middle-income countries provide broadcast and/or online learning. Low-income countries, less than 25% are delivering education using television and radio education to their students. For instance, Europe, Central Asia, East Asia, the Pacific, the Caribbean, and Latin America most countries are providing distance learning via online learning fully and the combination of broadcast and online learning to teach rural area students. In the North and Middle East Africa, about 28% of countries are providing only radio and television teaching, less than 40% provide only online learning, and 22% are providing a

combination of broadcast and online learning. In South Asia, 40% of countries are providing broadcast education, and 50% are providing a combination of broadcast and online learning. In Sub-Saharan Africa, 11% of countries are providing only online learning, and 23% of countries are providing a combination of broadcast and online learning. However, low-income and middle-income countries offering broadcast and online learning are not reach most students.

#### 4. Education System Post-COVID-19

There is inequality among urban and rural students; students from low-income or high-income and literate or illiterate parents. So that the education system should design and implement some evidence-based actions that aim to facilitate the recovery of the lost portion when schools are reopened. Because of the lack of required support during the school closures, it could take a very long time for children from illiterate and low-income parents to recover their missed portion when they return to school. Some students from low-income parents may decide to work as daily laborers to support their families financially and may never return to school when schools reopen. Parents from rural areas may be unwilling to send their children back to school because they may prefer their children to continue to support them in cattle herding and farming.

#### 5. Conclusion

The COVID-19 is a pandemic disease caused by a virus that affects the education system of both developing and developed countries. Education is the pillar of every country's development. In the world, most schools, colleges, and universities are closed to control the spread of the COVID-19. The school closure brings difficulties for students, families, and teachers. So, distance learning is a solution to continue the education system. However, distance learning is challenging in developing countries because many parents have not themselves been to school, lack of ICT infrastructures, computers, radio, and television.

#### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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# **Impact of** **Covid-19 on** **Education**



***Komal Shukla***

Abstract

Educational institutions (schools, colleges, and universities) in India are currently based only on traditional methods of learning, that is, they follow the traditional set up of face-to-face lectures in a classroom. Although many academic units have also started blended learning, still a lot of them are stuck with old procedures. The sudden outbreak of a deadly disease called Covid-19 caused by a Corona Virus (SARS-CoV-2) shook the entire world. Around 32 crore learners stopped to move schools/colleges and all educational activities halted in India. The outbreak of COVID 19 has taught us that change is inevitable. It has worked as a catalyst for the educational institutions to grow and opt for platforms with technologies, which have not been used before. The World Health Organization declared it as a pandemic. This situation challenged the education system across the world and forced educators to shift to an online mode of teaching overnight.

Many academic institutions that were earlier reluctant to change their traditional pedagogical approach had no option but to shift entirely to online teaching–learning. The article includes the importance of online learning and Strengths, Weaknesses, Opportunities, & Challenges (SWOC) analysis of e-learning modes in the time of crisis. This Research paper also put some light on the growth of EdTech Startups during the time of pandemic and natural disasters and includes suggestions for academic institutions of how to deal with challenges associated with online learning. The Research paper will attempt an analysis of Origin of Covid 19, its impact on education, Role and importance of Internet during covid 19, internet barring in Kashmir, and More importantly this paper will through a shift of light to the important scenarios of Covid 19.

Keynotes - Orgin of covid 19, Postive and negative impact of Covid on education, internet connectivity in Jammu and Kashmir, Life of Private school teacher.

Methodology: In this research paper the data for the present study is collected mainly through secondary sources the objectivity of historical and current writings has been used to develop a frame work of the study and to arrive at an unbiased conclusion. The data collected with a view to identify and analysis the impact of covid 19 on education in India.

### Objectives

The specific objectives of the evaluation study include the assessments / examination of the following:

1. The rise and origin of deadly coronavirus
2. To which extent the deadly virus laid down cascading effect on education in india.
3. The portray as to what extent the virus has affected the Poor poor students and private teachers.
4. To identify can virtual learning replace teachers.
5. To identify the limit of internet connectivity in J&K.

### Introduction

The COVID-19 pandemic has graphically illustrated the importance of digital networks and service platforms. Digital networks that deliver the internet to our homes, and the services that ride on those. It is time to consider whether these companies are too important to be left to make the rules governing their behavior themselves. There is a new public health crises threatening the world with the emergence and spread of 2019 novel coronavirus or the severe acute respiratory syndrome coronavirus 2.

The virus originated in bats and was transmitted to humans through yet unknown intermediary animals in Wuhan, Hubei province, China in December 2019. The disease is transmitted by inhalation or contact with infected droplets and the incubation period. The symptoms are usually fever, cough, sore throat, breathlessness, fatigue, malaise among others.

We may be social distancing physically but mentally and emotionally we are all still so connected. A pandemic like the COVID-19 may have restricted any form of outdoor activity and we are not complaining about it as much. There are two reasons for this: Surviving is a priority for all (of course!) and social media is not letting us miss out on anything! While we also spend most of our time on streaming platforms such as Netflix, Hot star, and Prime, there has been a definite change in the way we use social media. If there is one thing that we will remember in years to come about this pandemic is how we used social media to its full capacity.

### Impact of Covid 19 on Education:

Corona virus that originated in China, spread at an alarming rate throughout the world, took lives in thousands and put its adverse effects on millions. Every advanced country has knelt before it bewilderingly. The endeavors of every developed country in terms of health system have resulted in failure. The world is in bafflement, failing to get its cure. BENJAMIN FRANKLIN, one of the founding fathers of United States of America has wisely analyzed that an investment in education pays the best interest. This analysis of Franklin about investment should be an eye-opener for policy makers or rulers.

As education a basic right of an individual is in pitiable form in our country India especially in its union territory 'Kashmir'. The new entry of Covid-19 has changed the scenario once again. The world is facing the Grim reapers of Corona virus. It has become so affreux that people fear it more than the tutelary deity of death.

Lockdown is pivotal and effective step taken by the rulers. But at the same time around more than 2 hundred countries in the world, majority of them are investing huge amounts of money in education sector to uplift their countries by boosting diligent ones who yearn to prove their valor in any field. In our country unfortunately this sector is run by bureaucrats selected by ruling parties who have no experience. The more we bureaucratize the education system the more it will fall down. The trauma can be solved only by establishing modern systems equipped with scientific technologies and scrupulous teachers. This will definitely yield paramount mountains and help in solidification of education system. Without investing there will be no change and if done it should be utilized in a proper-proper manner. Internet the attention grabbing blessing of science is crippled in the India's paradise named union territory Kashmir. As from last 9 months 4G internet service is still switched off in the valley. One can guess how adversely it had affected the education sector.

Some zealous teachers started to teach on Google class room, Tube but it too needs fast internet speed, on 2G service it pinches and creates frustration. Moreover not everyone in the valley can afford smartphones to attend u

Tube lectures, so an act of segregation is created. We believe education is crucial for spawning societies which are impartial and are free from regionalism, dogmas and parochial notions about others. We believe the world has started moving like leopards speed from breaking up to oneness. The more intricate or tough the world becomes the more inventive we need to be to meet its difficulties.

Undoubtedly the meaning of life has changed in the current century. But our country is yet to adjust its motives and objectives to meet the needs of momentum and upcoming generation's. Our country need to bring improvement in education sector by investing huge amount so as to erase all the barriers. There is a Chinese proverb which says that if you want to live for more than hundred years then you have only one option to educate people. I hope effective and pivotal steps will be taken to overcome the high lightened problems which have not been taken yet.

Indias Response:

- Diksha portal contains e-Learning content for students, teachers, and parents aligned to the curriculum, including video lessons, worksheets, textbooks and assessments. Under the guidance of its national boards of education (CBSE) and NCERT, the content has been created by more than 250 teachers who teach in multiple languages. The app is available to use offline. It has more than 80,000 e-Books for classes 1 to 12 created by CBSE, NCERT in multiple languages. The contents can also be viewed through QR codes on textbooks. The app can be downloaded from IOS and Google Play Store.
- e-Pathshala is an e-Learning app by NCERT for classes 1 to 12 in multiple languages. The app houses books, videos, audio, etc. aimed at students, educators and parents in multiple languages including Hindi, Urdu, and English. In this web portal NCERT has deployed 1886 audios, 2000 videos, 696 e-Books and 504 Flip Books for classes 1 to 12 in different languages.
- National Repository of Open Educational Resources (NROER) portal provides a host of resources for students and teachers in multiple languages including books, interactive modules and videos including a host of STEMbased games. Content is mapped to the curriculum for classes 1-12, including aligned resources for teachers. It has a total of 14527 files including 401 collections, 2779 documents, 1345 interactive, 1664 audios, 2586 images and 6153 videos on different languages.
- Swayam is the national online education platform hosting 1900 courses covering both school (classes 9 to 12) and higher education (under graduate, post graduate programs) in all subjects including engineering, humanities and social sciences, law and management courses. The unique feature is that, it is integrated with the conventional education.
- Swayam Prabha has 32 DTH TV channels transmitting educational contents on 24 x 7 basis. These channels are available for viewing all across the country using DD Free Dish Set Top Box and Antenna. The channel schedule and other details are available in the portal. The channels cover both school education (classes 9 to 12) and higher education (undergraduate, postgraduate, engineering Out-of-school children, vocational courses and teacher training) in arts, science, commerce, performing arts, social sciences and humanities subjects, engineering, technology, law, medicine, agriculture.
- e-PG Pathshala is for postgraduate students. Postgraduate students can access this platform for e books, online courses and study materials during this lockdown period. The importance of this platform is that students can access these facilities without having internet for the whole day.

#### Positive impact of COVID-19 on education:

Though the outbreak of COVID-19 has created many negative impacts on education, educational institutions of India have accepted the challenges and trying their best to provide seamless support services to the students during the pandemic. Indian education system got the opportunity for transformation from traditional system to a new era.

The following points may be considered as the positive impacts.

- **Move towards Blended Learning:** COVID-19 has accelerated adoption of digital technologies to deliver education. Educational institutions moved towards blended mode of learning. It encouraged all teachers and students to become more technology savvy. New ways of delivery and assessments of learning opened immense opportunities for a major transformation in the area of curriculum development and pedagogy. It also gives access to large pools of learners at a time.
- **Rise in use of Learning Management Systems:** Use of learning management systems by educational institutions became a great demand. It opened a great opportunity for the companies those have been developing and strengthening learning management systems for use educational institutions.

- Enhance the use of soft copy of learning material: In lockdown situation students were not able to collect the hard copies of study materials and hence most of the students used of soft copies materials for reference.
- Improvement in collaborative work- There is a new opportunity where collaborative teaching and learning can take on new forms. Collaborations can also happen among faculty/teachers across the world to benefit from each other.
- Rise in online meetings- The pandemic has created a massive rise in teleconferencing, virtual meetings, webinars and e-conferencing opportunities
- Enhanced Digital Literacy: The pandemic situation induced people to learn and use digital technology and resulted in increasing the digital literacy.
- Improved the use of electronic media for sharing information: Learning materials are shared among the students easily and the related queries are resolved through e-mail, SMS, phone calls and using different social Medias like WhatsApp or Facebook.
- World wide exposure: Educators and learners are getting opportunities to interact with peers from around the world. Learners adapted to an international community.
- Better time management: Students are able to manage their time more efficiently in online education during pandemics.
- Demand for Open and Distance Learning (ODL): During the pandemic situation most of the students preferred ODL mode as it encourages self-learning providing opportunities to learn from diverse resources and customized learning as per their needs.

#### Negative impact of COVID-19 on education:

Education sector has suffered a lot due to the outbreak of COVID-19. It has created many negative impacts on education and some of them are as pointed below:

- Educational activity hampered: Classes have been suspended and exams at different levels postponed. Different boards have already postponed the annual examinations and entrance tests. Admission process got delayed. Due to continuity in lockdown, student suffered a loss of nearly 3 months of the full academic year of 2020-21 which is going to further deteriorate the situation of continuity in education and the as students would face much difficulty in resuming schooling again after a huge gap.
- Impact on employment: Most of the recruitment got postponed due to COVID-19 Placements for students may also be affected with companies delaying the on board of students. Unemployment rate is expected to be

increased due to this pandemic. In India, there is no recruitment in Govt. sector and fresh graduates fear withdrawal of their job offers from private sectors because of the current situation.

- Unprepared teachers/students for online education- Not all teachers/students are good at it or at least not all of them were ready for this sudden transition from face to face learning to online learning. Most of the teachers are just conducting lectures on video platforms such as Zoom, Google meet etc. which may not be real online learning without any dedicated online learning platform.
- Reduced global employment opportunity- Some may lose their jobs from other countries and the pass out students may not get their job outside India due to restrictions caused by COVID-19. Many Indians might have returned home after losing their jobs overseas due to COVID-19. Hence, the fresh students who are likely to enter the job market shortly may face difficulty in getting suitable employment. Many students who have already got jobs through campus interviews may not be able to join their jobs due to lockdown. The Indians who have been doing their jobs abroad may lose their jobs. Recent graduates in India are of also fearing for withdrawal of job offers from corporate sectors because of movement restriction in the current pandemic situation
- Increased responsibility of parents to educate their wards: Some educated parents are able to guide but some may not have the adequate level of education needed to teach children in the house.
- Loss of nutrition due to school closure: Mid day meals is a school meal programme of the Government of India which is designed to provide better the nutritional food to school age children nationwide. The closure of schools has serious implications on the daily nutrition of students as the mid-day meal schemes have temporarily been shut. Various studies have pointed out that mid-day meals are also an important contributing factor for increased enrolment in the schools
- Access to digital world: As many students have limited or no internet access and many students may not be able to afford computer, laptop or supporting mobile phones in their homes, online teaching-learning may create a digital divide among students. The lockdown has hit the poor students very hard in India as most of them are unable to explore online learning according to various reports. Thus the online teaching-learning method during pandemic COVID-19 may enhance the gap between rich/poor and urban/rural.
- Access to global education: The pandemic has significantly disrupted the higher education sector. A large number of Indian students who are enrolled in many Universities abroad, especially in worst affected countries are now leaving those countries and if the situation persists, in the long run, a there will be a significant decline in the demand for international higher education.
- Payment of Schools, Colleges fee got delayed: During this lockdown most of the parents will be facing the unemployment situation so they may not be able to pay the fee for that particular time periods which may affect the private institutes. integrated with a present-day mainstream higher education system.
- Govt and educational institutes should plan to continue the educational activities maintaining social distancing. 30-40% students and teachers may attend schools/colleges in two shifts per day to carry on educational activities by obeying guidelines for COVID-19.
- At current times, access to technology and internet is an urgent requirement. So, the digital capabilities and the required infrastructure must reach to the remotest and poorest communities to facilitate the students to continue their education during the pandemics. There is a need to deploy public funds to fix the internet gap and ensure that



students continue to learn digitally. The state governments/private organisations should come up with ideas to address this issue of digital education.

- Some significant issues associated with distance learning strategies like the availability and access to digital devices with internet connectivity, the need for safe learning spaces, creating capabilities for teachers, families and students to operate and navigate digital devices, and engaging lesson plans for disabled students and other marginalised groups should be addressed by Govt. and the stakeholders.

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COLLEGE PDLC

TOPIC :- SOCIAL IMPACTS OF COVID-19

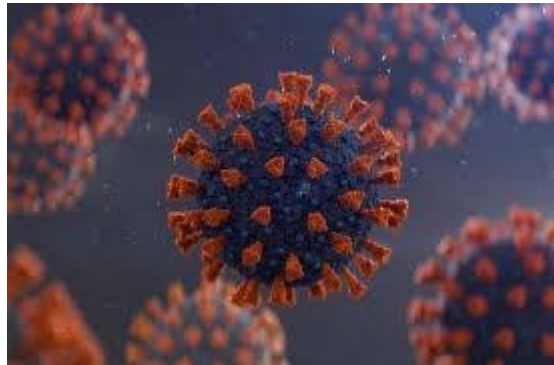
## **SOCIAL IMPACTS OF COVID-19**

### **❖ INTRODUCTION**

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India's Prime Minister Narendra Modi had imposed nationwide lockdown in an attempt to slow the spread of corona virus. P.M. Modi said, "There will be total ban on venturing out of your homes. The entire country will be in lockdown". He further said, "To save India, to save its every citizen, you and your family, every street, every neighborhood is being put under lockdown. India had already issued ban on international arrivals and grounded domestic flights. The country's rail network had also suspended for most passenger services.

**How does COVID -  
19 impact social  
lives of citizen of  
India are as  
follows:**



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## 1. Migrant crisis

Due to COVID -19 several lives were destroyed utterly. The biggest victim of COVID was poor people like migrant labourers, small vendors, businessperson, traders, etc. The migrant labourers in india during lockdown had shown faulty lines not only in the economy but also in society. The pandemic has worsened the condition of migrant labour. It pushed them into extreme despair, jobless, homelessness, hunger and mass migration back to villages. Millions of migrants across India walking with their kids helplessly to reach their homes. It even resulted thousands of deaths. This crisis showed the true colours of privileged people and government. Some people show their humanity and helped the poor and helpless migrants by providing food, water, mask, santizer. Some even tried to send them back to homes via bus and train. Government also tried to help by arranging transport for them. According to government report, 9.1 million migrants had travelled back to their homes in government arranged transport facilities. However, according to the Stranded Workers Action Network (SWAN), migrants were confused about the exact procedures to register themselves for travel. Additionally, many state registration portals were either in English or the local language of the states they lived in, which very few migrants could understand. Further, general lack of information from the government to the migrants had resulted in them paying large sums of money to register themselves.



## ❖ Mental Health

Mental Health is one of the most neglected area of public health. Besides this, we are battling with COVID-19 pandemic which has made many of us deal with grief, stress, anxiety, fear and social isolation. According to World Health Organization (WHO) , COVID-19 pandemic has had major impact on people's mental health. India has just 898 psychologist against requirement of 20250. Pandemic has been increasing the levels of loneliness, depression, harmful alcohol and drug use, and self harm or suicidal behaviour. The reasons why people are now suffering more mental illness than before, because people are now dealing with tons of issues like unemployment, education related issues, domestic violence, less physical activities, some people even lost their loved ones. Meanwhile, after a person catches corona virus he/she suffers from depression characterized by low mood, tiredness, poor sleep or insomnia, feeling hopeless and helpless, appetite and pessimism. Older people are more vulnerable and special care must be taken



### ❖ Employment and jobs

Unemployment is serious issue in our country before the pandemic began. It became even more serious after pandemic hit our country. As per source, 3 millions people have lost their jobs and are pushed towards poverty in 2020. Even people who have completed their graduation and post graduation are still not getting suitable jobs. Many graduates are unemployed. Nearly 1 in every 4 graduates is unemployed, says reports. Women's participation has also sharp decline. Women are still not getting equally paid. According to Centre for Monitoring Indian Economy (CMIE) unemployment has risen from 7.2 per cent to 9.78 per cent.

Below here is the list of unemployment rate in every state.

Andhra Pradesh	6.3
Assam	3.5
Bihar	10.0
Chhattisgarh	4.4
Delhi	16.8
Goa	7.4
Gujarat	1.3
Haryana	20.3
Himachal Pradesh	8.7
Jammu & Kashmir	21.6
Jharkhand	13.5
Karnataka	3.1
Kerala	8.9
Madhya Pradesh	3.2
Maharashtra	4.5
Meghalaya	2.1
Odisha	2.8



The NCW also states more than 80% crimes against go unregistered. Domestic violence is a silent pandemic. For countless women and children living in situations of domestic violence, the lockdown fails to ensure their safety, instead it exacerbates the violence they face. Young girls are more vulnerable during the time of COVID-19 as families are attempting to marry off many minors.

# **RESEARCH PAPER**



**Celestina Patel – B 1065**

**Topic – Impact of Covid in India College – Prahladrai Dalmia Lions College**

- **Abstract :-**

A holistic approach to education – that addresses students’ learning, social and emotional needs – is crucial, especially in times of crisis. School closures related to the current COVID-19 pandemic mean that students from diverse backgrounds who are more at risk of increased vulnerability are less likely to receive the support and extra services they need, and the gap between students that experience additional barriers and that do not might widen. Closures can also have considerable effects on students’ sense of belonging to schools and their feelings of self-worth – these are key for inclusion in education.



This Policy Brief describes OECD Member Countries' initiatives to address the different needs of vulnerable students during the COVID-19 pandemic. Beyond school closures, it also examines the issue of school re-openings by presenting countries' current measures and providing policy pointers aimed to ensure that the pandemic does not further hinder the inclusion of vulnerable students in education systems. Their schools to try to contain the spread of the virus. School closures have a very real impact on all students, but especially on the most vulnerable ones who are more likely to face additional barriers. Children and youth from low-income and single-parent families; immigrant, refugee, ethnic minority and Indigenous backgrounds; with diverse gender identities and sexual orientations; and those with special education needs suffer by being deprived of physical learning opportunities, social and emotional support available in schools and extra services such as school meals. They risk falling further behind and becoming isolated with school doors closed. These students are likely to lose the most in terms of educational outcomes and the support provided by schools if countries take insufficient measures to promote educational equity and inclusion.

The following sections describe OECD Member Countries' initiatives to address the different needs of vulnerable students during the COVID-19 pandemic. Beyond school closures, this Policy Brief also examines the issue of school re-openings by presenting countries' current measures and providing policy pointers aimed to ensure that the pandemic does not further hinder the inclusion of vulnerable students in education systems.

## • Introduction :-

As of 10<sup>th</sup> May 2020, COVID-19 pandemic has gripped 215 countries across the globe and many of these faced lockdown. Academia was among the first few sectors that faced rapid shut down of all its activities. Thousands of schools and higher education institutions and millions of students are affected by lockdown due to the COVID-19 pandemic as the first response from the educational sector was to completely halt its operations. Coronavirus pandemic has triggered the significant change, imposing many challenges in the higher education community globally. After about four months in the global crisis, we have started realizing that the COVID-19 is here to stay and we need to find solutions to move on. This crisis can be looked upon as an opportunity to reconstruct our longstanding educational systems and establish better and updated practices in academia, suitable for the present generation of learners. We must prepare ourselves for the changing world when COVID-19 pandemic is blown off.

## A Scenario in India

India is a demographically diverse large country with high population density. The nationwide lockdown was the only strategy in the fight against COVID-19 pandemic, which started on 25<sup>th</sup> March 2020 and is continued in its fifth phase until 30<sup>th</sup> June 2020 with some relaxations in no infection areas. Citizens across the country chose to sit in their homes abiding the guidelines issued by the government of India. Academic activities in India were rapidly halted in the middle of the year, by individual institutions and states even before the countrywide lockdown began. As per the recent guidelines issued by University Grant Commission (UGC), the apex body for higher education in India, the educational institutes must strive to provide quality education, ensuring uniformity, equity and universal accessibility to all the learners. There is constant encouragement from Hon. Prime Minister Shri Narendra Modi, for innovative use and promotion of technology in ushering educational reforms to create a vibrant knowledge society.

Medical and healthcare education is also severely affected by this global crisis. Moreover, it will continue to remain affected as healthcare systems as most teaching hospitals are completely occupied by COVID-19 load. The challenge of clinical exposure to the medical and health profession students will aggravate even further. Owing to the rapid transmission of COVID-19, face-to-face and small group tutorials are prohibited. This imposes greater challenge especially in the context of ophthalmic and optometric skills, which requires close contact between the eye care practitioner and the patient. Social distancing and telemedicine are set to be 'a new normal' hereafter, imposing a persistent challenge for global optometry educators, to teach various clinical skills to the students. The scenario is prompting an urgent need for transformation of optometry education, from traditional brick mortar system to e-learning environment, imparting updated competencies in our graduating optometry professionals.

Optometry educators in India have responded very quickly to this crisis, in the light of guidelines issued by the Government of India and UGC. There is a sudden surge seen in the number of webinars and online learning sessions on social media platforms, on various topics of optometry, attended not only by students but also by a massive number of practitioners. This has generated never before momentum in optometry education and also in continuing education programs. The purpose of this study is to apprehend the enabling and impeding factors behind this momentum.

This paper reports the findings of the observational study describing the rapid transition of optometry education in India amid COVID 19 disruptions. Findings of nationwide online survey ascertaining the present practices of teaching-learning in optometry are discussed in light of similar survey done in 2018 by the same authors (VR and UM). It not only informs the readers about what changed in reference to the past but also appraises how and why the quick adaptation was possible, along with the challenges that are faced during the transition from educator's perspectives.

## • **Conclusion :-**

From the research, it has carried out that COVID-19 is having a serious impact on the businesses and other sectors. The research has identified the impact of this pandemic Issue of the education system and approaches of the institutions for offering the learning. Through other mediums. According to the study, people are facing serious issues related To learning and looking for new approaches to learning. The leading authorities have to Consider the seriousness of the issues and have to take the corrective measure for improving the situation that will help to normalise the things and support in enhancing. The living experience. The lack of technical understanding of students and teacher is also a big challenge for the system to offer training and support. The proper implementation of rules for social distancing and sanitising will also increase the operational cost of the Institutions. Moreover, the sudden shift to online learning will be difficult for the Countries and educational authorities due to lack of infrastructure and planning for the Format that suits the new approach. It becomes difficult for the educational institutions. To maintaining the operational cost and retains the students. For the betterment of the educational system and approaches of institutions need Changes. To maintain continuity in learning and to share the knowledge with the Students, it is recommended to the institutions to adopt the technology and engage the Students in learning. The implementation of smart learning tools like Padlet and Edmodo Can be used for offering the learning. By offering the training to the staff members and collecting the feedback

from the parents related to the online system will be useful for the educational institution to overcome the issues related to take classes and engage the students.

- **Methology :-**

The research required a systematic flow of the actions that help to improve the effectiveness of outcome and achievement of the objectives. To develop the systematic approach, there are two types of philosophies used, interpretive and positivism. For Current research related to the analysis of the impact of COVID-19 on the education system and institution, the researcher has selected interpretive research philosophy. By Considering this philosophy, the researcher has collected and analysed the different opinions of respondents and identifies the key actions to improve the situation. Apart from this, interpretive philosophy has helped to maintain openness (Kumar, 2019).

Deductive and indicative research approaches are used for gaining an understanding Of the variables of the study and maintaining the flow of the analysis. For conducting current research, the researcher has applied the indicative approach that also supports In increasing reliability and validity. By implementing this approach, the researcher has Collected data for the analysis of the impact of COVID-19 on the educational system and Institution using the questionnaire method (Fletcher, 2017). This was cost and time Effective and eliminated the issues related to the privacy of the respondents.

The strategic approach of the research study is developed by applying the appropriate Design. For achieving the proposed outcome, the researcher could apply the exploratory, Descriptive and casual design. The current research is based on data collected from the Questionnaire and to analyse the impact of Covid-19 on the educational system, the descriptive design was useful. This kind of design has helped to analyse and social, Economic and technical aspects of the COVID-19 on the institution and support in Gaining the in-depth knowledge of issues and potential barriers in the offering of online learning and changing the existing classroom approach of study (Wiek and Lang, 2016).

According to research methodology functions, to research in a professional manner, Two types of study have been followed that involve qualitative and quantitative. For the Current research, the researcher has applied descriptive design and collected the data using the questionnaire method. Therefore, the study was based on the quantitative type and helped to meet the objectives of the study (Mohajan, 2018). By using this type, the researcher has made emphasis on direct and indirect factors that might influence the educational system and approaches of institutions due to outbreak of Covid-19. It has also supported in analysing the different variables for identifying the impact on online learning due to changes in economic, demographic and employment level of the people.

- **Data Analysis & Interpretation :-**

Quantitative data from surveys were analyzed using the software package SPSS. Factor analysis (Principal Components analysis) was conducted on the scales to ensure items of each scale measured one representative factor using Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity (BTS). Descriptive analysis was applied to gauge the categorical variables' frequencies and to determine the

means and standard deviations of each scale. Independent-samples t-tests were used to determine differences between the scores of the social and educational aspects of students' lives for men and women students, while Pearson correlation coefficients were used to explore the relationships among the aspects of social and educational lives of students. Parametric tests were considered appropriate as the sample was large, and the data met the requirements for parametric testing.

To ensure the validity of the survey, Saudi experts on the research subject reviewed and ensured the validity of the scales' content and structure in the Arabic version. After obtaining consensus on the survey's validity, a pilot study was conducted with a group of 25 university students to gain feedback. In addition, factor analysis (principal components analysis) was conducted on the survey scales to ensure that the items of each scale measured one representative factor using the Kaiser-MeyerOlkin (KMO) test and Bartlett's Test of Sphericity (BTS).

#### • **Sampling :-**

Sampling was done using the non-probability method as the researcher has chosen the sample of students and teachers from the entire population according to own connivance. For the current research, the researcher has selected a sample of 50 respondents and shared the questionnaire to gain knowledge of their opinion for analysis of the impact of COVID-19 on educational system and institution.

#### • **Reliability and Validity of the Study :-**

To maintain the reliability and validity of research, the researcher has asked questions related to the subject matter and eliminated the wrong responses. To improve validity of the study, the views of academics from the Kahramanmaraş Sütçü İmam University were gathered. Moreover, to improve the validity of the study, the researcher has collected the data from authentic sources and managed the analysis in proper ways. Descriptive and content analysis were used to analyze the data. Calculated according to Miles and Huberman (1994)'s formula, the reliability of the data was found 85%. Moreover, the researcher has focused upon ethical standards of study such as privacy of the respondents, manipulation of the data and ensured that no data had been taken as plagiarised. This kind of approach has improved the effectiveness and validity of the Research for analysing the impact of COVID-19 on the educational system and approaches of the institutions.

#### • **Analysis Technique :-**

It is an important part of the research, and the researcher has analysed the data by using the thematic analysis method. According to this method, the researcher has done the frequency distribution and analysed the response of respondents by developing the graphs and tables. This kind of approach has helped the researcher and readers of the Study (Cuervo-Cazurra et al., 2017). The thematic analysis has also improved the Reliability and eliminated the biasness in the study.

#### • **Objectives :-**

The overall objective of this study is to analyze the Impact of COVID-19 on Indian Education System. In particular, this study will examine:

- i. How the Indian education system is facing the Impact of COVID-19, and highlighting the role played by teachers and students through online education
- ii. How the positive impact helpful to student, parents and school teachers in this scenario of the online education.
- iii. How to reduce the negative impact of COVID-19 on students for their smooth education.

#### • Purpose of the study :-

All systems have strengths and weaknesses. Maximizing strengths and minimizing weaknesses in order not to miss the opportunity to move forward should be the goal. The main purpose of the study is to analyze the impact of COVID-19 on the Indian education system. It covers the impact of COVID-19 on rural and urban students, Higher education Institutions.

#### • Digital Infrastructure in India :-

Before the COVID-19 lockdown in India, no one estimated that the face of the Indian educational institutions could change so drastically. Schools that never allowed students to carry an electronic gadget turned into learning centers for online classes. Both teachers and students are getting familiar to this new normal, which is definitely more challenging for the teachers to handle with this situation. The teachers also face challenges in designing effective lessons and changing of teaching when shifting to online learning; this can also be resolved through workshops and training.

# Thank you

NAME : AASIYA PATEL

CLASS : FYBFM – A

ROLL NO. : 134

TOPIC : THE IMPACT OF CORONA VIRUS IN INDIA.

The impact of coronavirus pandemic on India has been largely disruptive in terms of economic activity as well as a loss of human lives. Almost all the sectors have been adversely affected as domestic demand and exports sharply plummeted with some notable exceptions where high growth was observed. An attempt is made to analyze the impact and possible solutions for some key sectors.

#### Food & Agriculture

Since agriculture is the backbone of the country and a part of the government announced essential category, the impact is likely to be low on both primary agricultural production and usage of agro-inputs. Several state governments have already allowed free movement of fruits, vegetables, milk etc. Online food grocery platforms are heavily impacted due to unclear restrictions on movements and stoppage of logistics vehicles. RBI and Finance Minister announced measures will help the industry and the employees in the short term. Insulating the rural food production areas in the coming weeks will hold a great answer to the macro impact of COVID-19 on Indian food sector as well as larger economy.

#### Aviation & Tourism

The contribution of the Aviation Sector and Tourism to our GDP stands at about 2.4% and 9.2% respectively. The Tourism sector served approximately 43 million people in FY 18-19. Aviation and Tourism were the first industries that were hit significantly by the pandemic. The common consensus seems to be that COVID will hit these industries harder than 9/11 and the Financial Crisis of 2008. These two industries have been dealing with severe cash flow issues since the start of the pandemic and are staring at a potential 38 million lay-offs, which translates to 70 per cent of the total workforce. The impact is going to fall on both, White and Blue collar jobs. According to IATO estimates, these industries may incur losses of about 85 billion Rupees due to travel restrictions. The Pandemic has also brought about a wave of innovation in the fields of contactless boarding and travel technologies.

#### Telecom

There has been a significant amount of changes in the telecom sector of India even before the Covid-19 due to brief price wars between the service providers. Most essential services and sectors have continued to run during the pandemic thanks to the implementation of the 'work from home' due to restrictions. With over 1 billion connections as of 2019, the telecom sector contributes about 6.5 per cent of GDP and employs almost 4 million people. Increased broadband usage had a direct impact and resulted in pressure on the network. Demand has been increased by about 10%. However, the Telco's are bracing for a sharp drop in adding new subscribers. As a policy recommendation, the government can aid the sector by relaxing the regulatory compliances and provide moratorium for spectrum dues, which can be used for network expansions by the companies.

## Pharmaceuticals

The pharmaceutical industry has been on the rise since the start of the Covid-19 pandemic, especially in India, the largest producer of generic drugs globally. With a market size of \$55 billion during the beginning of 2020, it has been surging in India, exporting Hydroxychloroquine to the world, esp. to the US, UK, Canada, and the Middle-East.

There has been a recent rise in the prices of raw materials imported from China due to the pandemic. Generic drugs are the most impacted due to heavy reliance on imports, disrupted supply-chain, and labour unavailability in the industry, caused by social distancing. Simultaneously, the pharmaceutical industry is struggling because of the government-imposed bans on the export of critical drugs, equipment, and PPE kits to ensure sufficient quantities for the country. The increasing demand for these drugs, coupled with hindered accessibility is making things harder. Easing the financial stress on the pharmaceutical companies, tax-relaxations, and addressing the labour force shortage could be the differentiating factors in such a desperate time.

## Oil and Gas

The Indian Oil & Gas industry is quite significant in the global context – it is the third-largest energy consumer only behind USA and China and contributes to 5.2% of the global oil demand. The complete lockdown across the country slowed down the demand of transport fuels (accounting for 2/3<sup>rd</sup> demand in oil & gas sector) as auto & industrial manufacturing declined and goods & passenger movement (both bulk & personal) fell. Though the crude prices dipped in this period, the government increased the excise and special excise duty to make up for the revenue loss, additionally, road cess was raised too. As a policy recommendation, the government may think of passing on the benefits of decreased crude prices to end consumers at retail outlets to stimulate demand.

## Beyond Covid: The new normal

In view of the scale of disruption caused by the pandemic, it is evident that the current downturn is fundamentally different from recessions. The sudden shrinkage in demand & increased unemployment is going to alter the business landscape. Adopting new principles like 'shift towards localization, cash conservation, supply chain resilience and innovation' will help businesses in treading a new path in this uncertain environment.

NAME: RONAK PATEL

CLASS: FYBFM- A

ROLL NO: 135

TOPIC: THE IMPACT OF CORONA VIRUS IN INDIA.

*The impact of coronavirus pandemic on India has been largely disruptive in terms of economic activity as well as a loss of human lives. Almost all the sectors have been adversely affected as domestic demand and exports sharply plummeted with some notable exceptions where high growth was observed. An attempt is made to analyze the impact and possible solutions for some key sectors.*

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**NAME: Priya Rathod**

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- **TOPIC: THE IMPACT OF CORONA VIRUS IN INDIA.**

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- *In view of the scale of disruption caused by the pandemic, it is evident that the current downturn is fundamentally different from recessions. The sudden shrinkage in demand & increased unemployment is going to alter the business landscape.*

# Indian stock market's reaction to Covid-19 crisis is surprisingly muted

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## Abstract

The COVID-19 pandemic seems to be the most important phenomenon observed from March 2020 in virtually all countries of the world. The necessity to prevent the spread of COVID-19 and keep health care systems efficient resulted in the forced, drastic limitation of economic activity. Many service sectors were hit particularly hard with this but industry and agriculture were also affected. In particular, the pandemic substantially influenced financial markets and we can observe that some markets or instruments vary in stability since they have been affected in the different degree. In the paper, we present the problem of stability of stock markets during the COVID-19 pandemic. Due to the low number of works related to CEE countries during the pandemic, we analyze the Warsaw Stock Exchange, which is one of the most important markets in the CEE. Our main goal was to find how various industries represented by stock market indices have reacted to the COVID-19 shock and consequently which sectors turned out to keep stability and remained resistant to the pandemic. In our investigation, we use two clustering methods: the K-means and the Ward techniques with the criterion of maximizing the silhouette coefficient and six indicators describing stability in terms of profitability, volume, overbought/oversold conditions and volatility. The results of the research present that during the pandemic it was possible to identify 5 clusters of sector indices in the short term and 4 in the medium term. We found that the composition of the clusters is quite stable over time and that none of the obtained clusters can be univocally considered the most or the least stable taking into account all the analyzed indicators. However, we showed that the obtained clusters have different stability origins, i.e. they vary from each other in terms of the investigated indicators of stability.

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## Introduction

The COVID-19 pandemic had a significant impact on the socio-economic life of most countries in the world. The virus has the potential to influence in a destructive way individuals, businesses, industries and entire economies. Its appearance, in principle, meant a significant burden and reorganization of the health service, and the need to provide

additional disinfection and hygiene measures, but its global scope is expected to be the most influencing economic and social event for decades. The problem of the COVID-19 virus has been its rapid spread, which resulted from airborne transmission and intensive use of public transport, including intercontinental flights. The necessity to prevent the failure of health care systems and counteracting the effects of COVID-19, which poses a direct threat to the health and life of citizens, resulted in the forced and often drastic limitation of economic activity. In fact, the pandemic brought global economic activity to a sudden halt in the first half of 2020. The sectors hit particularly strongly were services, including tourism and hoteling, retail trade, education, cultural activities, restaurants, galleries, gyms, hairdressers, taxis, expos, sporting events and personal services characterized by direct contact between people. Land and air transport, as well as entities directly related to it, including airports, also suffered severely. Especially, in the last sector, the demand is expected to be highly affected not only in the medium term, but also in the long term as the dynamics of pandemic spread is strictly linked with the airlines system. Moreover, Liu et al. Provided systematic analysis on the dynamics and dimensions of the unprecedented decline in the public transit demand due to the pandemic. The need for isolation and the inability to conduct production, commercial or service activities on the current terms resulted in the emergence of disruptions in production and supply, as well as the breakdown of logistics chains. The problem was also employees' infections, which made it impossible to conduct business in an undisturbed manner. The pandemic led also to a substantial fall in energy demand and global CO<sub>2</sub> emissions. Where the specific nature of the activity allowed it, the COVID-19 pandemic contributed to a change in the organization and work model of many entities, causing their decentralization, forcing greater flexibility of operation and starting the transformation towards remote work but also influencing internal relations, employee adjustment and human resources management. The issue of respecting human rights in such conditions was also raised.

The period of the pandemic is undoubtedly a turning point in the activities of many sectors, as well as for the directions of development of the entire economies, definitely changing the economic realities more than the previous crisis of 2007–2009. It can be treated as a specific demand and supply shock, the source of which is the lockdown of the real economy and disruptions in service, trade and production activities resulting from sanitary and epidemic reasons. The pandemic and its effects in finance are being compared to the previous global financial crisis 2007–2009. Wojcik and Ioannou find that the previous crisis is rather referred as the North Atlantic crisis which was spread around the world through international financial and economic relations, but the COVID-19 pandemic is truly global and directly affecting practically all countries because of traveling. In contrary to the 2007–2009 crisis, the pandemic crisis has not been initiated in the financial sector but its severity in the real sphere has transmitted it into financial sector and then reversely again to the production, trading and services. In some industries, it has undoubtedly caused a significant change in the business model or affect a change in the incomes and costs structure. The consequences of changes and transformations in individual sectors are currently difficult to predict, as it is unknown how long the pandemic will ultimately last and what its costs will be. Undoubtedly, there will be new challenges in the area of computerization, logistics, personnel management, real estate management, cybersecurity and broadly understood health protection.

### **Method and research description**

#### 2.1 Clustering methods

Clustering is the unsupervised grouping of objects into classes without any a priori knowledge of the datasets to be analyzed [85]. The purpose of clustering is to find high-quality groups of similar objects and identify patterns in the data. The problem of clustering is to divide a given data set into clusters (groups) in such a way that data points in a cluster are more similar to each other than points in different clusters. Clustering itself should not be considered as

one specific algorithm as it is a general task to be solved. This can be achieved by using different clustering methods, which vary considerably within the meaning of what constitutes a cluster and how to find them.

Most of the clustering methods can be categorized as hierarchical or partitional clustering. Algorithms of hierarchical clustering generate a cluster tree (dendrogram) by using heuristic splitting or merging techniques. By contrast, partitional methods usually require that the number of clusters and an initial clustering be specified as an input to the procedure [86, 87].

In our study we apply two clustering methods: the K-means and the Ward techniques. The K-means method [88] is a well-known partitional clustering algorithm. It determines clusters with minimal variability of the observations within each cluster, calculated using the within-cluster sum of squares:

(1)

where  $K$  is the number of clusters,  $C_k$  ( $k = 1, 2, \dots, K$ ) denote clusters,  $\mu_k$  are centroids (usually described by the mean of points in the cluster  $C_k$ ). In order to indicate the optimal clustering, the iterative algorithm is performed. It starts with randomly selected (or derived from a priori information) initial  $K$  centroids. Then each point in the data set is assigned to the closest cluster (i.e. to the closest centroid), based on the distance function. Next, based on the absorbed cases, new centroids are calculated. This process is repeated until convergence is achieved [89].

The second applied technique is the Ward method of hierarchical clustering. Like other agglomerative techniques, it consists in building nested clusters by merging them successively. The result can be represented as a tree (dendrogram) which describes the hierarchy of clusters. The Ward algorithm starts with clustering where each data point forms a cluster by itself. In each step the two clusters that minimally increase within-cluster variance (i.e., the error sums of squares (1) with ) are merged. The algorithm terminates when there is only one cluster left.

## 2.2 Data and research process

In order to examine the stability of the behavior of individual sectors of WSE, i.e. their resistance to the impact of the COVID-19 pandemic, we used a total of 16 indices, 14 of which were sector indices reflecting individual industries and two macro indices reflecting industries not directly included in sector indices, i.e. WIG.GAMES and WIGtech. Table 1 presents the characteristics of the investigated indices.

Index	Number of companies	Description
WIG banking ("WIG banki")	18	WIG banking is a sub-sector index and its portfolio includes WIG constituents belonging to the banking sector.
WIG construction ("WIG budownictwa")	37	WIG construction is a sub-sector index and its portfolio includes WIG constituents belonging to the construction sector.
WIG chemical ("WIG chemiczny")	3	WIG chemical is a sub-sector index and its portfolio includes WIG constituents belonging to the chemical sector.
WIG energy ("WIG energia")	18	WIG energy is a sub-sector index and its portfolio includes WIG constituents belonging to the energy sector.
WIG.GAMES ("WIG.GAMES")	3	WIG.GAMES index is calculated based on the value of portfolio of 3 most liquid companies covering game development sector.
WIG mining ("WIG gornictwa")	4	WIG mining is a sub-sector index and its portfolio includes WIG constituents belonging to the mining sector.
WIG.IT ("WIG informatyka")	18	WIG.IT is a sub-sector index and its portfolio includes WIG constituents belonging to the IT sector.
WIG pharmaceutical ("WIG farmacja")	9	WIG pharmaceutical is a sub-sector index and its portfolio includes WIG constituents belonging to the pharmaceutical sector.
WIG media ("WIG media")	12	WIG media is a sub-sector index and its portfolio includes WIG constituents belonging to the media sector.
WIG telecommunications ("WIG telekomunikacja")	7	WIG telecommunications is a sub-sector index and its portfolio includes WIG constituents belonging to the telecommunications and post sector.
WIG retail ("WIG detaliczny")	27	WIG retail is a sub-sector index and its portfolio includes WIG constituents belonging to the retail sector.
WIG services ("WIG uslugi")	27	WIG services is a sub-sector index and its portfolio includes WIG constituents belonging to the services sector.
WIG oil/gas ("WIG paliwa")	7	WIG oil/gas is a sub-sector index and its portfolio includes WIG constituents belonging to the oil and gas sector.
WIG food ("WIG spozywczo")	18	WIG food is a sub-sector index and its portfolio includes WIG constituents belonging to the food and drink sector.
WIGtech ("WIGtech")	16	WIGtech index is calculated based on the value of portfolio of 16 companies covering software, hardware, mobile games, IT, software and services technology.
WIG tobacco ("WIG tytoniowa")	4	WIG tobacco is a sub-sector index and its portfolio includes WIG constituents belonging to the tobacco sector.

Table 1. Description of investigated indices. doi:10.1371/journal.pone.0250938.t001

The stability analysis requires distinguishing two periods: base (pre-pandemic)—used to determine the standard behavior of the indices under study, and pandemic, in which the behavior of indices caused by the pandemic is analyzed. We assumed July 8, 2019 –January 3, 2020 (hereinafter: Period\_0) as the base period, i.e., the period in which investment decision were not affected by the pandemic. As the beginning of the pandemic on the stock market, we considered two alternative time points. According to the first option, the beginning of the pandemic was assumed

on January 7, 2020, i.e., the first working day after the WHO first COVID-19 Disease Outbreak News Report, and according to the second—on March 12, 2020, i.e. the first working day after the WHO statement that the COVID-19 is the pandemic and beginning of the lockdown in Poland. Moreover, we had to determine the length of the pandemic period analyzed in the study. In the case of the first time point of the beginning of the pandemic, the six-month research period was considered, i.e., January 7, 2020–July 6, 2020 (hereinafter: Period\_1). In the case of the second option, it can be seen that the period after March 12 was associated with very rapid and dynamic changes in the securities markets. At the same time, during this period, one can expect differences in the behavior of individual companies in terms of the depth and duration of these changes. For this reason, in this case, three variants of the pandemic period were considered: two weeks, 1 month and 3 months, which made it possible to identify and compare the duration of unstable reactions in individual industries. This means that in the second option, the study considered three alternative pandemic periods: March 12, 2020–March 25, 2020 (hereinafter: Period\_2a), March 12, 2020–April 9, 2020 (hereinafter: Period\_2b) and March 12, 2020–June 10, 2020 (hereinafter: Period\_2c). We will treat Period\_2a and Period\_2b as the short-term and Period\_2c as well as Period\_1 as the medium-term.

Fig 1 shows the dynamics of all the analyzed indices before and during the pandemic period. The chart also indicates the two time points assumed in the study as the start of the pandemic. The solid line indicates January 7, 2020 and the dashed line—March 12, 2020. In the case of most indices, it can be seen that the largest decreases in the indices' values were recorded until March 12 and the largest increases after that date.

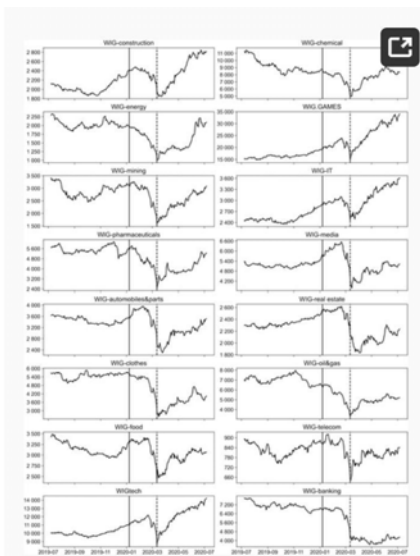


Fig 1. Dynamics of indices in the analyzed period.

Taking into account the issue of lacking any single variable which can be used to comprehensively define and measure stability of stock markets and their sectors (what we have underlined in the introduction), in our further investigation, we propose multiple variables as indicators of this stability. They reflect different aspects of stock market stability, including pricing, trading volume, volatility, and the attitude of investors. In our study, we used one variable describing stability in terms of profitability (price), one for volume, one for overbought/oversold conditions as well as three different measures of volatility. All of these variables reflect the difference between the pre-pandemic and pandemic periods and for the sake of comparability, most of them are presented as percentage changes.

The price stability measure (denoted by ) proposed in the study is defined by the formula:



$$\tilde{P} = \frac{\overline{P_1} - \overline{P_0}}{\overline{P_0}},$$

(6) where  $\overline{P_1}$  and  $\overline{P_0}$  denote the average value of a given index over the base and pandemic periods, respectively. This means that  $\tilde{P}$  reflects the relative change of the average price.

To assess the stability of the volatility of quotations, we used three different measures based on the standard deviation, the Parkinson estimator and the range, respectively.

The first one (denoted by  $\tilde{\sigma}$ ) is given by the formula:

$$\tilde{\sigma} = \frac{\sigma_1 - \sigma_0}{\sigma_0},$$

### **2.3. Data and interpretation**

where  $\sigma_0$  and  $\sigma_1$  are the standard deviations of log-returns of a given index over the base and pandemic periods, respectively. As a result, the value  $\tilde{\sigma}$  is the relative change of the standard deviation.

The second stability measure of volatility refers to the Parkinson [93] estimator of the standard deviation, expressed as:

$$\sigma_t^{(p)} = \sqrt{[\ln(H_t/L_t)]^2 / (4\ln 2)},$$

where  $H_t$  and  $L_t$  are the daily high and low prices, respectively. This estimator has an advantage over that based only on the closing prices because it uses information about the price changes during the day. As it can be seen it is calculated separately for each day  $t$ . Finally, in our study, we use the measure:

$$\tilde{\sigma}^{(p)} = \frac{\overline{\sigma_1^{(p)}} - \overline{\sigma_0^{(p)}}}{\overline{\sigma_0^{(p)}}},$$

where  $\bar{r}_1$  and  $\bar{r}_0$  are the mean values of the Parkinson estimator over the base and pandemic periods, respectively. The value of  $\tilde{r}$  is the relative change in mean daily variability as measured by the Parkinson estimator.

The third measure of volatility stability is based on the range, that is, the difference between the maximum and minimum values in a given period. It is expressed by the formula:

$$\tilde{r} = \frac{r_1 - \bar{r}_0}{\bar{r}_0},$$

where  $r_1$  is the range in the pandemic period, and  $\bar{r}_0$  is the average value of the ranges of the base period composed of the same number of observations as the studied pandemic period. The range for the pre-pandemic period  $r_0$  for Period\_2a, Period\_2b and Period\_2c was calculated as the range using a 1-day rolling window of two weeks, one month, and three months, respectively. This method of calculations allowed to use ranges calculated on the basis of the same periods as in the pandemic period in the calculations. In the case of Period\_1 (which has the same length as the pre-pandemic period),  $r_0$  was calculated in the way, i.e., as the difference between the maximum and minimum price. The  $\tilde{r}$  variable describes the relative change in volatility, measured by the range.

A measure based on the Relative Strength Index (RSI) was used to assess the attitude of investors. The RSI measures the magnitude of recent price changes to evaluate overbought or oversold conditions in the price of financial assets. The n-day RSI is calculated using the formula:

$$RSI_t = 100 \left( 1 - \frac{D_t}{D_t + U_t} \right),$$

where  $U_t$  is an average of n days' up closes and  $D_t$  is an average of n days' down closes. In the study we assumed  $n = 14$ . Ultimately, the following measure was used to test the RSI stability:

$$\widetilde{RSI} = \overline{RSI}_1 - \overline{RSI}_0,$$

where  $\overline{RSI}_1$  and  $\overline{RSI}_0$  are the average values of the RSI index over the base and pandemic periods, respectively. The measure shows the difference in the overbought in the two periods compared.

In turn, the following measure was used to assess the stability of turnover:

$$\tilde{W} = \frac{\overline{W_1} - \overline{W_0}}{\overline{W_0}},$$

where  $\overline{W_1}$  and  $\overline{W_0}$  are the average values of the trading volume in the base and pandemic periods. It means that  $\tilde{W}$  is a relative change in the average volume of trading.

It should be noted that from the point of view of the aim of the study, the important question concerning stability is the scale of changes, and not their direction. Therefore, the absolute values of the above measures were applied in the clustering analysis. Moreover, to ensure a balanced effect of all these measures on the grouping result, they have been normalized prior to clustering. Lack of normalization gives a greater impact on the result obtained by variables expressed in larger numbers. For this purpose, all the variables were normalized using the min-max scaling with the formula:

$$x' = \frac{x - \min(x)}{\max(x) - \min(x)}$$

which ensures that all the transformed variables are in the range [0, 1].

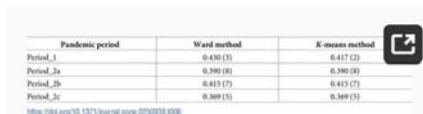
## Report

When analyzing the obtained results, it is worth paying attention to the fact that in the relatively unfavorable price conditions prevailing at the outbreak of the pandemic, a positive measure of a profitability change was obtained for selected sectors. In particular, the sector of computer games producers (WIG.GAMES) and IT (WIG-IT) showed a positive change in pricings independently on the time frame of analysis. The technology industry (WIGtech) recorded positive change except for the shortest period of analysis (Period\_2a) and the construction industry (WIG-construction) as well as media (WIG-media) increased their value in the medium term. All other sectors reported a profitability decrease. In case of variability measures ( $\sigma$  and  $\beta$ ) positive values were recorded in all analyzed periods for all investigated indices, except for a single record of the  $\beta$  measure noted for the banking sector in the short-term (Period\_2b). Such results clearly indicate increased volatility of valuation of WSE companies after the outbreak of COVID-19. Looking at the aforementioned parameter  $\beta$ , one should underline the positive outlier values for the computer games sector and the technology sector in all the analyzed periods, except Period\_1. For the RSI variable, with some exceptions, one could observe negative values for all the sectors in the short term (Period\_2a and Period\_2b) and positive values in the medium term (Period\_1 and Period\_2c). This may point that the short period was characterized by a sell-off of shares and the medium by their buyout. The real estate sector (WIG-real estate) turned out to be the worst, recording the lowest and negative values in all the analyzed periods. The last variable is characterized by positive values for all the sectors and all the investigation periods. An interesting result was obtained

is scope of trading volume of the pharmaceutical sector (WIG-pharmaceutical), and to the lesser extent the clothing sector (WIG-clothes), for which is significantly higher comparing to all other sectors in all the four periods of analysis.

After calculating the aforementioned six variables for all the sectors and for all the analyzed periods, we carried the clustering process on the basis of all these variables. In our study, we considered the number of clusters  $K = 2, 3, \dots, 10$  for both the K-means and Ward methods. To select the appropriate number of clusters the criterion of maximizing the silhouette coefficient was adopted. All calculations were made using own computer codes written in Python using the Scikit-learn and the Yellowbrick libraries.

It has presents the obtained silhouette coefficients for the K-means and Ward methods for considered variants of the pandemic period. Values in the parentheses indicate the number of identified clusters.



Pandemic period	Ward method	K-means method
Period_1	0.430 (3)	0.417 (2)
Period_2a	0.390 (8)	0.390 (8)
Period_2b	0.413 (7)	0.413 (7)
Period_2c	0.389 (5)	0.389 (5)

<https://doi.org/10.1371/journal.pone.0250938.t008>

Silhouette coefficients for all six variables.

Our classification of the indices representing individual sectors into the clusters partially coincided with the changes in the fundamentals of income generation and the development perspectives of such sectors in terms of the pandemic. Industries that turned out to be particularly susceptible to the business cycle and reduced activity due to lockdowns are metals, energy, machinery and equipment, chemistry or automotive manufacturers. On the other hand, there are computer & telecom, pharmaceuticals, software and IT, agri-food or construction, which supposed to be less susceptible to lockdowns. When looking at such classification, we may point that in our study sectors such as WIG-chemical, WIG-energy, WIG-mining, WIG-oil&gas were classified within a single cluster (Cluster\_3). Such clustering would correspond to a similar fundamental susceptibility of the companies from those, mainly traditional industries, to changes in the economic conditions caused by the pandemic. A similar effect was noticed in case of Cluster\_5 including WIG-construction, WIG-IT, WIG-real estate, and WIG-telecom, for which lockdowns did not cause fundamental limitation of activity of companies. Both classifications became apparent only in the short term (Period\_2a and Period\_2b). In the longer time horizons, clustering put together sectors with different fundamental susceptibility to changes in the output during the pandemic, e.g. WIG-banking, WIG-clothes, WIG.GAMES (Cluster\_2) or WIG-chemical, WIG-construction, WIG-energy, WIG-IT, WIG-mining, WIG-oil&gas, WIG-telecom (Cluster\_3).

To evaluate in more details the obtained clusters, we analyzed the mean silhouette coefficient for each cluster. We found that clusters are generally characterized by a different degree of homogeneity. The highest differentiation between coefficients was observed in the shortest time horizon (Period\_2a), and the lowest in the medium term (Period\_2c). Cluster\_3 in three out of four periods of analysis (except Period\_2c) was characterized by the highest homogeneity. Taking into account the structure of this cluster in all the investigated periods we can note the strongest relationship formed by the chemical-fuel-energy sectors (WIG-chemical, WIG-energy, WIG-mining, WIG-oil&gas). In turn, Cluster\_2 stands out in terms of the lowest homogeneity, reaching the minimum silhouette coefficient in the three out of four periods (except Period\_2b). Cluster\_4 always consisted of only one element, regardless of the period, that is why its coefficient equals 0.

The clustering results over four selected pandemic periods show that we are able to identify five groups of indices (proximities in stability) in the short terms (Period\_2a and Period\_2b) and four in the medium terms (Period\_1 and Period\_2c). It is worth noting that the indices creating Cluster\_5 in the short periods moved principally to Cluster\_3 in the medium terms.

Taking into account Period\_1, we found proximities between WIG-media, WIG-automobiles&parts, WIG-real estate, WIG-food and WIG-telecom, then between WIG-banking, WIG.GAMES, WIG-clothes, and finally between WIG-construction, WIG-chemical, WIG-energy, WIG-mining, WIG-oil&gas, WIG-telecom and WIG-IT. The pharmaceutical sector remained solely classified. Such clustering results are observed also in Period\_2c, what confirms the medium-term proximity of performance of groups of indices independently on the choice of the starting point of the pandemic (January 7 or March 12). The different clustering result is observed for Period\_2a and Period\_2b versus Period\_1 and Period\_2c. The bigger number of clusters may confirm that in the short periods (Period\_2a and Period\_2b) performance of the indices was more diversified.

According to the obtained clusters in the different pandemic periods, we found that some industries keep their proximities in all of the investigated periods. In Cluster\_1 there were: WIG-media, WIG-food, WIG-telecom, in Cluster\_2: WIG-banking, WIG-clothes and in Cluster\_3: WIG-chemical, WIG-energy, WIG-mining, WIG-oil&gas. Cluster\_4, consisting solely of WIG-pharmaceutical, also remained unchanged.

To characterize the obtained clusters more deeply and to identify their stability origins, the coordinates of their centroids were visualized with the use of parallel coordinates plot. Such visualization shows the mean values of each group, therefore it allows to compare obtained clusters accordingly to the investigated diagnostic variables.

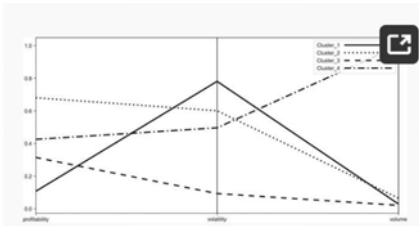


Fig 6. Parallel coordinate plot for centroids–Period\_1.

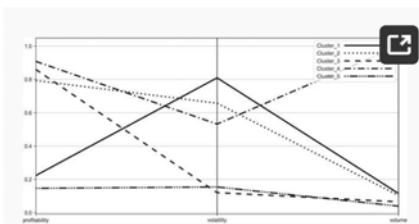


Fig 7. Parallel coordinate plot for centroids–Period\_2a.

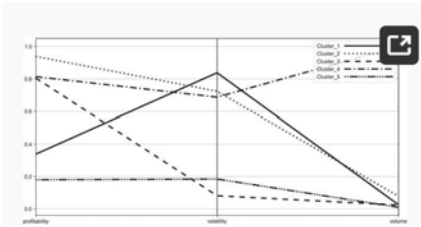


Fig 8. Parallel coordinate plot for centroids–Period\_2b.

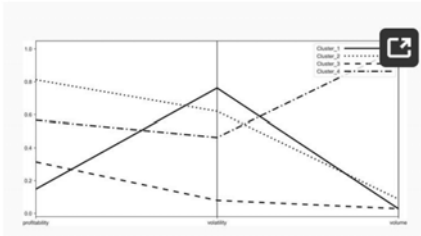


Fig 9. Parallel coordinate plot for centroids–Period\_2c.

## Conclusion

The COVID-19 pandemic has a significant impact on the socio-economic situation of most countries in the world. It is undoubtedly a turning point in the activities of many sectors, as well as for the directions of development of the entire economies. In some industries it will undoubtedly cause a significant change in the business model or affect a structural change in the income and cost conditions. The consequences of changes and transformations in individual sectors are currently difficult to predict, as it is not known how long the pandemic will ultimately last and what its costs will be.

Our paper is devoted to the problem of stability of stock markets during the COVID-19 pandemic. Due to the low number of works related to CEE countries during the pandemic, we analyzed the Warsaw Stock Exchange, which is one of the most important stock markets in the CEE region. We assessed the stability of the behavior of different sectors of the economy represented by sector sub-indices and macro-indices of this market. In our study we applied two clustering methods: the K-means and the Ward techniques with the criterion of maximizing the silhouette coefficient. Due to the doubts concerning the turning point to be taken as the beginning of the pandemic and what period length of the pandemic is the most informative, we considered four time ranges. To perform the analysis, we proposed six indicators (diagnostic variables) describing stability in terms of profitability, volume, overbought/oversold conditions and volatility. We conclude that the use of all these variables resulted in a poor clustering results. However, we found that limiting the set of diagnostic variables to three aspects: profitability, volume and volatility leads to much better results. In this case the obtained results show that after the outbreak of the pandemic it was possible to observe on the market 5 clusters of sector indices in the short term (2 weeks and 1 month) and 4 in the medium term (3 and 6 months). The additional fifth cluster in the short term was extracted from Cluster\_3 (indicated for the medium term). We found that the composition of the obtained clusters is quite stable, which means that many industries keep their proximities in all of the investigated periods. In Cluster\_1 there were:

WIG-media, WIG-food, WIG-telecom, in Cluster\_2: WIG-banking, WIG-clothes and in Cluster\_3: WIG-chemical, WIG-energy, WIG-mining, WIG-oil&gas. Cluster\_4, consisting solely of WIG-pharmaceutical, also remained unchanged.

The results show that none of the distinguished clusters, and hence the indices included in the cluster, can be considered as the most or the least stable accordingly to all the investigated variables. For this reason, we additionally compared the obtained clusters in terms of their stability accordingly to separate indicators. Summarizing the results for the short periods, as the most unstable clusters we can point out Cluster\_4, Cluster\_2 and Cluster\_3 –in terms of profitability, Cluster\_1 –in terms of volatility and Cluster\_4 –in terms of volume. On the other hand, the most stable clusters were Cluster\_5 and Cluster\_1 –in terms of profitability and Cluster\_3 and Cluster\_5 –in terms of volatility. In terms of volume all the investigated clusters except Cluster\_4 were characterized by the similar level of stability. The most unstable clusters in the medium periods were Cluster\_2 –in terms of profitability, Cluster\_1 –in terms of volatility and Cluster\_4 –in terms of volume. As the most stable clusters we can indicate Cluster\_1 –in terms of profitability, Cluster\_3 –in terms of volatility. Same as with short periods, in terms of volume all the investigated clusters, except Cluster\_4, were characterized by the similar level of stability. Generally, we can conclude that Cluster\_3 (in all periods) and Cluster\_5 (in the short period) distinguishes from other clusters in terms of their overall stability, and that Cluster\_4 can be considered the most unstable.

The results obtained from our research may bring several significant benefits to individual as well as institutional stock exchange investors. Determining the number of clusters and their compositions allows for better understanding of the behavior of industries and their companies in terms of external shocks, and thus for taking investment decisions that optimize the composition of the portfolio of securities. As our research characterizes the proximities in market behavior of multiple sectors, the investors may manage the investment risk in more effective way. By identifying industries that are slightly responsive to the crisis (most stable) or the strongly responsive (most unstable), investors can propose investment strategies focused on capital protection (defensive) or speculation (aggressive). Moreover, knowing the stability profile of individual sectors (according to profitability, volatility, turnover), investors can develop specific investment strategies within each cluster. Including this knowledge may also support more effective application of derivatives, such as futures or options, to manage investment portfolios.

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## **Bibliography**

### **Objective:-**

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This paper aims to examine the impact of the COVID-19 outbreak on Indian firms listed on the NSE and analyze its impact on various sectors. In addition, a sub-sample analysis based on market capitalization was performed to understand the effect of size during extreme events. The sample consisted of 1,335 firms listed on the NSE India. A standard event study outlined by

Brown and Warner (1985) was employed to analyze the price impact on the COVID-19 outbreak.

The event windows from -10 days to +10 days were selected. The estimation window is 250

days. The Nifty 50 has been chosen as a proxy for market return. The sample firms witnessed a negative impact of the COVID-19 outbreak with a negative CAAR in different event windows. In addition, various sectors are classified according their responsiveness towards the COVID-19 outbreak into three groups: highly negatively affected,

moderately negatively affected, and slightly negatively affected. The paper also points out that the pandemic substantially affects the above-median market capitalized firms than the below-median market capitalized firms, which contradicts the size effect phenomenon. The results assist shareholders in managing their portfolios and mitigate the systematic risk of their investments during extreme events such as a pandemic, wars, and others. This study is the first comprehensive analysis of the impact of the COVID-19 outbreak on different sectors in India. It is also the first study to investigate the size effect anomalies during extreme events.

### Primary and secondary data

The primary market is where securities are created. Here securities are issued by companies for the first time. New stocks and bonds are offered to the public via an initial public offering (IPO). The secondary market, on the contrary, refers to exchanges such as BSE or New York Stock Exchange or Nasdaq where stocks are traded.

A company may have different types of capital requirements depending on its present stage of growth. A well-established company may not require long-term capital. In that case, they may opt for equity financing i.e. raising capital via the sale of shares.

But another company, which has a proven track record and now wishes to expand operations may go for an IPO. While equity financing is a secondary market operation, launching an IPO happens in the primary market.

- Securities that are issued in a market are referred to as the primary market. When the company gets listed on an exchange the stocks are then traded in the secondary market.
- The primary market is also known as a new issue market and the secondary market is known as after issue market. Depending upon the demand and supply of the securities traded the prices in the secondary market vary. But the prices in the primary market are fixed.
- Unlike the secondary market, the primary market provides financing to the new and the old companies.
- In the primary market, investors have an option to purchase the shares directly from the company, whereas in the secondary market, the investors buy and sell the securities among themselves.
- Investment bankers do the selling in a primary market. In the secondary market, the broker acts as an intermediary while the trading is done.
- In the primary market, the company stands to gain from the sale of security. While in the secondary market, an investor gains from the securities.
- The securities in the primary market can only be sold once, while in the secondary market sale and purchase is an ever-going process.

- The amount that is received from the securities becomes capital for a company whereas; in the case of the secondary market, the same reflects as the income of investors.

## Conclusion

The basic difference between the primary and secondary market lies in the type of companies and investors it caters too. Companies looking for long term investments for an IPO which is a function of the primary markets, while companies that look for short-term capital use the secondary market. Now that you have a sense of the functionalities of both these markets, you can try your hand at investing by opening an online Demat account.

## Hypotheses

H1:- Shares will not affect the market H0:- Shares will affect the market.

H2:- In Market analysis BSC stock are coming down.

H0:-In Market analysis BSC stock are going up.

## CONCLUSION

The COVID-19 pandemic has affected the global economy of which India is a big participant. India is the country with the second largest population in the world, so the pandemic is especially dangerous for India. The COVID-19 affected almost all stock markets around the world. The world stopped due to the virus outbreak and it pushed the world into the great crisis of the century. The total lockdown and social distancing is the only solution for preventing the spreading of the virus until a vaccine is available. India also announced the lockdown as a protective measure, but India announced a little bit late and this is evident through the pre-lockdown period where AAR was negative. The announcement of the lockdown was taken positively by the stock market that was reflected in the stock market response; this is not an ideal situation, but still there is a chance when the lockdown is lifted and COVID-19 is eradicated from the country, the stock market will recover.

The study finds the evidence of a positive AR around the present lockdown period and confirms that the lockdown has a positive impact on the stock market performance until the situation improves in the Indian context. However, the result holds true for the select sample of BSE-listed companies and during the period considered for the study. It cannot be generalized for other traded stocks, nor in other periods in the future or in a different market environment. The implications of this study are that investors can take precautionary steps before trading in stocks during the period of a lockdown. Risk averse investors can avoid trading around the lockdown to avoid the risk linked with volatility of stocks in the lockdown period. The result of this study will benefit investors as it may help them better understand and evaluate the impact of the lockdown on stock markets caused by COVID 19.

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# Entertainment Industry In The Age Of Pandemic

**Paper presented by**

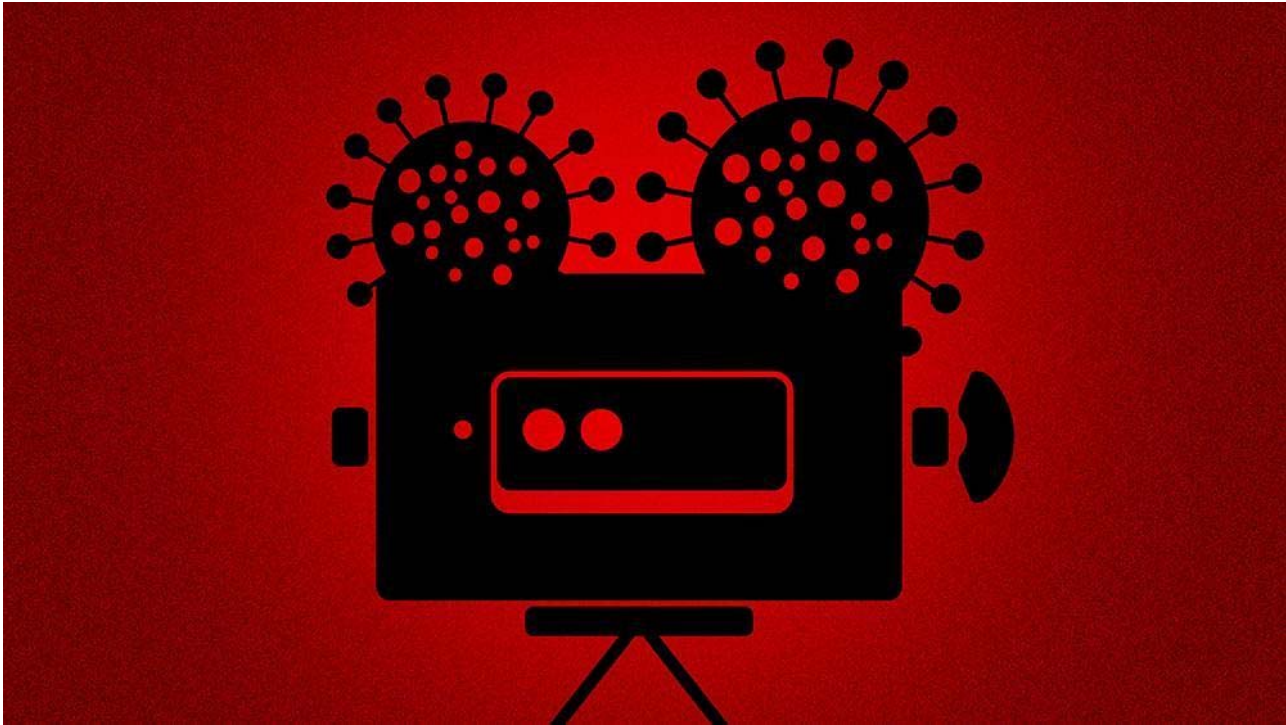
Maya Rajbhar And Vedant Pawar

**Institution:** Prahladrai Dalmia Lions College

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## Abstract

*In this research paper we study the impact of the coronavirus pandemic on the media and entertainment industry of India. The media and entertainment industry of India is very large and gives employment to millions of people. It includes internet, TV, radio, newspaper, magazine,*



*photography, cinema, publishing, etc.*

## Introduction

*Covid-19 pandemic which started in Wuhan, China was affecting the entire world. Numbers of the case were increasing day by day. Lockdowns were imposed, the economy was going down and no. of deaths had increased. Educational institutes, offices, etc. were closed. All major industries*

were impacted and the effect of covid-19 on the media and entertainment industry was devastating. Thousand of people were unemployed. Theatres were closed. The shooting of movies was suspended. The release of blockbuster movies was postponed indefinitely. However some movies were released on digital platforms. Similarly, the shooting of TV serials was also suspended. Repeated telecasts were aired on TV. Ramayana was aired which created a world record of most watched shows with a 77 million views. To combat the problems due to covid-19 majority of people were working digitally from home. People are adopting this new normal, some are in favor while others are not. But we all have to compromise and accept the change.

## Review of literature

*The Motion Picture Association (MPA) recently released their annual THEME report covering 2020. The report tracks the theatrical and in-home entertainment industry both globally and domestically as well as other video industries. For the THEME report, the MPA relied on various data sources.*

*In 2020, the global pandemic impacted the theatrical and home/mobile entertainment, as movie theaters and production studios temporarily closed. As millions quarantined, viewers were forced to stay home for their video entertainment. Coinciding with the pandemic, was the emergence of new streaming video services from such prominent studios as Disney DIS -1%, Universal and Warner Bros. joining (and competing) with Netflix NFLX +0.7%, Hulu and Amazon AMZN +2.5%. Hence, stay-at-home viewers were able to watch premium TV and movies across various screens and providers. While industry analysts had commented*

*this trend was already beginning, many agree the pandemic had sped up the pace of adoption.*

## **Objective of study**

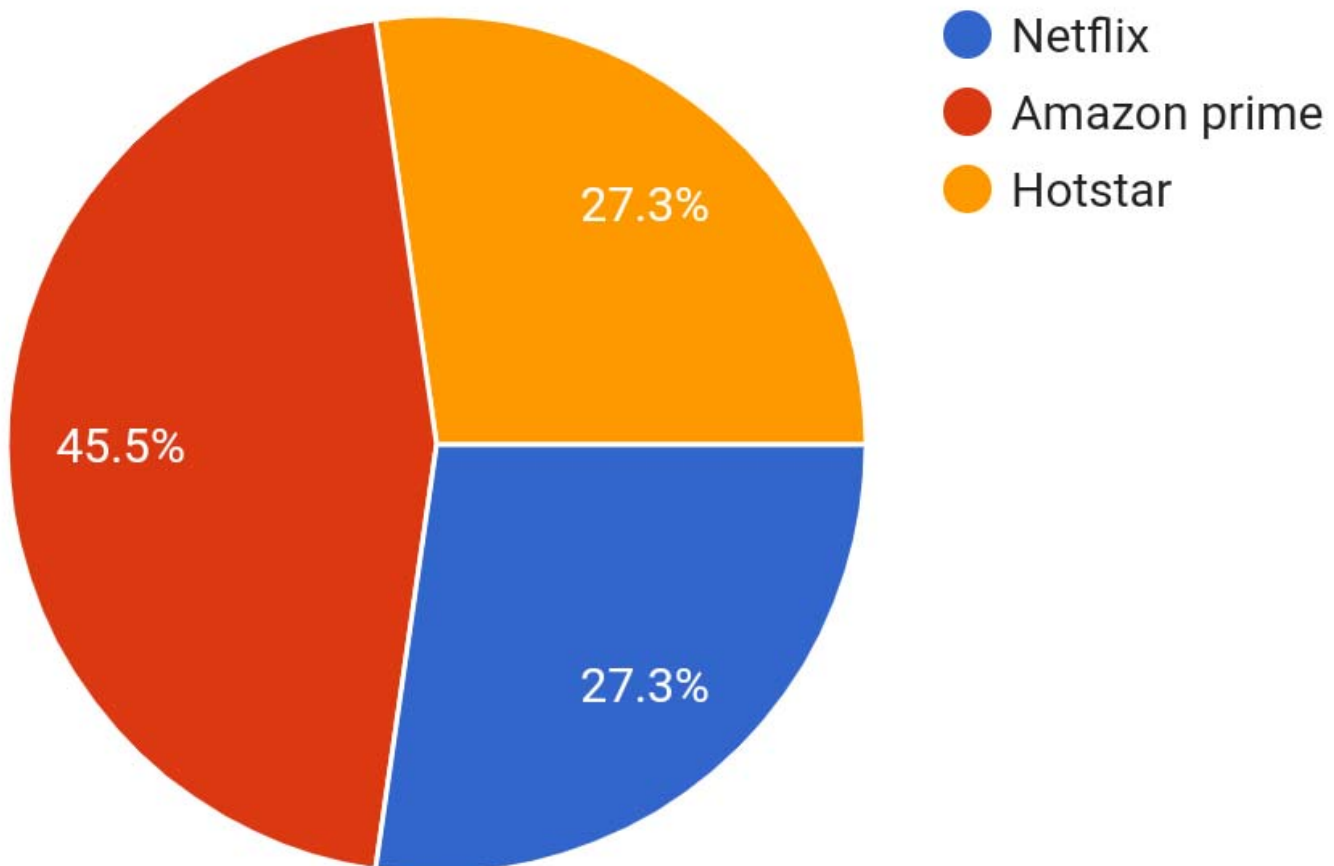
1. To study the loss of entertainment industry.
2. To study the unemployment caused due to covid-19.
3. How everything from offline went to online platform.

## **Data Analysis**

The data is collected from Google form which has 5 question as following:

1. which streaming services was help you most to watch movies during pandemic ?

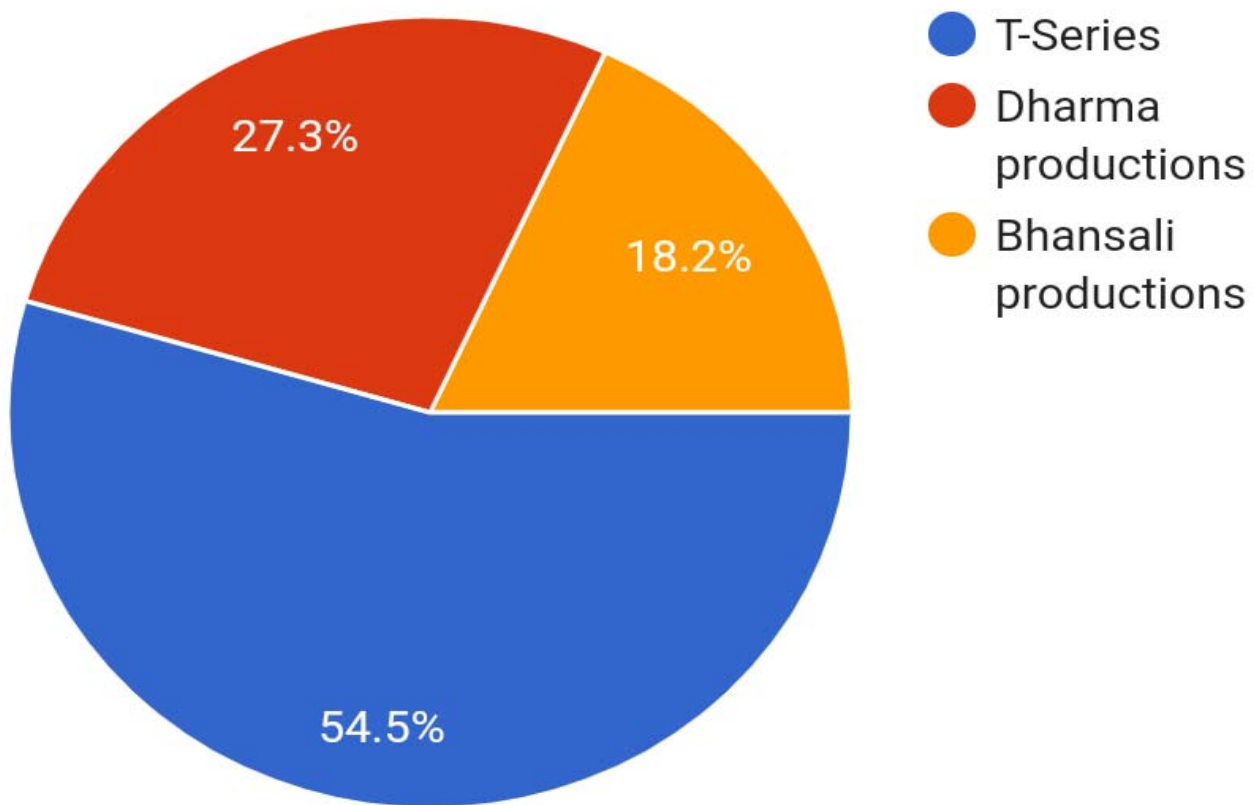
11 responses





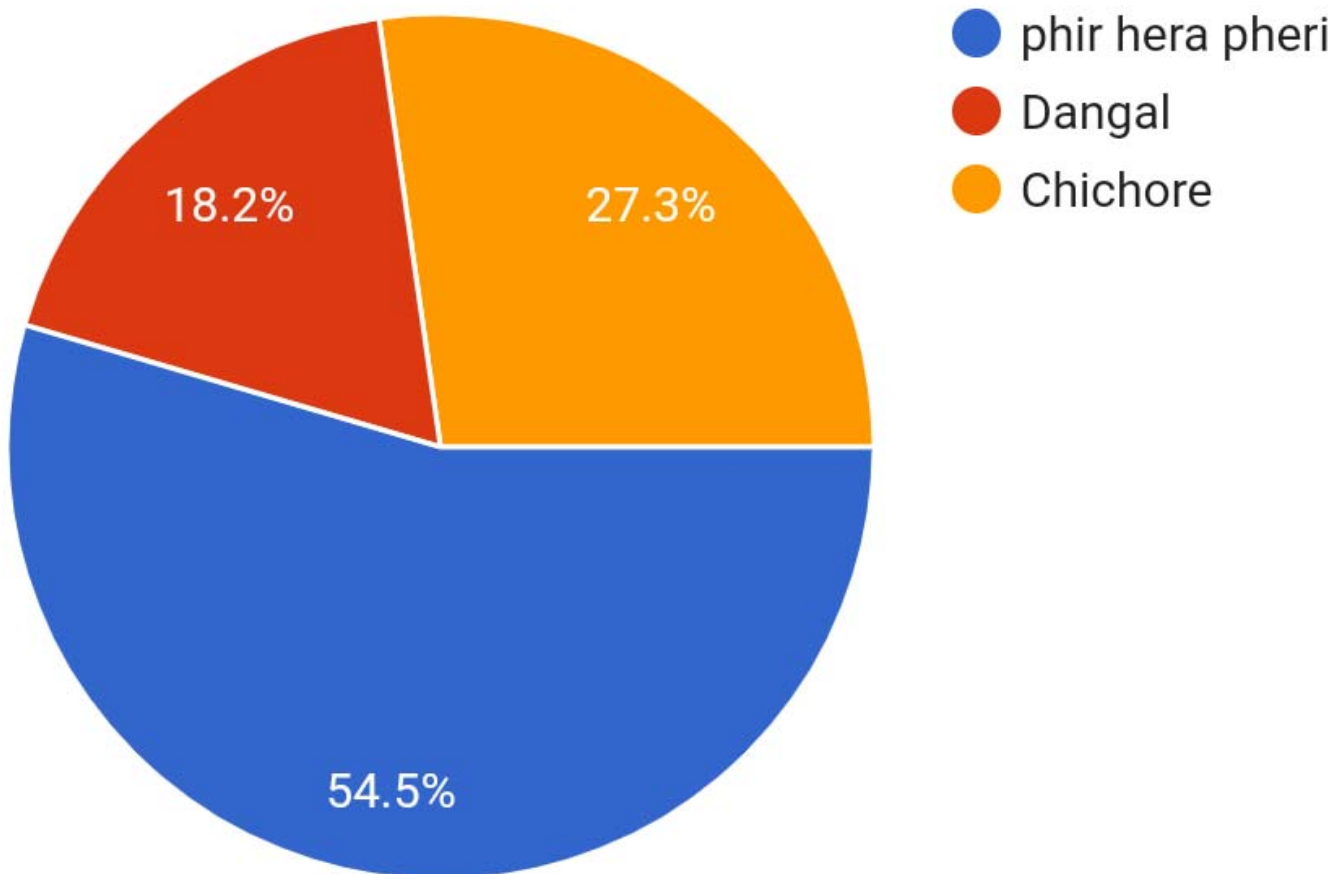
## 2. which movie production company was entertains you most during pandemic?

11 responses



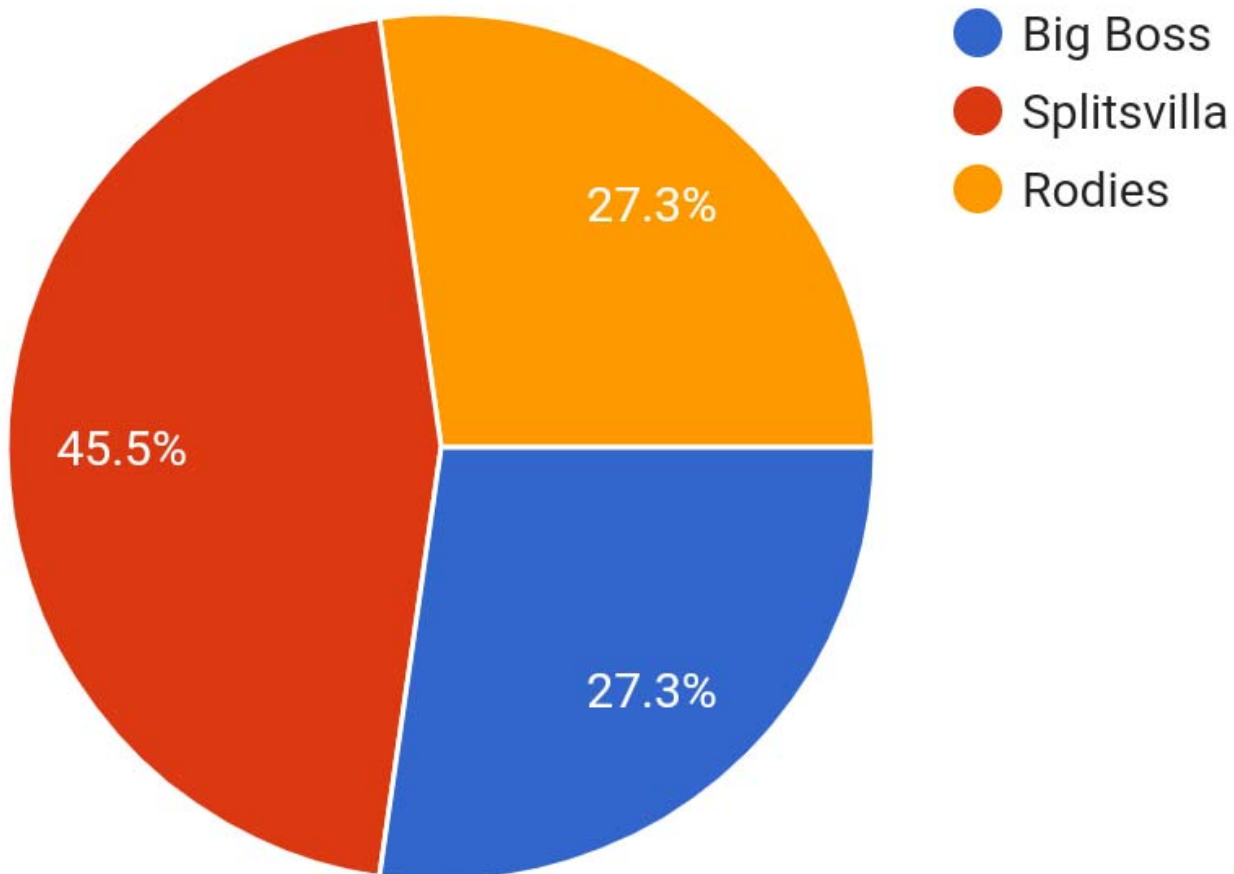
### 3. which movie was entertained you during pandemic ?

11 responses



## 4. which Tv shows was entertained you during pandemic ?

11 responses

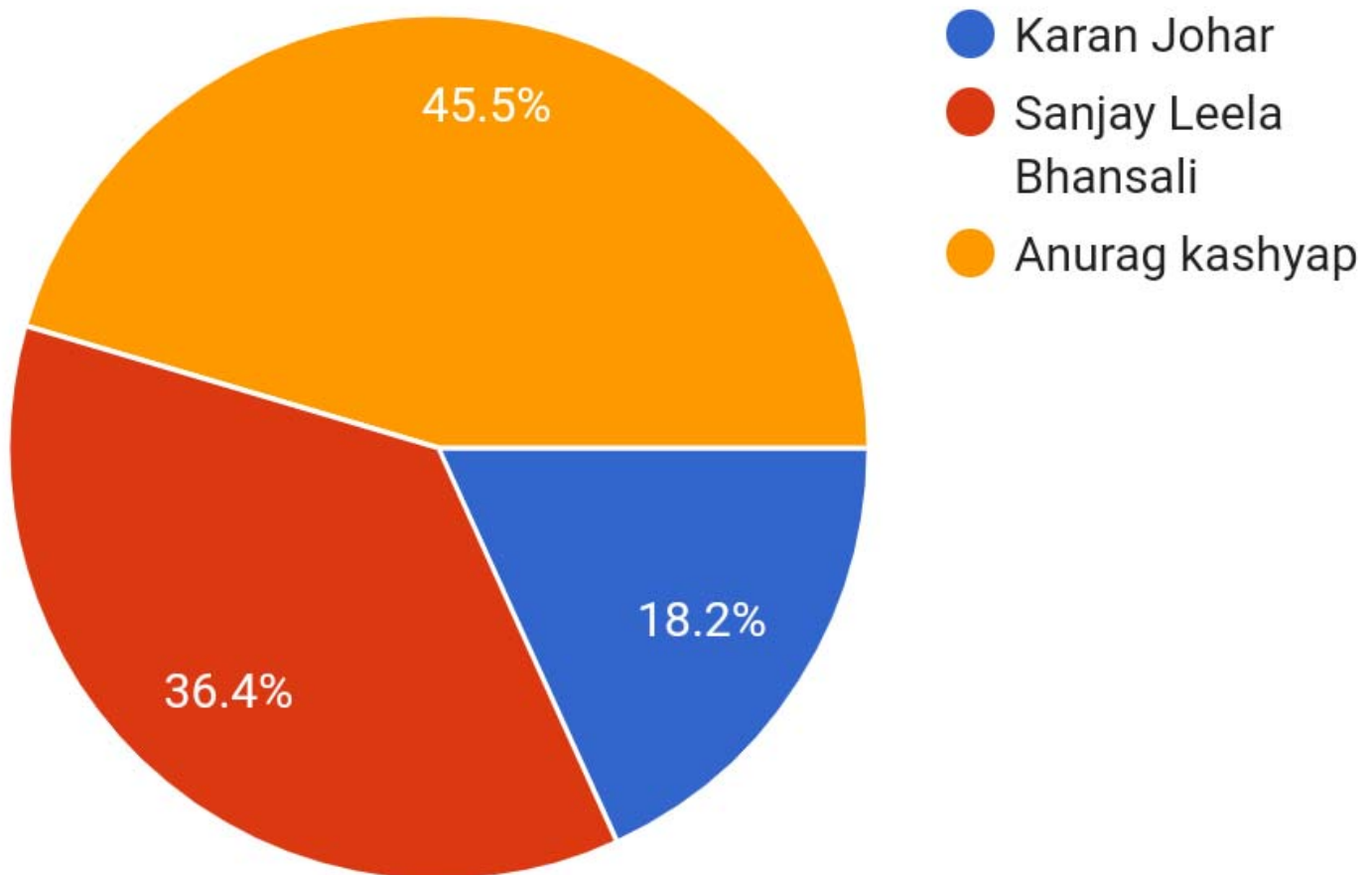




## Conclusion

5. which director was gave you best movies during pandemic ?

11 responses



Covid-19 Pandemic has caused a major transformation Media and Entertainment Industry; such that the Media segments which involved public gatherings like Films, Events, etc. has a hard hit however in other home-based entertainments like OTT Platforms like Amazon, Netflix, Televisions channels, Online Gaming's etc. noticed major spike in consumption pattern. In this Primary study, we found that People tends to use more of Online Platforms for entertainment rather than TV as it telecasted Old or repeated episodes during the Lockdown period. Our study also shows that OOT platform

SHULRG □ □ 2XU □ VWXG \ □ DOVR □ VKRZV □ WKDW □ 277

□ SODWIRUP

subscription has increased during COVID19 Lockdown as people enjoy it more. We found that the Income pattern had no relation to the M&E consumption pattern. Average (15k-25k) Income participants also used all the channels of Entertainment similar as Medium (25-50K) and High Income (>50K) participants. There is no direct relation between the Income levels and the consumption pattern of Entertainment/ Media during the Lockdown.

# Reference

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3. Photo from Google
4. Hindustan times newspaper



HARSH VINAY SHUKLA A-164

TOPIC: TECHNOLOGY FOR THE FUTURE

COLLEGE: Prahladrai Dalmia Lions College



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## TECHNOLOGY FOR THE FUTURE

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### Abstract

*Change is happening at an ever faster rate today, driven partly by technological changes leading to changes in all other areas of our lives. Today's global trends, uncertainties, and surprises have the potential to significantly change the way the world works tomorrow. Shaping the world we want to live in means being more aware of the future and seeking better approaches. In such increasingly uncertain environment, planning uncertainties force policy and decision makers to foster futureoriented technology analyses (FTA) by using foresight methodologies. FTA can help us react on the likely directions of technologies, manage the risks involved and shape technological trajectories in order to improve the long term benefits to society. Foresight methodologies seek to gather data and make sense of it so that people can think in different and new ways about the future. That data might be collected from humans or from the analysis of documents and artefacts, or both. The data might be analysed using qualitative or quantitative techniques, or both. To be used in strategy processes, however, data needs to be analysed, interpreted and used in ways that make sense to the organisation. There is no single set of methods used in all foresight activities. The methods used need to reflect the resources available and the objectives of the exercise. The choice of methods is critical, though it often appears to be based upon what is fashionable or which practitioners*

have experience in. The methods may be organised and interrelated in different ways. In other terms, the conduct of foresight analyses needs to be tailored to the type. The first thing to do is to choose the right methods which are most appropriate to the analysis and technology characteristics. One of the substantial advances has been a move away from a tool or method driven approach to one which relies on the selection of tools in accord with their appropriateness for the particular issue being examined, their relative strengths and limitations. Thus, the experience of observing so many developing nations attempting to conduct a Japanese style Delphi survey, with an extremely limited number of 'experts' and doubtful relevance of estimated technology realisation times to their economy, indicates the need to develop foresight appropriate to local conditions. Their use and contribution will be determined primarily by the values, structures and cultures of the organisations applying them. This paper will try to discuss the importance of future oriented technology analysis, in particularly technology foresight, and the question of how to select the best methodology among the existing ones. Although this paper intends to lay a framework and cover the tools used in technology futures analysis, in particularly emerging air transportation technologies, a full understanding of each of these tools is out of this paper. The conduct of analysis needs to be tailored to the type. The first thing to do is to choose the right tools which are most appropriate to the analysis and the technology characteristics. Thus, we have to set the criteria and figure out key aspects and factors for designing our research. In our case, the key aspects and factors are: it is a long term vision for 10-15 years later; an emerging air transportation mode; a socio- technological system of systems in transportation area which is composed of resources and stakeholders network, drivers and disruptors; and also normative, both qualitative and quantitative, national and global. The probably research tools that can be used are; agent based modelling, cost benefit analysis, scenarios, impact analysis, case study (Visioning), subjective judgement, roadmap, interviews, benefit visualization tool, literature reviews, and attending conferences

## Introduction

Now-a-days as a human being we can't cross our day without a gadget, like most commonly smartphone. In every field like AI, MI, smartphone, virtual reality, etc which are all interconnected, technology is getting developed each day & each second and it has no curb. Technology is all about making our life easier and comfortable. In every field its occupancy and requirement is numerous.

Now-a-days as a human being we can't cross our day without a gadget, like most commonly smartphone. In every field like AI, MI, smartphone, virtual reality, etc which are all interconnected, technology is getting developed each day & each second and it has no curb. Technology is all about making our life easier and comfortable. In every field its occupancy and requirement is numerous. *g* about the type of battery that we use in these smartphones is, we use lithium polymers batteries commonly....and now as an alternate for this we are going to develop graphene batteries which are thin, stores more energy and are capable of recharging very fastly. Our life gets easier and simpler as we progress.

Artificial Intelligence (AI) wouldn't know its limit in improving itself. We try to replace human with a machine (usually a ROBOT), which is more efficient and faster than us which works on AI and ML. Using AI we develop every device even smarter.

We have computers to do most of our works very fastly and efficiently, which uses binary language to make this possible. What if we make this even faster and faster....probably a QUANTUM COMPUTER....

Quantum Computers are an advanced type of computers which are predominantly much faster than a computer that we have right now. Using a Quantum computer as of now is a dream, but once we built it, we cannot expect the result of those computers. Quantum computer makes direct use of distinctively quantum mechanical phenomena, such as superposition and entanglement to perform operations on data.

### How Does Technology Prepare Students for the Future?

Technology has seeped into every part of our lives. It has created entire industries and improved the efficiency of pre-existing professions. Manufacturing jobs are increasingly automated. Medical devices and technology are saving more lives. More people are leaving the office in favor of remote or freelancing work. Technology is here, and it isn't going anywhere. In truth, it will only advance, further changing the structure of our work and lives. This begs the question: how does technology prepare students for the future?

Technology is often seen as a part of the adult world. When technology is in the hands of children, the association is often social media or gaming. But now, more than ever, children need technology to assist their education. We say "need" because as valuable as textbooks and traditional learning are, they don't do enough. In a world that relies on technology, analog learning alone cannot prepare students for what they will face as adults, no matter their profession.

It's difficult to imagine the leap. Just two decades ago, computers in school were only found in computer labs. Now they are in every classroom. The value was slowly recognized, and even today, we cannot grasp what will come tomorrow. With that in mind, let's take a look at how technology prepares students for the future.

## How Does Technology Help Students?

Asking “How does technology help students?” is like asking “Does school prepare you for life?” or “Does college prepare students for the workforce?” Education, no matter what form it takes, capitalizes on a child’s natural need to develop skills. At a young age, our brains are developing thousands of connections that help to inform our world. These connections relate to our ability to solve problems, communicate, and collaborate. Obtaining these skills is necessary for use over the course of our lives. Technology is just one tool to help students acquire these skills and more.

Preparing students for the future isn’t easy. It takes balance and proper utilization. But when tech is balanced with other forms of learning, it prepares students by:

- Teaching New Technology Skills

Technology is constantly advancing. This gives rise to new jobs and industries, such as coding and artificial intelligence. Technology provides a makers education in AI, IT, design, and many STEM fields. It does this through specialized programs that allow students to explore these interests.

Several schools are now teaching coding to students as young as age 8. Schools are also offering courses in AI. MIT created an App Inventor to help students learn how to develop new apps with coding. They also developed Shadowspect, which allows students to learn geometry with 3D puzzles. All of this is beneficial because it’s estimated that AI will replace 40 percent of jobs in the future. Rather than being fully replaced, these students will be the problem-solvers and designers. Or, they’ll create their own AI.

- Career Learning

Students today are better equipped to learn and explore future career options. But that’s not what we’re talking about here. Instead, we’re talking about the installation of learning as a

skill for life. Using technology to engage students also helps them to embrace learning. It may even inspire them to enjoy learning and encourage them to explore topics that interest them.

- *Teaching Workplace Skills*

Active learning is the most effective tool in preparing students for the workplace. Active learning involves activities such as reading, writing, discussion, and projects. Project-based learning also achieves “cognitive activation.” This is a focus on how they reached their answer rather than the answer itself. Technology is another tool in active learning and cognitive activation via personalized learning. Each student has their own unique way of learning.

- *Teamwork*

Technology helps to tap into students' individual learning styles. Tech can also encourage teamwork by working on team or class projects. By working together, they must share, listen, support, and help each other.

## Conclusion

Progress in many of the basic computing and information technologies has been rapid in recent years, and the committee does not expect the pace of change to slow down in the foreseeable future. While some technologies are reaching maturity now, many important technologies have enormous future potential. As more of the world's information is digitized and more people and things are networked, the economics of the digital, networked economy will become ever more important. This includes the ability to make copies of goods and services at almost zero cost and deliver them anywhere on the planet almost instantaneously. Furthermore, digitization of products, services, processes, and interactions makes it possible to measure and manage work with far more precision. Data-driven decision making and machine learning provide vast opportunities for improving productivity, efficiency, accuracy, and innovation.

The committee expects important innovations to come in the area of artificial intelligence (AI) and robotics. Several decades ago, humans were unable to converse with machines using ordinary speech; now it is done routinely. Machines are learning to effectively translate from one language to another, a task once seen only in science fiction. We are moving from an era where machines were blind, unable to recognize even simple objects, to an era where they can distinguish faces, read street signs, and understand the content of photographs as well as—or better than—humans. They are being put to work reading X-ray and MRI images, advising doctors on potential drug interactions, helping lawyers sift through documents, and composing simple stories about sports and finance for newspapers. Machines are becoming much better at

reasoning and can now defeat the best humans at most games of skill, from checkers and chess to trivia and Go. Machines are learning to drive cars, which could potentially save thousands of lives in the United States and millions worldwide. Bipedal robots are learning to navigate stairs and uneven terrain, while their cheetah-like brethren can outrun even the fastest humans. Many of the technologies with the greatest impact will likely look unlike any human or animal, but will transport shelves of inventory throughout warehouses, assemble basic electronics in factories, fly to disaster zones with medicine, swim beneath the waves to gather data for oceanographers, and haunt computer networks in search of cyberattacks. In fact, many of these exist in some form already, although they are likely to become more widespread and more competent.



**THANK YOU.**

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**Research paper**

**Topic:- TECHNOLOGY FOR FUTURE**



## 1) Abstract

The new technology nowadays is based on smart systems, includes smart energy, smart grid, smart home, smart phone, smart plant irrigation system and smart technology. All are applicable to many medical, engineering, educational, shopping, banking, booking travel or hotels, commercial systems and devices. These are almost based on control and optimization programming algorithms and logic process which lead to time saving, energy saving, friendly use and cost effective. Most of these technologies are running online and wirelessly by the cellular phone in monitoring the measurements of the variables and to control the system or appliance by touching button and sending signals

Now-a-days as a human being we can't cross our day without a gadget, like most commonly smartphone. In every field like AI, MI, smartphone, virtual reality, etc which are all interconnected, technology is getting developed each day & each second and it has no curb. ... Using AI we develop every device even smarter.

## INTRODUCTION TO TECHNOLOGY

Technology takes many forms in today's world. The Introduction to Technology course explores the fundamentals of technology education while broadening awareness about the pervasiveness of technology in our daily lives.

Technology is constantly advancing. This gives rise to new jobs and industries, such as coding and artificial intelligence. Technology provides a makers education in AI, IT, design, and many STEM fields. ... All of this is beneficial because it's estimated that AI will replace 40 percent of jobs in the future.

More technology and greater efficiency for more humanity

Before the Covid-19 pandemic, global health spending was around seven trillion euros a year.

Despite this huge sum, calls are now emerging for additional investments to prepare for further pandemics. This cannot be financed and will therefore accelerate a rethinking process: Instead of putting more money into moderately efficient healthcare systems, we will increase the efficiency of existing systems while enabling more people to access to modern healthcare. Of the seven trillion euros spent on healthcare globally, less than one percent is invested in technologies that boost the overall efficiency of the healthcare system. If we expect physicians and caregivers to provide high-quality and empathic care, we should also ensure they have the technical resources they need to carry out their tasks as comprehensively and productively as possible.

Technology development and production: Global teamwork wins out over independent national initiatives

Covid-19 shows us that independent national initiatives in healthcare do not work. Whereas research facilities searching for quickly available therapy and vaccination solutions now exchange information unbiased by national egoism, attempts are being made to roll back the global distribution of work in the development and production of ventilators and protective equipment. But in a crisis such as this, we need more and not less international cooperation. What has now become painfully clear in this pandemic also applies to the same extent for chronic illnesses such as cancer and diabetes. No country will be able to defeat these "creeping" pandemics on its own.

## Review

The current knowledge about various technologies used during COVID-19

There exists relatively extensive literature in this area, a total of 260 articles examining the varieties of digital technologies that have been used during the COVID-19 pandemic. Based on the types of technologies, this section categorizes the technologies into hardware and software. There are approximately 15 types of hardware technologies and over 50 types of software technologies have been used to combat COVID-19. Looking back at history, unlike the Spanish flu that occurred 100 years ago, COVID-19 has rapidly spread to every inhabitable continent within weeks. Fortunately, the hardware and software technology used during the pandemic has greatly improved the health system's ability to detect, track, and contain people with suspected infection. Not only the use of hardware technology such as computerized tomography machine in the medical field, but also in the fields of education, work, and daily life, the technology represented by computers, smartphones, and video-based communication platforms brings an unprecedented change to our lives. Table 1 highlights the most frequently used technologies that are categorized into Healthcare, Education, Work, and Daily Use to provide an overview during the pandemic.

## Objective of technology

Technology shapes the future and it can help to make it compatible with nature. It can help us to develop clean energy, transport possibilities with less emissions and low-energy houses to save resources.

What is future technology?

Technology shapes the future and it can help to make it compatible with nature. It can help us to develop clean energy, transport possibilities with less emissions and low-energy houses to save resources.

What is the main goal of technology?

The primary goal of technology is to make a certain job more easier to do. For example, technology in agriculture (such as irrigation, machinery, etc) allows planting to be easier.

What are the objective of technology?

Provide a variety of technological information and ideas. Encourage curiosity, ingenuity, resourcefulness and discrimination. Stimulate self-confidence through the knowledge and application of technology. Develop practical skills through the creation of products/solutions.

## Hypothesis

A hypothesis is an assumption, an idea that is proposed for the sake of argument so that it can be tested to see if it might be true. ... In non-scientific use, however, hypothesis and theory are often used interchangeably to mean simply an idea, speculation, or hunch, with theory being the more common choice.

The most common forms of hypotheses are: Simple Hypothesis. Complex Hypothesis. Null Hypothesis.

In the year 2050, technology will dominate the workplace with artificial intelligence and smart assistants being commonplace, while the use of augmented and virtual reality continues to increase. Everything will be 'smart' – connected and data-driven.

Why technology is our future?

(Pocket-lint) – Technology has the power to do many things, and changing the world is one of them. We're privileged to be living in a time where science and technology can assist us, make our lives easier and rethink the ways we go about our daily lives.

## Data collection

The growing use of smart phones and connected devices in the past two decades has dramatically changed the way we receive information. While often overlooked by users, this rise in technology has made it incredibly easy for corporations as well as private interest groups to collect, store, and use our personal information. With tech evolving at such a rapid pace, public policy regarding the use of private information has struggled to keep up and hold tech giants accountable for the exploitation of private data. This ongoing dilemma requires marketers to try to anticipate what the future of data collection and marketing regulation will bring, and what legal and ethical standards will be imposed on businesses in order to protect consumers.

The future of data collection will be dominated by the use of artificial intelligence (AI). This will manifest itself through the increase of Internet connected devices we use and encounter every day

### Using technology to collect data

Mobile data collection is the use of digital devices such as mobile phones, tablets, or laptops for data collection. Crowdsourcing and crowdseeding are real-time data collection methods that involve different technologies

### Using technology to collect data

Mobile data collection is the use of digital devices such as mobile phones, tablets, or laptops for data collection. Crowdsourcing and crowdseeding are real-time data collection methods that involve different technologies

The specific ICT approach that has been used is Digital Data Gathering. This refers to gathering data using electronic handheld devices, such as a smartphone or data pen. These devices are used to record data in the field and transfer information back to a server.

Digital data collection relies on digital forms which are electronic versions of the paper-based forms that can be filled out on electronic devices like smartphones and tablets.

Data may be grouped into four main types based on methods for collection: observational, experimental, simulation, and derived. The type of research data you collect may affect the way you manage that data

Under the main three basic groups of research methods (quantitative, qualitative and mixed), there are different tools that can be used to collect data. Interviews can be done either face-to-face or over the phone. Surveys/questionnaires can be paper or web based

Future data is data associated with a future time stamp. PI Data Archive 2015 allows storage and retrieval of data with time stamps beyond current time, allowing you to store data within a time range of January, 1970 through January, 2038.

## Data analysis

Data analytics is expected to radically change the way we live and do business in the future.

Already today we use the analytics in our technology devices, for many decisions in our lives. ... Expectations are that data analytics will make the impossible possible, but we are still in the early stages of the data era.

### Augmented Analytics

This form of analytics is going to play a huge role in analysing data in 2020. Augmented analytics is going to be the future of data analytics because it can scrub raw data for valuable parts for analysis, automating certain parts of the process and making the data preparation process easier.

Data analytics (DA) is the process of examining data sets in order to find trends and draw conclusions about the information they contain. ... Data analytics technologies and techniques are widely used in commercial industries to enable organizations to make more-informed business decisions.

The reports by the U.S. Bureau of Labor Statistics indicates that the Data Analysts are projected to see faster than average growth of 19% from 2014-2024, thanks to the continuous growth of data generation and the need to refine and extract relevant insights from the same.

Data analytics is the future of everything because it is everywhere. Every organization can use data to analyze and predict almost everything they need to meet the goals they have in mind. Data-driven decisions can lead to higher ROI, create new revenue streams, and even help save the planet.

## Conclusion

Researchers are investigating each possible choice for fighting the coronavirus pandemic, and Modern Technology represents to a captivating road. While technology advances have entered into our day by day lives with numerous victories, they have additionally added to helping people in the very intense battle against COVID-19. The papers talk about the troubles while using these algorithms in real world clinical practices. Likewise, there is an interest for a future work on building up a benchmark framework to assess and look at the current techniques. The present models acquired extraordinary accuracy in recognizing COVID-19 symptoms with different kinds of viral pneumonia utilizing radiology pictures but lacks transparency and interpretability. It can be conclude that there is a wide scope of potential utilizations of modern technologies covering clinical and cultural difficulties made by the coronavirus pandemic; but not many of them are right now develop enough to show operational effect.

This bibliography is annotated to provide a synthesis of recent reports and current initiatives regarding information technology and manufacturing research

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ACADEMIC PAPER

WILEY

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## The outbreak of COVID-19 pandemic and its impact on stock market volatility: Evidence from a worst-affected economy

Debakshi Bora<sup>1</sup>  | Daisy Basistha<sup>2</sup>

This paper empirically investigates the impact of COVID-19 on the volatility of stock prices in India with the help of a generalized autoregressive conditional heteroscedasticity model. Daily closing prices of stock indices, Nifty and Sensex from September 3, 2019 to July 10, 2020 has been used for the analysis. Further, the study has been attempted to make a comparison of stock price return in pre-COVID19 and during COVID-19 situation. Findings reveal that the stock market in India has experienced volatility during the pandemic period. While comparing the result during COVID period with that of the pre-COVID, we found that the return on the indices is higher in the pre-COVID-19 period than during COVID-19.

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## INTRODUCTION

The rapid spread of the unprecedented COVID-19 pandemic has put the world in jeopardy and changed the global outlook unexpectedly. Initially, the SARS-CoV-2 virus, which caused the COVID-19 outbreak triggered in Wuhan city, Hubei province of China in December 2019, and with time it spread all over the globe. This pandemic is not only a global health emergency but also a significant global economic downturn too. As many countries adopt strict quarantine policies to fight the unseen pandemic, their economic activities are suddenly shut down. Transports being limited and even restricted among countries have slowed down global economic activities. Most importantly, consumers and firms have prevented their usual consumption patterns due to the creation of panic among them and created market abnormality. Uncertainty and risk created due to this pandemic, causing significant economic impact all over the globe affecting both advanced and emerging economies such as the United States, Spain, Italy, Brazil, and India. In this context, the financial market has responded with dramatic movement and adversely affected. Economic turmoil associated with COVID-19 has affected the financial market severely which includes both stock and bond markets. Due to this pandemic, there is a large fall in the price of oil and a large increase in the price of gold. Firzli (2020), refers to this pandemic as “the greater financial crisis.” In many countries, businesses are highly indebted, weak companies are further destabilized, and corporate debt stands at a very high level. The global financial market risk has increased substantially in response to the pandemic (Zhang et al., 2020). Investors are suffering sufficient losses due to fear and uncertainty. For example, due to the impact of this pandemic, the global stock market has struck out about US\$6 trillion in 1 week from 24 to 28 February (Ozili & Arun, 2020). The market value of standard &

poor (S&P) 500 indexes declined to 30% since the COVID-19 outbreak. According to Azimili (2020) increased uncertainty affects the required rate of return and thus the current market value of stocks.

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Although there is limited current literature related to the impact of COVID-19 on the financial market, the existing empirical studies have provided an exciting result. Baret et al. (2020), in their research on financial markets and banks, have found that there is a fall in the share of oil, equity, and bonds throughout the world as a result of the COVID-19 pandemic. Social distancing measures adversely affected the productivity of the companies and brought about a decrease in revenue, higher operating cost, and also cash flow challenges to the companies. In Europe, the Financial Times Stock Exchange 100 index witnessed a sharp 1-day fall since 1987 (BBC News, 2020). Igwe (2020) is of the view that the shock from this pandemic can increase the volatility that can negatively affect the economic and financial system of every country. Most of the developed and developing countries' financial markets are adversely affected by this unexpected pandemic. The leading economy of the world, the US stock market hit the circuit breaker mechanism four times in 10 days in March 2020 (Zhang et al., 2020). The stock market of Europe and Asia has also jumped. United Kingdom's leading index FTSE has fallen more than 10% on March 12, 2020 (Zhang et al., 2020). Vishnoi and Mookerjee (2020) observed that the stock market in Japan had dropped more than 20% in December 2019. The stock market of Spain, Hong Kong, and China also declined to 25.1, 14.75, and 12.1% in their price from March 8, 2020 to March 18, 2020 (Shehzad et al., 2020). In his study, also found a harmful impact of the COVID-19 on stock returns of the S&P 500 and an inconsequential impact on the Nasdaq composite index. Georgieva (2020) pointed out that the COVID-19 pandemic brought the

entire globe near to financial crises more hazardous than Global Crises 2007–2008.

Gradually the worst effect of the pandemic spread to the emerging economy too. If we consider the financial market of the emerging economy a gloomy picture caught our eyes as this economy is worsthit by the collapse of oil prices. The outbreak of the COVID-19 pandemic makes this picture more critical. The top leading emerging economies such as Brazil, Russia, and Mexico gradually moved toward hard mobility restrictions that will bring down the emerging economies to a recession of 1% in 2020 (Herfero, ). In South Korea, the Coronavirus disease caused KOSPI to drop below 1,600 in their history after 10 years (So, 2020). In China, higher uncertainty due to COVID-19 results in greater volatility of stock return (Leduc & Liu, 2020). The government of India announced Janata Curfew on March 22, 2020 and lockdown policy to maintain social distancing practice to slow down the outbreaks from March 24, 2020. As the government announced such a lockdown policy, various economic activities have been stopped suddenly. The financial market of India is witnessed sharp volatility as a result of the disruption of the global market (Raja Ram, 2020). As a result of the fall out in the global financial market, the Indian stock market also witnesses sharp volatility. It has also borne the brunt of the COVID-19 pandemic.

There are two major stock indices in India—Bombay Stock Exchange (BSE), Sensex, and National Stock Exchange (NSE), Nifty. If we look at the Bombay Stock Exchange there is a drop in the Sensex index to 13.2% on March 23, 2020. It was the highest single they fall after the news of the Harshad Mehta Scam, April 28, 1991

(Mandal, 2020). Similarly, Nifty has also declined to almost 29% during this period. Some economists have considered the impact of COVID19 on the Indian stock market as a “black swan event,” that is, the occurrence of a highly unanticipated event with an extremely bad impact. Due to the lockdown policy adopted by the government, the factories have reduced the size of their labor force as well as production level which disrupted the supply chain.

Again, because of the uncertainty prevailing among mankind, people also reduce their consumption habits leading to demand-side shock. Studies have also found that the entire previous pandemic had affected only the demand chain. But this COVID-19 pandemic has affected both the demand chain and supply chain.

Despite the several literatures on the impact of COVID-19 on the stock market of the entire economy, there is limited study on it especially in the case of an emerging economy. To shed light on this aspect, this paper attempts to investigate the impact of COVID-19 on the two important stock market of India. Glostén–Jagannathan–Runkle (GJR) generalized autoregressive conditional heteroscedasticity (GJR GARCH) model is used to make the study more significant in terms of volatility in stock index prices due to the outbreak of the pandemic and lockdown policy adopted by the Indian Government. Major findings of the study reveal the volatile nature of BSE Sensex and NSE Nifty, the two prominent stock market of India.

This paper is organized as follows. Section 1 starts with an introduction, Section 2 represents a literature review, Section 3 describes the sources of data and methodology, Section 4 shows results and discussion, and Section 5 ends with the conclusion.

## LITERATURE REVIEW

The impact of COVID-19 on the financial market as well as the stock market has been subject to many empirical studies both in advanced and emerging economies. Existing literature found diverse results in these regards. Ozili and Arun (2020) have conducted an empirical study on the effect of social distancing policy that was adopted to prevent the spread of the Coronavirus, based on four continents: North America, Africa, Asia, and Europe. The study found that 30 days of social distancing policy or lockdown hurts the economy through its negative impact on stock prices. Azimili (2020), also researched on understanding the impact of coronavirus on the degree and structure of risk-return dependence in the United States using quantile regression. The results indicate that following the COVID-19 outbreak the degree of dependence



between returns and market portfolio has raised in the higher quantiles that lowering the benefits of diversification. The author also studied the GSIC and stock return relationship and found that the GSIC return relationship revealed an asymmetric pattern, lower tails influenced negatively almost twice as compared to the upper tails. Shehzad et al. (2020) conducted a study to analyze the nonlinear behavior of the financial market of the United States, Italy, Japan, and China market return by applying the asymmetric power GARCH model. The study confirmed that COVID-19 harm the stock returns of the S&P 500. However, it revealed an inconsequential impact on the Nasdaq composite index. An empirical study conducted by Cepoi (2020) on the relationship between COVID-19 related news and stock market returns across the topmost affected countries. By employing a panel quantile regression this study found that the stock market presents asymmetry dependence on COVID-19 related information. Osagie et al. (2020) by applying quadratic GARCH and exponential GARCH models with dummy variables found that the COVID-19 hurts the stock returns in Nigeria and recommended that a stable political environment, incentive to indigenous companies, diversification of economy, and flexible exchange rate regime be implemented to improve the financial market. Baker (2020), in his study, found that there is a dramatic fall in oil prices by 70–80%. It is severe than the financial crisis of 2008/2009. This is a serious issue for the economy as the country is highly dependent on oil revenue. There is a huge gap between the depreciated exchange rate, that is, 20% and the fall in oil prices, that is, 70–80%. According to Herrero (2020), the third wave of the COVID-19 pandemic has hit the emerging economy worst resulting decrease in business activities. This unprecedented shock increases the risk-averse nature which increases the financial cost. Latin America is affected worst because of its much dependency on external financing. Due to the restriction on transport, export has declined. Restriction in the international movement has hampered the tourism sector leading to a fall in revenue. HyunJung (2020) has made a study on the stock market of South Korea, another leading country of the emerging economies. In his

analysis, it was found that the economy has shown a roller-coaster ride. The monthly export shows a downtrend in January, improved in February, then again dipped down in March and June. The country's export volume has come down to 11.2% point in comparison to the previous year. Topcu and Gulal (2020) have made regional classification of the impact of COVID-19 on the stock market of emerging economy. Their findings reveal that the impact of the outbreak has been the highest in Asian emerging markets whereas European emerging markets have experienced the lowest. The emerging market economies face a credit crunch, also referred to as capital flows (Ahmed et al., 2020). Goldberg and Reed (2020) discussed the negative effect of COVID-19 on the trade of emerging economy. Consequently, the interest rate on emerging market sovereign debt spiked. Frankel (2020) analyzed the economic effect of the pandemic on the emerging economy. COVID-19 has reduced the revenue of those economies by restricting export, tourism receipts, and remittances of migrant workers. Raja Ram (2020) in his study has found that COVID-19 crashes the entire global share. Indian stock market also experienced sharp volatility due to the collapse of the global financial market. Again fall in foreign portfolio investments also reduces the return of the Indian stock market. By analyzing the history of all unexpected events the author has considered COVID-19 also a “black swan” event. He has further analyzed the history of the crash and recovery of the Indian stock market and concluded that the economist cannot predict the recovery of the economy until a stable public health system. Ravi (2020) has compared the pre-COVID-19 and during COVID-19 situation of the Indian stock market. His findings revealed that before COVID-19, that is, at the beginning of January, trade of NSE and BSE were at their highest levels hitting peaks of 12,362 and 42,273, respectively showing favorable stock market conditions. After the outbreak of the COVID-19, the stock market came under fear as BSE Sensex and NSE Nifty fell by 38%. It leads to a 27.31% loss of the total stock market from the beginning of this year. The stock of some other sectors such as hospitality, tourism, and entertainment has been dropped by more than 40% due to transport



restrictions. Mandal (2020) has rigorously analyzed the agony of the deadly pandemic on the Indian stock market. Findings reveal that BSE Sensex has witnessed the biggest single-day fall of 13.2% that has surpassed the infamous fall of April 28, 1992. Nifty also has a steep dive of 29%, overtaking the disaster of 1992. As people have compressed their consumption only to necessary products only the FMCG Company has shown a positive return whereas other companies face a sharp decline (Rakshit & Basistha, 2020).

There is various literature available on the impact of COVID-19 on different sectors such as health, agriculture, industry, trade, and commerce, but a limited specific study has been conducted on its impact on the stock market of the emerging economy. The stock market plays an important role in the economy. As India is one of the dominant parts of the emerging economy, this paper tries to interpret the impact of COVID-19 on the Indian stock market. GJR GARCH is an efficient model to test the volatility of BSE and NSE, the two major stock market of India. Besides, there are very few literature that compares the return of the stock market before and during the COVID-19 situation. Accordingly, our study has also made an attempt to compare the returns of both the stock market considering those two mentioned time frames.

## DATA AND METHODOLOGY

The study is based on secondary sources of data. Data on daily closing prices of indices Nifty and Sensex have been collected from the official site of BSE and NSE (<https://in.finance.yahoo.com/>). Data are collected from September 3, 2019 to July 10, 2020 including both the period before and during COVID-19. The time period from September 3, 2019 to January 29, 2020 is considered as before the COVID-19 phase and January 30, 2020 to October 6, 2020 as during COVID-19, that is, the first 5 months are taken as before COVID-19 and the next 5 months as during COVID-19 time frame for the study (<https://www.statista.com/>). The first positive case of India was found on January 30, 2020. Data on COVID-19 positive cases are collected from the report of the

Ministry of Health and Family Welfare, Government of India (<https://www.mohfw.gov.in/>). Hence, for this study, the period before this date is considered as the pre-COVID-19 era and the period after this date is considered as during the COVID-19 era.

In this paper, the closing price of BSE and NSE has been considered for analyzing the volatility of the stock market. In the estimations, we take the natural logarithm of each price data to reduce the observed skewness in the stock price data distribution.

The return of both BSE and NSE has been also calculated to investigate the scenario of change in stock price return during preCOVID and the COVID period. To calculate the return, the following formula has been used (Osagie et al., 2020):

$$R_t = \ln P_t - \ln P_{t-1} \quad (1)$$

Here,  $R_t$ ,  $P_t$ , and  $P_{t-1}$  represent the day-wise return, the closing price of the stock at time  $t$ , and the previous day's closing price at time  $t - 1$ , respectively, while  $\ln$  symbolizes the natural log.

To check whether a time series is stationary or nonstationary, augmented Dickey–Fuller (ADF) and Phillips and Perron (PP) unit root test have been used. We use the PP unit root test also to estimate the proper result because it does heteroscedasticity and autocorrelation consistency correction to ADF test statistics. To test heteroscedasticity errors PP test is preferred the most. The ADF test is based on the estimate of the following regression:

$$\Delta Y_t = \alpha_0 + \gamma_1 Y_{t-1} + \sum_{i=1}^p \beta_i \Delta Y_{t-i} + \epsilon_t \quad (2)$$

Here,  $\Delta$  represents first difference operator,  $p$  symbolized lag,  $\alpha_0$  represents constant,  $\gamma_1$  and  $\beta_i$  are parameters, and  $\epsilon_t$  denotes a stochastic error term. If  $\gamma = 0$ , then the series is said that it is a unit root and nonstationary.

ADF test add lagged difference term of the regression to take care of possible serial correlation in

the error term. On the other hand, PP use nonparametric serial correlation method to take care of serial correlation in the error term without adding lagged difference term (Gujrati, 2016). For this reason, PP test can be considered more advantageous than ADF test.

The PP test is based on the estimate of the following regression:

$$\Delta Y_t = \alpha + \rho Y_{t-1} + \varepsilon_t \quad (3)$$

Here,  $\alpha$  symbolizes constant,  $\rho$  represents parameter, and  $\varepsilon_t$  denotes residual.

To analyze the effect of COVID-19 on the stock market volatility GJR GARCH model is used. The GJR GARCH model developed by Glosten et al. (1993) and Zakoian (1994) is used to capture asymmetric in terms of negative and positive shocks in the financial decision. One of the limitations of the GARCH model is that this model imposes a symmetric volatility response to positive and negative shocks (Sakthivel et al., 2014). This is due to the reason that conditional variance in Equation (4) is the magnitude of the lagged residuals and therefore does not account for their sign.

This asymmetric response of conditional volatility to information can be captured by including, along with the standard GARCH variables, squared values of  $\varepsilon_{t-1}$  when  $\varepsilon_{t-1}$  negative (Glosten et al., 1993). The GJR GARCH model is estimated as follows:

$$h_t = \omega + \sum_{j=1}^q \lambda_j \varepsilon_{t-j}^2 + \sum_{i=1}^p \beta_i h_{t-i} + \sum_{k=1}^r \gamma_k |\varepsilon_{t-k}| \varepsilon_{t-k}^2 \quad (4)$$

where  $|\varepsilon_{t-1}| = 1$  if  $\varepsilon_{t-1} < 0$ ;  $=0$  otherwise.

$\gamma$  is known as asymmetry or leverage term. If  $\gamma > 0$  represents asymmetry while  $\gamma = 0$  represents symmetry. The condition for nonnegativity would now be  $\alpha_0 \geq 0$ ,  $\alpha_1 \geq 0$ ,  $\beta_1 \geq 0$ , and  $\alpha_1 + \gamma_1 \geq 0$ . In the model, the good news ( $\varepsilon_{t-1} > 0$ ) and bad news ( $\varepsilon_{t-1} < 0$ ) have contrasting impacts on the conditional variance, good news has an effect of  $\beta_1$ , while bad news has an effect of  $\alpha_1 + \gamma_1$ . If  $\gamma_1 > 0$ , negative shocks tend to have more

volatility and is known as the leverage effect of the  $i$ th order. If  $\gamma_1 = 0$ , the news effect is symmetric.

A dummy variable is introduced in the conditional mean and variance equation to investigate the impact of the COVID-19 outbreak on the volatility of NSE and BSE. The model modified as per the GJR GARCH approach is specified as:

$$P_t = \alpha_0 + \beta_1 P_{t-1} + \gamma_1 D_1 + \varepsilon_t \quad (5)$$

$$h_t = \omega + \sum_{j=1}^q \lambda_j \varepsilon_{t-j}^2 + \sum_{i=1}^p \beta_i h_{t-i} + \sum_{k=1}^r \gamma_k |\varepsilon_{t-k}| \varepsilon_{t-k}^2 + \lambda_1 D_1 \quad (6)$$

The dummy variable  $D_1$  assumes the value 0 for the preCOVID-19 era and 1 for the during COVID-19 era. A negative and statistically significant coefficient for the dummy variable implies that the COVID-19 pandemic caused a reduction in the volatility of the Indian stock market. A positive and statistically significant coefficient for the dummy variable implies that the COVID-19 crisis has caused an increase in the volatility of the Indian stock market.

## DISCUSSION AND ANALYSIS

This paper uses the daily price and return of two stock indices of India, BSE, and NSE. First and foremost, we calculate the descriptive statistics of the price and return of the BSE and NSE series. In Table 1, the mean return which is a major indicator of profit shows a negative value, indicating a loss in stock. Negatively skewed return with higher kurtosis value indicates chances of high losses in both the stock markets. Likewise, the return of pre-COVID-19 and during COVID-19 is presented in Table 2. As India reported the first case of COVID-19 on January 30, 2020, before this period is considered to be as the pre-COVID-19 era and the period after January 30, 2020 is considered as the during COVID-19 period for the study. In Table 2, it is observed that the mean return of both the indices is positive in the pre-COVID-19 era but daily mean returns are negative during the COVID-19 era, implying an adverse impact on stock returns. The SD of the indices has increased during the COVID-

19 era which implies that the volatility of the indices has increased during the COVID-19 time frame.

Figures 1 and 2 represent the time plot of BSE and NSE stock prices respectively over the examined period. Before February 2020 (pre-COVID-19 period) the prices of both the indices are positive and show almost a smooth line in the figure. But after reporting the first case in India as well as the declaration of the first lockdown, it moves down to the bottom of the steep at the end of March 2020. From April 2020, it again shows a positive trend. This is because relaxation has been adopted in the case of a lockdown policy from April by the government.

Figures 3 and 4 present the log return of BSE and NSE from the period September 3, 2019 to July 10, 2020 and evidence of volatility is shown with the help of these two diagrams. The result depicts that BSE is more volatile than NSE. As we all know that BSE is the largest stock exchange in India, a huge number of investors from different parts of the world make investment in this market. So in terms of volatility BSE is more sensitive in comparison to NSE.

To check the stationarity of two indices, BSE and NSE, we perform ADF and PP stationarity tests. The result presented in Table 3 revealed that most of the log indices are nonstationary in level form, hence the null hypothesis is accepted. Although, log indices have been found stationary in the first difference in both ADF and PP tests. Consequently, the indices are found stationary in first deference. Therefore, the unit root tests justify the existence of stationarity at the first difference.

Table 4 presents the estimated results on the GJR GARCH (1,1) model with BSE Sensex and from this table, it has been observed that the coefficient of asymmetric ( $\lambda_1$ ) and GARCH ( $\beta_1$ ) are significant. The coefficient of ARCH ( $\alpha_1$ ) is found negative but significant; this particular finding indicates the existence of the ARCH effect in the BSE Sensex

TABLE 1 Descriptive statistics of the entire sample

	BSE Sensex	NSE
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	Price	Return
Observation	209	208
Mean	466.9311	-0.000113
Median	496.5000	-0.000139
Maximum	573.6500	0.039111
Minimum	283.3000	-0.043645
SD	77.23121	0.011278
Skewness	-0.708423	-0.95679
Kurtosis	2.349923	5.285872
JB	21.16169	45.60252

Abbreviations: BSE, Bombay Stock Exchange; NSE, National Stock Exchange.  
Source: Author's calculation.

TABLE 2 Descriptive statistics of stock return of pre-COVID-19 and COVID-19 period

	BSE Sensex Pre-COVID-19 era	NSE Nifty
		During COVID-19 era
Mean	8.84E-05	-0.000239
Median	-0.000306	0.000217
Maximum	0.020004	0.039111
Minimum	-0.015436	-0.043645
SD	0.006570	0.014427
Skewness	0.307638	-0.097568
Kurtosis	3.643217	3.72661
JB	3.268177	2.491638

Abbreviations: BSE, Bombay Stock Exchange; NSE, National Stock Exchange.  
Source: Author's calculation.

series. Further, the coefficient of GARCH was appeared positive and significant, which implies that volatility clustering was present in the BSE index. The positive and significant asymmetric effect also indicate the presence of asymmetric effect and this implies that negative shocks news tend to increase volatility more than positive shocks. To capture volatility, a dummy variable ( $D_1$ ) has been added in both mean and variance equation;  $D_1$  takes the value of 0 and 1 for the pre and during the COVID-19 era, respectively. The result exhibits that the coefficient of the dummy variable for BSE Sensex in the mean equation is negative but not significant. Conversely, in the variance equation, it is positive and significant. This inferred that the spot market volatility in the

BSE stock market has increased during the COVID-19 period.

Table 5 presents the result of GJR GARCH with NSE Nifty. The table reveals that the coefficient of asymmetric ( $\lambda_1$ ) and GARCH ( $\beta_1$ ) are significant and positive, which entailed that volatility is present in NSE Nifty. The positive and significant value of the asymmetric term ( $\lambda_1$ ) represent that negative shocks have a larger effect than the positive shock to the volatility of the NSE stock exchange. However, the coefficient of ARCH is positive but insignificant; indicating that past news does not impact current volatility. On the other hand, it can be noticed that the coefficient of dummy variable ( $D_1$ ) in the mean equation is negative but in variance, it is positive and insignificant. In both equations the coefficient of the dummy is insignificant, implying no significant impact of the COVID-19 period on the volatility of NSE stock price.

### Diagnostic measure

Ljung-Box Q and ARCH LM test is used to check the serial correlation and heteroscedasticity in the square of standardized residuals of the model. The result

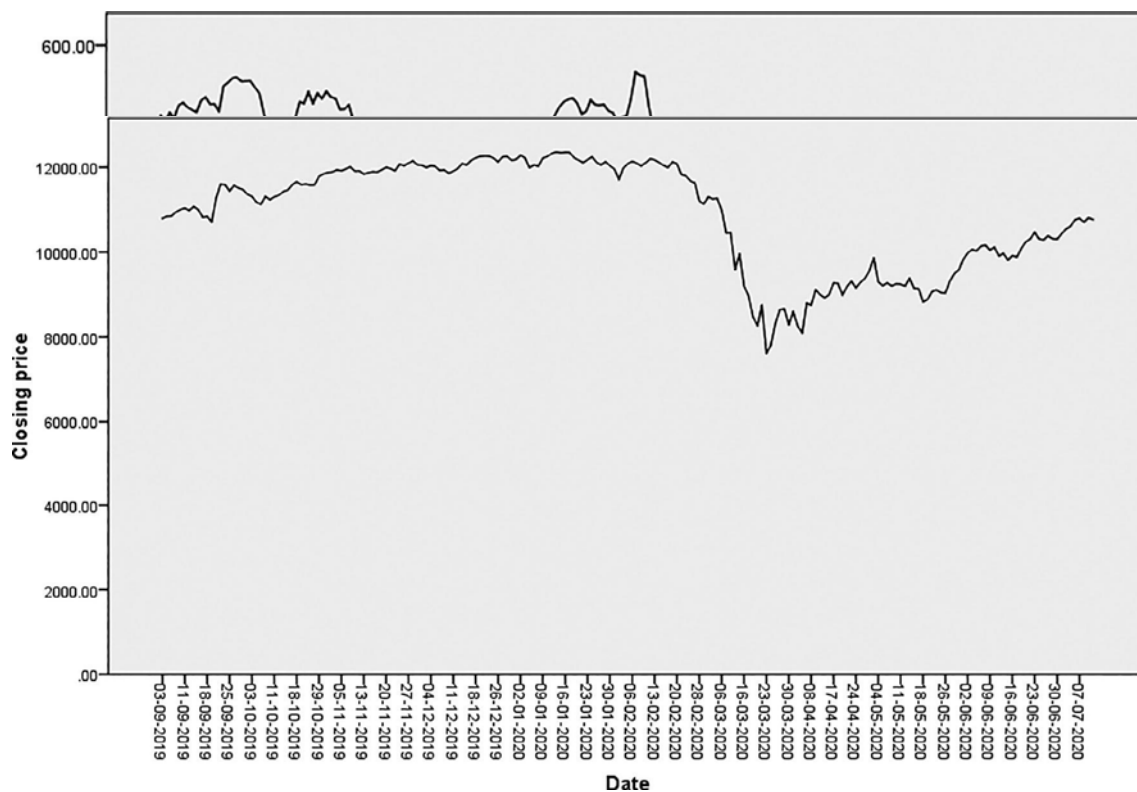
indicates that there is an absence of serial correlation and heteroscedasticity which is shown in Table 6. All the models performed correctly in this study.

## CONCLUSION AND POLICY SUGGESTION

In this study, we investigate the effect of COVID-19 on the performance of BSE and NSE; the two stock markets of India. GJH FIGURE 1 Time plot of Bombay Stock Exchange (BSE) stock price

FIGURE 2 Time plot of National Stock Exchange (NSE) stock price

GARCH model is used to test the volatility in the stock market by taking the two time periods, before and after the first positive COVID-19 cases in India. These two periods are taken as the dependent variable and per day closing price of BSE and NSE indices are considered as the independent variable. The result shows that the stock market especially the BSE Sensex become volatile during the pandemic period. In case of another stock index, NSE Nifty, it is found that there is no such significant



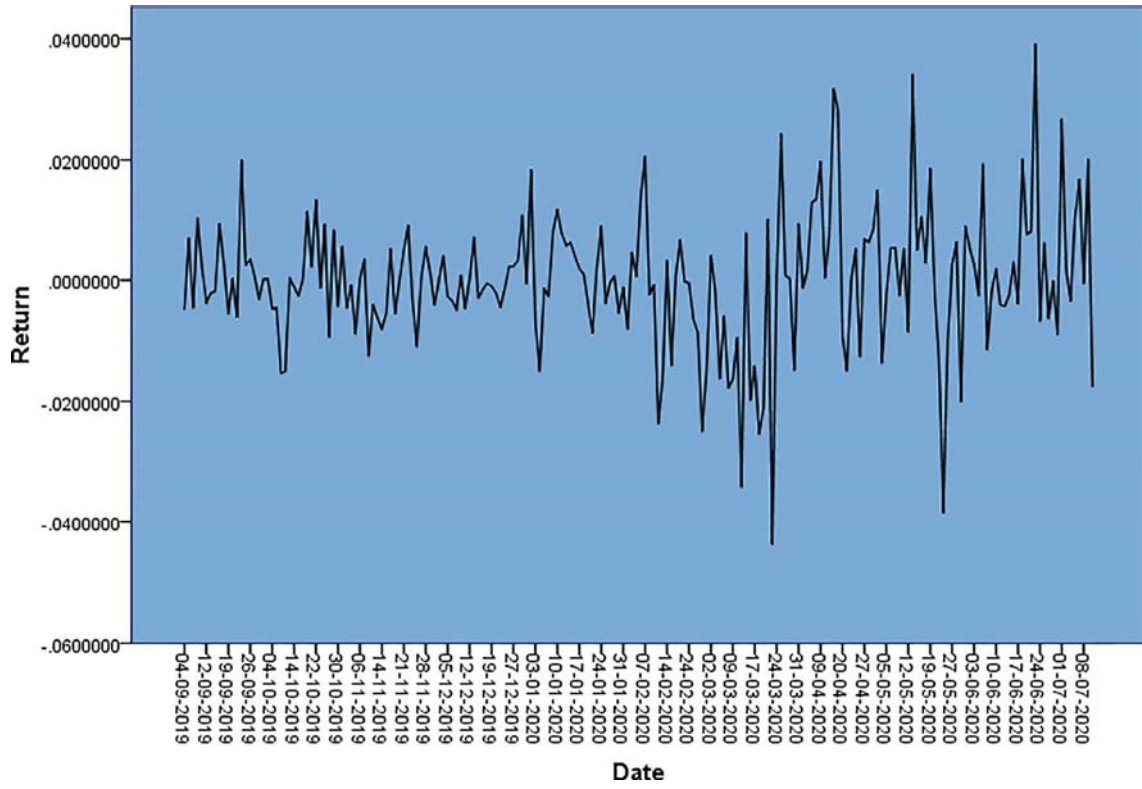
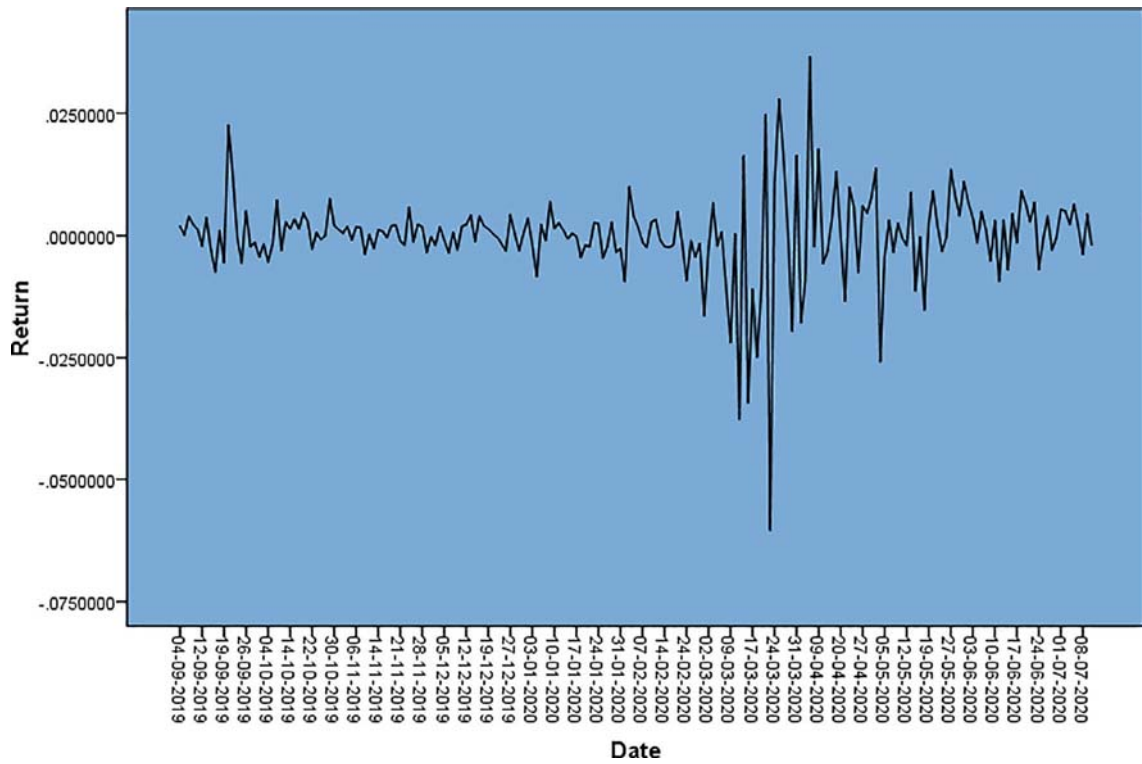


FIGURE 3 Log return of Bombay Stock Exchange (BSE)





**FIGURE 4** Log return of National Stock Exchange (NSE) TABLE 3 Result of unit root statistics

Name of index	ADF in level	ADF in first difference	PP in level	PP in first difference
BSE Sensex	-1.269416 (0.6438)	-12.24932* (0.0000)	-1.456996 (0.5535)	-12.64598* (0.0000)
NSE Nifty	-1.619650 (0.4707)	-16.60469* (0.0000)	-1.220566 (0.6657)	-16.43414* (0.0000)

Abbreviations: ADF, augmented Dickey–Fuller; BSE, Bombay Stock Exchange; NSE, National Stock Exchange; PP, Phillips and Perron.

\*Indicates 1% significance level.

Source: Author's calculation.

Abbreviations: GJR GARCH, Glosten–Jagannathan–Runkle generalized autoregressive conditional heteroscedasticity; NSE, National Stock Exchange.

\*Indicates 1% significance level.

Source: Author's calculation.

**TABLE 4** Result of GJR GARCH model with BSE Sensex

Mean equation parameters	Coefficients	Z-statistics	p-value
$\beta_0$	-0.001621	-1.677327	0.0935
$\gamma_1$	-0.000705	-0.235801	0.8136
Variance equation			
$\alpha_0$	1.23E-05	10.86474*	0.0000
$\beta_1$	1.024974	329.0440*	0.0000
$\lambda_1$	0.040947	1.893853**	0.0542
$\alpha_1$	-0.089238	10.86474*	0.0000
$\delta_2$	4.16E-05	4.248481*	0.0000

Abbreviations: BSE, Bombay Stock Exchange; GJR GARCH, Glosten–Jagannathan–Runkle generalized autoregressive conditional

heteroscedasticity.

\*Indicates 1% significance level.

\*\*Indicates 5% significance level.

Source: Author's calculation.

impact of the COVID-19 period on the volatility of NSE stock prices. The mean return in pre-COVID-19 and during the COVID19 period is calculated separately. The result revealed that with negative mean returns, the stock market faces losses during the pandemic, whereas return is shown positive in the pre-COVID-19 phase. By comparing the SD, it is noticed that the deviation is TABLE 6 Diagnostic parameters

Variable	Serial correlation		Heteroscedasticity	
	Q statistics	p-value	F statistics	p-value
BSE Sensex	30.760	0.716	0.278137	0.8919
NSE Nifty	23.924	0.938	0.161734	0.9575

Abbreviations: BSE, Bombay Stock Exchange; NSE, National Stock Exchange.

Source: Author's calculation.

**TABLE 5** Result of GJR GARCH model with NSE Nifty

Mean equation parameters	Coefficients	Z-statistics	p-value
$\beta_0$	0.000659	0.983215	0.3255
$\gamma_1$	-0.000945	-0.526764	0.5984
Variance equation			
$\alpha_0$	2.82E-06	1.687363	0.0915
$\beta_1$	0.822061	30.55926*	0.0000
$\lambda_1$	0.357850	4.805764*	0.0000
$\alpha_1$	0.000418	1.687363	0.9887
$\delta_2$	7.83E-06	1.070103	0.2846

large during the COVID-19 era than the pre-COVID-19 time. Similarly, the price of the stock indices also shows a significant change. In the pre-COVID-19 period, the price was high but during the COVID-19 period it shows a declining trend up to the first lockdown period, that is, to the end of March but after this, it again takes an upward movement gradually. It is on account of the relaxation added to the lockdown policy by the Indian government. The unprecedented pandemic has already brought challenges to almost all countries. Not a single sector is left unaffected because of COVID-19. In brief, the results conclude that the Coronavirus outbreak has

affected the stock price and increased the volatility in the Indian stock markets, and affect the financial system. Accordingly, this paper tries to provide a very simple but original statistical analysis of the COVID-19 pandemic by taking the case of the Indian stock market.

COVID-19 has collapsed the backbone of the financial market. To boost up the stock market proper policy measures must have to be adopted by the government. Without some extraordinary policy support, the crisis would have been the worst. Accordingly, liquidity injection measures need to be taken. Reserve bank of India (RBI), the central monetary authority has cut its key policy rate by 115 basis points over the last 3 months. It also announced a liquidity injection of around Rs 8 lakh crore in the financial markets since its first announcement on March 27, 2020. Although this pandemic brings the entire world to lockdown trauma, the fatality rate is very low. Many investors can feel that this will be a short-run phenomenon and when the economy recovers it will be difficult for them to buy stocks at the current prices. According to George (2020), during this recovery period liquidity will push stock prices up. This turmoil is a good opportunity for long term investors. For debt markets, RBI must have to cut the rate. There prevails uncertainty in the market at this time. So the investors must have to shift their investment from a bleak prospect to the bright one to balance their work and avoid risk. In this aspect, the pharma sector is looking attractive at this time. To maintain inclusive and sustainable growth domestic policies will need to be designed. Financial assistance must have to be provided by the supreme authority to the destroyed required sectors.

#### DATA AVAILABILITY STATEMENT

The data set is available on request.

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also a doctoral student in the Department of Economics at

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## RESEARCH PAPER



- Abstract

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• **Introduction :-**

As of 10th May 2020. COVID-19 has spread across 215 countries and many of these have faced lockdown. Academia was among the first few sectors that faced rapid shut down of all its primary and higher education institutions and millions of students are affected by lockdown due to the COVID-19 pandemic as the first response. From the

educational sector was to completely halt its operations. Coronavirus pandemic is a significant change, imposing many challenges in the education system. After the onset of the crisis, we started realizing that the COVID-19 is here to stay and we need to find a way to overcome this crisis and transform educational systems and establish better and updated practices in academia. We are preparing for the world when COVID-19 pandemic is now over.

India is a densely populated country. Nationwide lockdown was the only strategy in the first COVID-19 pandemic, which started on 25 March 2020 and is continuing in its fifth year with some relaxations in non-essential areas. Citizens across the country chose to sit in their homes as the guidelines issued by the government of India. Academic activities in India were rapidly halted in the middle of the year, by institutions and states across the country. As per the recent

\*Guidelines issued by University Grants Commission (UGC), the apex for higher in India, the educational institutes strive to provide by ensuring equity and universal accessibility to all the learners. There is constant encouragement by Minister of Education, Government of India, and by the Ministry of Health and Family Welfare in ushering educational reforms to create a knowledge society. Medical and healthcare education is also severely affected by this crisis. Moreover, it will continue to be affected as healthcare systems as most teaching hospitals are occupied by COVID-19 patients. The lack of clinical exposure to the medical and health profession students will deteriorate even further. Owing to the rapid transmission of COVID-19, face-to-face and two-way tutorials are prohibited. This imposes a greater challenge especially in the context of ophthalmic and optometric skills, which requires close eye care practitioner and the patient. Social distancing and telemedicine are set to be a new hereafter, imposing a persistent attempt to teach various clinical skills to the students. The scenario

is prompting an urgent need for transformation of optometry education from traditional system to environment-friendly updated in graduating optometry professionals.

Optometry educators in India have responded very quickly to this crisis, in the light of guidelines issued by the Government of India and UGC. There is a sudden increase seen in the number of webinars and online learning sessions on social media platforms, various topics of optometry, attended not only by students but also by a massive number of practitioners. This has generated tremendous momentum in optometry education and also in continuing education programs. The challenge of this is to apprehend the existing and impending factors that hinder this momentum.



This paper reports the findings of the observational study describing the rapid transition of optometry education in India amid COVID-19 disruptions. Findings of

A nationwide online survey ascertaining the present practices of teaching-learning in optometry are discussed in comparison with a similar survey done in 2018 by the same authors (VR and UM). It not only informs the readers about the changes in reference to the past but also appraises the reasons why the quick adaptation was with the challenges are faced during the transition from educator's perspectives.

#### • Conclusion:-

From the research, it has carried out that COVID-19 is having a serious impact on the health and other sectors. The research has identified the impact of this pandemic on the education system and approaches of the institutions for offering online learning through other mediums. According to the study, people are facing serious issues related to learning and looking for new approaches to learn. The leading authorities have to consider the seriousness of these issues and take the corrective measures to improve the situation that will help to formalise the things and support in enhancing the living experience. The lack of technical understanding of students and teacher is also a big challenge for the system to offer training and support. The proper implementation of

rules for social distancing and sanitising will also increase the operational cost of the Institutions. Moreover, the sudden shift to online learning will be difficult for the Countries and educational authorities due to lack of infrastructure planning for the Format that suits the new approach. It is difficult for the educational institutions. To maintain the operational cost and retain the students. For the betterment of the educational system and approaches of institutions need Changes. To maintain continuity in learning and to share the knowledge with Students, it is recommended to the institutions to adopt the technology and engage Students in learning. The implementation of smart learning tools like Padlet and Edmodo can be used for offering the learning. By the training to staff and collecting the feedback from parents related to the online

• **Methology :-**

system will be useful for the educational institution to overcome the issues related to take classes and engage the students.

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SPSS, on items of each scale one representative factor using Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity (gTS). Descriptive analysis was applied to the categorical frequencies and to determine the means and standard deviations of each scale. Independent-samples t-tests were used to determine differences between the scores the and educational aspects of students' lives for rural and urban students, while used to explore the relationships among the aspects of students, were considered appropriate as the sample was large... and the data met the requirements for parametric testing.

To ensure the validity of the survey, Saudi experts and ensured the validity of the and structure. Applicable

After obtaining consensus on the survey's validity, a pilot study was conducted with a group of 25 students to gain feedback. In addition, factor analysis (principal components analysis) was conducted on the survey scales to ensure that the of each scale measured one representative factor using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity (BTS).

Sampling was done using the non-probability method as the researcher has chosen the sample of students and teachers from the entire population according to convenience. In the current research, the researcher has a sample of 50 respondents and shared the questionnaire with their opinion for analysis of the impact of COVID-19 on the educational system and institutions.

**Reliability and Validity of the Study :-**

To maintain the reliability and validity of research, the researcher has asked questions related to the subject matter and eliminated the wrong responses. To improve validity of the study, the views of academics from the Kahramanmaraş Sütçü İmam University were gathered. Moreover, to improve the validity of the study, the researcher has collected the data from authentic sources and managed the analysis in proper ways. Descriptive and content analysis were used to analyze the data. Calculated according to Miles and Huberman (1994)'s formula, the reliability of the data was found 85%. Moreover, the researcher has focused upon ethical standards of study such as privacy of the respondents, manipulation of the data and ensured that no data had been taken as plagiarised. This kind of approach has improved the effectiveness and validity of the research for analysing the impact of COVID-19 on the educational system and approaches of the institutions.

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• **Analysis Technique :-**

It is an important part of the research, and the researcher has analysed the data by using the thematic analysis method. According to this method, the researcher has done frequency distribution and analysed the response of respondents by developing the graphs and tables. This kind of approach has helped the researcher and readers of the Study (Cuervo-Cazurra et al., 2017). The thematic analysis has also improved the Reliability and eliminated the biasness in the study.

• **Objectives :-**

The overall objective of this study is to analyze the Impact of COVID-19 on Indian Education System. In particular, this study will examine:

- i. How the Indian education system is facing the Impact of COVID-19, and highlighting the role played by teachers and students through online education
- ii. How the positive impact helpful to student, parents and school teachers in the scenario of the online education.
- iii. How to reduce the negative impact of COVID-19 on students for their smooth

education.

The

• **Purpose of the study :-**

All systems have strengths and weaknesses. Maximizing strengths and minimizing weaknesses in order not to miss the opportunity to move forward should be the goal. The main purpose of the study is to analyze the impact of COVID-19 on the Indian education system. It covers the impact of COVID-19 on rural and urban students, Higher education Institutions.

• **Digital Infrastructure in India :-**

Before the COVID-19 lockdown in India, no one estimated that the face of the Indian educational institutions could change so drastically. Schools that never allowed students to carry an electronic gadget turned into learning centers for online classes. Both teachers and students are getting familiar to this new normal, which is definitely more challenging for the teachers to handle with this situation. The teachers also face challenges in designing effective lessons and changing of teaching when shifting to online learning; this can also be resolved through workshops and training.

Thank you

Name- Manish kamti  
Std- FYBMMC 1033  
Clg- pdlc

.TOPIC: THE IMPACT OF CORONA VIRUS IN INDIA.

. The impact of coronavirus pandemic on India has been largely disruptive in terms of economic activity as well as a loss of human lives. Almost all the sectors have been adversely affected as domestic demand and exports sharply plummeted with some notable exceptions where high growth was observed. An attempt is made to analyze the impact and possible solutions for some key sectors.

Food & Agriculture

. Since agriculture is the backbone of the country and a part of the government announced essential category, the impact is likely to be low on both primary agricultural production and usage of agro-inputs.

Several state governments have already allowed free movement of fruits, vegetables, milk etc. Online food grocery platforms are heavily

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impacted due to unclear restrictions on movements and stoppage of logistics vehicles. RBI and Finance Minister announced measures will help the industry and the employees in the short term. Insulating the rural food production areas in the coming weeks will hold a great answer to the macro impact of COVID-19 on Indian food sector as well as larger economy.

#### Aviation & Tourism

. The contribution of the Aviation Sector and Tourism to our GDP stands at about 2.4% and 9.2% respectively. The Tourism sector served approximately 43 million people in FY 18-19. Aviation and Tourism were the first industries that were hit significantly by the pandemic. The common consensus seems to be that COVID will hit these industries harder than 9/11 and the Financial Crisis of 2008. These two industries have been dealing with severe cash flow issues since the start of the pandemic and are staring at a potential 38 million lay-offs, which translates to 70 per cent of the total workforce. The impact is going to fall on both, White and Blue collar jobs. According to IATO estimates, these industries may incur losses of about 85 billion Rupees due to travel restrictions. The Pandemic has also brought about a wave of innovation in the fields of contactless boarding and travel technologies. Telecom

The impact of coronavirus pandemic on India has been largely disruptive in terms of economic activity as well as a loss of human lives. Almost all the sectors have been adversely affected as domestic demand and exports sharply plummeted with some notable exceptions where high growth was observed. An attempt is made to analyze the impact and possible solutions for some key sectors.

#### Pharmaceuticals

.The pharmaceutical industry has been on the rise since the start of the Covid-19 pandemic, especially in India, the largest producer of generic drugs globally. With a market size of \$55 billion during the beginning of 2020, it has been surging in India, exporting Hydroxychloroquine to the world, esp. to the US, UK, Canada, and the Middle-East.

. There has been a recent rise in the prices of raw materials imported from China due to the pandemic. Generic drugs are the most impacted due to heavy reliance on imports, disrupted supply-chain, and labour unavailability in the industry, caused by social distancing. Simultaneously, the pharmaceutical industry is struggling because of the government-imposed bans on the export of critical drugs, equipment, and PPE kits to ensure sufficient quantities for the country. The increasing demand for these drugs, coupled with hindered accessibility is making things harder. Easing the financial stress on the pharmaceutical companies, tax-relaxations, and addressing the labour force shortage could be the differentiating factors in such a desperate time.

#### Oil and Gas

. The Indian Oil & Gas industry is quite significant in the global context - it is the third-largest energy consumer only behind USA and China and contributes to 5.2% of the global oil demand. The complete lockdown across the country slowed down the demand of transport fuels

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(accounting for 2/3rd demand in oil & gas sector) as auto & industrial manufacturing declined and goods & passenger movement (both bulk & personal) fell. Though the crude prices dipped in this period, the government increased the excise and special excise duty to make up for the revenue loss, additionally, road cess was raised too. As a policy recommendation, the government may think of passing on the benefits of decreased crude prices to end consumers at retail outlets to stimulate demand.

Beyond Covid: The new normal

. In view of the scale of disruption caused by the pandemic, it is evident that the current downturn is fundamentally different from recessions. The sudden shrinkage in demand & increased unemployment is going to alter the business landscape

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**POSITIVE IMPACT OF COVID -19 ( RESEARCH  
PAPER)**

**BEHAVIOURAL CHANGES IN THE  
HYGIENIC OF ELDERLY PEOPLE IN INDIA**

**PAPER PRESENTED BY:**

**AAFIYA FIROZ PATEL**

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COLLEGE: MITHIBAI COLLEGE

Behavioural Changes in the Hygienic of elderly people in  
India

ABSTRACT:

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WASH practice has emerged as a very important factor in controlling COVID -19 and promoting Sanitation . The pandemic has helped India in solving its problem of sanitation and hygiene. Be it infant or elders , everyone have showed drastic behavioural changes in their personal hygiene. We have surveyed **2000** locals of Dharavi slum area through phone interview and straight forward questions. Interviews were conducted from May to September 2020 with **1000** heads of household, and **1000** woman members of slum area . Majority of them targeted were oldsters **80%** respondents reported a change in their hand washing practice due to COVID-19, typically describing an increase in hand washing frequency, more thorough washing method, and/or use of soap.

However, there was minimal change in latrine use . The results also highlight the importance of ensuring communities have adequate WASH infrastructure to enable the practice of safe behaviours and strengthen resilience during a large-scale health crisis.

Overall the slum residents had tried their best to improve their sanitary measures and help to combat the COVID-19 , they did face some challenges due to infrastructure . **20-25%** oldster's were not having access to any good facilities or were very rigid to sudden changes and were the major victims .

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## INTRODUCTION:

Sanitation had been the major concern in India from ancient times as seen in Vedic Scriptures and Indus Valley. In the recent past, poor hygiene, unsafe water sources and no access to hand washing facilities were among the top factors in India. But since the pandemic struck, COVID-19 has dramatically improved India's public sanitation. Earlier India was producing only **10 lakh litres** of hand sanitizer per annum, used mainly in the hospitals, but keeping in view the crucial role of sanitizer in the fight against Covid-19, India's hand sanitizer production capacity went up by a staggering **1,000 times to 30 lakh litres** per day. Many researchers have published their work on the sanitation area of India affected by COVID but none or very few published on how sanitation changed or improved in the lives of elderly people especially living in the rural and slum area of India. For example, there has been an increase in the percentage of old people using soaps and sanitizers. In this research paper, I have tried to look in their lives and see the positive changes as well as the challenges faced by the elderly people of India.

## REVIEW OF LITERATURE:

Sanitation: The promotion of hygiene and prevention of disease by maintaining cleanliness

Behavioural Changes : Changes in the behaviour of a person

S Ashraf, J Kuang, U Das (2020) in their Research Paper "Sanitation Practices during early phases of COVID-19 lockdown in pre-urban communities of Tamil Nadu"

V Bauza, GD Sclar, A Bisoyi, F Majori (2021) in their research paper "Water, sanitation, and hygiene practices and challenges during the COVID-19 pandemic: a cross-sectional study in rural Odisha, India"

KA Schmidtke, KG Drinkwater - BMC (2021) in their research paper "A cross-sectional survey assessing the influence of theoretically informed behavioural factors on hand hygiene across seven countries during the COVID-19 pandemic"

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## OBJECTIVES:

The aim behind this research is :

- To study and review the improvement in sanitation and hygiene of the elderly people in the slums .
- To observe and examine the overall behavioural change in the rigid , stereotypical minds of elderly people.
- To analyse the overall positive impact and challenges in maintaining hygiene.

## RESEARCH HYPOTHESES:

It is hypothesized that sanitation would be given priority in the future .

Hypotheses as a question: Will sanitation be given utmost priority in future ?

By taking a more holistic approach to the question , we see that survival dominates and health sensitivities will remain sharp and strong. PM Narendra Modi's slogan "Jaan hai to Jahaan hai" has become must while interacting socially.

**If** proper preventive measures like using of mask , washing hands properly , wearing gloves , not spitting on public places and prevention of open defecation **than** sanitation and hygiene would be our priority in the future.

Null Hypothesis: No , sanitation's importance would not be our utmost priority in the future.

## RESEARCH METHODOLOGY:

Primary data was collected by a cross-sectional study in Asia's largest slum - Dharavi . The data was collected from 100 respondents , majorly comprising the elderly people of the slum.

The secondary data was collected from various sources like the research paper , books , websites , journals and magazines.

## UPSWING OF PERSONAL HYGIENE IN OLDSTERS:

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The government spent nearly **Rs 4,000** crore under SBM towards information and communication to enhance cleanliness. But a noticeable behavioural change happened post the Covid-19 outbreak when people sought ways to avoid getting infected by maintaining sanitary measures and social distancing.

The majority of the older individuals went out less frequently during the declared state of emergency. This measure was also associated with more frequent hand washing, suggesting that reductions in physical activity in our older participants may be part of preventive behaviours to reduce social contact. For personal hygiene practices, **92%** reported wearing a mask when they went out, and **45%** reported an increased frequency of hand washing. Several respondents also described that they had started using waterless hand sanitizer for the first time and now use it frequently, particularly when they are outside their home.

“Now, after seeing it from the TV, we are washing our hands very frequently from all the sides in a systematic way; from above, below, and between the fingers. Earlier we only used to wash one side of the hand palm and that too, not very frequently.”

Male respondent, Dharavi Slum resident, 69 years old (June 2020)

One respondent – 70 years old, described how the virus could be transmitted through contaminated hands and had therefore started using a utensil instead of their hands to retrieve drinking water from their water storage container to avoid contact between their hands and the water.

REPORTED CHANGES IN HANDWASHING PRACTICES :

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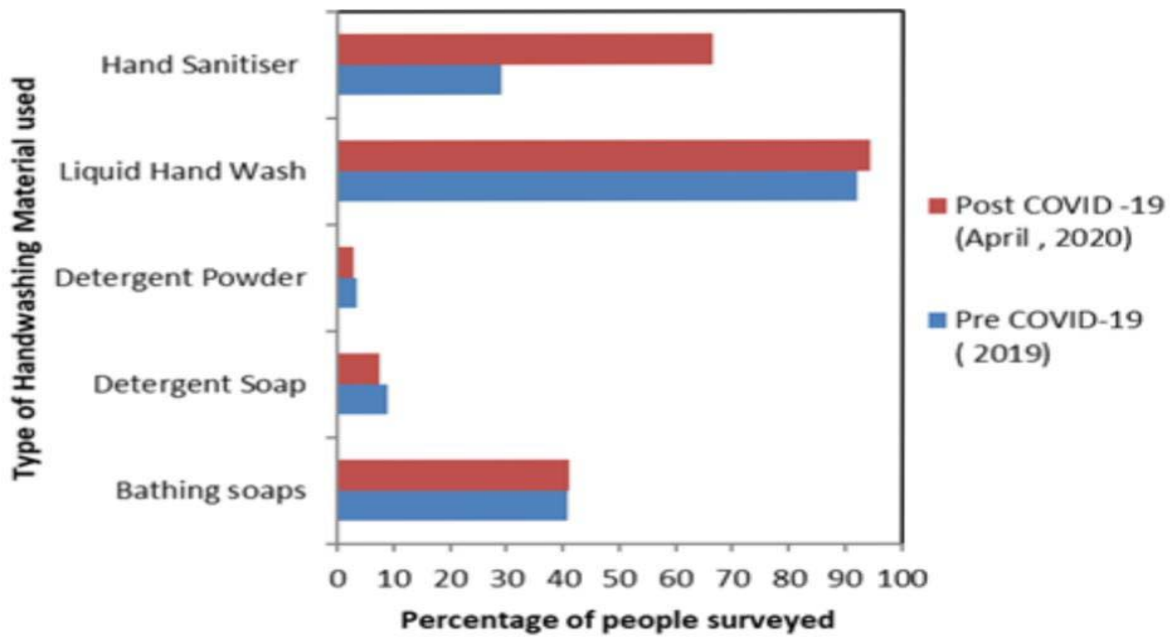
Hand washing Practice	Quantitative result	Qualitative result
	86% of the older respondents reported change in their pattern of washing hands	Respondents reported that they washed their hands 20 times a day for a prolonged period of time after each task.

REPORTED CHANGES IN SANITATION PRACTICES IN OLDSTERS:

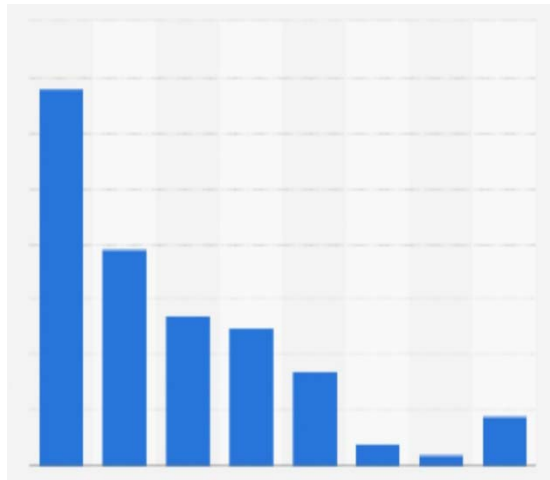
Sanitation Practices	Quantitative result	Qualitative result
	70% of elder respondents reported defecating in the latrine the last time they defecated	One respondent explained that their grandfather became scared of defecating in the open due to the COVID-19 outbreak and started defecating in the latrine.

CHANGES IN SAFE HAND WASHING IN ELDERLY :





INCREASE IN THE USAGE OF PERSONAL HYGIENE PRODUCTS BY ELDERLY IN THE SLUMS OF DHARAVI:



2020 2019. 2018 2017 2016 2015 2014 2013

Following things were not used by rigid minded oldsters in maintaining hygiene :

1. Sanitizers
  2. Gloves
  3. Liquid hand wash
  4. Frequent hand washing
  5. Drinking the kaadha and lemon tea
  6. Drinking of warm water
-

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COMPARING THE CHANGE IN OVERALL SANITATION OF ELDERLY PEOPLE :

<b><u>PRE- COVID SANITARY MEASURES</u></b>	<b><u>AMID COVID LOCKDOWN AND POST- COVID SANITARY MEASURES</u></b>
The elderly residents use to defecate in open without any proper sanitary measures.	The elderly stopped defecating in the open space and used washroom for the same with proper usage of water and maintenance of hygiene.

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Earlier the oldsters use to wash their hands normally with only water without the usage of soaps.	There was a phenomenal rise in the usage of soaps and liquid soaps very often after every task.
Some elderly use to bath on alternate days in the week .	It was reported that the elderly started bathing everyday with soap and proper amount of water
Some old man use to spit on the road without hesitation and they didn't even use handkerchief while coughing and sneezing. They used their clothes while coughing.	After the COVID outbreak they stopped spitting on the road. They had even started using handkerchief whenever necessary.
Rigid , stereotypical old people were reluctant to use sanitizers .	The outbreak made them understand the usage of sanitizer and they started using it often.

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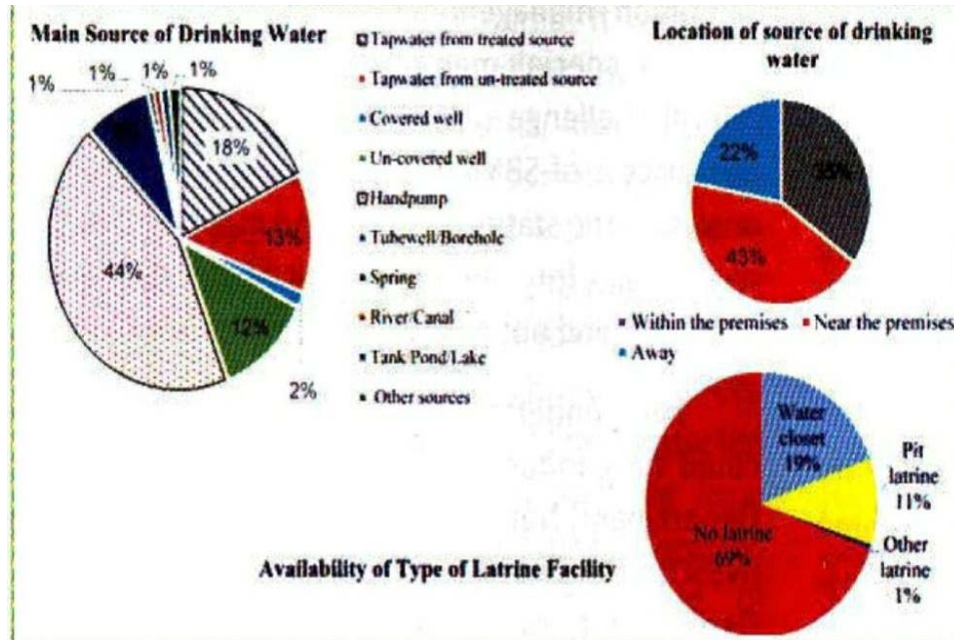
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## CHALLENGES FACED IN IMPLEMENTING SANITARY MEASURES:

- **20%** of the respondent lacked access to any toilet facility and hence reported to open defecation.
  - **75%** Residents faced difficulty at times for washing hands due to water scarcity in the summer season or the water source being far away from their place.
  - **10%** residents stated that they were not using soaps because of their low income. Some even complained that Government had not given any help to them , regarding this.
  - **25%** residents cried that they don't have enough money to even buy their one time meal , so hence they cannot afford buying sanitizers.
  - Rigid elderly people avoided using soap and sanitizers. They did not even maintain social distance .
  - Inadequate maintenance , Ineffective management of faecal waste and rising groundwater contamination were some complaints of the locals .
-

## RURAL WATER SUPPLY AND SANITATION SITUATION IN INDIA:

### Findings and Results:



In total 2000 participants with the majority of oldsters were interviewed, where many of them reported change in their personal hygiene and cleanliness. Majority had prevented open defecation but 20-25% locals were facing challenges with the toilet facilities and had to defecate in open.

Overall, the research revealed rich descriptions of changes in WASH practices among the residents of slum as a result of the COVID-19 pandemic, including improvements in hand washing practices that were promoted for COVID-19 prevention as well as improvements in other WASH practices that were not directly promoted, such as water treatment and household cleaning.

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## Conclusion :

India is trying to the best of its capabilities to make a clean green India but it will not be fulfilled by the effort of an individual but requires a collaborative approach of the government and public requiring welfare policies and a change in the mindset go hand in hand.

Seven per cent of Indians – approximately 91 million people – lack basic infrastructure to supply clean water in their local community.

I would suggest that people are trying and improving their personal hygiene but more awareness and more interaction of government would help achieve India its goal faster.

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Web biography:

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SARS-CoV-2 in the environment: modes of transmission, early detection and potential role  
of pollutions

Department of Statistics , India , Social statistics bulletin: India

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# **Density based traffic light signal using microcontroller**

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## **Abstract**

The propose system is the Traffic Density Based Signal Management in Traffic System which deal with traffic load in each side of lane during high density traffic on road at specific time. Here we are considering the main scenario at time when the traffic is extended for, less no. of vehicles then signal activate for less number of time. If the traffic gets on increasing on other side of lane then, the problem with previous algorithm is that, the vehicles on other side those arrived first as compared to others have to wait. In previous they introduce equal size platoon. We are proposing such a system that deal with such kind of problem by automatically switching the signal by calculating the time at which the

vehicles arrived at stop line. We first formulate the vehicular traffic signal control problem as a job scheduling problem on processors. In our system we switch the signal if the density of vehicle is high then the maximum time is allocated. In our system we are not decide the platoon length or size. Our system show result under light medium & heavy traffic.

**Keywords** — Atmega8 microcontroller, IR Sensors(infrared sensor) , LED'S.

## **Introduction**

**T**raffic Research has the goal to optimize traffic flow of people and goods. As the number of road users constantly increases, and resources provided by current

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infrastructures are limited, intelligent control of traffic will become a very important issue in the future. However, some limitations to the usage of intelligent traffic control exist. Avoiding traffic jams for example is thought to be beneficial to both environment and economy, but improved traffic-flow may also lead to an increase in demand. There are several models for traffic simulation. In our research we focus on optimization of traffic light controller in a city using IR sensor and developed visual monitoring using Atmega8 microcontroller. Traffic light optimization is a complex problem. Even for single junctions there might be no obvious optimal solution. With multiple junctions, the problem becomes even more complex, as the state of one light

influences the flow of traffic towards many other lights. Another complication is the fact that flow of traffic constantly changes, depending on the time of day. **Literature survey**

The Authors K.Vidhya,A.BazilaBanu suggest in reference [1] International Journal of Innovative Research in Science. This article studied about the Density based traffic signal system.The Authors VikramadityaDangi, AmolParab, KshitijPawar and S.S Rathod suggest in reference [2] Image Processing Based Intelligent Traffic Controller. Undergraduate academy Research Journal (UARJ), ISSN: 2278 – 1129, Vol-1, Iss-1, in 2012. The Authors Dinesh Rotake and

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Prof.Swapnilkamore suggest in reference [3] Intelligent traffic signal control system using embedded system in 2012. The author Koushik Mandal, Arindam Sen, Abhijnan Chakraborty and Siuli Roy, purpose that in reference [4] Road Traffic Congestion Monitoring and Measurement using Active RFID and GSM Technology. These Annual Conference on Intelligent Transportation Systems, in 2011. The author B. Prashanth Kumar, B. Karthik purpose that in reference [5] Micro controller based traffic light controller, Department of Electrical Engg. In reference [6] Article studied about ‘A dynamic and automatic traffic light control system for solving the road congestion problem’. By W. Wen & C. L. Yang. The author Bechrakis D . A., Sparis P. D suggest in reference [7] A flexible data logging device for wind potential measurements and statistic-al magnitudes. The author Muhammad Ridwan in Department of Me -chanical and Materials Engineering Faculty of Engi-neering and Built Environment Universiti Kebang-saan Malaysia, purposed a Development of a Low Cost Smart Traffic Controller System. In reference [8]. The Author Amrita Rai and Govind Singh Patel purposed Sensors & Transducers JournalVol. 94, Issue 7, July 2008, pp. 126132. In that article studied about Multiple Traffic Control Using wireless Sensor and Density Measuring camera in reference [9]. Studied in reference [10] About Marco Wiering. “Intelligent Traffic Light Control” by Institute of information and computing sciences, utrecht university.

Figure 1:- Block diagram

### IR sensor

IR sensor is an electronic instrument which comprises of an IR light emitting diode, an IR photodiode, an op-amp

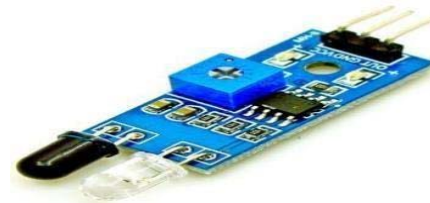


Figure 2: IR sensor.

that emits the light in order to sense some object of the surroundings. An IR sensor can measure the heat of an object as well as detects the motion. Usually, in the infrared spectrum, all the objects radiate some form of thermal radiation. These types of radiations are invisible to our eyes, but infrared sensor can detect these radiations.

### ATmega8 Microcontroller

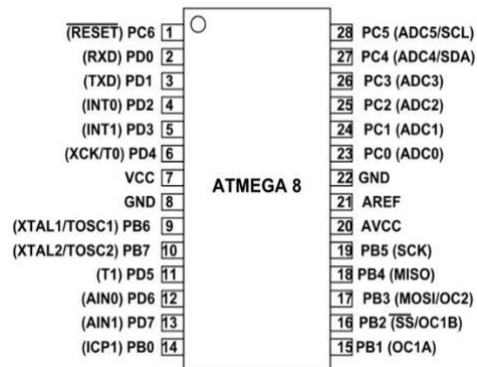
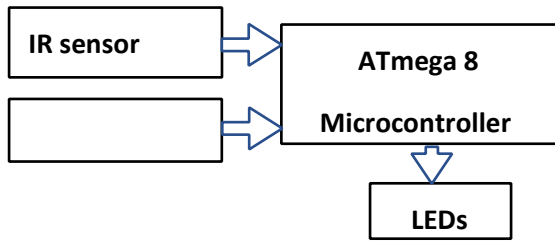


Figure 3: pin layout of Atmega8.

One of the most important features of ATmega8 microcontroller is that except 5 pins, all other pins can be used for supporting two signals. Pins 9,10,14,15,16,17,18,19 are used for port B, Whereas Pins 23,24,25,26,27,28 and 1 are



used for port C and Pins 2,3,4,5,6,11,12 are used for port D. Pin 1 is used as Reset pin

igram

Power supply

and on applying low level signal for time longer than minimum pulse length will generate a reset signal. Pins 3 and 2 can also be used in serial communication for USART (Universal Synchronous and Asynchronous Receiver Transmitter).

Pin 5 and 4 are used as external interrupts. Pins 10 and 9 are used as timer counter oscillators as well as external oscillator where the crystal is connected directly between the pins. Pin 19 is used as slave clock input or master clock output for Serial Peripheral Interface (SPI) channel. Pin 18 is used as slave clock output or master clock input.

Pins 23 to 28 are used for analog to digital conversion (ADC) channels. Pin 12 and 13 are used as Analog Comparator inputs. Pins 6 and 11 are used as counter/timer sources.

## Density based traffic light signal circuit diagram design

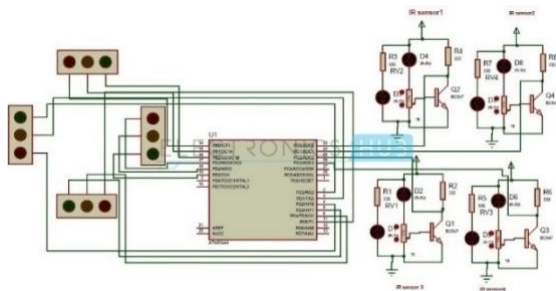


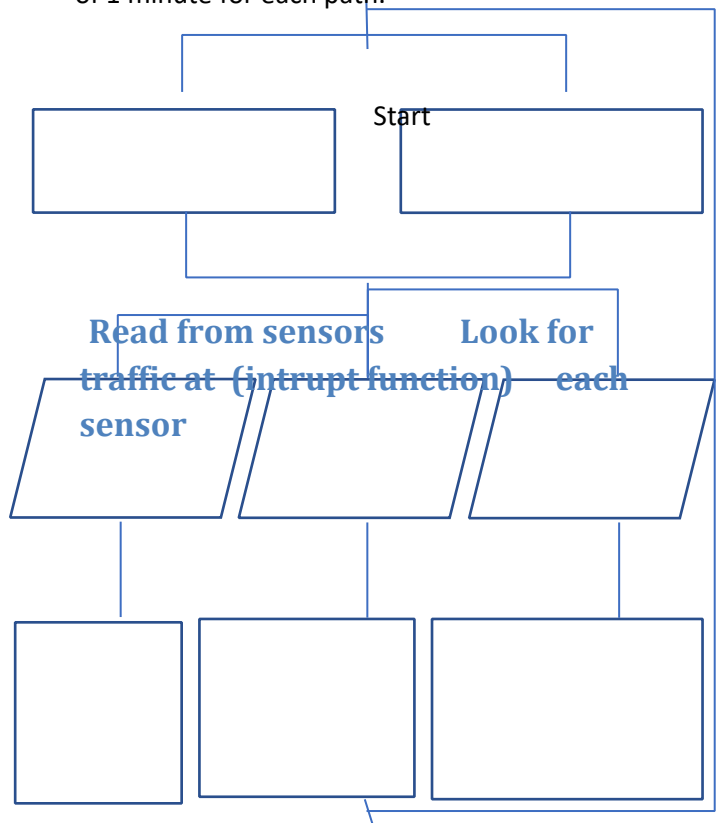
Figure 4: circuit diagram of density based traffic light control system.

This circuit consists of 4 IR sensors, atmega8 microcontroller, 4 traffic lights.

IR transmitter looks like an LED. This IR transmitter always emits IR rays from it. The operating voltage of this IR transmitter is 2 to 3v.

These IR (infra red) rays are invisible to the human eye. But we can view these IR rays through camera. IR receiver receives IR rays that are transmitted by IR transmitter. Normally IR receiver has high resistance in order of mega ohms, when it is receiving IR rays the resistance is very low. The operating voltage of IR receiver also 2 to 3V. We have to place these IR pair in such a way that when we place an obstacle in front of this IR pair, IR receiver should be able to receive the IR rays. When we give the power, the transmitted IR rays hit the object and reflect back to the IR receiver.

Instead of traffic lights, you can use LEDs (RED, GREEN, YELLOW). In normal traffic system, you have to glow the LEDs on time basis. If the traffic density is high on any particular path, then glows green LED of that particular path and glows the red LEDs for remaining paths. In normal traffic system, we allow the traffic for a time delay of 1 minute for each path.



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If traffic at signals    If traffic at all signals    If traffic at all signals

Skip the    Stop at current Run  
signal and wait

**other 2**

normally    signals for the traffic at  
other signal

Figure 5: Flow chart

## Observations

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Nowadays, controlling the traffic becomes major issue because of rapid increase in automobiles and also because of large time delays between traffic lights. So, in order to rectify this problem, we will go for density based traffic lights system.

### **Discussion**

In this system, we will use IR sensors to measure the traffic density. We have to arrange one IR sensor for each road; these sensors always sense the traffic on that particular road. All these sensors are interfaced to the microcontroller.

### **Conclusion**

we have studied the optimization of traffic light controller in a City using IR sensors and microcontroller. By using this system configuration we tried to reduce the possibilities of traffic jams, caused by traffic lights, to an extent and we have successfully gets the results. No. of passing vehicle in the fixed time slot on the road decide the density range of traffics and on the basis of vehicles.

### **Future scope**

The Future scope includes Profiling of the traffic by storing the data and managing the traffic lights according to the collected data. The Profiling can also be used for Traffic study and the variation in traffic density throughout the day, week, month or a year. Further, we can optimize this system for the emergency Vehicles such as Ambulance. **References**

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## Coronavirus, COVID-19

COVID-19 is a virus that can cause mild to severe respiratory illness, including death. The best preventive measures include getting vaccinated, wearing a mask, staying 6 feet apart, washing hands often and avoiding sick people.

### What is coronavirus?

Coronaviruses are a family of viruses that can cause respiratory illness in humans. They are called “corona” because of crown-like spikes on the surface of the virus. Severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS) and the common cold are examples of coronaviruses that cause illness in humans.

The new strain of coronavirus — COVID-19 — was first reported in Wuhan, China in December 2019. The virus has since spread to all continents.

### How many people are infected with COVID-19?

The number of people infected changes daily. As of this writing (10/11/2021), more than 196,910,000 people in the world have

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been infected. Over 4,850,000 people have died. Some 192 countries and territories on all continents have now reported cases of COVID-19.

### *How do you get infected with COVID-19?*

COVID-19 enters your body through your mouth, nose or eyes (directly from the airborne droplets or from transfer of the virus from your hands to your face). The virus travels to the back of your nasal passages and mucous membrane in the back of your throat. It attaches to cells there, begins to multiply and moves into lung tissue. From there, the virus can spread to other body tissues.

### *How does the new coronavirus (COVID-19) spread from person to person?*

COVID-19 is likely spread:

- The virus travels in respiratory droplets released into the air when an infected person coughs, sneezes, talks, sings or breathes near you (within 6 feet). You may be infected if you inhale these droplets.
  - You can also get COVID-19 from close contact (touching, shaking hands) with an infected person and then touching your face.
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- It's considered possible to get COVID-19 after touching a contaminated surface and then touching your eyes, mouth, or nose before washing your hands. But it's thought to be unlikely.

## **Where do coronaviruses come from?**

Coronaviruses are often found in bats, cats and camels. The viruses live in but do not infect the animals. Sometimes these viruses then spread to different animal species. The viruses may change (mutate) as they transfer to other species. Eventually, the virus can jump from animal species and begins to infect humans. In the case of COVID-19, the first people infected in Wuhan, China are thought to have contracted the virus at a food market that sold meat, fish and live animals. Although researchers don't know exactly how people were infected, they already have evidence that the virus can be spread directly from person to person through close contact.

## **What's different about the delta variant of COVID-19?**

It's normal for viruses to mutate — especially coronaviruses and influenza viruses. These mutations create new variants of the virus.

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Sometimes the variants are less contagious, less severe or have slightly different presenting symptoms. Unfortunately, the delta variant of COVID-19 (a strain called B.1.617.2) is more highly contagious and more likely to result in severe illness.

## **How long is a person infected with COVID-19 considered contagious?**

If you're infected with COVID-19 it can take several days to develop symptoms — but you are contagious during this time. You are no longer contagious 10 days after your symptoms began.

The best way to avoid spreading COVID-19 to others is to:

- Stay 6 feet away from others whenever possible.
  - Wear a cloth mask that covers your mouth and nose when around others.
  - Wash your hands often. If soap is not available, use a hand sanitizer that contains at least 60% alcohol.
  - Avoid crowded indoor spaces. Bring in outdoor air as much as possible.
  - Stay self-isolated at home if you are feeling ill with symptoms that could be COVID-19 or have a positive test for COVID-19.
  - Clean and disinfect frequently touched surfaces.
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## How soon after becoming infected with COVID-19 will I develop symptoms?

The time between becoming infected and showing symptoms (incubation period) can range from 2 to 14 days. The average time before experiencing symptoms is five days. Symptoms can range in severity from very mild to severe. In about 80% of patients, COVID-19 causes only mild symptoms, although this may change as variants emerge.

## Who's most at risk for getting COVID-19?

Persons at greatest risk of contracting COVID-19 are:

- People who live in or have recently traveled to any area with ongoing active spread.
  - People who have had close contact with a person who has a laboratory-confirmed or a suspected case of the COVID-19 virus. Close contact is defined as being within 6 feet of an infected person for a cumulative total of 15 minutes or more over a 24-hour period.
  - People over age 60 who have pre-existing medical conditions or a weakened immune system.
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## *Have certain ethnic groups been harder hit by COVID-19?*

*Yes. Many researchers have analyzed data across the country and in some large cities, looking at number of confirmed cases and deaths based on race and ethnicity and related factors. They found that African Americans and the Latino-Hispanic populations have disproportionately higher rates of hospitalizations and deaths due to COVID-19.*

*Researchers suspect this might be because these ethnic groups tend to:*

- Live in more crowded housing situations — living in densely populated areas and in multi-generational households — making social distancing practices difficult.*
  - Work in consumer-facing service industries and are more likely to use public transportation to get to work, putting them at risk for increased exposure to COVID-19.*
  - Be at increased risk of severe illness if they get COVID-19 because of higher rates of existing medical conditions, such as high blood pressure, diabetes, obesity, asthma, and heart, liver and kidney diseases.*
  - Be more likely to be uninsured or lack a consistent care source, which limits access to COVID-19 testing and treatment services.*
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Researchers are still studying other factors that may make ethnic groups more susceptible to negative COVID-19 outcomes, including:

- Genetics.
- Possible differences in lung tissue.
- Socioeconomic status.

*If I recover from a case of COVID-19, can I be infected again?*

Reinfection with COVID-19 is rare, but has been reported.

## SYMPTOMS AND CAUSES

*What are the symptoms of the novel coronavirus (COVID-19) infection?*

The CDC says you may have coronavirus if you have these symptoms or a combination of symptoms:

- **Fever** or chills.
  - Cough.
  - Shortness of breath or difficulty breathing.
  - Tiredness.
  - Muscle or body aches.
  - Headaches.
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- New loss of taste or smell.
  - Sore throat.
  - Congestion or runny nose.
  - Nausea or vomiting.
  - Diarrhea.

*Additional symptoms are possible.*

*Symptoms may appear between two and 14 days after exposure to the virus. Children have similar, but usually milder, symptoms than adults. Older adults and people who have severe underlying medical conditions like heart or lung disease or diabetes are at higher risk of more serious complication from COVID-19.*

*Call 911 and get immediate medical attention if you have these warning signs*

- Trouble breathing.
  - Persistent pain or pressure in your chest.
  - New confusion.
  - Inability to wake up from sleep.
  - Bluish lips or face.
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*This list does not include all possible symptoms. Contact your healthcare provider if you are concerned you may have coronavirus or have any severe symptoms.*

## **DIAGNOSIS AND TESTS**

### *How is coronavirus diagnosed?*

*COVID-19 is diagnosed with a laboratory test. Your healthcare provider may collect a sample of your saliva or swab your nose or throat to send for testing.*

### *When should I be tested for the coronavirus (COVID-19)?*

*Call your healthcare provider if you:*

- *Feel sick with fever, cough or have difficulty breathing.*
  - *Have been in close contact with a person known or suspected to have COVID-19.*
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Your healthcare provider will ask you questions about your symptoms. Your healthcare provider will tell you if you need to be tested for COVID-19.

**If I have a positive test for coronavirus, how long should I self-isolate?**

According to current CDC recommendations, you should self-isolate until you've met all three of the following criteria:

- It's been 10 days since your symptoms first appeared.
- You've not had a fever for 24 hours and you've not used fever-lowering medications during this time.
- Your COVID-19 symptoms have improved.

While at home, ideally self-isolate within separate room of your home if possible to limit interaction with other family members. If you can't stay 100% isolated in a separate room, keep 6 feet away from others and wear a cloth mask, wash your hands often/family members wash hands often, and frequently disinfect commonly touched surfaces and shared areas.

You don't need to be retested to be around others outside your home. However, since everyone and every case is unique, follow your healthcare provider's recommendations for testing.

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If you have a weakened immune system or have had a severe case of COVID-19, the CDC's criteria do not apply to you. You may need to stay home for up to 20 days after your symptoms first appeared. Talk with your healthcare provider about your situation.

### *How long do I need to isolate myself if I've been around a person with COVID-19?*

Known contacts that have not yet been fully vaccinated should quarantine for an appropriate time from the date of exposure based on local guidance. This is typically 14 days, but can vary with testing and concerns around variant strains.

- Fully vaccinated individuals who meet the following criteria are not required to quarantine:
  - They are fully vaccinated (2 weeks have passed since the second dose in a 2-dose series, or 2 weeks after their dose in a single-dose vaccine).
  - They are within 3 months following the last vaccine dose in the series.
  - They remain asymptomatic since their current exposure to COVID-19. Fully vaccinated people should still self-monitor for symptoms of COVID-19 for 14 days following exposure, and seek clinical evaluation if indicated.
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## Is it possible to test negative for COVID-19 and still be infected with the virus?

Yes, it's possible. There are several reasons for "false negative" test results — meaning you really DO have COVID-19 although the test result says you don't.

Reasons for a false negative COVID-19 test result include:

- You were tested too early in the course of illness. The virus hasn't multiplied in your body to the level that it could be detected by the test.
  - They didn't get a good specimen. The healthcare personnel may not have swabbed deeply enough in the nasal cavity to collect a good sample. There could also be handling errors and transportation errors.
  - The COVID-19 test itself was not sensitive or specific enough to detect COVID-19. Sensitivity refers to the ability of the test to detect the smallest amount of virus. Specificity refers to the ability of the test to detect only the COVID-19 virus and not other similar viruses. Many different commercial and hospital laboratories have developed tests for COVID-19. All must meet standards, but no test is 100% sensitive and 100% specific for
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*COVID-19. This is why there is always a possibility of “false negative” and “false positive” tests.*

*If you think you might have COVID-19 even if your test is negative, it's best to follow the current CDC recommendations. Stay home for 10 days if you think you are sick. Stay 6 feet away from others (“social distancing”) and wear a cloth mask. Contact your healthcare provider if your symptoms worsen. Don't decide on your own if it's safe for you to be around others. Instead, contact your healthcare provider when your symptoms improve.*

## **MANAGEMENT AND TREATMENT**

***What medications are currently approved to treat COVID-19?***

*Currently, only one drug has received Food and Drug Administration (FDA) approval. Remdesivir (Veklury®) is approved to treat hospitalized patients with COVID-19 infection.*

***What treatments do people receive if they have COVID-19?***

*Treatments for COVID-19 vary depending on the severity of your symptoms. If you're not in the hospital or don't need supplemental oxygen, no specific antiviral or immunotherapy is recommended. Some people may also benefit from an infusion of monoclonal antibodies.*

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But if you're in the hospital, you may be given IV remdesivir with or without the oral (by mouth) corticosteroid dexamethasone (or another steroid) or dexamethasone alone if remdesivir can't be used.

Depending on the severity of your COVID infection, you may need:

- Supplemental oxygen (given through tubing inserted into your nostrils).
- Mechanical ventilation (receive oxygen through a tube inserted down your trachea). You are given medications to keep you comfortable and sleepy as long as you're receiving oxygen through a ventilator.
- Extracorporeal membrane oxygenation (ECMO). You continue to receive treatment while a machine pumps your blood outside your body. It takes over the function of your body's lungs and heart.

### **What vaccines are in use or in late-stage development to prevent COVID-19?**

The Food and Drug Administration has granted Emergency Use Authorization for three coronavirus vaccines. Both the Pfizer and Moderna vaccines are administered in two doses. It's important for you to get both doses of the vaccine for maximum protection. Pfizer's vaccine doses are given 21 days apart and it's authorized for use in

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those age 5 and older. Doses of the Moderna vaccine are given 28 days apart, and it's authorized for use in those age 18 and older. Both vaccines are highly effective. Another effective option is Johnson & Johnson's single-dose vaccine, which is authorized for use in individuals 18 years of age and older.

### **Can vaccinated people still get COVID-19?**

No vaccines are 100% effective. In fact, breakthrough cases (when someone tests positive for COVID-19 more than two weeks after they're fully vaccinated) are expected. The vaccines reduce your risk of infection. The risk of a severe illness or death from a breakthrough infection is extremely **low**.

### **If I've tested positive for COVID-19 and do not need hospitalization, what can I do to best manage my symptoms at home?**

If you have mild COVID-19 symptoms, you will likely need to **manage your health at home**. Follow these tips:

- If you have a fever, drink plenty of fluids (water is best), get lots of rest, take acetaminophen (Tylenol®).
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- *If you have a cough, lie on your side or sit up (don't lie on your back). Add a teaspoon of honey to your hot tea or hot water (don't give honey to children under one year old). Gargle with salt water. Call your healthcare provider or pharmacist for advice about over-the-counter, comfort care product, like cough suppressants, cough drops/lozenges. Have a friend or family member pick up any needed medicines. You must stay at home.*
- *If you are anxious about your breathing, try to relax. Take slow deep breaths in through your nose and slowly release through pursed lips (like you're slowly blowing out a candle). If you are having trouble breathing, call 911.*

*If you have a mild case of COVID-19, you should start to feel better in a few days to a week. If you think your symptoms are getting worse, call your healthcare provider.*

## **PREVENTION**

*How can I prevent getting the novel coronavirus (COVID-19)?*

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The best defense to prevent getting COVID-19 is to get vaccinated. You should also follow the same steps you would take to prevent getting other viruses, such as the common cold or the [flu](#).

- [Wash your hands](#) for at least 20 seconds— especially before eating and preparing food, after using the bathroom, after wiping your nose, and after coming in contact with someone who has a cold.
  - Wear a multilayered cloth facemask that fits snugly on your face and covers your mouth, nose and chin.
  - Avoid touching your eyes, nose and mouth to prevent the spread of viruses from your hands.
  - Cover your mouth and nose with a tissue when sneezing and coughing or sneeze and cough into your sleeve. Throw the tissue in the trash. Wash your hands afterward. Never cough or sneeze into your hands!
  - Avoid close contact (within 6 feet) with those who have coughs, colds or are sick. Stay home if you are sick.
  - If you are prone to sickness or have a weakened immune system, stay away from large crowds of people. Follow the directions of your healthcare authorities especially during outbreaks.
  - Clean frequently used surfaces (such as doorknobs and countertops) with a virus-killing disinfectant.
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- Use hand sanitizers that contain at least 60% alcohol if soap and water are not available.
  - Greet people with a friendly gesture instead of shaking hands.
  - Get enough sleep, eat a healthy diet, drink plenty of liquids and exercise if you are able. These steps will strengthen your immune system and enable you to fight off infections easier.

### **Should I wear a face mask?**

The CDC recommends wearing a cloth face coverings in public, especially in places where it's hard to maintain at least six feet of distance between yourself and another person. Face masks protect both you and the people around you. Cloth face masks are being recommended because we now know individuals with COVID-19 could have mild or no symptoms, while still spreading the virus to others.

### **A note from Cleveland Clinic**

We've come a long way since the first cases of coronavirus (COVID-19) were confirmed in the United States. We've learned a lot about the virus and how to treat patients who have it. We've also greatly increased our ability for testing. You — our communities — have made tremendous efforts to adapt, too. It's heartening to see so many people

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protecting each other by wearing face masks in public and finding ways to have fun while respecting the rules of social distancing.

The changes we've all made to stay safe and healthy can feel challenging. But please stay vigilant. We know it's not easy, but it's critical. COVID-19 shouldn't be taken lightly. While most people get only mild symptoms, others develop serious complications of the lungs, brain and heart. There may also be other long-term effects that we don't yet know about. And, so far, there's no cure. Fortunately, there are steps we can all take to prevent this. But for them to be effective, we all need to do them all of the time.

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**MELISSA:** Good morning, everyone, I Melissa on behalf of Prahladrai Dalmia Lions College of Commerce and Economics Welcome you all for today's Intercollegiate student conference on "POSITIVE IMPACT OF PANDEMIC ON EVERY ASPECT OF OUR LIVES" Organized by Self-Financed Courses Bachelors of Arts in Multimedia and Mass Communication & Bachelor of Commerce in Banking & Insurance in Association with IQAC. We are glad that you all could join us on this special day. Welcoming you all to this much awaited virtual session we are looking forward to a day spent in action thinking and surely so are you??? ok great!

Now I request Ms. Kinjal to take over.

**KINJAL:** All our lives, from the very start we were taught to never stop. But the most unpredictable phase of our life, covid 19, came silently and out of nowhere, people learned to stop and ponder. Willingly or unwillingly, they just stopped. Sometimes standing still, or being at a halt, they were put to think you are weak, or you can't move further. Some stops are for you, to meet your inner self. Some stops are to teach you the necessity of slowing down. Some stops will help you to calm that continuous running storm inside you, just like the prayers do to our soul. Let us begin our event traditionally with the blessings of goddess Saraswati.

## **SARASWATI VANDANA**

Now I would like to call upon Ms. Harshita to continue.

**HARSHITA:** We have among us today OUR CHIEF GUEST - DR. SHEKHAR CHANDRATRE, OUR GUEST OF HONOUR - MS. JASBIR KAUR AND OUR CHAIRPERSONS FOR TECHNICAL SESSION - DR. NATIKA PODDAR & DR. SUREKHA MISHRA, OUR INCHARGE PRINCIPAL, DR. KIRAN MANE, OUR VICE PRINCIPAL OF DEGREE COLLEGE, PROF. MADHAVI NIGHOSKAR, OUR CONVENOR AND VICE PRINCIPAL OF SELF-FINANCED COURSES, PROF. SUBHASHINI NAIKAR, THE IQAC COORDINATOR, PROF. EMELIA NORONHA, THE BAMMC COORDINATOR, PROF. BHAVANA SINGH, THE BBI COORDINATOR, C.A. DURGESH KENKRE, Our Mentors, Prof. Minu Paul, Prof. Priyanka Radhakrishnan, Prof. Kritika Rao and Prof. Mohini Nadkarni. Wow! That's a Lot of Names to Remember. Before we go ahead, I would like to request our In-charge Principal Dr. Kiran Mane Sir to share words of wisdom with us.

## **SPEECH by Principal Sir**

**MELISSA: Thank you Sir for your encouraging and inspiring words. Now I would like to ask Ms. Kinjal to introduce our Chief Guest for today.**

**KINJAL: OUR EMINENT CHIEF GUEST Dr. SHEKHAR VASANT CHANDRATRE is a Member of National Managing Body of Indian Red Cross, nominated by Hon President of India. He is a Member of Governing Council of MIT- a well known Pvt University at Pune, nominated by Govt of Maharashtra. He has a long list of credentials to his name. He was Vice Principal, Associate Professor and Head of the Department of Commerce at Prahladrai Dalmia Lions College of Commerce & Economics.**

- Sir has more than 30 years of Managerial Experience in managing institutions, programs, seminars and various events on National, State, University and Local levels.
- He has worked on various committees of the University of Mumbai- Syllabus Committees for various subjects, Budget Scrutiny Committee of Mumbai University.
- He has worked as a paper setter, moderator in various university exams as well as a resource person in various conferences, seminars, workshops at National, State and University level.
- He has contributed in the formulation of the New Education Policy (Draft) of India and was also invited as a member by the Government of Maharashtra in preparing the Draft of the New Maharashtra Public Universities Act, 2016.
- He has Presented Research papers on various topics and has delivered guidance lectures on communication and presentation, personality development, interview technique, education scenario in our country, students movement of our country etc.
- In the field of Disaster Management he has organized student activities to provide help to affected students in particular and people in general. He has attended International Conference, Training Programs for youth volunteers on Disaster Management organized by Municipal Corporation of Greater Mumbai (MCGM). Also he has delivered lectures on Disaster Management.
- He is Coordinator and Member of the Syllabus Framing Committee of a Part Time PG Course in Disaster Management conducted jointly by University of Mumbai and Disaster Management Unit of Municipal Corporation of Greater Mumbai.
- He visited the Delaware University- Disaster Research Centre, USA for international inputs on the subject while doing Ph.D.

I would like to request our Chief Guest with such an eminent personality to share a few words to our young researchers.

**SPEECH by Dr. Shekhar Chandratre Sir**



**MELISSA: Thank you Sir for Your valuable and insightful words. Now I would like to ask Ms. Harshita to introduce our Guest of honour for today.**

**HARSHITA:** Our today's Guest of honour Ms. Jasbir Kaur has completed her B.Hsc. in nutrition and dietetics from Delhi University. She is an alumnus of International Board Of Yoga Education, Mumbai. She has an experience of more than 26 years in yoga, nutrition and cognitive behavior enhancement. She has touched more than 11,000 lives across 12 countries including India, Australia, Europe, UAE and USA. Her specialization is in mind control for relaxation and achieving peak performance. She has received a National Award from the President of India - Mr. Ram Nath Kovind in 2017. She has trained 30+ trainers across India through her internationally recognized institute - Mind & Body Wellness Institute. She has also received the Best Health Services Award from AYUSH natural and health organics (2019). She is a wellness keynote speaker for corporates like GVK, Godrej, Jagran engage, etc.

**SPEECH by Ms. Jasbir Kaur**

**MELISSA:** Thank you so much ma'am for your words of inspiration. Request Our Convenor and Vice Principal of Self-Financed Courses, Prof. Subhashini Naikar, To Share Her Outlook on This Conference.

**SPEECH by Subhashini Maam**

**MELISSA:** Thank you Ma'am for always being a beacon of enthusiasm and energy.

**HARSHITA:** Now it's the time for a very creative and interesting thing. As many of you know about the "Tabloid" now we request our BAMMC coordinator, Prof. Bhavana Singh to address us about 'SCOOP Bulletin 2021'.

**SPEECH by Bhavna Maam**

**KINJAL:** Thank you ma'am! It was great to know about the Scoop Bulletin and inspiring as well!!! Now we would be unveiling the 'SCOOP Bulletin 2021 - 2022'.

**UNVEILING OF SCOOP BULLETIN**

(Scoop Bulletin unveiled)

**THE SCOOP BULLETIN'S LINK HAS BEEN SHARED ON THE CHATBOX.**



**MELISSA:** With this we have come to an end of our Inauguration session. I would like to request our BBI Coordinator Prof. CA Durgesh Kenkre to propose the Vote of thanks.

### **VOTE OF THANKS BY DK SIR**

**MELISSA:** Thank you so much Sir for your kind words. Thank you to all the dignitaries for gracing the inaugural session. Now we shall start with our technical session.

### **TECHNICAL SESSION:**

**KINJAL:** This pandemic gave us all a time to focus on ourselves. So, when we are back to basic we are not basic anymore. A coin has two sides, similarly this pandemic too has had both positive and negative impact on our lives.

Keeping the happenings in our surroundings in our mind, we chose POSITIVE IMPACT OF PANDEMIC ON EVERY ASPECT OF OUR LIVES as the topic for today's conference. It would be great to know the different Perspectives of different students on the same topic. Now I would request Ms. Harshita to introduce our First Chairperson For Technical Session for the day Dr. Natika Poddar.

**HARSHITA:** CMA Dr.Natika Poddar is an Associate professor in Finance at St.Francis Institute of Management and Research,Mumbai. She is also Chairperson of Examination and Head- Research at St.Francis institute. She has a double doctorate in Commerce and Management .She has over 15 years teaching experience and 2 years industry experience. She has published over 20 papers at highly reputed national and international indexed journals and presented more than 15 papers at national and international conferences.She has co-authored 6 books. She has been bestowed with many awards in areas such as academic excellence, research excellence and many more.She is a Post Graduate recognized Faculty and Ph.D guide in Management studies for the University of Mumbai.

### **SPEECH by Dr. Natika Poddar Ma'am**

**KINJAL:** Thank you so much ma'am for your words of wisdom. Now I would like to request Ms. Harshita to introduce our Second Chairperson For Our Technical Session, Dr. Surekha Mishra.

**HARSHITA:** Dr. Surekha Mishra is faculty of Shankar Narayan College of arts and Commerce Bhayadar, East. She has a vast Teaching experience of 30 years. She has a Ph. D in Industrial Relations and has presented & published more than 20 papers. She has also been involved in various surveys. She has chaired various conferences & seminars. She is also a Ph. D. guide for business Administration in Mumbai University. Along with all her academic credentials, maam has also worked on a number of social & community based projects like Swatch Bharat Abhiyan, Ladki bachao, women empowerment, literacy campaign, senior citizens protection etc. She has been appreciated by the University for her credentials with several awards.

### **SPEECH by Dr. Surekha Mishra Ma'am**

**MELISSA:** Thank you ma'am for your motivating words, now we shall proceed towards the paper presentations. Dear all please listen to the rules carefully and you may note them down if you like.

- Every participating team has 5 minutes to speak.
- Students would be called as per their codes and not their college or personal names.
- You will present your papers one by one.

I hope the rules are clear to everyone. Without further ado, let's begin with the paper presentation ceremony.

### **PAPER PRESENTATION**

#### **interim threading**

**HARSHITA:** Next presentation would be by Code Number \_\_\_\_\_

**MELISSA:** Resolve Technical queries, if any.

**KINJAL:** Keep a watch on time.

**HARSHITA:** We have officially come to the end of the paper presentation. All Participants did very well and you should all be proud of yourselves. In my eyes, you're all winners, irrespective of the final results! Kudos to all of you!

It was indeed a majestic experience for all of us. Wasn't it?

Undoubtedly we have learned a lot of things from the speakers and their research. One more thing that I learned today is this with a positive vision you can even make a world pandemic a good thing.

When used wisely everything can get you good conclusions. Now I would like to request our Chief Guest to share his/her thoughts about the presentations and guide them further.

### **SPEECH (SUBJECT EXPERT)**

**MELISSA:** Thank you to much maam for your insightful and guiding words. An important announcement regarding the results: the names of the winning Speakers will be shared on our social media handles. So, make sure to actively check PDLC's Instagram and other socials in the coming days to find out who the top 3 speakers are!

Also, an important announcement for all my fellow students attending; the link for the feedback form has been posted too. Make sure to fill the form before exiting this meeting. Now, I request our lovely mentor, Prof. Mohini Nadkarni to propose the vote of thanks.

### **VOTE OF THANKS BY MOHINI MAAM**

Thank you, ma'am for beautifully summarising this lovely day.

I request everyone present in the meeting to rise up for the national anthem

### **NATIONAL ANTHEM**

ONE DAY Inter-Collegiate Conference on  
**“NISHCHITAM: POSITIVE IMPACT OF PANDEMIC  
ON EVERY ASPECT OF OUR LIVES”**  
(CONFERENCE PROCEEDINGS)

**Chairman, Governing Council**

Lion Dr. Sharad S. Ruia



**Hon. Secretary, Governing Council**

Lion Kanahaiyalal G. Saraf



**Chief Editor**

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Prof. Kritika Rao



**Student Co-ordinator**

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ORGANISED BY:-

**PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE AND ECONOMICS**

**B.A.M.M.C and B.B.I in association with IQAC**

Sunder Nagar, S.V. Road, Malad West, Mumbai, Maharashtra 400064

DATE: - 02<sup>nd</sup> December 2021

## Chairman's Message

'To go and catch a falling star!'

In three words I can sum up everything I've learned about life. IT GOES ON."- Robert Frost

All of us across all walks of life are witnessing an unprecedented event in our lifetime, Academic institutions are no different; all of us have been overhauled alike. Adapting to the current times and overcoming them is the need of the hour. However, it is re-assuring for decision makers like me that like a real leader at the time of Crisis, our institution, Prahladrai Dalmia Lions College of Commerce & Economics and its entire workforce has stood tall, and ensured that the academic delivery, exams and other curricular activities were conducted unhindered.

Yes, I admit that the sudden change of methods, technology infusion, remote online classroom sessions have been of great discomfiture to the teachers, students and the support staff alike. But the steadfast turnaround displayed by our team under the able leadership of Dr. Kiran Mane, I/C Principal and the teams led by Vice Principals Prof. Madhavi Nighoskar (Degree Aided), Prof. Subhashini Naikar (Degree-Unaided) and Ms. Kiran Mishra and Mr. Anil Bagade (Incharges Junior College) have us, members of Governing Council wanting for words of gratitude.

To match the undeterred service provided by the College Team, we decided to utilize this challenging time for the betterment of the college infrastructure. I am happy to announce that Governing Council was unanimous in releasing requisite funds and resources to renovate and transform existing infrastructure. The General Auditorium, Conference Room, student's washrooms, Principal's cabin, Non-teaching Dry Cafeteria is upgraded to a state-of-art 3 star facility. We have also upgraded 2 class rooms to technology laced – 'Smart Classrooms' and installed the much awaited Rain Water Harvesting Technology- improving our sustainability quotient. With a new coat of paints, and other amenities, we are sure that the new batch of students would find an entire new college building ready to welcome them dearly. I am duty bound to mention the valuable service of our senior member Lion Kamal Ruia, Vice Chairman Governing Council for his rigorous follow up and supervision of the above said projects, and the youngest leader Lion Atit Ruia for his visionary inputs. Their support along with our other members of the Governing Council, despite the Covid scare gives us the confidence to drive forward.

There are yet many achievements to be mentioned, but are being withheld as the Covid19 protocols limit the capacity of University offices to approve new proposals. However, we are happy that LIC Team has visited the college for scrutiny of proposed Research Centre of Commerce & Economics and have submitted a positive report.

The pandemic effect has had a serious impact on the academic cycle, as many things remained ambiguous. This in turn affected the admissions and increased drop out percentages amongst student of many institutions around Mumbai. But again, our stellar team of teaching and non-teaching staff have upheld the quality admissions, even in the increase of intake capacity.

I personally thank those Samaritans with benevolent heart who have sponsored the academic fees of some of our students. The Governing Council is pleased to announce a special provision of 2.5 lakhs towards financial aid to deserving candidates. Kudos to all the achievers and supporters!

The road ahead is tough, but I am sure that we could work as a team and Triumph over the pandemic from our life. I urge everyone to follow Covid19 Protocols and assist the administration for effectively controlling the spread and treatments. If anyone can support financially or through social ventures in the trying times, it would be great!

Prahladrai Dalmia Lions College of Commerce & Economics is entering into its Golden Jubilee year and this year is important. Let us look ahead, and with the same resolve we shall strive for a better future for all of us, for all humanity.

In the words of Og Mandino, “I will love the light for it shows me the way, yet I will endure the darkness for it shows me the stars.”

**LION DR. SHARAD S. RUIA**

Chairman, Governing Council

## Secretary's Message

Report card of the college is excellent. Due to Covid and lockdown, classes were conducted on virtual platform. We feel sorry for those students who could not enjoy college and canteen life, nor showcase their talents in various fields. During this period of crisis, under able leadership of Incharge Principal Dr. Kiran H. Mane and equally supported by teaching and administrative staff, college has performed very well. In the past, I have seen that we have produced thousands of Corporate Leaders, Public leaders, Chartered Accountants and Media Persons. They have travelled from Classroom to Boardroom of Public Limited Company. We make education a purposeful, meaningful and enjoyable experience.

We give due weightage and importance to the grievances of students and solve the same by not taking it lightly and casually. In spite of the economic meltdown due to Corona lockdown, we are continuously increasing basic amenities and other facilities for students and staff members.

Let us all march ahead for a better tomorrow.

Together we can and always will make a difference.

Be positive in life and wish negative Corona test for all.

We extend our whole hearted support to economically backward students.

LION KANAHAIYALAL.G. SARAF

**Hon. Secretary, Governing Council**

## From the In-charge Principal's Desk

It is every human soul's inherent desire, to realise, to be aware, and to awaken to a brighter light, to a better space, and to a more tranquil state of mind. The theme of our Intercollegiate Student Conference "Nishchitam" has been chosen with a view to having "Creation amidst Chaos" i.e. to bring out the positive aspects of the pandemic in all walks of our lives.

With the rise of the New Year, there has been a rise of new hope. Under the leadership of our BAMMC and BBI programs in association with the internal quality assurance cell, we put into practice the slogan reaching out - i.e. know all those who required help in COVID 19 period. During these times of Pandemic, all of us are surrounded by negativity, but we should be focusing on the Silver lining of this black cloud.

As said by Roy T. Bennett, "Your hardest times often lead to the greatest moments of your life. Keep going. Tough situations build strong people in the end." Thus, we at Prahladrai Dalmia Lions College wish that amidst the negative chaos, all of you radiate your positive vibes. May these difficult times bless you with strength and toughness.



DR. KIRAN MANE

**In Charge Principal**

## **FOREWORD**

Life is all about accepting the changes or changing what we can't accept. Your mind is a powerful tool, when you fill it with positive thoughts, your life will start to change. This is the main aim of conducting this conference; to fill the young minds with positivity and Nishchitam.

PROF SUBHASHINI NAIKAR

**Vice Principal SFC & Convenor**

## INDEX

SR. NO	NAME	COLLEGE NAME	TOPIC	PG.NO
1	SHRUTI BRIJMOHAN OJHA	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	ECONOMIC CONSEQUENCES OF COVID – 19	1 – 17
2	ARSHIYA SAYYED	BHAVANS COLLEGE	CORONO CRUSHING BLOW TO DREAMS OF MILLONS	18– 23
3	FARHEEN ABDUL JABBAR MANSOORI	VIDHYA VIKAS UNIVERSAL COLLEGE	IMPACT OF COVID ON EDUCATION	24 – 27
	CELESTINA PATEL	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	IMPACT OF COVID IN INDIAN COLLEGE	28-34
4	KHUSHBOO JASBIRSINGH RAJPAL	K.P.B.HINDUJA COLLEGE	INDIAN STOCK MARKETS REACTION TO COVID – 19 CRISIS IS SURPRISINGLY MUTED	35 – 53
5	AAFIYA FIROZ PATEL	MITHIBAI COLLEGE	BEHAVIORAL CHANGES IN THE HYGIENE OF ELDERLY PEOPLE IN INDIA	54 – 63
6	DHURU BORINA	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	IMPACT OF COVID ON EDUCATION	64 – 65
7	SAURAB CHAHAN	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	NEGATIVE IMPACT COVID – 19 FOR THE CLIMATE CHANGES	66 - 70
8	DHRUVI BAWAL	PRAHLADRAI DALMIA LIONS COLLEGE OF	IMPACT OF COVID – 19 ON EDUCATION AND WELL- BEING	71 –73

		COMMERCE & ECONOMICS		
9	SHILPA BAIRAGI	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	INDIAN GOVERNMENT PERFORMANCE IN COVID-19	74 – 80
10	HARIS ANSARI	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	EVIDENCE OF THE IMPACT OF NOISE POLLUTION ON BIODIVERSITY	81 – 82
11	SANJANA GUPTA	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	DIGITAL MARKETING	83-87
12	PAPIYA DEV	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	COVID – 19 AND IMPACTS ON AGRICULTURAL OUTPUT	88– 98
13	KRUPA NIMAVAT	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	EMERGING TECHNOLOGIES	99 - 103
14	ALOK BAIRAGI AND ASHTA KHATU	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	IMPACT OF PANDEMIC ON BUSINESS AND PEOPLE	104 – 113
15	MAYA RAJBHAR AND VEDANT PAWAR	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	ENTERTAINMENT INDUSTRIES IN THE AGE OF PANDEMIC	114 – 110
16	NANDESH VISHWANATH SHIRSAT	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	IMPACT OF COVID ON EDUCATION	111 – 119
17	SHWETA PANDEY	PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS	DEMAND OF THE NEW E-MARKETING	120 - 124

**NAME:-** SHRUTI BRIJMOHAN OJHA

**COLLEGE NAME:-** PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS OF COMMERCE & ECONOMICS

**TOPIC:-** ECONOMIC CONSEQUENCES OF COVID-19

#### ABSTRACT

COVID-19 is not only a global pandemic and public health crisis; it has also severely affected the global economy and financial markets. Significant reductions in income, a rise in unemployment, and disruptions in the transportation, service, and manufacturing industries are among the consequences of the disease mitigation measures that have been implemented in many countries. The outbreak of COVID-19 brought social and economic life to a standstill. In this study the focus is on assessing the impact on affected sectors, such as aviation, tourism, retail, capital markets, MSMEs, and oil. International and internal mobility is restricted, and the revenues generated by travel and tourism, which contributes 9.2% of the GDP, will take a major toll on the GDP growth rate. Aviation revenues will come down by USD 1.56 billion. Oil has plummeted to an 18-year low of \$ 22 per barrel in March, and Foreign Portfolio Investors (FPIs) have withdrawn huge amounts from India, about USD 571.4 million. While lower oil prices will shrink the current account deficit, reverse capital flows will expand it. Rupee is continuously depreciating. MSMEs will undergo a severe cash crunch. The crisis witnessed a horrifying mass exodus of such a floating population of migrants on foot, amidst countrywide lockdown. Their worries primarily were loss of job, daily ration, and absence of a social security net. India must rethink her development paradigm and make it more inclusive. COVID 19 has also provided some unique opportunities to India. There is an opportunity to participate in global supply chains, multinationals are losing trust in China. To 'Make in India', some reforms are needed, labour reforms being one of them. It has become clear that most governments in the world underestimated the risks of rapid COVID-19 spread and were mostly reactive in their crisis

response. As disease outbreaks are not likely to disappear in the near future, proactive international actions are required to not only save lives but also protect economic prosperity.

## KEYWORDS

COVID 19, economic impact, GDP growth rate, sectoral impact, COVID relief measures.

## LITERATURE REVIEW

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## HYPOTHESIS

In Covid pandemic, countries across the globe implemented stringent measures such as mandatory national lockdown and border closures. No doubt, addressing the public health consequences of COVID-19 is the top priority, but the nature of the equally crucial economic recovery efforts necessitates some key questions as governments around the world introduce stimulus packages to aid such recovery endeavours: Should these packages focus on avenues to economic recovery and growth by thrusting business as usual into overdrive or could they be targeted towards constructing a more resilient low-carbon CE? To answer this question, this paper builds on the extant literature on public health, socio-economic and environmental dimensions of COVID-19 impacts .global economic boom in a resilient post-COVID-19 world. It is conceived that the “accidental” or the pandemic-induced CE strategies and behavioural changes that ensued during coronavirus crisis can be leveraged or locked in, to provide opportunities for both future resilience and competitiveness. The negative effects have ranged from a severe contraction of GDP in many countries to multi-dimensional environmental and social issues across the society.

## OBJECTIVES OF RESEARCH

- TO KNOW about the Lockdown has put great stress on the supply chains of essential commodities, and therefore, many of the Indian companies have focused on the production and supply of essential items only, thereby stopping all other production activities, thereby bringing down the production graph.
- TO UNDERSTAND the consequences of economics.

- TO AIM minimise the effect in the economy caused by the COVID -19 outbreak, the Union Finance & Corporate Affairs Minister.
- TO ANALYSE the Case Study of Research.
- TO EXAMINE the steps taken by the Indian government.

## INTRODUCTION

The outbreak of COVID-19 has impacted nations in an enormous way, especially the nationwide lockdowns which have brought social and economic life to a standstill. A world which forever buzzed with activities has fallen silent and all the resources have been diverted to meeting the never-experienced-before crisis. There is a multi-sectoral impact of the virus as the economic activities of Nations have slowed down. What is astonishing and worth noting is an alarm bell which was rung in 2019 by the World Health Organization (WHO) about the world's inability to fight a global pandemic. A 2019 joint report from the WHO and the World Bank estimated the impact of such a pandemic at 2.2 per cent to 4.8 per cent of global GDP. That prediction seems to have come true, as we see the world getting engulfed by this crisis. In another report entitled 'COVID-19 and the world of work: Impact and policy responses' by International Labour Organization, it was explained that the crisis has already transformed into an economic and labour market shock, impacting not only supply (production of goods and services) but also demand (consumption and investment). International Monetary Fund's (IMF) chief said that, 'World is faced with extraordinary uncertainty about the depth and duration of this crisis, and it was the worst economic fallout since the Great Depression'. The IMF estimated the external financing needs for emerging markets and developing economies in trillions of dollars. India too is groaning under the yoke of the pandemic and as per news reports in Economic Times published on 23 March 2020, the economists are pegging the cost of the COVID-19 lockdown at US\$120 billion or 4 percent of the GDP. This COVID-19 pandemic affected the manufacturing and the services sector—hospitality, tours and travels, healthcare, retail, banks, hotels, real estate, education, health, IT, recreation, media and others. The economic stress has started and will grow rapidly. While lockdown and social distancing result in productivity loss on the one hand, they cause a sharp decline in demand for goods and services by the consumers in the market on the other, thus leading to a collapse in economic activity. However, lockdown and social distancing are the only cost-effective tools available to prevent the spread of COVID-19. Governments are learning by doing.

### Impact on Tourism, Aviation and Retail

The tourism industry is the worst affected due to the COVID crisis, internationally. The World Tourism Organization (UNWTO) (2020) estimations depict a fall of 20–30 per cent in international tourist arrivals. These figures too are based on present circumstances and are likely to increase or decrease in future. Millions of people associated with industry are likely

to lose their jobs. In India, the travel and tourism industry is flourishing and is contributing significantly to the economy. The FICCI-Yes Bank report titled 'India Inbound Tourism: Unlocking the Opportunities' described India as a tourism powerhouse and the largest market in South Asia. Tourism in India accounted for 9.2 percent of GDP and had generated US\$247.3 billion in 2018, with the creation of 26.7 million jobs. Currently, it is the 8th largest country in terms of contribution to GDP (JaganMohan, 2020). According to the report, by 2029, the sector is expected to provide employment to nearly 53 million people. Foreign Tourist Arrivals (FTAs) crossed 10 million in 2017. However, the coronavirus pandemic has restricted international mobility and the revenues generated by this sector will take a major toll on the GDP growth rate. It may bring a downfall of 0.45 per cent in the growth rate of GDP. The aviation sector in India currently contributes US\$72 billion to India's GDP. Foreign tourist arrival has been down in the first quarter. The lockdown will have a significant impact on arrivals in the second quarter. If we estimate a conservative 25 per cent decline in the contribution of the aviation sector, it will amount to 18 billion. Railways contributed US\$27.13 billion in 2019 to GDP. A 21-day lockdown period will bring down the revenue by US\$1.56 billion. The Indian retail industry was worth US\$790 billion in FY 2019. It accounts for over 10 per cent of the country's GDP and around 8 percent of employment. In the past few years, online retail has seen a very rapid growth and the market projections had indicated a 30 per cent growth in online retail in 2020 (National Investment Promotion and Facilitation Agency, 2020). A month-long shutdown for retail will affect the Quarter 2 revenues. In the retail sector, the suppressed demand has a tendency to revive very fast and this will enable the sector to recover the losses once the lockdown is lifted. Online retail was operational in some parts of the country during the lockdown period and this will help in offsetting some of the losses for the industry.

#### Impact on GDP Growth Rate

While the COVID-19 pandemic is constantly growing and showing little signs of containment as of 15 April 2020, its adverse impact on economic growth of the country will probably be very serious. The UN warned that the coronavirus pandemic is expected to have a significant adverse impact on the global economy, and most significantly, GDP growth of India for the present economy is projected to decline to 4.8 per cent.

#### Impact of COVID-19 Pandemic on Migratory Labour

The International Labour Organization in its report describes the coronavirus pandemic as 'the worst global crisis since World War II'. About 400 million people (76.2% of the total workforce) working in the informal economy in India are at a risk of falling deeper into poverty due to catastrophic consequences of the virus. As half of the world is in lockdown, it is going to be a loss of 195 million full-time jobs or 6.7 percent of working hours globally. Many are in low-paid, low-skilled jobs where sudden loss of income is catastrophic. Seasonal migration of labour for work is a pervasive reality in rural India. A migration of millions of people happens from rural areas to industries, urban markets and farms. Major migration corridors in India are from UP and Bihar, to Punjab, Haryana, Maharashtra and Gujarat.

Newer corridors from Odisha, West Bengal and North East to Karnataka and Andhra Pradesh, from Rajasthan to Gujarat, from MP to Gujarat and Maharashtra and from Tamil Nadu to Kerala are also being created.

### Health Sector

In an effort to sustain these challenges, hospitals have begun implementing measures to reduce or defer costs, with a view to reserve cash in hand. In the context of consumables, supplier consolidation for better rates and renegotiation of credit periods for pharmacy and consumables are some measures instituted by hospitals to conserve their cash flow. The rampant rise in the total number of people reported worldwide as of writing is 12,170,408 while the world has seen an untimely death of 552,112 humans worldwide, and the overall recovery number has been 7,069,188. The high surge in the numbers of cases worldwide led the WHO to declare it as Pandemic ( public health emergency) On January 30, 2020 where the overall mortality rate is 3.4%.

### DIGITAL/IT SECTOR

Nowadays, technological progress has given the opportunity to industries to provide people with huge amounts of products. Digital marketing uses channels like the internet to open new avenues for industries to advertise and sell their products to customers. Digital marketing includes all marketing tactics and ways that use an electronic device or the internet to show, promote, sell products or services and industries use internet channels that will help them succeed. Websites, social media pages, targeted advertisements and email tend to keep current and increase prospective customers. Digital marketing includes all the methods that can create a massive impact on people at a certain time, at a certain place and through a certain channel [1]. Digital marketing industrial progress is an outcome of combining big data and academic scientific research on intelligent systems. In this article digital marketing methods are thoroughly analyzed and explained through an artificial intelligence (AI) research perspective. However, the number of scientific publications remains at an intermediate level when at the same time the business sector seems to have moved forward. This paper highlights the technical components of digital marketing techniques in scientific research to optimize the performance of them through artificial intelligence (AI) methods. Despite the vast research area and a certain number of publications, it seems that there is a lack of scientific publications regarding specifically digital marketing and artificial intelligence (AI). Nevertheless, there are some very extensive research attempts on specific digital marketing fields like search engine optimization, search engines ranking factors, consumer behavior, web development and targeted ads that gives hope for the future of artificial intelligence (AI) impact on digital marketing research[2]. Customers, resellers, competitors, suppliers, promoters, the overall: economy, positioning, segmentation, expansion, growth, products, brands, advertising, Market share, price, advertising expenditures, number of resellers, churn, customer value, etc. are some of the main variables that affect decision making. It is certain that decision making is a matter of multiple variables based on analysis, experience and judgment [3, 4]. In order



to define the key role of artificial intelligence (AI) in digital marketing research we must map the current situation of digital marketing scientific research and compare it to the business sector. Then we will know on what scale digital marketing in academia falls short of the development in the business sector.

We propose a data-driven approach for automatic prediction of deterioration risk using a deep neural network that learns from chest X-ray images and a gradient boosting model that learns from routine clinical variables. Our AI prognosis system, trained using data from 3661 patients, achieves an area under the receiver operating characteristic curve (AUC) of 0.786 (95% CI: 0.745–0.830) when predicting deterioration within 96 hours. The deep neural network extracts informative areas of chest X-ray images to assist clinicians in interpreting the predictions and performs comparably to two radiologists in a reader study. In order to verify performance in a real clinical setting, we silently deployed a preliminary version of the deep neural network at New York University Langone Health during the first wave of the pandemic, which produced accurate predictions in real-time. In summary, our findings demonstrate the potential of the proposed system for assisting front-line physicians in the triage of COVID-19 patients.

## POSITIVE IMPACT OF COVID - 19 ON SECTORS

### IT services

Many businesses were forced to make their employees work from home spurring a surge in the requirement for IT solutions. In particular, businesses needed to update company wide security systems to protect critical data and employees from cyber attacks.

### Education

When schools closed, many students were required to quickly move towards online learning. This caused a huge increase in demand for online learning education providers such as Mathletics, iVET and Education Perfect. Online learning has now become an integral part of a school curriculum and assessment of student performance, and this is expected to continue into the future. It has also led to a huge increase in demand for computer hardware such as laptops and servers, as well as home office equipment such as screens, ergonomic chairs and standing desks.

### Essential Government services

Companies that provide services to essential government institutions such as prisons, medical centres, and hospitals will continue to operate and service the community regardless of the economic conditions. These organisations tend to see an increase in activity due to community changes where increases to unemployment create more requirements for certain government-provided services. This would include service providers under the National Disability Insurance Scheme (NDIS).

## People working from home

More people than ever are now working from home due to the COVID-19 restrictions imposed. Once restrictions ease, we will see people gradually going back to the office. However, it is likely that a large portion of the business community will continue to encourage employees to work from home as it becomes part of the standard working arrangement. This will see a rise in the demand for:

### Home office setups

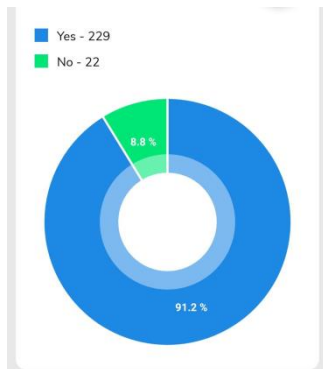
Communication software  
The protection of sensitive data  
With people working from home, there will be less demand for public transport, and traffic in the city centres should reduce. It will also mean that people will have more time for leisure activities as they do not have to deal with the lost time from the daily commute into the office.

## RESEARCH MYTHOLOGY

I had taken primary data through survey forms and total responses I got of 250 people. I also took Secondary Data.

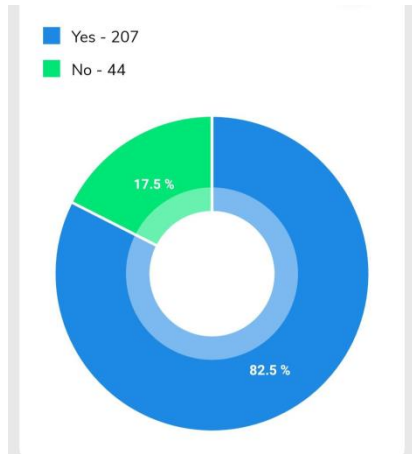
### 1) What do you think 2020 is Worst year for the economy?

In my survey 91.60% people said the count of people is 229, and 8.40% have said No the count of people is 21.



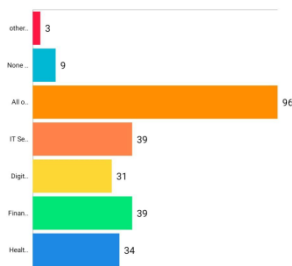
### 2) Do you agree that Once lockdown is lifted, our productivity will rise?

In my survey 82.40% of people said yes the count was 206, and 17.60% of people said No the count of people was 44.



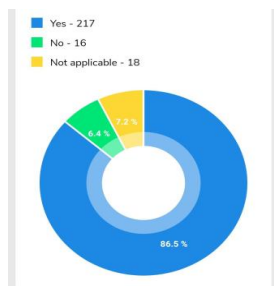
3) Which sectors of the Indian Economy will grow faster?

In my survey 13.60% people has said Health sector the count of people is 34. Financial sector is said by 15.60%, the count of people is 39. Digital marketing is said by 12.40% the count of people is 31. IT sector is said by 15.60%, the count of people is 39. people said All of the above are 38% the count of people is 95. None of the above is said by 3.60% the count of people is 9. and some people had specify other sector they are Education sector, oil sector, etc is said by 1.20% the count of people is 3.



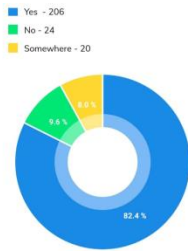
4) Did you lose Your Job from this Pandemic?

In my research 87.20% of people have said yes. The count of people is 218. people said No is 6% the count is 15. Not applicable is said by 6.80% the total count of people is 17.



5)According to you, "Work from Home" is the best for our economic development?

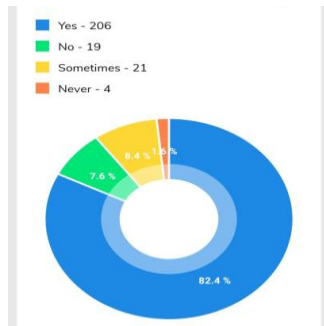
In my research people said yes is 82.40% the count is 206.people said No is 9.60% the count is 24.people said somewhere 8% the total count of people are 20.



6)India Economies have suffered the worst GDP fall due to COVID-19?

In my research People said yes are 76.80%

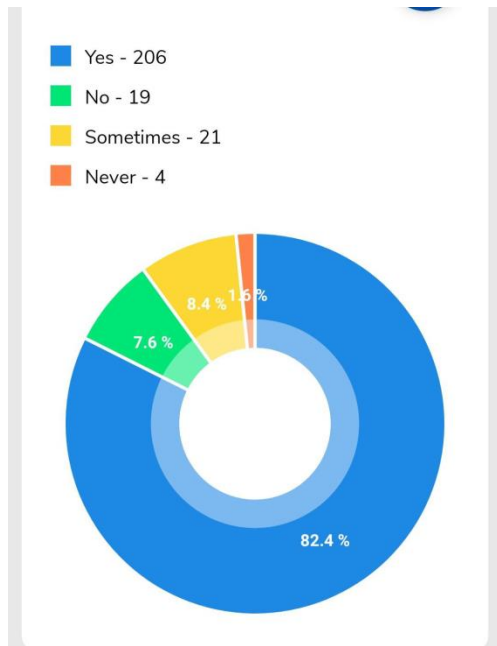
The count of people is 192.People said No are 19.60% the count of people are 49.Not Applicable is said by 3.60% and the total count of people are 9.



7)Can you Visualise this picture ? And do you agree that this Coronavirus is a depression for Many people because of unemployment?

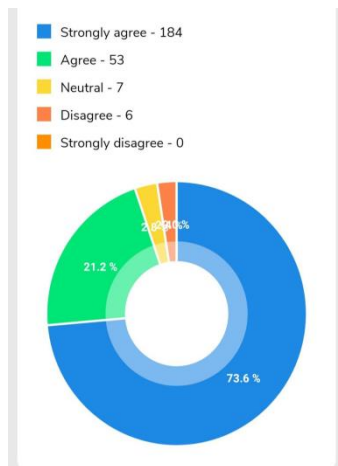
In my research people said yes are 82.80% and the count of people are 207.people said No are 7.60% the count of people are 19.sometimes is said by 8% and the count is 20.Never is said by 1.60% ,the count of people are 4.

a



8)Just because the economy is down, doesn't mean that your spirit has to be down with it.

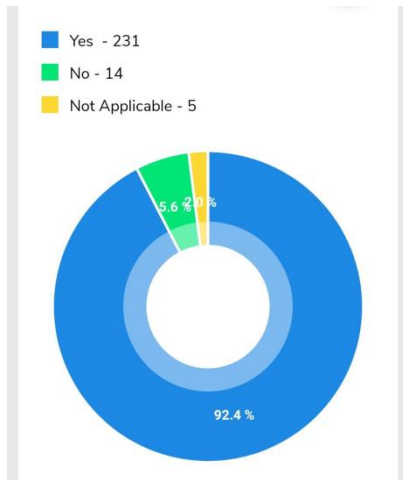
In my research people said strongly agree are 73.60%,the count of people are 184.People said agree are 21.20%,the count of people is said by 53.Neutral said by 2.80%,the count of people is 7.people said Disagree are 2.40%,the count of people are 6.and no one said strongly disagree.



9)Do you agree that COVID-19 is not only a global pandemic and public health crisis; it has also severely affected the global economy and financial markets?

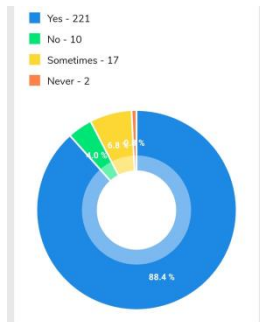
In my research People said yes 92.40%, the count of people is 231.people said No is 5.60%,the count of people is 14.

Not applicable is said by 2% and the count is 5.



10) Does the Health crisis translate to an Economic crisis?

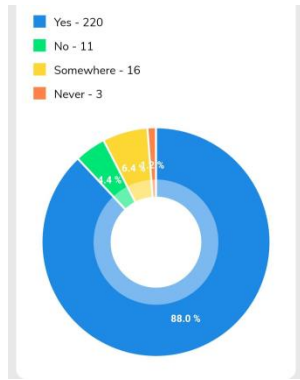
In my research people Yes are 88.80%, the count of people are 222. No is said by 4%, the count of people are 10. Sometimes is said by 6.40%, the count of people are 16. Never is said by 0.80% and the total count of people is 2.



11) The pandemic of COVID-19 has disrupted every aspect of life?

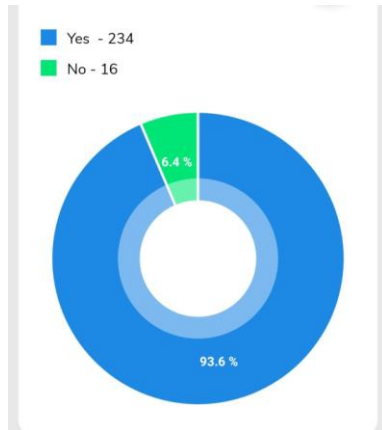
In my research people Said yes are 88.80%, the count of people are 222. No is said by 4.40%, the count of people is 11. Somewhere is said by 5.60%, the count of people is 14. Never is said by 1.20%, the count of people is 3.

a



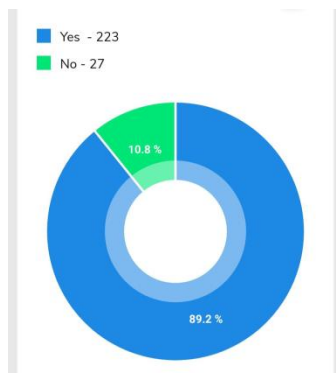
12) Do you think that because of the pandemic people are more towards digitalization?

In my research People said yes is 93.20%, the count of people is 233. No is said by 6.80% and the total count of people are 17.



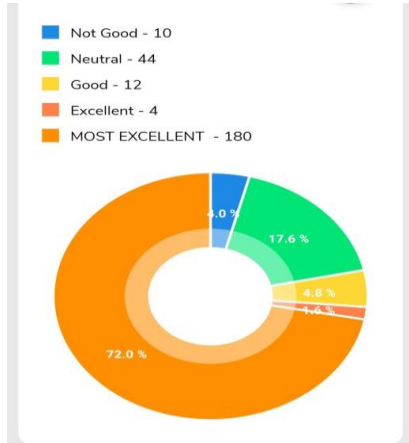
13) Did you earn more money because of Covid-19 ?

In my research people said yes 89.60%, the count of people is 224. No is said by 10.40, the count of people is 26.



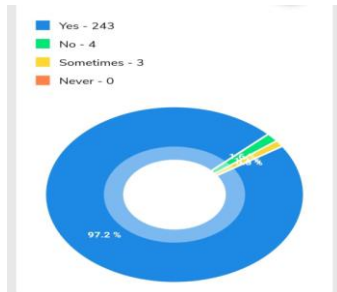
14) Overall your ratings for our Economy?

In my research People said Not good are 3.20% the count of people is 8. Neutral is said by 17.60% and the count of people are 44. Good rating is gave by 4.80% the count of people is 12. Excellent is gave by 1.60% and the count is 4. Most excellent is said by total 72.80%, the count of people is 182.



15) What do you think about digitalization? Is it important for Economy?

In my research People said yes to 97.20%, the count of people was 243. No was said by 1.60% and the count was 4. Sometimes it was said by 1.20%, the count of people was 3. Never was said by no one.

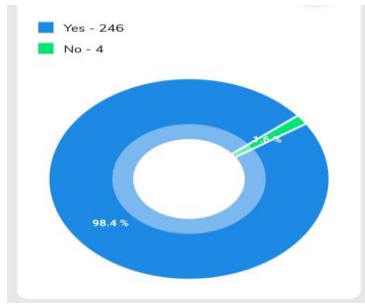


16) Do you think that a few Impacts are also there due to this pandemic?

- 1) Impact On Education
- 2) Impact On Environment
- 3) Impact On Banking
- 4) Impact On Society

In my research people said 98.50% and the count is 246. No is said by 1.60% and the total count is 4.





#### STEPS TAKEN BY THE INDIAN GOVERNMENT:

The Central Government, amongst others, has taken the following decisions in these directions:

##### a) Income Tax

i. Extension of last date for income tax returns for financial year 2018-2019 from 31.03.2020 to 30.06.2020.

ii. Aadhaar-PAN linking date to be extended from 31.03.2020 to 30.06.2020.

iii. Due dates for issue of notice, intimation, notification, approval order, sanction order, filing of appeal, furnishing of return, statements, applications, reports, any other documents and time limit for completion of proceedings by the authority and any compliance by the taxpayer including investment in saving instruments or investments for roll over benefit of capital gains under Income Tax Act, Wealth Tax Act, Prohibition of Benami Property Transaction Act, Black Money Act, STT law, CTT Law, Equalization Levy law, Vivad Se Vishwas law where the time limit will be expiring between 20.03.2020 to 29.06.2020 shall be extended to 30.06.2020.

i. For delayed payments of advance tax, self-assessment tax, regular tax, TDS, TCS, equalization levy, STT, CTT made between 20.03.2020 and 30.06.2020, reduced interest rate at 9% instead of 12%/18% per annum (i.e. 0.75% per month instead of 1/1.5 percent per month) will be charged for this period. No late fee/penalty shall be charged for delay relating to this period.

##### B. GST/Indirect Tax

I. Those having aggregate annual turnover less than Rs. 5 Crore can file GSTR-3B due in March, April and May 2020 by the last week of June, 2020, without any interest, late fee, and penalty.

#### CASE STUDY

Present crisis faced by Biyani — known for making Big Bazaar a household brand name since early the 2000s — is the most serious. This is not the first time Biyani's group is facing

a debt crisis. “Biyani is to India what the Walton family of Walmart is to the US. Through the deal made in August with Reliance Industries, the Ambani –led firm will acquire Future Retail that owns the BigBazaar that sells everything from groceries to cosmetics and apparel, and Future Lifestyle Fashions Ltd that operates fashion discount chain Brand Factory. Reliance Retail has announced that they have acquired Future Group’s retail, wholesale, logistic business for Rs 24,713 crore. Big Bazaar, which was facing acute inventory crunch due to non-payment or late payment of dues to supplier, has received a fresh lease of life from JioMart, an arm of Reliance Retail. Future Group founder Kishore Biyani on Wednesday said the homegrown retail major lost nearly ₹7,000 crore revenue in the first three-four months of the COVID-19 pandemic due to closing of stores, which led him to sell his business to Reliance Industries.

## CONCLUSION

This CoronaVirus pandemic may wreck the Indian economy. The level of GDP may further fall, more so when India is not immune to the global recession. Infact, it is believed that India is more vulnerable, since its economy has already been ailing and in a deep-seated slowdown for several quarters, much before the COVID-19 outbreak became known. The Prime Minister of India has already spoken of setting up an Economic Task Force to devise policy measures to tackle the economic challenges arising from COVID 19, as also on the stability of the Indian economy. However, concrete plans would have to be kept in place to support the economy and its recovery. As my Suggestion/opinion is that disruption from the virus progresses globally as well as within India, it is for us to forget, at least for the time being, all talking only about economic recovery, and instead join hands wholeheartedly to tackle the outcome of COVID-19. As the spread of the virus is likely to continue disrupting economic activity and negatively impact manufacturing and service industries, especially in developed countries, we expect that financial markets will continue to be volatile. There is still a question as to whether this unfolding crisis will have a lasting structural impact on the global economy or largely short-term financial and economic consequences. financial costs on regional and global economies. Because of high transportation connectivity, globalization, and economic interconnectedness, it has been extremely difficult and costly to contain the virus and mitigate the importation risks once the disease started to spread in multiple locations.

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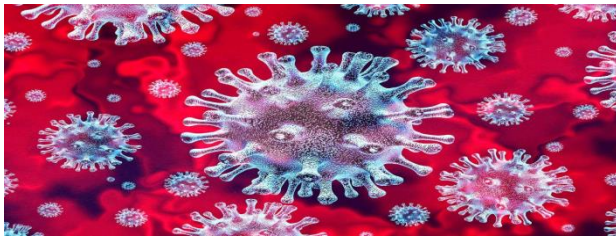
**NAME:-** ARSHIYA SAYYED

**COLLEGE NAME:-** BHAVANS COLLEGE, ANDHERI (WEST)

**TOPIC:-** CORONA...CRUSHING BLOW TO DREAMS OF MILLIONS

**ABSTRACT:**

"Covid" the devastating phases of human life. By the end of the year 2019 the world faced the biggest trauma in history, starting from the Wuhan city of China and spreading all over the world. Over 5,074,148 people lost their lives worldwide. Covid affected every strata of society whether it be rich or poor but the most affected strata was the middle class(who earn from Rs.2500 to Rs.700 daily). "The Middle class is a fluid category, people constantly move in and out of it, mainly because of the precarious nature of work in India and the informal economy," for living a simple and respectful life. The middle-class faced many problems in this phase. This paper will discuss the impact of covid on the life of the middle class.



**INTRODUCTION:**

Indian middle class is estimated to be 150 million before the onset of first coronavirus wave. Corona affected the world economy severely. It pushed poverty sharply. Taking the upper middle class to lower middle class, making poor more poor .Compromising at every step of life, the middle class somehow spent the first wave of covid but the second wave came like destroyer. Till now the savings ended, the saved grocery ended, due to constant lockdown the

daily wagers sat helpless. Many lost jobs, unemployment was a big threat now! Many families migrated back to their villages. Families managed to spend their day only in one meal. This was really a tough time for each and everyone in the society but the middle class suffered the most.

#### REVIEW OF LITERATURE:

As per research paper of Punjab University as the situation stands, covid has sharply divided the Indian middle class and its impacts, it has been varied as North and South poles

The first section comprises those who are in government jobs and government pensioners or are working in private sector business houses or retired from the private sector with good future security schemes for unemployed in research sectors of private enterprise which are not affected by restrictions like Pharma IT and healthcare.

Somehow, the current virus has rendered this section of the middle class as the privileged one as it is least affected and rather were financially benefited with restrictions and lockdowns. This section comprises 30% of the total middle class.

Second section comprises small shopkeepers, or who are associated with service sectors like transport, catering, hospitality, entertainment; lawyers, self employed professionals like architect & CA etc, teachers in private schools & colleges, running coaching centers etc.

Two waves of the virus have left this section as vulnerable as it experienced great financial stress due to the restrictions and lockdowns. Many from this section lost their jobs, managed to spend a day only having one meal, lost their dear and near ones due to poor treatment, financial issues. Fact of matter is that this section is affected even more severely than the lower class as the latter continues to get government help in one way or the other like free

'ration' and monthly funds transfers. This vulnerable section has a much higher presence of 70% amongst the middle class.

Such is the difference in the impact of Covid that whenever lockouts are proposed or declared, the first section rather feels relieved as they are saved from going to offices/workplaces which itself results in 20-30% savings as expenditure on transport/travel, outside eating and outings etc. has come to almost nil with exception of essential service class like health department, top administration officers or police who rather slogged and displayed great courage during this period of virus. No wonder, this class has financially prospered during the pandemic.

It is this second class which bore the brunt of two coronavirus waves. While with lockdowns and closures, their earnings completely dried up, the expenses in the form of family running cost, fee of school and college going children, rents, electricity bills, EMIs etc kept on piling. With the result, apart from financial stress, they have mental as well as physical stress too. They slogged for years to graduate from the lower to middle class but these two waves of coronavirus pushed one third of them back to the lower class with earnings less than Rs 700 per day.

#### OBJECTIVES OF STUDY:

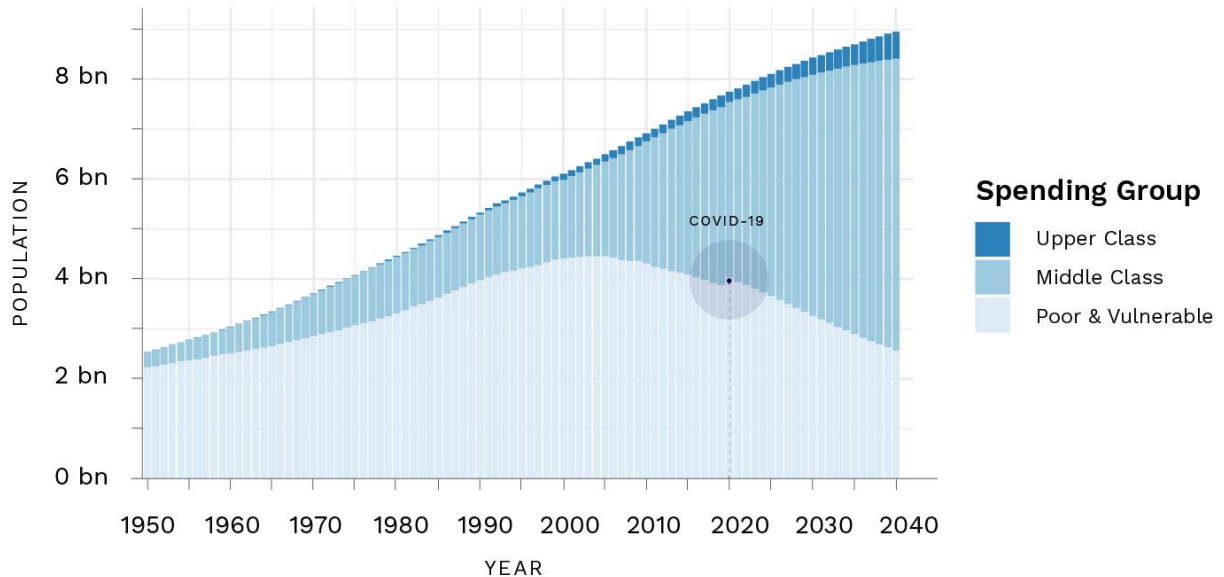
This paper will discuss the following points:

1. To study the financial condition of middle class people during covid-19.
2. To study unemployment caused due to covid-19.
3. Role of government and NGOs during covid-19 for helping middle class people.

**DATA COLLECTION:** The data is collected from the internet after searching on multiple websites, various news articles and gathering information based on the topic.

**DATA**

**ANALYSIS**



**FINDINGS:** The above graph shows the growth of the global middle class. It shows that during the covid phase there is a rapid increase in the middle class globally and lowered rate of upper class as well as lower class.

#### **CONCLUSION AND SUGGESTION:**

For decades, India's vast middle class population has been a key engine to drive the economy, contributing to the growth of several sectors. This correlation is the reason why the coronavirus pandemic has toppled the country's growth trajectory. While incomes of economically weaker sections suffered during the months of strict lockdown, middle income households took the biggest knock. "Middle income households, particularly at the higher income levels, have suffered much more, because they had a lot more to lose. Their loss is in excess of 30 percentage points," CMIE highlighted in the report.

Then came various government organizations, NGO's and many individuals to help the people. Provided them free ration, money for daily expenses, tickets for boarding back to the villages, helping financially for treatments, compensation for death in the family, etc. People fought together to overcome this tough situation and finally won over it!

The government needs to take cognizance of this vulnerable section of the middle class which has been suffering for a long time, has no voice, is helpless and lives under tremendous stress. They are prepared to do anything to fill their belly even after acquiring higher degrees . As I see it, our government is already doing a lot in this covid phase for the helpless . It will be more helpful if some attention is paid to this class too.

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self collected data and self observations

**NAME:-** FARHEEN ABDUL JABBAR MANSOORI

**COLLEGE NAME:-** VIDYA VIKAS UNIVERSAL COLLEGE MALAD (WEST).

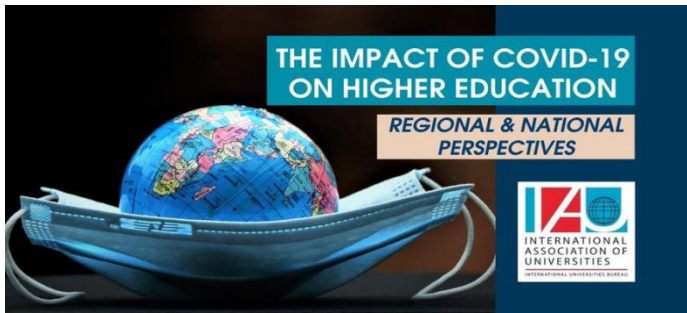
**TOPIC:-** IMPACT OF COVID ON EDUCATION

**ABSTRACT:**

The COVID-19 pandemic has created the largest disruption of education systems in human history, affecting nearly 1.6 billion learners in more than 200 countries. Closures of schools, institutions and other learning spaces have impacted more than 94% of the world's student population. This has brought far-reaching changes in all aspects of our lives. Social distancing and restrictive movement policies have significantly disturbed traditional educational practices. Reopening of schools after relaxation of restriction is another challenge with many new standard operating procedures put in place.

Within a short span of the COVID-19 pandemic, many researchers have shared their works on teaching and learning in different ways. Several schools, colleges and universities have discontinued face-to-face teachings. There is a fear of losing the 2020 academic year or even more in the coming future. The need of the hour is to innovate and implement alternative educational systems and assessment strategies. The COVID-19 pandemic has provided us with an opportunity to pave the way for introducing digital learning. This article aims to provide a comprehensive report on the impact of the COVID-19 pandemic on online teaching and learning of various papers and indicate the way forward.





## **INTRODUCTION:**

Covid-19 affected higher educational institutions not just in Wuhan, China where the virus originated but all other higher educational institutions in 188 countries as of April 06, 2020. Educational countermeasures are taken to continue educating the students despite the COVID-19 predicaments. Based on the author's experiences, research, observations in the academe, COVID-19 guidelines, and the need for alternative solutions, this article introduces how higher education is affected and how it can respond to future challenges. This article recommends educational institutions to produce studies to proliferate and document the impact of the pandemic to the educational system. There is also a greater need for educational institutions to strengthen the practices in the curriculum and make it more responsive to the learning needs of the students even beyond the conventional classrooms.

## **REVIEW OF LITERATURE:**

A sudden implementation of online teaching and learning due Covid-19 and lockdown by many universities has proven to bring numerous challenges into the higher education industry. Although there are remarkable successes especially for higher learning institutions who already had well established online teaching and learning systems, it has been recognised that the shift from class-based to online learning has not been smooth for most universities and colleges. The literature shows that, among others, academics' and students' difficulties to adjust; connectivity, network and internet issues; uncondusive physical space and environment; mental health related issues; lack of basic needs; and lack of teaching and learning resources are the major challenges associated with the sudden change to online learning. These challenges are discussed below.

## **OBJECTIVES OF STUDIES:**

This paper will discuss the following points :

- 1 Changing roles of teachers and technologies amid of covid.

2 Challenging in front of quality Ed in the times of pandemic.

3 Impact of covid 19 on education and children.

4 Rise in online learning courses.

5 Information and digital library.

6 Skilling , upskilling and reskilling by students.

## **HYPOTHESIS:**

Considering this background, the present study aimed at testing the anxiety-buffer hypothesis during the COVID-19 pandemic. More in detail, self-esteem should buffer the relationships from both a fear of COVID-19 and dispositional loneliness to anxiety symptoms – that in turn lead to depressive symptoms. Moreover, specific hypotheses about each path (relationship) between variables were formulated:

H1: fear of COVID-19 and dispositional loneliness are positively associated with depressive symptomatology;

H2a: fear of COVID-19 predicts depressive symptomatology through anxiety symptoms (simple mediation) – without considering the buffering effect of self-esteem;

H2b: dispositional loneliness predicts depressive symptomatology through anxiety (simple mediation) – without considering the buffering effect of self-esteem;

H3: fear of COVID-19 and dispositional loneliness predict depressive symptomatology through anxiety symptoms (mediation) – without considering the buffering effect of self-esteem;

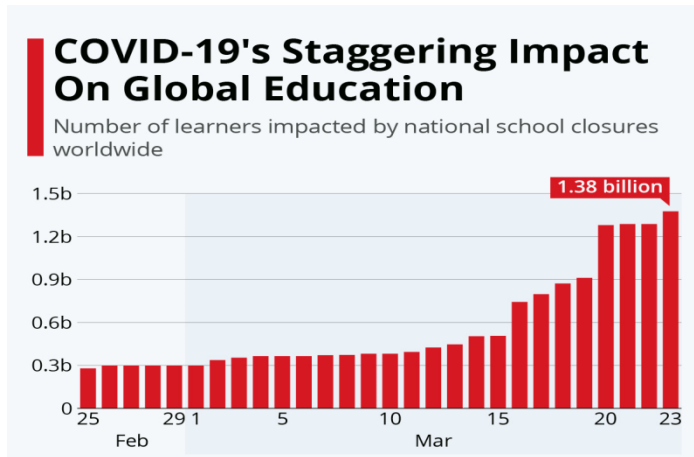
H4: fear of COVID-19 and dispositional loneliness predict depressive symptoms through self-esteem (buffering effect) and anxiety symptoms (multiple mediation).

In other words, it was hypothesized that a fear of COVID-19 and loneliness are associated with depressive symptomatology, but this relationship should be mediated by both anxiety and self-esteem. In particular, self-esteem should play a buffering role.

## **DATA COLLECTION:**

Data is collected from the internet after searching on multiple websites ,various news articles and gathering information based on the topic.

## **Data Analysis:**



### FINDING:

Figure refers to learners enrolled at pre- primary , primary ,lower-secondary, and upper secondary levels of education as well as at tertiary education levels.

### CONCLUSION AND SUGGESTION:

**CONCLUSION AND RECOMMENDATIONS FOR FURTHER RESEARCH** In conclusion, the Covid-19 outbreak has introduced a lot of challenges for higher education institutions across the world. Lockdown and other Covid-19 regulations have forced a sudden shift from face to face learning to online learning in many academic institutions. While this shift was considered a possible solution to higher education crises in the era of Covid-19, it is shown in this study that this shift came with numerous challenges for students and academics. As discussed in this study, these challenges include; difficulties to adjust by lectures and students, connectivity issues, unconducive physical environment, mental health related issues, lack of basic needs, lack of teaching and learning resources. Despite these challenges, this study shows that there are Covid-19 induced opportunities such as innovation and capacity development. There is a lack of scientific research evidence on the impact of Covid-19 on academic outcomes. It is therefore recommended that further research should be conducted to measure the impact (short term and long- term) of Covid-19 on academic outcomes.

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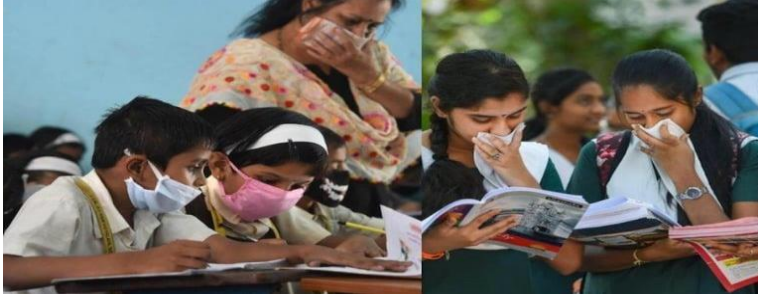
<https://www2.ed.gov/about/offices/list/ocr/docs/20210608-impacts-of-covid19.pdf>

SELF COLLECTED DATA AND SELF OBSERVATIONS.

**NAME:- CELESTINA PATEL**

**COLLEGE NAME:- PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS OF COMMERCE & ECONOMICS**

**TOPIC:- IMPACT OF COVID IN INDIA COLLEGE**



**Abstract :**

A holistic approach to education – that addresses students’ learning, social and emotional needs – is crucial, especially in times of crisis. School closures related to the current COVID-19 pandemic mean that students from diverse backgrounds who are more at risk of increased vulnerability are less likely to receive the support and extra services they need, and the gap between students that experience additional barriers and those that do not might widen. Closures can also have considerable effects on students’ sense of belonging to schools and their feelings of self-worth – these are key for inclusion in education

This Policy Brief describes OECD Member Countries’ initiatives to address the different needs of vulnerable students during the COVID-19 pandemic. Beyond school closures, it also examines the issue of school re-openings by presenting countries’ current measures and providing policy pointers aimed to ensure that the pandemic does not further hinder the inclusion of vulnerable students in education systems. Their schools try to contain the spread of the virus. School closures have a very real impact on all students, but especially on the most vulnerable ones who are more likely to face additional barriers. Children and youth from low income and single-parent families; immigrant, refugee, ethnic minority and Indigenous backgrounds; with diverse gender identities and sexual orientations; and those with special education needs suffer by being deprived of physical learning opportunities, social and emotional support available in schools and extra services such as school meals. They risk falling further behind and becoming isolated with school doors closed. These students are likely to lose the most in terms of educational outcomes and the support provided by schools if countries take insufficient measures to promote educational equity and inclusion.

The following sections describe OECD Member Countries’ initiatives to address the different needs of vulnerable students during the COVID-19 pandemic. Beyond school closures, this Policy Brief also examines the issue of school re-

openings by presenting countries' current measures and providing policy pointers aimed to ensure that the pandemic does not further hinder the inclusion of vulnerable students in education systems.

- Introduction :-

As of 10<sup>th</sup> May 2020, COVID-19 pandemic has gripped 215 countries across the globe and many of these faced lockdown. Academia was among the first few sectors that faced rapid shutdown of all its activities. Thousands of schools and higher education institutions and millions of students are affected by lockdown due to the COVID-19 pandemic as the first response from the educational sector was to completely halt its operations. Coronavirus pandemic has triggered the significant change, imposing many challenges in the higher education community globally. After about four months in the global crisis, we have started realizing that the COVID-19 is here to stay and we need to find solutions to move on. This crisis can be looked upon as an opportunity to reconstruct our longstanding educational systems and establish better and updated practices in academia, suitable for the present generation of learners. We must prepare ourselves for the changing world when COVID-19 pandemic is blown off.

#### A Scenario in India

India is a demographically diverse large country with high population density. The nationwide lockdown was the only strategy in the fight against COVID-19 pandemic, which started on 25<sup>th</sup> March 2020 and is continued in its fifth phase until 30<sup>th</sup> June 2020 with some relaxations in no infection areas. Citizens across the country chose to sit in their homes abiding the guidelines issued by the government of India. Academic activities in India were rapidly halted in the middle of the year, by individual institutions and states even before the countrywide lockdown began. As per the recent guidelines issued by University Grant Commission (UGC), the apex body for higher education in India, the educational institutes must strive to provide quality education, ensuring uniformity, equity and universal accessibility to all the learners. There is constant encouragement from Hon. Prime Minister Shri Narendra Modi, for innovative use and promotion of technology in ushering educational reforms to create a vibrant knowledge society.

Medical and healthcare education is also severely affected by this global crisis. Moreover, it will continue to remain affected as healthcare systems as most teaching hospitals are completely occupied by COVID-19 load. The challenge of clinical exposure to the medical and health profession students will aggravate even further. Owing to the rapid transmission of COVID-19, face-to-face and small group tutorials are prohibited. This imposes greater challenge especially in the context of ophthalmic and optometric skills, which requires close contact between the eye care practitioner and the patient. Social distancing and telemedicine are set to be 'a new normal' hereafter, imposing a persistent challenge for global optometry educators, to teach various clinical skills to the students. The scenario is prompting an urgent need for transformation of optometry education, from traditional brick mortar system to e-learning

environment, imparting updated competencies in our graduating optometry professionals.

Optometry educators in India have responded very quickly to this crisis, in the light of guidelines issued by the Government of India and UGC. There is a sudden surge seen in the number of webinars and online learning sessions on social media platforms, on various topics of optometry, attended not only by students but also by a massive number of practitioners. This has generated unprecedented momentum in optometry education and also in continuing education programs. The purpose of this study is to apprehend the enabling and impeding factors behind this momentum.

This paper reports the findings of the observational study describing the rapid transition of optometry education in India amid COVID 19 disruptions. Findings of nationwide online surveys ascertaining the present practices of teaching-learning in optometry are discussed in light of a similar survey done in 2018 by the same authors (VR and UM). It not only informs the readers about what changed in reference to the past but also appraises how and why the quick adaptation was possible, along with the challenges that are faced during the transition from educator's perspectives

- **Methodology :-** The research required a systematic flow of the actions that help to improve the effectiveness of outcome and achievement of the objectives. To develop the systematic approach, there are two types of philosophies used, interpretive and positivism. For Current research related to the analysis of the impact of COVID-19 on the education system and institution, the researcher has selected interpretive research philosophy. By Considering this philosophy, the researcher has collected and analysed the different opinions of respondents and identified the key actions to improve the situation. Apart from this, interpretive philosophy has helped to maintain openness (Kumar, 2019).

Deductive and inductive research approaches are used for gaining an understanding Of the variables of the study and maintaining the flow of the analysis. For conducting current research, the researcher has applied the inductive approach that also supports In increasing reliability and validity. By implementing this approach, the researcher has Collected data for the analysis of the impact of COVID-19 on the educational system and Institution using the questionnaire method (Fletcher, 2017). This was cost and time Effective and eliminated the issues related to the privacy of the respondents.

The strategic approach of the research study is developed by applying the appropriate Design. For achieving the proposed outcome, the researcher could apply the exploratory, Descriptive and causal design. The current research is based on data collected from the Questionnaire and to analyse the impact of Covid-19 on the educational system, the descriptive design was useful. This kind of design has helped to analyse and social, Economic and technical aspects of the COVID-19 on the institution and support in Gaining the in-depth knowledge of issues and potential barriers in the offering of online learning and changing the existing classroom approach of study (Wiek and Lang, 2016).

According to research methodology functions, to research in a professional manner, Two types of study have been followed that involve qualitative and quantitative. For the Current research, the researcher has applied descriptive design and collected the data using the questionnaire method. Therefore, the study was based on the quantitative type and helped to meet the objectives of the study (Mohajan, 2018). By using this type, the researcher has made emphasis on direct and indirect factors that might influence the educational system and approaches of institutions due to the outbreak of Covid-19. It has also supported in analysing the different variables for identifying the impact on online learning due to changes in economic, demographic and employment level of the people.

#### Data Analysis & Interpretation :-

Quantitative data from surveys were analyzed using the software package SPSS. Factor analysis (Principal Components analysis) was conducted on the scales to ensure items of each scale measured one representative factor using Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity (BTS). Descriptive analysis was applied to gauge the categorical variables' frequencies and to determine the means and standard deviations of each scale. Independent-samples t-tests were used to determine differences between the scores of the social and educational aspects of students' lives for men and women students, while Pearson correlation coefficients were used to explore the relationships among the aspects of social and educational lives of students. Parametric tests were considered appropriate as the sample was large, and the data met the requirements for parametric testing.

To ensure the validity of the survey, Saudi experts on the research subject reviewed and ensured the validity of the scales' content and structure in the Arabic version. After obtaining consensus on the survey's validity, a pilot study was conducted with a group of 25 university students to gain feedback. In addition, factor analysis (principal components analysis) was conducted on the survey scales to ensure that the items of each scale measured one representative factor using the Kaiser-MeyerOlkin (KMO) test and Bartlett's Test of Sphericity (BTS).

#### Sampling :-

Sampling was done using the non-probability method as the researcher has chosen the sample of students and teachers from the entire population according to their own connivance. For the current research, the researcher has selected a sample of 50 respondents and shared the questionnaire to gain knowledge of their opinion for analysis of the impact of COVID-19 on the educational system and institution.

#### Reliability And Validity of the Study :-

To maintain the reliability and validity of research, the researcher has asked questions related to the subject matter and eliminated the wrong responses. To improve the validity of the study, the views of academics from the Kahramanmaraş Sütçü İmam University were gathered. Moreover, to improve the validity of the study, the researcher Has collected the data from authentic sources and managed the analysis in proper ways. Descriptive and content analysis were used to analyze the data. Calculated according to Miles and Huberman (1994)'s formula, the reliability of the data was found 85%. Moreover, the researcher has focused upon ethical standards of study such as privacy of The respondents, manipulation of the data and ensured that no data had been taken as plagiarised. This kind of approach has improved the effectiveness and validity of the Research for analysing the impact of COVID-19 on the educational system and approaches of the institutions.

### Analysis Technique :-

It is an important part of the research, and the researcher has analysed the data by using the thematic analysis method. According to this method, the researcher has done The frequency distribution and analysed the response of respondents by developing the graphs and tables. This kind of approach has helped the researcher and readers of the Study (Cuervo-Cazurra et al., 2017). The thematic analysis has also improved the Reliability and eliminated the biases in the study.

- Objectives :-

The overall objective of this study is to analyze the Impact of COVID-19 on the Indian Education System. In particular, this study will examine:

- How the Indian education system is facing the Impact of COVID-19, and highlighting the role played by teachers and students through online education
- How the positive impact is helpful to students, parents and school teachers in the scenario of online education.
- How to reduce the negative impact of COVID-19 on students for their smooth education.

### Purpose of the study :-

All systems have strengths and weaknesses. Maximizing strengths and minimizing weaknesses in order not to miss the opportunity to move forward should be the goal. The Main purpose of the study is to analyze the impact of COVID-19 on the Indian education system. It covers the impact of COVID-19 on rural and urban students, Higher education Institutions.

### Digital Infrastructure in India :-

Before the COVID-19 lockdown in India, no one estimated that the face of the Indian educational institutions could change so drastically. Schools that never allowed students to carry an electronic gadget turned into learning centers for online classes. Both teachers and students are getting familiar with this new normal, which is definitely more challenging for the teachers to handle with this situation. The teachers also face challenges in designing effective lessons and changing of teaching when shifting to online learning; this can also be resolved through workshops and training.

### Conclusion :-

From the research, it has been carried out that COVID-19 is having a serious impact on the businesses and other sectors. The research has identified the impact of this pandemic Issue of the education system and approaches of the institutions for offering the learning. Through other mediums. According to the study, people are facing serious issues related To learning and looking for new approaches to learning. The leading authorities have to Consider the seriousness of the issues and have to take the corrective measure for improving the situation that will help to normalise the things and support in enhancing. The living experience. The lack of technical understanding of students and teachers is also a big challenge for the system to offer training and support. The proper implementation of rules for social distancing and sanitising will also increase the operational cost of the



Institutions. Moreover, the sudden shift to online learning will be difficult for the Countries and educational authorities due to lack of infrastructure and planning for the Format that suits the new approach. It becomes difficult for the educational institutions. To maintain the operational cost and retain the students. For the betterment of the educational system and approaches of institutions need Changes. To maintain continuity in learning and to share the knowledge with the Students, it is recommended to the institutions to adopt the technology and engage the Students in learning. The implementation of smart learning tools like Padlet and Edmodo Can be used for offering the learning. By offering the training to the staff members and collecting the feedback from the parents related to the online system will be useful for the educational institution to overcome the issues related to taking classes and engaging the students.

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**COLLEGE : K.P.B.HINDUJA COLLEGE**

**TOPIC:-INDIAN STOCK MARKET'S REACTION TO COVID-19 CRISIS IS SURPRISINGLY MUTED**

#### **Abstract**

The COVID-19 pandemic seems to be the most important phenomenon observed from March 2020 in virtually all countries of the world. The necessity to prevent the spread of COVID-19 and keep health care systems efficient resulted in the forced, drastic limitation of economic activity. Many service sectors were hit particularly hard with this but industry and agriculture were also affected. In particular, the pandemic substantially influenced financial markets and we can observe that some markets or instruments vary in stability since they have been affected to a different degree. In the paper, we present the problem of stability of stock markets during the COVID-19 pandemic. Due to the low number of works related to CEE countries during the pandemic, we analyze the Warsaw Stock Exchange, which is one of the most important markets in the CEE. Our main goal was to find how various industries

represented by stock market indices have reacted to the COVID-19 shock and consequently which sectors turned out to keep stability and remained resistant to the pandemic. In our investigation, we use two clustering methods: the K-means and the Ward techniques with the criterion of maximizing the silhouette coefficient and six indicators describing stability in terms of profitability, volume, overbought/oversold conditions and volatility. The results of the research present that during the pandemic it was possible to identify 5 clusters of sector indices in the short term and 4 in the medium term. We found that the composition of the clusters is quite stable over time and that none of the obtained clusters can be univocally considered the most or the least stable taking into account all the analyzed indicators. However, we showed that the obtained clusters have different stability origins, i.e. they vary from each other in terms of the investigated indicators of stability.

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Competing interests: The authors have declared that no competing interests exist

## **Introduction**

The COVID-19 pandemic had a significant impact on the socio-economic life of most countries in the world. The virus has the potential to influence in a destructive way individuals, businesses, industries and entire economies. Its appearance, in principle, meant a significant burden and reorganization of the health service, and the need to provide additional disinfection and hygiene measures, but its global scope is expected to be the most influencing economic and social event for decades. The problem of the COVID-19 virus has been its rapid spread, which resulted from airborne transmission and intensive use of public transport, including intercontinental flights. The necessity to prevent the failure of health care systems and counteract the effects of COVID-19, which poses a direct threat to the health and life of citizens, resulted in the forced and often drastic limitation of economic activity. In fact, the pandemic brought global economic activity to a sudden halt in the first half of 2020. The sectors hit particularly strongly were services, including tourism and hoteling, retail trade, education, cultural activities, restaurants, galleries, gyms, hairdressers, taxis, expos, sporting events and personal services characterized by direct contact between people. Land and air transport, as well as entities directly related to it, including airports, also

suffered severely. Especially, in the last sector, the demand is expected to be highly affected not only in the medium term, but also in the long term as the dynamics of pandemic spread is strictly linked with the airlines system. Moreover, Liu et al. Provided systematic analysis on the dynamics and dimensions of the unprecedented decline in the public transit demand due to the pandemic. The need for isolation and the inability to conduct production, commercial or service activities on the current terms resulted in the emergence of disruptions in production and supply, as well as the breakdown of logistics chains. The problem was also employees' infections, which made it impossible to conduct business in an undisturbed manner. The pandemic led also to a substantial fall in energy demand and global CO2 emissions . Where the specific nature of the activity allowed it, the COVID-19 pandemic contributed to a change in the organization and work model of many entities, causing their decentralization, forcing greater flexibility of operation and starting the transformation towards remote work but also influencing internal relations, employee adjustment and human resources management. The issue of respecting human rights in such conditions was also raised.

The period of the pandemic is undoubtedly a turning point in the activities of many sectors, as well as for the directions of development of the entire economies, definitely changing the economic realities more than the previous crisis of 2007–2009. It can be treated as a specific demand and supply shock, the source of which is the lockdown of the real economy and disruptions in service, trade and production activities resulting from sanitary and epidemic reasons. The pandemic and its effects in finance are being compared to the previous global financial crisis 2007–2009. Wojcik and Ioannou find that the previous crisis is rather referred to as the North Atlantic crisis which was spread around the world through international financial and economic relations, but the COVID-19 pandemic is truly global and directly affects practically all countries because of traveling. In contrast to the 2007–2009 crisis, the pandemic crisis has not been initiated in the financial sector but its severity in the real sphere has transmitted it into the financial sector and then reversely again to the production, trading and services. In some industries, it has undoubtedly caused a significant change in the business model or effected a change in the incomes and costs structure. The consequences of changes and transformations in individual sectors are currently difficult to predict, as it is unknown how long the pandemic will ultimately last and what its costs will be. Undoubtedly, there will be new challenges in the area of computerization, logistics, personnel management, real estate management, cybersecurity and broadly understood health protection

### **Objective:-**

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This paper aims to examine the impact of the COVID-19 outbreak on Indian firms listed on the NSE and analyze its impact on various sectors. In addition, a sub-sample analysis based on market capitalization was performed to understand the effect of size during extreme events. The sample consisted of 1,335 firms listed on the NSE India. A standard event study outlined by

Brown and Warner (1985) was employed to analyze the price impact on the COVID-19 outbreak.

The event windows from -10 days to +10 days were selected. The estimation window is 250 days. The Nifty 50 has been chosen as a proxy for market return. The sample firms witnessed a negative impact of the COVID-19 outbreak with a negative CAAR in different event windows. In addition, various sectors are classified according to their responsiveness towards the COVID-19 outbreak into three groups: highly negatively affected, moderately negatively affected, and slightly negatively affected. The paper also points out that the pandemic substantially affects the above-median market capitalized firms than the below-median market capitalized firms, which contradicts the size effect phenomenon. The results assist shareholders in managing their portfolios and mitigate the systematic risk of their investments during extreme events such as a pandemic, wars, and others. This study is the first comprehensive analysis of the impact of the COVID-19 outbreak on different sectors in India. It is also the first study to investigate the size effect anomalies during extreme events.

## Hypotheses

H1:- Shares will not affect the market

H0:- Shares will affect the market.

H2:- In Market analysis BSC stock is coming down.

H0:-In Market analysis BSC stock is going up.

## Primary and secondary data

The primary market is where securities are created. Here securities are issued by companies for the first time. New stocks and bonds are offered to the public via an initial public offering (IPO). The secondary market, on the contrary, refers to exchanges such as BSE or New York Stock Exchange or Nasdaq where stocks are traded.

A company may have different types of capital requirements depending on its present stage of growth. A well-established company may not require long-term capital. In that case, they may opt for equity financing i.e. raising capital via the sale of shares.

But another company, which has a proven track record and now wishes to expand operations may go for an IPO. While equity financing is a secondary market operation, launching an IPO happens in the primary market.

- Securities that are issued in a market are referred to as the primary market. When the company gets listed on an exchange the stocks are then traded in the secondary market.

- The primary market is also known as a new issue market and the secondary market is known as an after issue market. Depending upon the demand and supply of the securities traded the prices in the secondary market vary. But the prices in the primary market are fixed.
- Unlike the secondary market, the primary market provides financing to the new and the old companies.
- In the primary market, investors have an option to purchase the shares directly from the company, whereas in the secondary market, the investors buy and sell the securities among themselves.
- Investment bankers do the selling in a primary market. In the secondary market, the broker acts as an intermediary while the trading is done.
- In the primary market, the company stands to gain from the sale of security. While in the secondary market, an investor gains from the securities.
- The securities in the primary market can only be sold once, while in the secondary market sale and purchase is an ever-going process.
- The amount that is received from the securities becomes capital for a company whereas; in the case of the secondary market, the same reflects the income of investors

## **Method and research description**

### 2.1 Clustering methods

Clustering is the unsupervised grouping of objects into classes without any a priori knowledge of the datasets to be analyzed [85]. The purpose of clustering is to find high-quality groups of similar objects and identify patterns in the data. The problem of clustering is to divide a given data set into clusters (groups) in such a way that data points in a cluster are more similar to each other than points in different clusters. Clustering itself should not be considered as one specific algorithm as it is a general task to be solved. This can be achieved by using different clustering methods, which vary considerably within the meaning of what constitutes a cluster and how to find them.

Most of the clustering methods can be categorized as hierarchical or partitional clustering. Algorithms of hierarchical clustering generate a cluster tree (dendrogram) by using heuristic splitting or merging techniques. By contrast, partitional methods usually require that the number of clusters and an initial clustering be specified as an input to the procedure [86, 87].

In our study we apply two clustering methods: the K-means and the Ward techniques. The K-means method [88] is a well-known partitional clustering algorithm. It determines clusters with minimal variability of the observations within each cluster, calculated using the within-cluster sum of squares:

(1)

where  $K$  is the number of clusters,  $C_k$  ( $k = 1, 2, \dots, K$ ) denote clusters,  $\mu_k$  are centroids (usually described by the mean of points in the cluster  $C_k$ ). In order to indicate the optimal clustering, the iterative algorithm is performed. It starts with randomly selected (or derived from a priori information) initial  $K$  centroids. Then each point in the data set is assigned to the closest cluster (i.e. to the closest centroid), based on the distance function. Next, based on the absorbed cases, new centroids are calculated. This process is repeated until convergence is achieved [89].

The second applied technique is the Ward method of hierarchical clustering. Like other agglomerative techniques, it consists in building nested clusters by merging them successively. The result can be represented as a tree (dendrogram) which describes the hierarchy of clusters. The Ward algorithm starts with clustering where each data point forms a cluster by itself. In each step the two clusters that minimally increase within-cluster variance (i.e., the error sums of squares (1) with ) are merged. The algorithm terminates when there is only one cluster left.

## 2.2 Data and research process

In order to examine the stability of the behavior of individual sectors of WSE, i.e. their resistance to the impact of the COVID-19 pandemic, we used a total of 16 indices, 14 of which were sector indices reflecting individual industries and two macro indices reflecting industries not directly included in sector indices, i.e. WIG.GAMES and WIGtech. Table 1 presents the characteristics of the investigated indices.

Index	Number of companies	Description
WIG banking ("WIG banki")	15	WIG banking is a sub-sector index and its portfolio includes WIG constituents belonging to the "banking" sector.
WIG construction ("WIG budownictwa")	37	WIG construction is a sub-sector index and its portfolio includes WIG constituents belonging to the "construction" sector.
WIG chemical ("WIG chemiczny")	3	WIG chemical is a sub-sector index and its portfolio includes WIG constituents belonging to the "chemical" sector.
WIG energy ("WIG energia")	11	WIG energy is a sub-sector index and its portfolio includes WIG constituents belonging to the "energy" sector.
WIG.GAMES ("WIG.GAMES")	3	WIG.GAMES index is calculated based on the value of portfolio of 3 most liquid companies covering game development sector.
WIG mining ("WIG gornictwa")	4	WIG mining is a sub-sector index and its portfolio includes WIG constituents belonging to the "mining" sector.
WIG IT ("WIG informatyka")	23	WIG IT is a sub-sector index and its portfolio includes WIG constituents belonging to the "IT" sector.
WIG pharmaceutical ("WIG farmacja")	9	WIG pharmaceutical is a sub-sector index and its portfolio includes WIG constituents belonging to the "pharmaceutical" sector.
WIG media ("WIG media")	12	WIG media is a sub-sector index and its portfolio includes WIG constituents belonging to the "media" sector.
WIG telecommunications ("WIG telekomunikacja")	7	WIG telecommunications is a sub-sector index and its portfolio includes WIG constituents belonging to the "telecommunications and post" sector.
WIG oil and gas ("WIG ropa naftowa")	27	WIG oil and gas is a sub-sector index and its portfolio includes WIG constituents belonging to the "oil and gas" sector.
WIG retail ("WIG detaliczny")	17	WIG retail is a sub-sector index and its portfolio includes WIG constituents belonging to the "retail & consumer" sector.
WIG ships ("WIG statki")	7	WIG ships is a sub-sector index and its portfolio includes WIG constituents belonging to the "oil and gas" sector.
WIG food ("WIG spozywczy")	19	WIG food is a sub-sector index and its portfolio includes WIG constituents belonging to the "food and drink" sector.
WIGtech ("WIGtech")	46	WIGtech index is calculated based on the value of portfolio of companies covering following sectors: biotechnology, video games, IT software and new technology.
WIG tobacco ("WIG tytoniowy")	4	WIG tobacco is a sub-sector index and its portfolio includes WIG constituents belonging to the "tobacco" sector.

Table 1. Description of investigated indices.  
doi:10.1371/journal.pone.0250938.t001

The stability analysis requires distinguishing two periods: base (pre-pandemic)—used to determine the standard behavior of the indices under study, and pandemic, in which the behavior of indices caused by the pandemic is analyzed. We assumed July 8, 2019 –January

3, 2020 (hereinafter: Period\_0) as the base period, i.e., the period in which investment decisions were not affected by the pandemic. As the beginning of the pandemic on the stock market, we considered two alternative time points. According to the first option, the beginning of the pandemic was assumed on January 7, 2020, i.e., the first working day after the WHO first COVID-19 Disease Outbreak News Report, and according to the second—on March 12, 2020, i.e. the first working day after the WHO statement that the COVID-19 is the pandemic and beginning of the lockdown in Poland. Moreover, we had to determine the length of the pandemic period analyzed in the study. In the case of the first time point of the beginning of the pandemic, the six-month research period was considered, i.e., January 7, 2020 –July 6, 2020 (hereinafter: Period\_1). In the case of the second option, it can be seen that the period after March 12 was associated with very rapid and dynamic changes in the securities markets. At the same time, during this period, one can expect differences in the behavior of individual companies in terms of the depth and duration of these changes. For this reason, in this case, three variants of the pandemic period were considered: two weeks, 1 month and 3 months, which made it possible to identify and compare the duration of unstable reactions in individual industries. This means that in the second option, the study considered three alternative pandemic periods: March 12, 2020 –March 25, 2020 (hereinafter: Period\_2a), March 12, 2020 –April 9, 2020 (hereinafter: Period\_2b) and March 12, 2020 –June 10, 2020 (hereinafter: Period\_2c). We will treat Period\_2a and Period\_2b as the short-term and Period\_2c as well as Period\_1 as the medium-term.

Fig 1 shows the dynamics of all the analyzed indices before and during the pandemic period. The chart also indicates the two time points assumed in the study as the start of the pandemic. The solid line indicates January 7, 2020 and the dashed line—March 12, 2020. In the case of most indices, it can be seen that the largest decreases in the indices' values were recorded until March 12 and the largest increases after that date.

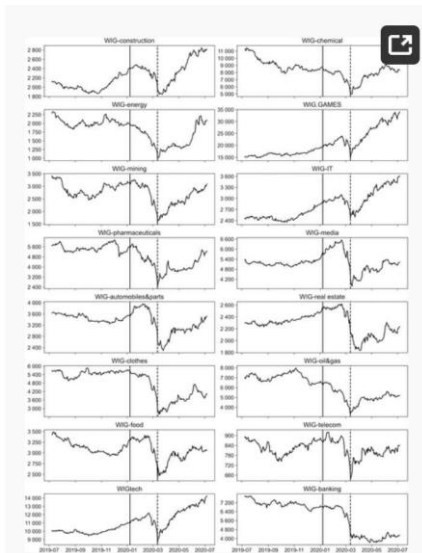


Fig 1. Dynamics of indices in the analyzed period.

Taking into account the issue of lacking any single variable which can be used to comprehensively define and measure stability of stock markets and their sectors (what we

have underlined in the introduction), in our further investigation, we propose multiple variables as indicators of this stability. They reflect different aspects of stock market stability, including pricing, trading volume, volatility, and the attitude of investors. In our study, we used one variable describing stability in terms of profitability (price), one for volume, one for overbought/oversold conditions as well as three different measures of volatility. All of these variables reflect the difference between the pre-pandemic and pandemic periods and for the sake of comparability, most of them are presented as percentage changes.

The price stability measure (denoted by  $\tilde{P}$ ) proposed in the study is defined by the formula:

$$\tilde{P} = \frac{\overline{P_1} - \overline{P_0}}{\overline{P_0}},$$

(6) where  $\overline{P_1}$  and  $\overline{P_0}$  denote the average value of a given index over the base and pandemic periods, respectively. This means that it reflects the relative change of the average price.

To assess the stability of the volatility of quotations, we used three different measures based on the standard deviation, the Parkinson estimator and the range, respectively.

The first one (denoted by  $\tilde{\sigma}$ ) is given by the formula:

$$\tilde{\sigma} = \frac{\sigma_1 - \sigma_0}{\sigma_0},$$

### **2.3. Data and interpretation**

where  $\sigma_0$  and  $\sigma_1$  are the standard deviations of log-returns of a given index over the base and pandemic periods, respectively. As a result, the value  $\tilde{\sigma}$  is the relative change of the standard deviation.

The second stability measure of volatility refers to the Parkinson [93] estimator of the standard deviation, expressed as:

$$\sigma_i^{(p)} = \sqrt{[\ln(H_i/L_i)]^2 / (4\ln 2)},$$



where  $H_t$  and  $L_t$  are the daily high and low prices, respectively. This estimator has an advantage over that based only on the closing prices because it uses information about the price changes during the day. As it can be seen it is calculated separately for each day  $t$ . Finally, in our study, we use the measure:

$$\tilde{\sigma}^{(p)} = \frac{\overline{\sigma_1^{(p)}} - \overline{\sigma_0^{(p)}}}{\overline{\sigma_0^{(p)}}},$$

where  $\overline{\sigma_1^{(p)}}$  and  $\overline{\sigma_0^{(p)}}$  are the mean values of the Parkinson estimator over the base and pandemic periods, respectively. The value of  $\tilde{\sigma}^{(p)}$  is the relative change in mean daily variability as measured by the Parkinson estimator.

The third measure of volatility stability is based on the range, that is, the difference between the maximum and minimum values in a given period. It is expressed by the formula:

$$\tilde{r} = \frac{r_1 - \overline{r_0}}{\overline{r_0}},$$

where  $r_1$  is the range in the pandemic period, and  $\overline{r_0}$  is the average value of the ranges of the base period composed of the same number of observations as the studied pandemic period. The range for the pre-pandemic period  $r_0$  for Period\_2a, Period\_2b and Period\_2c was calculated as the range using a 1-day rolling window of two weeks, one month, and three months, respectively. This method of calculations allowed us to use ranges calculated on the basis of the same periods as in the pandemic period in the calculations. In the case of Period\_1 (which has the same length as the pre-pandemic period),  $r_0$  was calculated in this way, i.e., as the difference between the maximum and minimum price. The  $\tilde{r}$  variable describes the relative change in volatility, measured by the range.

A measure based on the Relative Strength Index (RSI) was used to assess the attitude of investors. The RSI measures the magnitude of recent price changes to evaluate overbought or oversold conditions in the price of financial assets. The  $n$ -day RSI is calculated using the formula:

$$RSI_t = 100 \left( 1 - \frac{D_t}{D_t + U_t} \right),$$

where  $U_t$  is an average of  $n$  days' up closes and  $D_t$  is an average of  $n$  days' down closes. In the study we assumed  $n = 14$ . Ultimately, the following measure was used to test the RSI stability:

$$\widetilde{RSI} = \overline{RSI_1} - \overline{RSI_0},$$

where  $\overline{RSI_1}$  and  $\overline{RSI_0}$  are the average values of the RSI index over the base and pandemic periods, respectively. The measure  $\widetilde{RSI}$  shows the difference in the overbought in the two periods compared.

In turn, the following measure was used to assess the stability of turnover:

$$\widetilde{W} = \frac{\overline{W_1} - \overline{W_0}}{\overline{W_0}},$$

where  $\overline{W_1}$  and  $\overline{W_0}$  are the average values of the trading volume in the base and pandemic periods. It means that there is a relative change in the average volume of trading.

It should be noted that from the point of view of the aim of the study, the important question concerning stability is the scale of changes, and not their direction. Therefore, the absolute values of the above measures were applied in the clustering analysis. Moreover, to ensure a balanced effect of all these measures on the grouping result, they have been normalized prior to clustering. Lack of normalization gives a greater impact on the result obtained by variables expressed in larger numbers. For this purpose, all the variables were normalized using the min-max scaling with the formula:

$$x' = \frac{x - \min(x)}{\max(x) - \min(x)}$$

which ensures that all the transformed variables are in the range [0, 1].

## Report

When analyzing the obtained results, it is worth paying attention to the fact that in the relatively unfavorable price conditions prevailing at the outbreak of the pandemic, a positive measure of a profitability change was obtained for selected sectors. In particular, the sector of computer games producers (WIG.GAMES) and IT (WIG-IT) showed a positive change in pricings independently on the time frame of analysis. The technology industry (WIGtech) recorded positive change except for the shortest period of analysis (Period\_2a) and the construction industry

(WIG-construction) as well as media (WIG-media) increased their value in the medium term. All other sectors reported a profitability decrease. In case of variability measures ( and ) positive values were recorded in all analyzed periods for all investigated indices, except for a single record of the measure noted for the banking sector in the short-term (Period\_2b). Such results clearly indicate increased volatility of valuation of WSE companies after the outbreak of COVID-19. Looking at the aforementioned parameter , one should underline the positive outlier values for the computer games sector and the technology sector in all the analyzed periods, except Period\_1. For the RSI variable, with some exceptions, one could observe negative values for all the sectors in the short term (Period\_2a and Period\_2b) and positive values in the medium term (Period\_1 and Period\_2c). This may point that the short period was characterized by a sell-off of shares and the medium by their buyout. The real estate sector (WIG-real estate) turned out to be the worst, recording the lowest and negative values in all the analyzed periods. The last variable is characterized by positive values for all the sectors and all the investigation periods. An interesting result was obtained in the scope of trading volume of the pharmaceutical sector (WIG-pharmaceutical), and to a lesser extent the clothing sector (WIG-clothes), for which is significantly higher compared to all other sectors in all the four periods of analysis.

After calculating the aforementioned six variables for all the sectors and for all the analyzed periods, we carried out the clustering process on the basis of all these variables. In our study, we considered the number of clusters  $K = 2, 3, \dots, 10$  for both the K-means and Ward methods. To select the appropriate number of clusters the criterion of maximizing the silhouette coefficient was adopted. All calculations were made using computer codes written in Python using the Scikit-learn and the Yellowbrick libraries.

It presents the obtained silhouette coefficients for the K-means and Ward methods for considered variants of the pandemic period. Values in the parentheses indicate the number of identified clusters.

Pandemic period	Ward method	K-means method
Period_1	0.430 (5)	0.417 (2)
Period_2a	0.390 (8)	0.390 (8)
Period_2b	0.415 (7)	0.415 (7)
Period_2c	0.369 (5)	0.369 (5)

<https://doi.org/10.1371/journal.pone.0250938.t006>

Silhouette coefficients for all six variables.

Our classification of the indices representing individual sectors into the clusters partially coincided with the changes in the fundamentals of income generation and the development perspectives of such sectors in terms of the pandemic. Industries that turned out to be particularly susceptible to the business cycle and reduced activity due to lockdowns are metals, energy, machinery and equipment, chemistry or automotive manufacturers. On the other hand, there are computer & telecom, pharmaceuticals, software and IT, agri-food or construction, which are supposed to be less susceptible to lockdowns. When looking at such classification, we may point that in our study sectors such as WIG-chemical, WIG-energy, WIG-mining, WIG-oil gas were classified within a single cluster (Cluster\_3). Such clustering would correspond to a similar fundamental susceptibility of the companies from those, mainly traditional industries, to changes in the economic conditions caused by the pandemic. A similar effect was noticed in the case of Cluster\_5 including WIG-construction, WIG-IT, WIG-real estate, and WIG-telecom, for which lockdowns did not cause fundamental limitation of activity of companies. Both classifications became apparent only in the short term (Period\_2a and Period\_2b). In the longer time horizons, clustering put together sectors with different fundamental susceptibility to changes in the output during the pandemic, e.g. WIG-banking, WIG-clothes, WIG.GAMES (Cluster\_2) or WIG-chemical, WIG-construction, WIG-energy, WIG-IT, WIG-mining, WIG-oil gas, WIG-telecom (Cluster\_3).

To evaluate in more details the obtained clusters, we analyzed the mean silhouette coefficient for each cluster. We found that clusters are generally characterized by a different degree of homogeneity. The highest differentiation between coefficients was observed in the shortest time horizon (Period\_2a), and the lowest in the medium term (Period\_2c). Cluster\_3 in three out of four periods of analysis (except Period\_2c) was characterized by the highest homogeneity. Taking into account the structure of this cluster in all the investigated periods we can note the strongest relationship formed by the chemical-fuel-energy sectors (WIG-chemical, WIG-energy, WIG-mining, WIG-oil gas). In turn, Cluster\_2 stands out in terms of the lowest homogeneity, reaching the minimum silhouette coefficient in the three out of four periods (except Period\_2b). Cluster\_4 always consists of only one element, regardless of the period, that is why its coefficient equals 0.

The clustering results over four selected pandemic periods show that we are able to identify five groups of indices (proximities in stability) in the short terms (Period\_2a and Period\_2b) and four in the medium terms (Period\_1 and Period\_2c). It is worth noting that the indices creating Cluster\_5 in the short periods moved principally to Cluster\_3 in the medium terms.

Taking into account Period\_1, we found proximities between WIG-media,

WIG-automobiles parts, WIG-real estate, WIG-food and WIG-telecom, then between WIG-banking, WIG.GAMES, WIG-clothes, and finally between WIG-construction, WIG-chemical, WIG-energy, WIG-mining, WIG-oil gas, WIG-telecom and WIG-IT. The pharmaceutical sector remained solely classified. Such clustering results are observed also in Period\_2c, which confirms the medium-term proximity of performance of groups of indices independently on the choice of the starting point of the pandemic (January 7 or March 12). The different clustering result is observed for Period\_2a and Period\_2b versus Period\_1 and Period\_2c. The bigger number of clusters may confirm that in the short periods (Period\_2a and Period\_2b) performance of the indices was more diversified.

According to the obtained clusters in the different pandemic periods, we found that some industries keep their proximities in all of the investigated periods. In Cluster\_1 there were: WIG-media, WIG-food, WIG-telecom, in Cluster\_2: WIG-banking, WIG-clothes and in Cluster\_3: WIG-chemical, WIG-energy, WIG-mining, WIG-oil gas. Cluster\_4, consisting solely of WIG-pharmaceutical, also remained unchanged.

To characterize the obtained clusters more deeply and to identify their stability origins, the coordinates of their centroids were visualized with the use of parallel coordinates plot. Such visualization shows the mean values of each group, therefore it allows to compare obtained clusters accordingly to the investigated diagnostic variables.

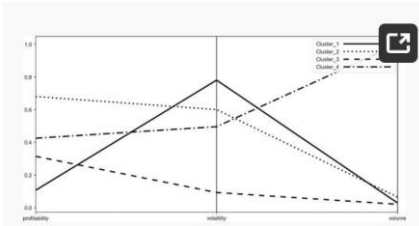


Fig 6. Parallel coordinate plot for centroids–Period\_1.

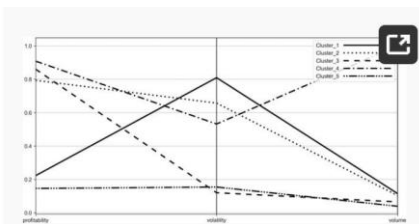


Fig 7. Parallel coordinate plot for centroids–Period\_2a.

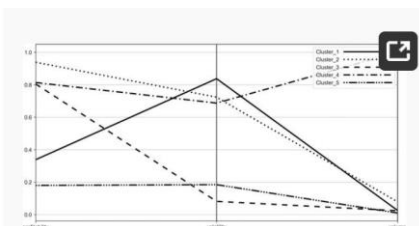


Fig 8. Parallel coordinate plot for centroids–Period\_2b.

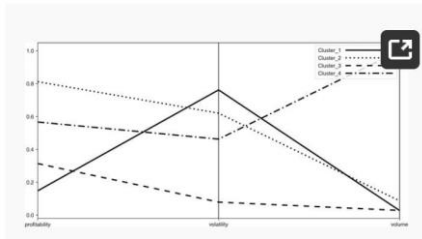


Fig 9. Parallel coordinate plot for centroids–Period\_2c.

## Conclusion

The COVID-19 pandemic has a significant impact on the socio-economic situation of most countries in the world. It is undoubtedly a turning point in the activities of many sectors, as well as for the directions of development of the entire economies. In some industries it will undoubtedly cause a significant change in the business model or affect a structural change in the income and cost conditions. The consequences of changes and transformations in individual sectors are currently difficult to predict, as it is not known how long the pandemic will ultimately last and what its costs will be.

Our paper is devoted to the problem of stability of stock markets during the COVID-19 pandemic. Due to the low number of works related to CEE countries during the pandemic, we analyzed the Warsaw Stock Exchange, which is one of the most important stock markets in the CEE region. We assessed the stability of the behavior of different sectors of the economy represented by sector sub-indices and macro-indices of this market. In our study we applied two clustering methods: the K-means and the Ward techniques with the criterion of maximizing the silhouette coefficient. Due to the doubts concerning the turning point to be taken as the beginning of the pandemic and what period length of the pandemic is the most informative, we considered four time ranges. To perform the analysis, we proposed six indicators (diagnostic variables) describing stability in terms of profitability, volume, overbought/oversold conditions and volatility. We conclude that the use of all these variables resulted in poor clustering results. However, we found that limiting the set of diagnostic variables to three aspects: profitability, volume and volatility leads to much better results. In this case the obtained results show that after the outbreak of the pandemic it was possible to observe on the market 5 clusters of sector indices in the short term (2 weeks and 1 month) and 4 in the medium term (3 and 6 months). The additional fifth cluster in the short term was extracted from Cluster\_3 (indicated for the medium term). We found that the composition of the obtained clusters is quite stable, which means that many industries keep their proximities in all of the investigated periods. In Cluster\_1 there were: WIG-media, WIG-food, WIG-telecom, in Cluster\_2: WIG-banking, WIG-clothes and in Cluster\_3: WIG-chemical, WIG-energy, WIG-mining, WIG-oil gas. Cluster\_4, consisting solely of WIG-pharmaceutical, also remained unchanged.

The results show that none of the distinguished clusters, and hence the indices included in the cluster, can be considered as the most or the least stable according to all the investigated variables. For this reason, we additionally compared the obtained clusters in terms of their stability accordingly to separate indicators. Summarizing the results for the short periods, as the most unstable clusters we can point out Cluster\_4, Cluster\_2 and Cluster\_3 –in terms of profitability, Cluster\_1 –in terms of volatility and Cluster\_4 –in terms of volume. On the other hand, the most stable clusters were Cluster\_5 and Cluster\_1 –in terms of profitability and Cluster\_3 and Cluster\_5 –in terms of volatility. In terms of volume all the investigated clusters except Cluster\_4 were characterized by the similar level of stability. The most unstable clusters in the medium periods were Cluster\_2 –in terms of profitability, Cluster\_1 –in terms of volatility and Cluster\_4 –in terms of volume. As the most stable clusters we can indicate Cluster\_1 –in terms of profitability, Cluster\_3 –in terms of volatility. Same as with short periods, in terms of volume all the investigated clusters, except Cluster\_4, were characterized by the similar level of stability. Generally, we can conclude that Cluster\_3 (in all periods) and Cluster\_5 (in the short period) distinguishes them from other clusters in terms of their overall stability, and that Cluster\_4 can be considered the most unstable. The results obtained from our research may bring several significant benefits to individual as well as institutional stock exchange investors. Determining the number of clusters and their compositions allows for better understanding of the behavior of industries and their companies in terms of external shocks, and thus for taking investment decisions that optimize the composition of the portfolio of securities. As our research characterizes the proximities in market behavior of multiple sectors, the investors may manage the investment risk in a more effective way. By identifying industries that are slightly responsive to the crisis (most stable) or the strongly responsive (most unstable), investors can propose investment strategies focused on capital protection (defensive) or speculation (aggressive). Moreover, knowing the stability profile of individual sectors (according to profitability, volatility, turnover), investors can develop specific investment strategies within each cluster. Including this knowledge may also support more effective application of derivatives, such as futures or options, to manage investment portfolios.

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**COLLEGE NAME:** MITHIBAI COLLEGE

**TOPIC:** BEHAVIOURAL CHANGES IN THE HYGIENIC OF ELDERLY PEOPLE IN INDIA

**ABSTRACT:**

WASH practice has emerged as a very important factor in controlling COVID -19 and promoting Sanitation . The pandemic has helped India in solving its problem of sanitation and hygiene. Be it infants or elders , everyone has shown drastic behavioural changes in their personal hygiene. We have surveyed **2000** locals of the Dharavi slum area through phone interviews and straight forward questions. Interviews were conducted from May to September 2020 with **1000** heads of household, and **1000** woman members of slum areas . Majority of them targeted were oldsters. **80%** respondents reported a change in their hand washing practice due to COVID-19, typically describing an increase in hand washing frequency, more thorough washing method, and/or use of soap.

However, there was minimal change in latrine use . The results also highlight the importance of ensuring communities have adequate WASH infrastructure to enable the practice of safe behaviours and strengthen resilience during a large-scale health crisis.

Overall the slum residents had tried their best to improve their sanitary measures and help to combat the COVID-19 , but they did face some challenges due to infrastructure . **20-25%** oldster's were not having access to any good facilities or were very rigid to sudden changes and were the major victims .

**INTRODUCTION:**

Sanitation had been the major concern in India from ancient times as seen in Vedic Scriptures and Indus Valley. In the recent past, poor hygiene, unsafe water sources and no access to hand washing facilities were among the top factors in India. But since the pandemic struck , COVID-19 has dramatically improved India's public sanitation . Earlier India was producing only **10 lakh litres** of hand sanitizer per annum, used mainly in the hospitals, but keeping in view the crucial role of sanitizer in the fight against Covid-19 , India's hand sanitizer production capacity went up by a staggering **1,000 times to 30 lakh litres** per day . Many researchers have published their work d on the sanitation area of India affected by COVID but none or very few published on how sanitation changed or improved in the lives of elderly people especially living in the rural and slum area of India .For example , there has been an increase in the percentage of old people using soaps and sanitizers. In this research paper , I have tried to look at their lives

and see the positive changes as well as the challenges faced by the elderly people of India.

#### REVIEW OF LITERATURE:

Sanitation: The promotion of hygiene and prevention of disease by maintaining cleanliness

Behavioural Changes : Changes in the behaviour of a person

S Ashraf, J Kuang , U Das (2020) in their Research Paper “Sanitation Practices during early phases of COVID-19 lockdown in pre-urban communities of Tamil Nadu”

V Bauza, GD Sclar, A Bisoyi , F Major (2021) in their research paper “Water, sanitation, and hygiene practices and challenges during the COVID-19 pandemic: a cross-sectional study in rural Odisha, India”

KA Schmidtke , KG Drinkwater - BMC ( 2021) in their research paper “A cross-sectional survey assessing the influence of theoretically informed behavioural factors on hand hygiene across seven countries during the COVID-19 pandemic”

#### OBJECTIVES:

The aim behind this research is :

- To study and review the improvement in sanitation and hygiene of the elderly people in the slums .
- To observe and examine the overall behavioural change in the rigid , stereotypical minds of elderly people.
- To analyse the overall positive impact and challenges in maintaining hygiene.

#### RESEARCH HYPOTHESES:

It is hypothesized that sanitation would be given priority in the future .

Hypotheses as a question: Will sanitation be given utmost priority in future ?

By taking a more holistic approach to the question , we see that survival dominates and health sensitivities will remain sharp and strong. PM Narendra Modi’s slogan “Jaan hai to Jahan hai ” has become a must while interacting socially.

**If** proper preventive measures like using masks , washing hands properly , wearing gloves , not spitting on public places and prevention of open defecation **then** sanitation and hygiene would be our priority in the future.

Null Hypothesis: No , sanitation’s importance would not be our utmost priority in the future.

## RESEARCH METHODOLOGY:

Primary data was collected by a cross-sectional study in Asia's largest slum -Dharavi . The data was collected from 100 respondents , majorly comprising the elderly people of the slum.

The secondary data was collected from various sources like the research paper , books , websites , journals and magazines.

## UPSWING OF PERSONAL HYGIENE IN OLDSTERS:

The government spent nearly **Rs 4,000** crore under SBM towards information and communication to enhance cleanliness. But a noticeable behavioural change happened post the Covid-19 outbreak when people sought ways to avoid getting infected by maintaining sanitary measures and social distancing.

The majority of the older individuals went out less frequently during the declared state of emergency . This measure was also associated with more frequent hand washing, suggesting that reductions in physical activity in our older participants may be part of preventive behaviours to reduce social contact. For personal hygiene practices, **92%** reported wearing a mask when they went out, and **45%** reported an increased frequency of hand washing. Several respondents also described that they had started using waterless hand sanitizer for the first time and now use it frequently, particularly when they are outside their home.

“Now, after seeing it from the TV, we are washing our hands very frequently from all the sides in a systematic way; from above, below, and between the fingers. Earlier we only used to wash one side of the hand palm and that too, not very frequently.”

Male respondent, Dharavi Slum resident , 69 years old (June 2020)

One respondent – 70 years old , described how the virus could be transmitted through contaminated hands and had therefore started using a utensil instead of their hands to retrieve drinking water from their water storage container to avoid contact between their hands and the water.

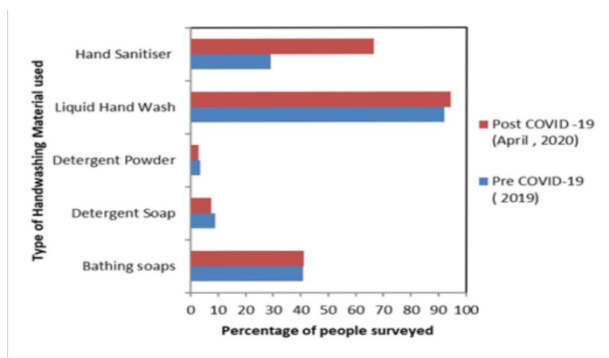
## REPORTED CHANGES IN HANDWASHING PRACTICES :

Hand washing Practice	Quantitative result	Qualitative result

	86% of the older respondents reported change in their pattern of washing hands	Respondents reported that they washed their hands 20 times a day for a prolonged period of time after each task.
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**REPORTED CHANGES IN SANITATION PRACTICES IN OLDSTERS:**

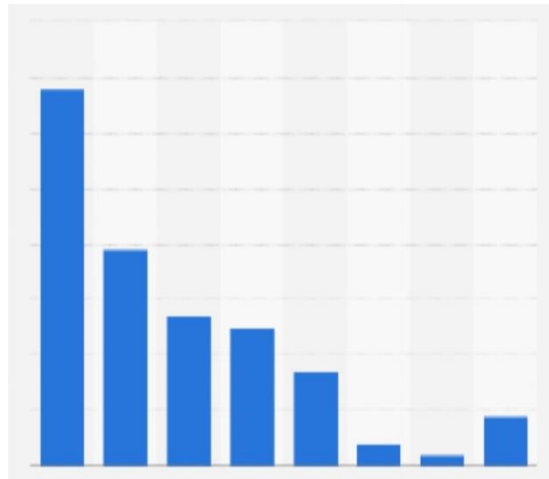
Sanitation Practices	Quantitative result	Qualitative result
	70% of elder respondents reported defecating in the latrine the last time they defecated	One respondent explained that their grandfather became scared of defecating in the open due to the COVID-19 outbreak and started defecating in the latrine.



**CHANGES IN SAFE HAND WASHING IN ELDERLY :**

**INCREASE IN THE USAGE OF PERSONAL HYGIENE PRODUCTS BY ELDERLY IN THE SLUMS OF DHARAVI:**

a



2020 2019. 2018 2017 2016 2015 2014 2013

Following things were not used by rigid minded oldsters in maintaining hygiene :

1. Sanitizers
2. Gloves
3. Liquid hand wash
4. Frequent hand washing
5. Drinking the kaadha and lemon tea
6. Drinking of warm water.

COMPARING THE CHANGE IN OVERALL SANITATION OF ELDERLY PEOPLE :

<u>PRE- COVID SANITARY MEASURES</u>	<u>AMID COVID LOCKDOWN AND POST- COVID SANITARY MEASURES</u>

The elderly residents used to defecate in the open without any proper sanitary measures.	The elderly stopped defecating in the open space and used the washroom for the same with proper usage of water and maintenance of hygiene.
Earlier the oldsters used to wash their hands normally with only water without the usage of soaps.	There was a phenomenal rise in the usage of soaps and liquid soaps very often after every task.
Some elderly people used to bathe on alternate days in the week .	It was reported that the elderly started bathing everyday with soap and proper amount of water
Some old men used to spit on the road without hesitation and they didn't even use handkerchiefs while coughing and sneezing. They used their clothes while coughing.	After the COVID outbreak they stopped spitting on the road. They had even started using handkerchiefs whenever necessary.
Rigid , stereotypical old people were reluctant to use sanitizers .	The outbreak made them understand the usage of sanitizer and they started using it often.

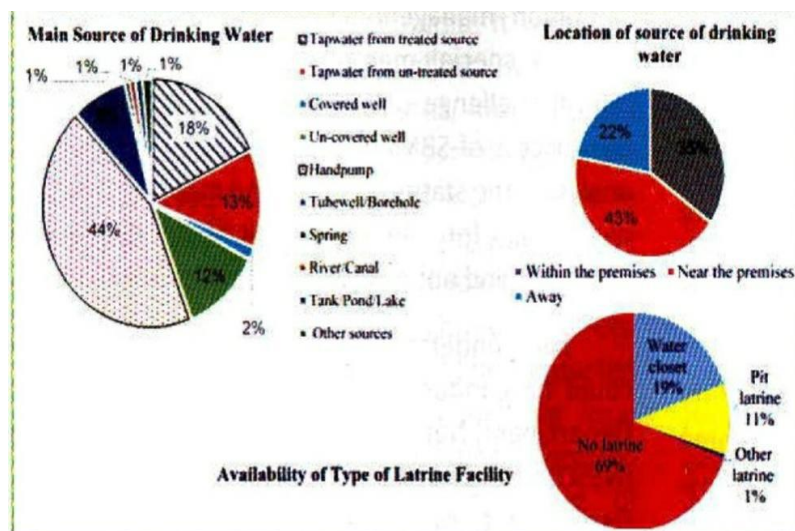
#### CHALLENGES FACED IN IMPLEMENTING SANITARY MEASURES:

- **20%** of the respondents lacked access to any toilet facility and hence reported open defecation.
- **75%** Residents faced difficulty at times for washing hands due to water scarcity in the summer season or the water source being far away from their place.

- **10%** residents stated that they were not using soaps because of their low income. Some even complained that the Government had not given any help to them regarding this.
- **25% of residents** cried that they don't have enough money to even buy their one time meal , so hence they cannot afford buying sanitizers.
- Rigid elderly people avoided using soap and sanitizers. They did not even maintain social distance .
- Inadequate maintenance , Ineffective management of faecal waste and rising groundwater contamination were some complaints of the locals .

### RURAL WATER SUPPLY AND SANITATION SITUATION IN INDIA:

#### Findings and Results:



In total 2000 participants with the majority of oldsters were interviewed, where many of them reported change in their personal hygiene and cleanliness. Majority had prevented open defecation but 20-25% locals were facing challenges with the toilet facilities and had to defecate in the open. Overall, the research revealed rich descriptions of changes in WASH practices among the residents of slum as a result of the COVID-19 pandemic, including improvements in hand washing practices that were promoted for COVID-19 prevention as well as improvements in other WASH practices that were not directly promoted, such as water treatment and household cleaning.

Conclusion :



India is trying to the best of its capabilities to make a clean green India but it will not be fulfilled by the effort of an individual but requires a collaborative approach of the government and public, requiring welfare policies and a change in the mindset go hand in hand.

Seven per cent of Indians – approximately 91 million people – lack basic infrastructure to supply clean water in their local community. I would suggest that people are trying to improve their personal hygiene but more awareness and more interaction with the government would help achieve India's goal faster.

Web biography:

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/interactive-timeline#>

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>

<https://www.nhp.gov.in/disease/communicable-disease/novel-coronavirus-2019-ncov>

<https://covid19.who.int/>

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SARS-CoV-2 in the environment: modes of transmission, early detection and potential role of pollutions

Department of Statistics , India , Social statistics bulletin: India

**NAME :- DHURU BORINA**

**COLLEGE NAME: PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS OF COMMERCE & ECONOMICS.**

**TOPIC:- IMPACT OF COVID ON EDUCATION**

1)Introduction:

The world is facing a crisis today due to the Coronavirus Covid 19 pandemic. Almost all nations have been affected due to the direct and the indirect effects of the virus and lives of millions of people have been changed, in many cases almost irrecoverably. The pandemic has had an impact on the education sector, as the primary rolling stock of this sector - the student being forced to remain in their homes to spare the risk of possible infection and death due to the virus, if the schools and colleges were to run during the pandemic. This has caused almost all schools and colleges to reach out to the online route for running the day's scheduled classes via webcams and smartphones. A further development has happened in the increasing popularity of pre-recorded or on-demand access online courses made available by platforms such as byjus, Unacademy and Unacademy. The creation of a new online route for delivery of course content will become more prominent in the post Covid world as the survivors of the pandemic and the ones who have endured through the lock down may not be as confident as they were, in the pre Covid world about sending their children and wards to schools and colleges, and thus may motivate the schools and colleges to offer online based courses to cater to their needs.

## 2) Abstract:

Biggest public health risk, the world today facing is leading to biggest and fastest restructuring or reorientation of the Indian education order. End of the month march 2020 recorded the spread of covid 19 pandemic to over 185 countries and resulted in closure of over 95 percent of all schools, colleges and universities impacting close to approx. 350 million students. The spread of the epidemic was so speedy and quick that there were hardly any plans for transition to online teaching or learning from higher education systems offline classes and no one could anticipate the associated potential risks and opportunities that a sudden change could bring in the sector. Entrance tests of several universities and many competitive examinations are held in such a crucial period that is affecting education system badly. The intrusion in the education system due to the incessant COVID-19 is a reminder that there is a prerequisite for revolution.

The semester exams scheduled in May, in universities across India, is now all set to be deferred indefinitely. Academic events chain and the academic calendars will be tempt fate if those are not completed in time.

## 3) Review of literature:

In order to understand the impact of covid-19 on the education sector of india and the challenge and the opportunities that can be gained from it a search of literature was conducted to find useful information, pertaining to the paper. The internet was used for acquiring useful research papers, having a connection with the objectives of this paper, as accessing online databases kept in the institute was rendered impossible due to closure of the institute due to the lock down. The internet (and Google Scholar) was used as a resource for acquiring research papers having a connection with the objectives of this paper. Search keywords used for this purpose were - Covid 19 pandemic, Coronavirus, Wuhan Coronavirus, Effect of the pandemic on students, teachers and institutions, Effect of the pandemic on educational policy decisions by the Government, Challenges and opportunities presented by Covid 19, e-learning, online learning and distance learning solutions for delivery of the education possible difficulties in delivering the educational content by the teacher possible difficulties in receiving and understanding the educational content delivered by the teacher, possible difficulties in conducting exams via online route in a honest and fair way during the

pandemic, a comparison between the School closures ordered during quarantine caused by the Spanish Flu of 1919 and the present closures due to Covid 19 and so on.

**4) Objectives of study:**

1. To anticipate or find out the various potential threats and potential opportunities in the education system because of covid-19 pandemic in India.

2. To find out the impact of covid-19 on students and teachers in India.

3. To find out the positive and negative impact of covid-19 on the education sector in India.

**5) Conclusion:**

The Coronavirus Covid 19 pandemic has had a very broad and measurable impact on life in general in the world. Many countries have shut their doors and the doors of their citizens in the interest of safeguarding their lives from this micro microscopic menace. The pandemic has had an impact on the education sector, which due to the nature of the sector, relies on the physical presence of the teacher and the students in the schools, colleges and universities. The lockdown enforced to reduce the menace of the virus has had an effect on this sector as students are being taught, via the online route by the teachers who are adjusting themselves to this new paradigm. Issues relating to the changed situation, connectivity of the internet and supply of electricity are a few of the various challenges being experienced in this current lockdown period.

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**TOPIC :- NEGATIVE IMPACT COVID-19: FOR THE CLIMATE CHANGE EMERGENCY.**

### **1.ABSTRACT**

The ongoing COVID-19 outbreak pandemic is now a global crisis. It has caused 9+ million confirmed cases and 400,000+ deaths at the time of writing and triggered unprecedented preventative measures that have confined a substantial portion of the global population and established 'social distancing' as a new global behavioral norm. The COVID-19 crisis has affected all aspects of everyday life and work, and heavily impacted the global economy. This crisis also offers unprecedented insights into how the global climate crisis may be managed, as there are many parallels between the COVID-19 crisis and what we expect from the imminent global climate emergency. Reflecting upon the challenges of today's crisis may help us better prepare for the future. Here we compile a list, by no means comprehensive, of the similarities and differences between the two crises, and the lessons we can learn from them: (i) High momentum trends, (ii) Irreversible changes, (iii) Social and spatial inequality, (iv) Weakening of international solidarity, and (v) Less costly to prevent than to cure.

### **2.INTRODUCTION AND LESSONS**

Expansion dynamics of the SARS-CoV-2 virus are difficult for humans to grasp owing to its long incubation period ([Linton et al., 2020](#)), the prevalence of asymptomatic individuals ([Nishiura et al., 2020](#)), and its exponential growth ([Levy and Tasoff, 2017](#)), making pandemic crisis management extremely difficult. In a similar way, climate change also has a complex but even slower, temporal dimension. Climate change models and long-term forecasts are hard for the public and policy makers to grasp, as they challenge intuition and short-term thinking. In such cases, the crisis may only become obvious when it is too late to prevent it. Scientists have long cautioned about anthropogenic climate change and emphasized the need for strong and early action to prevent its worst consequences ([Houghton, 1996](#); [Oreskes, 2004](#); [Ripple et al., 2019](#)). But, as with the muted response to early warnings of the spread of SARS-CoV-2 in China, and even earlier warnings of the

pandemic potential of SARS-COVID-like viruses ([Cheng et al., 2007](#)), much needed early action has not been taken. To date, only timid measures have been put in place to reduce the use of fossil fuels and CO<sub>2</sub> emissions. As a result, greenhouse gas concentrations have continued rising, even as both global and local temperatures repeatedly break records (IEA global.

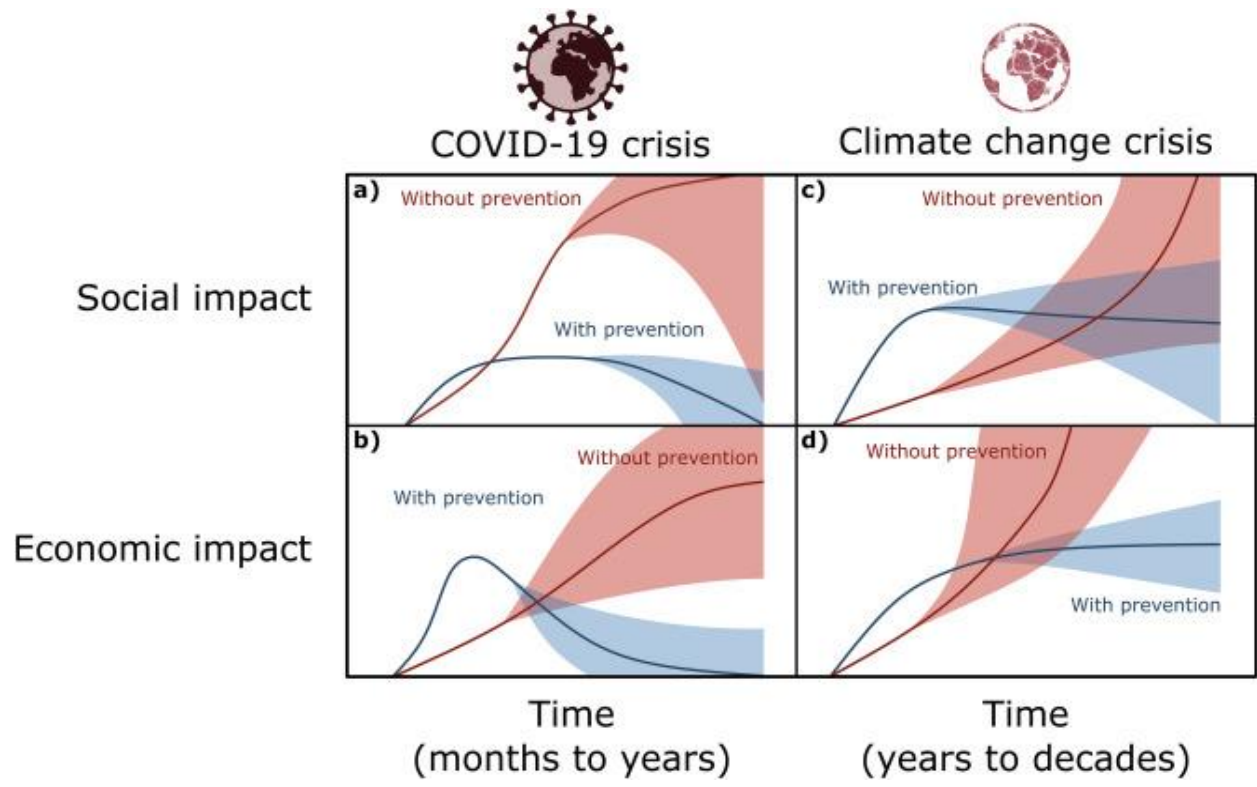
Report on CO<sub>2</sub> emissions, 2019

## **Objective and scope**

The concept of such humongous impact of COVID-19 posed several challenges that inspired MPCB to take up this study & made everyone involved to ponder up on & create an effective approach to resolve this hypothesis;

1. The pace of activities post COVID-19 will be multifold in order to revive & recover from the loses and to bring faster rate of coping up from economic perspective
2. The question still remains as to whether such revival of environmental conditions so to say betterment with absolute lockdown is the only way forward or there are ways & means to sustain these environmental conditions even post COVID-19 conditions
3. Are the concentration of pollutants in environment found as of now are background concentrations
4. If the above is true, whether reporting values till date were misleading since background corrections were not considered yet
5. What are the alternatives to sustain these environmental conditions post COVID-19 & post retrieval of activities known to add pollutants in environment such as providing for regular lockdowns to recover environmental conditions through masses – say weekly or so / mandatory work from home, no vehicle days,
6. What are the changes in resource patterns from point, area, line & fugitive source emissions.
7. Whether primary data collection is possible to establish source receptor correlation
8. Can secondary data & engineering estimates be used to establish environmental betterment visa source activity.
9. What has been the rate of recovery of environmental conditions, if any.
10. Understand graded patterns of recovery & individual source impact on the existing improvement of environmental conditions

11. Whether the cost of environmental improvement during these 30 days period of lockdown translating into assured environmental health benefits comparable to economic loss during this period of time (Green GDP?) The idea is to understand the environmental clean-up (as anticipated through the improved environmental scenario) that is supposedly shaped due to the ongoing event of Impact Evaluation of COVID-19 Pandemic Conceptualized by on Environmental Attributes Maharashtra Pollution Control Board Science & Knowledge Partners 8 COVID-19 & further to evaluate & account for prevailing environmental improved conditions to various barriers / restrictions on activities / source imposed due to lockdown.



## HIGHLIGHTS

- There are important shared challenges between COVID-19 and climate change crises.
- Some are new for policymakers and public, difficult to manage, and counterintuitive.
- We discuss main similarities and differences and highlight lessons for the future.
- Early action, forethought, and trust in science are key to face climate emergencies.

## 3. Review and literature

There is a two-way relationship between COVID-19 and the environment. On the one hand, is the effect of geographical conditions on the pandemic. The study of Yang et al. Investigated whether the relationship between climate conditions and COVID-19 transmission is subject to seasonal and geographical specificities, showing that temperature and relative humidity were driving factors of transmission, but their relations varied with season and geographical location. At the same time, Bolaño-Ortiz et al. Evaluated the spread of the pandemic in Latin America and the Caribbean region, analysis the correlation between climate and air pollution indicators in 10 cities: Mexico City (Mexico), Santo Domingo (Dominican Republic), San Juan (Puerto Rico), Bogotá (Colombia), Guayaquil (Ecuador), Manaus (Brazil), Lima (Perú), Santiago (Chile), São Paulo (Brazil) and Buenos Aires (Argentina). The results show significant associations between average temperature, minimum temperature, and air quality with the spread of infections. Moreover, humidity, wind speed, and rainfall were significantly related to daily cases, total cases, and mortality rates at various cities [16]. Moreover, in the case of India, evidence suggests that the COVID-19 epidemic trend evolution is closely related to the air quality improvement due to the nationwide lockdown in the 10 most polluted cities across the country. Similar results also derive from the study of Fernández et al. [18], who used the global Database of the World Health Organization to show that environmental aspects, such as Sustainability 2021, 13, 3158–5 of 21 loss of biodiversity, high level of air pollutants, and diminished air quality were positively connected with the spread of infections and mortality in several countries.

### ❖ Positive impacts/aspects of COVID-19 pandemic

***The COVID-19 pandemic has taught us CO2 emissions now. Howard lessons that can guide key decision makers in both the private and public sectors toward slowing climate change by reducing Kunreuther and Paul Slovic explain how decision makers can design a risk management strategy that heeds the advice of experts and addresses the cognitive biases which obstruct effective action.***

Humanity retreats indoors and the non-human natural world rumbles out liberated. Notoriously dirty, the waterways and rivers in the world look cleaner, the air fresher, the smog gone, the haze dispersed and the wildlife has filled the open spaces, coronavirus

lockdowns across the world seem to have a number of positive effects on the environment. Millions of the people have been cooped up indoors but the natural world outside has continued to rumble on and the natural world is benefiting from our absence. Here, we have discussed some important positive impacts of the COVID-19-induced lockdown on environmental quality by compiling the recently published data from research articles, NASA (National Aeronautics and Space Administration) and ESA (European Space Agency).

## **Most polluted cities of the world during the period of COVID-19-induced lockdown**

### **❖ FOREWORD**

Now, due to current lockdown the transport is restricted and factories are closed, hence, in cities all over the world the concentration of NO<sub>2</sub> in air has dropped drastically (from 5.6 µg/m<sup>3</sup> to 0.2 µg/m<sup>3</sup>) (Otmani et al. [2020](#)). Using Ozone Monitoring Instrument (OMI), NASA and ESA have monitored the abrupt decrease in NO<sub>2</sub> concentration during the initial quarantine phase of COVID-19 in China. This decrease in concentration of NO<sub>2</sub> began in China and slowly it was observed in the rest of the world. The decrease in NO<sub>2</sub> concentration was significant in China because the pandemic of COVID-19 happened in the same time when they were celebrating lunar year (Spring Festival) in China, when all the factories, transport and businesses were already closed followed by COVID-19-induced lockdown.

### **Conclusion**

WHO declared this COVID-19 outbreak a pandemic and since February, 2020 affected countries have halted their factories, transport, vehicles and aviation to minimize the spread of the virus. Following social distancing, lockdown and restricted human interaction with nature proved to be a blessing for nature and environment during the crises. There are positive indications from all over the world that COVID-19-induced lockdown is improving environmental conditions including air and water quality and causes a significant concurrent reduction in PM<sub>2.5</sub>, NO<sub>2</sub> and CO concentration which resulted in a significant increase in O<sub>3</sub> concentration. This recovery of lost environment is an indicator that the environmental degradation caused by human is reversible. In a period of just 2–3 months, recovery of nature is being witnessed by everyone. This is a signal for us to understand and react. Government and policy makers must take necessary steps so that this healing process does not become a temporary one. There is a need for rigorous study on the effect of implementation of such short term lockdown as an alternative measure for pollution reduction and its effect on economy.



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**TITLE:-** IMPACT OF COVID-19 ON EDUCATION AND WELL-BEING.

**ABSTRACT-**

The closure of educational institutions as a preventive measure against the spread of COVID-19 has affected the educational systems in the world. While

the process of shifting learning to an online format has already become common to many educational institutions worldwide, several factors are assumed to affect the quality of remote or online learning, teachers' performance, and students' knowledge and skills. This chapter presents the research findings on the impact of COVID-19 on education and the well-being of teachers, parents, and students by listing the challenges relating to remote online learning

**KEYWORDS-**

Education  
Prevention  
Worldwide  
Knowledge  
Skills

**INTRODUCTION-**



More than 1 billion and 575 million students in approximately 188 countries around the world are reported to have been by the closure of schools and universities due to preventive measures taken by countries against the spread of COVID-19 (UNESCO, 2020a). Due to isolation, the use of technology has been considered the most appropriate (if not the only) alternative to keep educational systems functional in many parts of the world during this period. Despite the challenges in implementation, several advantages have been acknowledged in the need to shift to remote or online learning, among which stands out the opportunity for rapid progress of digital education, which, in other circumstances, would take years (UNESCO, 2020b). The shift to the remote learning format has also been assessed as a good opportunity for teachers and students to become more creative. The spread of COVID-19 has also caused fear, anxiety and other concerns to citizens in parts of the world, including groups engaged in the educational process, such as children, teachers and parents. Parents' concerns, apart from circumstances created due to physical distancing and other personal factors, are presumed to have been influenced by an unwillingness to support their children in distance/online learning or home learning; the lack of access to technology and the Internet inadequacy of the technological formats used for children with special educational needs; economic hardship.



## **METHODOLOGY**

Research approach: This study used a qualitative research design. To explore the impact of COVID-19 circumstances (ex: physical distance and school closure) on teachers, parents and children, a descriptive phenomenological research approach has been used. Participants: Participants: Semi-structured interviews were used for data collection, with n=13 parents, and n=11 teachers. Participants for this study were selected using convenience sampling. All teachers and parents who at the time of the interview were involved or had children within the public pre-university education institutions, grades 1-9, in different cities of Kosovo had the right to participate in the study. Throughout the contact period, participants were informed of the purpose of the study, that their participation was voluntary and that they could withdraw from the process at any time. No participants withdrew from the interview process. To protect the participants' confidentiality, all data through which their identities could be revealed were removed. The data collection process lasted from March 20 to April 1, 2020. In addition to the areas explored, the general characteristics of the participants were collected during the initial part of the interviews.

### **OBJECTIVE OF THE STUDY-**

The specific objectives of the evaluation study include the assessments / examination of the following:

1. The rise and origin of deadly coronavirus.
2. Which extent the deadly virus laid down cascading effect on education in India.
3. Portray as to what extent the virus has affected the Poor students and private teachers.
4. To identify can virtual learning replace teachers.
5. To identify the limit of internet connectivity in J&K.

## **RESULT-**

The following results reflect findings from the perspectives of teachers and parents, by areas explored. In addition to the narrative description, the findings are accompanied by excerpts from the interviews, and processed data, presented in tabular form. The findings listed within the codes and subcodes are derived from the classical analysis of the content of the interviews, and are ranked according to the frequency of information identified among the interviews.

## **CONCLUSION-**

The findings of this study confirm that social isolation and the new circumstances created against the spread of COVID-19, including changes in education, have caused a number of concerns for children, parents, and teachers in Kosovo. These changes are in line with expectations that the spread of COVID-19 would cause fear, anxiety, and other concerns among citizens around the world (International Federation of Red Cross and Red Crescent Societies, 2020). Furthermore, these circumstances, which have influenced the changes in the engagement of teachers, parents, and students to have influenced both parents' and teachers' overburden. However, as highlighted by other countries, these concerns have also been affected by other changes, including the impact of COVID-19 in the field of education and inexperience or lack of preparation of teachers and parents to support students or their children in remote or online learning – also influenced by the inadequacy of the methods used for online learning to the individual needs of students. In addition, these results confirm that, as in other countries of the world, knowledge of the use of technology and the demand for change, in conjunction with the circumstances caused by COVID-19, can bring on a number of concerns, including increased stress and teacher anxiety. However, despite the declared changes and concerns, the early implementation of remote and online learning has been confirmed to have been positively assessed during this period, keeping students engaged and distracting them from the pandemic. In addition, while increasing parental responsibilities, home isolation is considered valuable and influential in raising the level of quality and productive time among family members. The findings of this study confirm the implementation of remote and online learning and demonstrate the efforts of teachers and students to engage in the learning processes.

## **REFERENCE-**

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**TOPIC :- INDIAN GOVERNMENT PERFORMANCE IN COVID-19 PANDEMIC**

#### **ABSTRACT**

This paper examines continuity and change in development in different sectors by the **INDIAN GOVERNMENT IN COVID-19** pandemic. To evaluate the level of change, it defines major change as a major shift in the goals and strategies of a state's policy and argues that most often a major change in foreign policy is a result of changes in the systemic variables followed by a change in either state- or individual-level variables. Indian foreign policy under Modi government is witnessing a proactive turn infused by a strong leadership. The government has redefined India's foreign policy priorities, and the level of external

engagement has also gone up. However, areas like democracy promotion have not upheld their momentum, and the government's regional policy has failed to utilize the opportunities that were available to it when it began its tenure. Also, foreign policy changes under the new government cannot be regarded as a major change because the goals and strategies of Indian foreign policy have not changed. Initiatives such as the **Swachh Bharat Abhiyan** or the **Clean India Mission** and the **Make in India** projects, along with the **Digital India initiative** were welcomed by citizens across classes.

This paper aims to analyse the performance levels of Indian government since **COVID-19** pandemic struck India.

## INTRODUCTION

**COVID-19** struck India in 2020, since then the performance in different sectors of the Indian government has varied. Indian people have gone through a lot during this one year, many lost their jobs, their loved ones, their life. To tackle these problems what methods Indian government used will be analysed in this paper. The life before pandemic and after pandemic sure has a great difference.

Different Government initiatives like Make in India were affected by the pandemic since many industries were closed down because of low sales and suffering huge loss. The Indian Education too quickly adapted and upgraded from offline to online education for the protection of the students. Some Sectors like **ECONOMY, UNEMPLOYMENT** are some where government's efforts caught lacking. The Indian Economy faced a major fall of **24.4%** bearing a loss of **200-500 billion USD**. India was a **2.6 TRILLION** Economy. The Helping Funds given to the states by the government have helped the states to some extent but were not able to cope up to losses they bore.

## OBJECTIVES

The overall objective of this study is to analysis the changes in the Performance of the Indian Government in COVID-19 pandemic. In particular, this study will examine:

- I. How Indian government is facing the COVID-19 pandemic.
- II. Positives and negatives of the level of changes during the COVID-19 pandemic.
- III. Measures taken by the government to tackle the COVID-19.

## REVIEW

The first **COVID-19** case in India was detected on January 30, the same day When WHO declared it a public health emergency of international concern. India went into pandemic lockdown almost two months later. On June 8, after 10 weeks of lockdown, India started a phased reopening of its economy. With Unlock 1.0, the country is trying to balance attempts to revive the economy while dealing with increasing caseloads and new hotspots. On June 30, official COVID-19 cases stood at over **585,000**, and more than **17,500** deaths. While Recovery rates have improved to 60 % and the death rate is relatively low considering

that India is the fourth most-impacted country globally, **COVID-19** in India is nowhere close to the peak.

The lockdown came at a time when the economy was already struggling.  
Trade

Across sectors was estimated to be impacted. This directly affected the procurement of essential items including testing equipment. Besides the import and export business, yet another major revenue generator that received a blow was the tourism industry. India's predominantly unorganized retail market was yet another casualty with the lockdown increasing the pressure on the online retail segment to rise to the occasion.

## METHODOLOGY

Data and information presented in the study are collected from various reports and articles published by national and international agencies on impact of COVID-19 pandemic. Information is also collected from various authentic websites. Some journals are also referred related to impact of COVID-19 and what measures The Indian Government took to restrain the effect of the deadly viral infection.

## METHOD OF DATA COLLECTION

Although data can be valuable, too much information is unwieldy, and the wrong data is useless. The right data collection method can mean the difference between useful insights and time-wasting misdirection. Luckily, there are several tools available for primary data collection. The methods range from traditional and simple, such as a face-to-face interview, to more sophisticated ways to collect and analysis data.

1. Interviews
2. Questionnaires and surveys
3. Observations
4. Documents and records
5. Oral histories

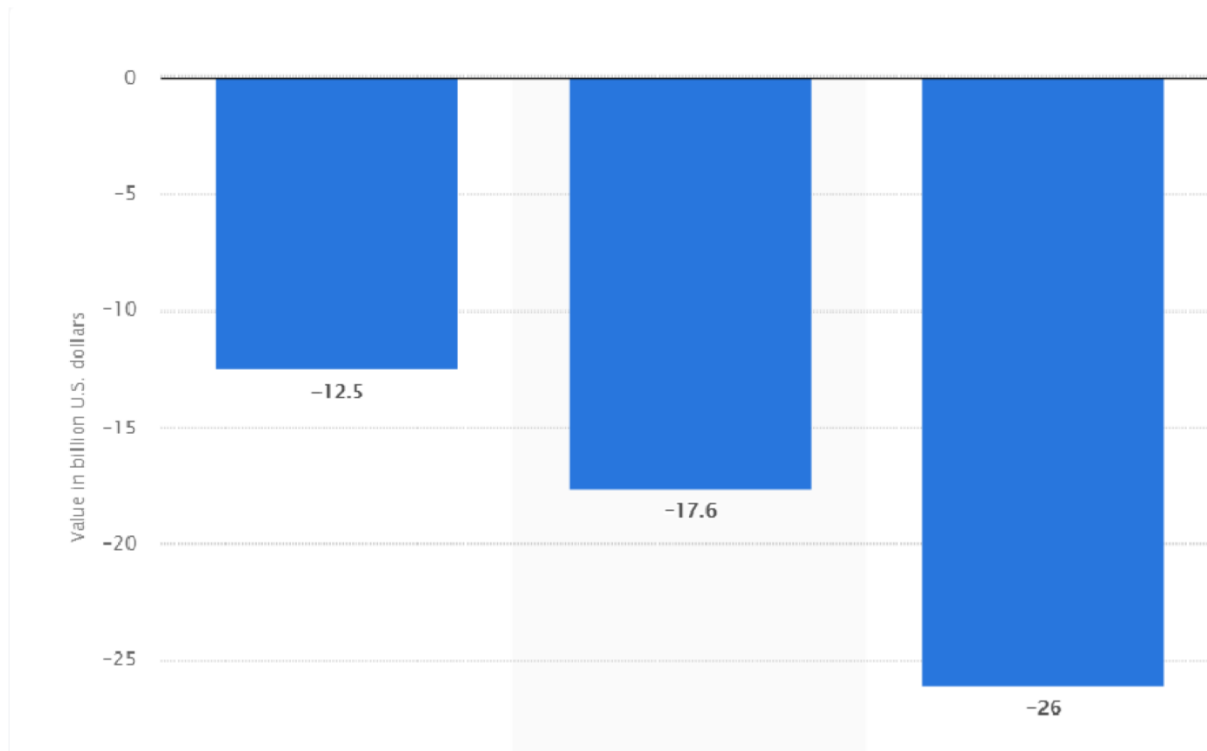
## DATA ANALYSIS

Data analysis can take various formats. The method you choose depends on the subject matter of your research. Quantitative methods, such as surveys, large-scale benchmarks, and prioritization, answer the question "How much?" But these methods can leave the question "Why?" unanswered. This is where qualitative data collection methods come into play.



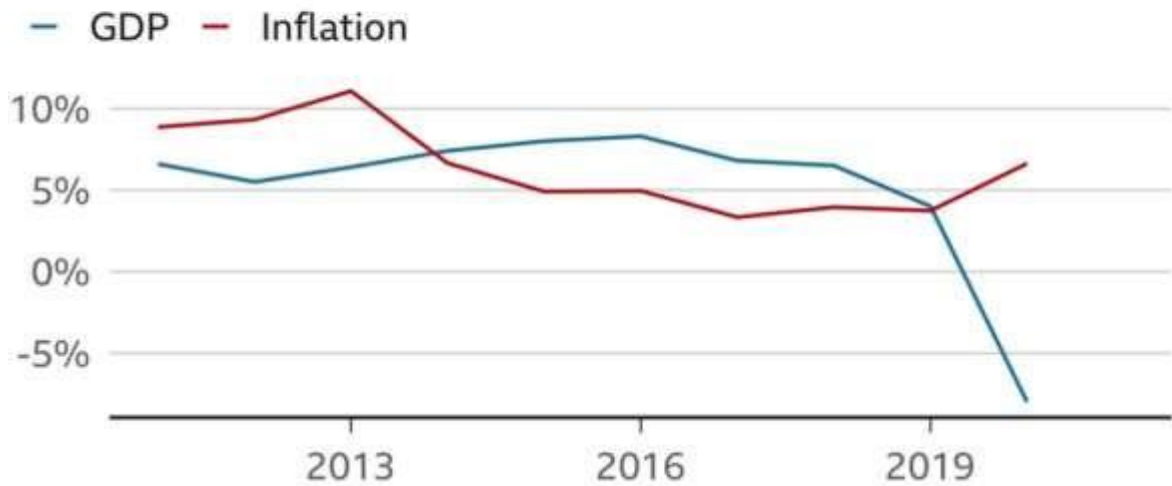
## QUANTATIVE ANALYSIS

Estimated cost of the coronavirus (COVID-19) lockdown on the Indian economy in 2020 (in USD)



## India's GDP is too low and its inflation too high

GDP growth and retail inflation, 2011-2020

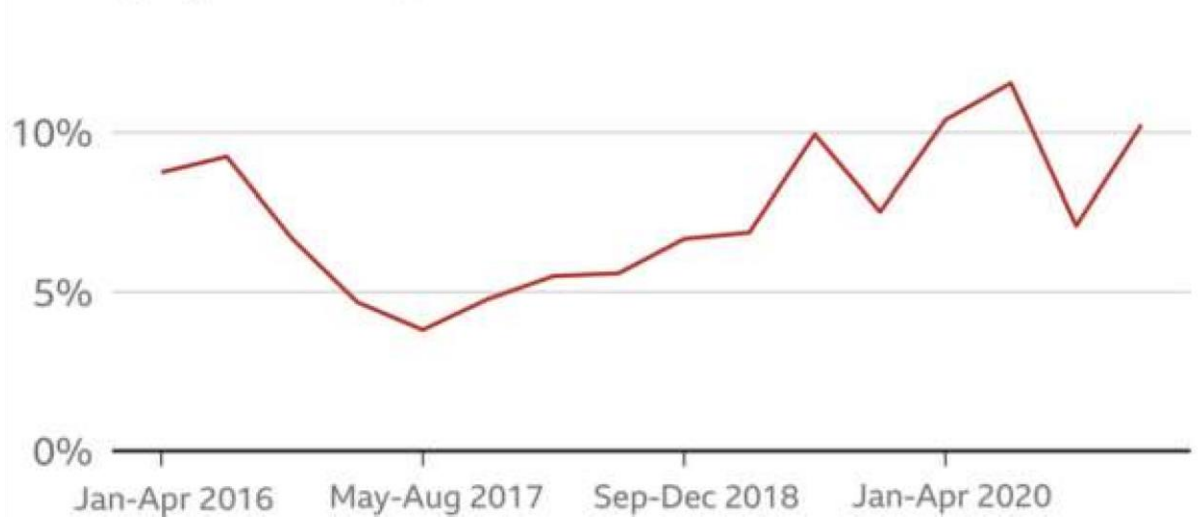


Source: IMF, MOSPI

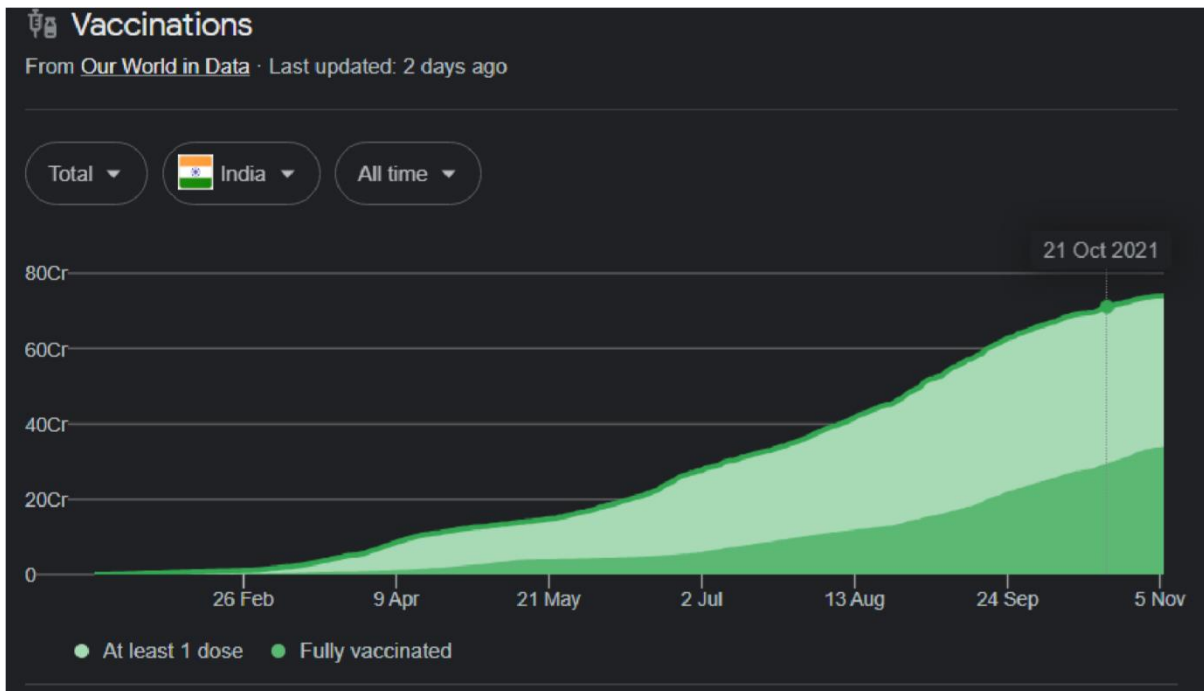


# Unemployment has been on the rise

Unemployment rate, 2016-21



## Vaccination chart



## QUALITATIVE ANALYSIS

In January 2021, India saw an unemployment rate of over six percent. This was a significant improvement from the previous month. A damaging impact on an economy as large as India's caused due a total lockdown was imminent. Unemployment went up to nearly 24 percent in April 2020. This was possibly a result of a decrease in demand as well as the disruption of workforce faced by companies. Furthermore, this caused a GVA loss of more than nine percent for the Indian economy that month.

### **The trickle-down effect**

Between February and April 2020, the share of households that experienced a fall in income shot up to nearly 46 percent. Inflation rates on goods and services including food products and fuel were expected to rise later this year. Social distancing resulted in the job losses, specifically those Indian society's lower economic strata. Several households terminated domestic help services – essentially an unorganized monthly-paying job. Most Indians spent a large amount of time engaging in household chores themselves, making it the most widely practiced lockdown activity.

### **Aid from the Pradhan MantriGaribKalyanYojana**

The most devastating impact of the virus and the lockdown had been on the economically backward classes, with limited access to proper healthcare and other resources. This resulted the government has launched various programs and campaigns to help sustain these households. Under the **Pradhan MantriGaribKalyanYojana**, 312 billion Indian rupees were accrued and provided to around **331 million beneficiaries** that included women, construction workers, farmers, and senior citizens. More aid was announced in mid-May, to mainly support small businesses through the crisis.

## VACCINATION DRIVE BY GOVERNMENT

The pace of vaccination is expected to pick up again after seeing a slump during Diwali. The Centre said the states have a stock of 16 crores vaccine doses still to be administered. It also revealed that 36% of the population above 18 years have been fully vaccinated.

## RESEARCH HYPOTHESIS

The above extensive study gives the result of the level of performance by the Indian government. The government did a good job by going in lockdown earlier than most of the countries to restrain the infection of the deadly virus. The government also did a great thing by vaccinating the majority of the population. The mortality rate has also reduced to great extent.

The Indian Government was not able to perform in the Economy and the Unemployment of the country, the unemployment rate is still record high in the country, the GDP has fallen terribly, it has shown some signs of improvement in these few months because of the slow

and steady up liftment of the lockdown which were imposed in the whole country. The Online sector though gained a lot in this period of the pandemic.

## CONCLUSION

COVID-19 has impacted immensely the country. Though it has created many challenges, various opportunities have opened up for various people like the online sector, ecommerce etc. The vaccination drive done by the Indian government have impacted positively throughout the globe. Many Start-ups took birth in this pandemic era.

The Economy too have shown a positive trend in improvement and the government too are working towards reducing the unemployment rate of the country by introducing many policies which will help them. Small business got affected by the lockdown, many small scale textile industries got shut down due to huge losses the owner bore. The lack of Oxygen cylinders in the hospital too caused horrific events in the country. The lack of Hospital beds in some hospitals took place. The Indian Government took some measures by building temporary beds with large capacity helped the people.

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- d. <https://www.jotform.com/data-collection-methods/>
- e. [https://www.who.int/news-room/q-a-detail/coronavirusdisease-\(covid-19\)-vaccines?adgroupsurvey={adgroupsurvey}](https://www.who.int/news-room/q-a-detail/coronavirusdisease-(covid-19)-vaccines?adgroupsurvey={adgroupsurvey})
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**TOPIC :- EVIDENCE OF THE IMPACT OF NOISE POLLUTION ON BIODIVERSITY: A SYSTEMATIC MAP**

## 1) ABSTRACT

Ecological research now deals increasingly with the effects of noise pollution on biodiversity. Indeed, many studies have shown the impacts of anthropogenic noise and concluded that it is potentially a threat to the persistence of many species. The present work is a systematic map of the evidence of the impacts of all anthropogenic noises (industrial, urban, transportation, etc.) on biodiversity. This report describes the mapping process and the evidence base with summary figures and tables presenting the characteristics of the selected articles.

## 2) METHODS

The method used was published in an a priori protocol. Searches included peer-reviewed and grey literature published in English and French. Two online databases were searched using English terms and search consistency was assessed with a test list. Supplementary searches were also performed (using search engines, a call for literature and searching relevant reviews). Articles were screened through three stages (titles, abstracts, full-texts). No geographical restrictions were applied. The subject population included all wild species (plants and animals excluding humans) and ecosystems. Exposures comprised all types of

man-made sounds in terrestrial and aquatic media, including all contexts and sound origins (spontaneous or recorded sounds, in situ or laboratory studies, etc.). All relevant outcomes were considered (space use, reproduction, communication, etc.). Then, for each article selected after full-text screening, metadata were extracted on key variables of interest (species, types of sound, outcomes, etc.).

### **3) Review findings**

Our main result is a database that includes all retrieved literature on the impacts of anthropogenic noise on species and ecosystems, coded with several markers (sources of noise, species concerned, types of impacts, etc.). Our search produced more than 29,000 articles and 1794 were selected after the three screening stages (1340 studies (i.e. primary research), 379 reviews, 16 meta-analyses). Some articles (n = 19) are written in French and all others are in English. This database is available as an additional file of this report. It provides an overview of the current state of knowledge. It can be used for primary research by identifying knowledge gaps or in view of further analysis, such as systematic reviews. It can also be helpful for scientists and researchers as well as for practitioners, such as managers of transportation infrastructure.

### **4) BACKGROUND**

For decades, biodiversity has suffered massive losses worldwide. Species are disappearing [1], populations are collapsing [2], species' ranges are changing (both shrinking and expanding) at unprecedented rates [3] and communities are being displaced by invasive alien species [4]. All of the above is caused by human activities and scientists regularly alert the international community to our responsibility [5]. In particular, urban growth is one of the major reasons for biodiversity loss [6, 7] in that it destroys natural habitats, fragments the remaining ecosystems [8] and causes different types of pollution, for example, run-off, waste and artificial light impacting plants and animals [9, 10]. Similarly, man-made sounds are omnipresent in cities, stemming from traffic and other activities (industrial, commercial etc.) [11] and they can reach uninhabited places [12]. Anthropogenic noise can also be generated far from cities (e.g. tourism in a national park, military sonar in an ocean, civil aircraft in the sky)

Many studies have shown that such sounds may have considerable impact on animals. However, sound is not a problem in itself. A majority of species hear and emit sounds [13]. Sounds are often used to communicate between partners or conspecifics, or to detect prey or predators. The problem arises when sounds turn into "noise", which depends on each species (sensitivity threshold) and on the type of impact generated (e.g. disturbances, avoidance, damage). In this case, we may speak of "noise pollution". For instance, man-made sounds

can mask and inhibit animal sounds and/or animal audition and it has been shown to affect communication [14], use of space [15] and reproduction [16]. This problem affects many biological groups such as birds [17], amphibians [18], reptiles [19], fishes [20], mammals [21] and invertebrates [22]. It spans several types of ecosystems including terrestrial [23], aquatic [24] and coastal ecosystems [25]. Many types of sounds produced by human activities can represent a form of noise pollution for biodiversity, including traffic [26], ships [27], aircraft [28] and industrial activities [29].

Noise pollution can also act in synergy with other disturbances, for example light pollution [30].

Despite this rich literature, a preliminary search did not identify any existing systematic maps pertaining to this issue. Some reviews or meta-analyses have been published, but most concern only one biological group, such as Morley et al. [31] on invertebrates, Patricelli and Blickley [32] on birds and Popper and Hastings [33] on fishes. Other syntheses are more general and resemble somewhat a systematic map, but their strategies seem to be incomplete. For instance, Shannon et al. [34] performed their literature search on only one database (ISI Web of Science within selected subject areas) and did not include grey literature. As another example, we can cite Rocca et al. in 2016, a meta-analysis that limited its population to birds and amphibians and its outcome to vocalization adjustment [35]. As a consequence, a more comprehensive map, covering all species and ecosystems, all sources of man-made sounds and all outcomes, and implementing a deeper search strategy (e.g. several databases, grey literature included) is needed to provide a complete overview for policy and practice. This report presents a systematic map of evidence of the impact of noise pollution on biodiversity based on an a priori method published in a peer-reviewed protocol [36]. It describes the mapping process and the evidence base. It includes aggregate data and tables presenting the characteristics of the selected articles to highlight gaps in the literature concerning the issue. A database was produced in conjunction with this report, containing metadata for each selected article including key variables (species, types of sound, effects, etc.)

## 5) METHOD

The method used to produce this map was published in an a priori peer-reviewed protocol by Sordello et al. [36]. Deviations are listed below. The method follows the Collaboration for Environmental Evidence (CEE)

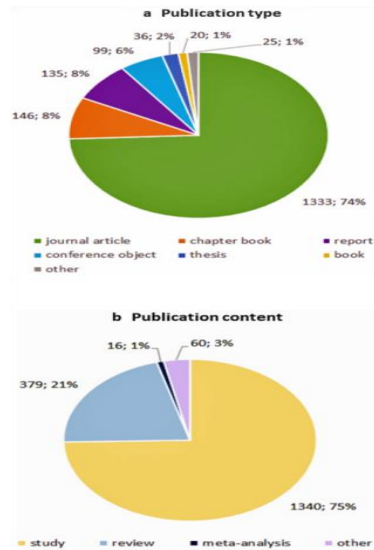
Guidelines and Standards for Evidence Synthesis in Environmental Management [38] unless noted otherwise, and this paper conforms to ROSES reporting standards [39] (see Additional file 1).

Deviation from the a priori protocol published by

Sordello et al. [36]

## Method enhancements

We reinforced the search strategy with: a search performed on both CORE and BASE, whereas the protocol was limited to a search on only one of these two search engines,



export of the first 1000 hits for each search string run on Google Scholar, whereas the protocol foresaw the export of the first 300 hits,

extraction of the entire bibliography of 37 key reviews selected from the previously provided corpus whereas the protocol did not foresee this option.

## Method downgrades

Because of our resource limitations:

we could not extract the design comparator (e.g. CE,

BAE, BACE),

we could not split each article included in the map into several entries (i.e. a book with several chapters, a proceeding with multiple abstracts, a study with several species, sources of noise or outcomes). Consequently, we coded the multiple aspects of these articles on one line in the map database.

## Search for articles

## Languages



Searches were performed using exclusively English search terms. The list of search terms is presented below (see “Search string”).

Only studies published in English and in French were included in this systematic map, due to limited resources and the languages understood by the map team.

### Search string

The following search string was built (see Additional file 2, section I for more details on this process):

((TI = (noise OR sound\$) OR TS = (“masking auditory”

OR “man-made noise” OR “anthropogenic noise” OR

“man-made sound\$” OR “music festival\$” OR

((pollution OR transportation OR road\$ OR highway\$ OR motorway\$ OR railway\$ OR traffic OR urban OR city OR cities OR construction OR ship\$ OR boat\$ OR port\$ OR aircraft\$ OR airplane\$ OR airport\$ OR industry OR machinery OR “gas extraction” OR mining OR drilling OR pile-driving OR “communication network\$” OR “wind farm\$” OR agric\* OR farming OR military OR gun\$ OR visitor\$) AND noise))) AND

TS = (ecolog OR biodiversity OR ecosystem\$ OR “natural habitat\$” OR species OR vertebrate\$ OR mammal\$ OR reptile\$ OR amphibian\$ OR bird\$ OR fish\* OR invertebrate\$ OR arthropod\$ OR insect\$ OR arachnid\$ OR crustacean\$ OR centipede\$)).

## 6) OBJECTIVE OF THE REVIEW

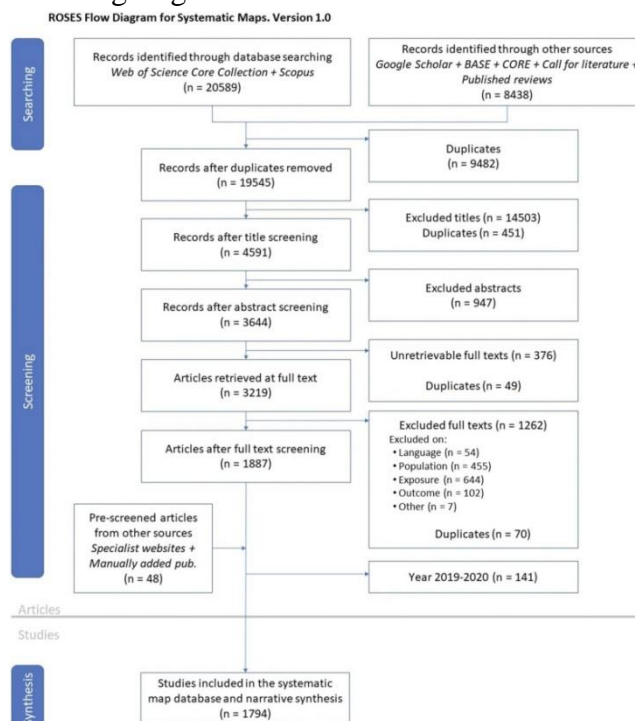
The objective of the systematic map is to provide a comprehensive overview of the available knowledge on the impacts of noise pollution on species and ecosystems and to quantify the existing research in terms of the taxonomic groups, sources of noise and impact types studied.

The systematic map covers all species and ecosystems. In that we are currently not able to say exactly when a sound becomes a noise pollution for species (which is precisely why a systematic map and reviews are needed on this topic), this map covers all man-made sounds, regardless of their characteristics (e.g. frequency, speed, intensity), their origin (road traffic, industrial machines, boats, planes, etc.), their environment or media (terrestrial, aquatic, aerial) and their type (infrasound, ultrasound, white noise, etc.), and in most cases here uses

the term “noise” or “noise pollution”. It does not include sounds made by other animals (e.g. chorus frogs) or natural events (e.g. thunder, waterfalls). The systematic map deals with all kinds of impacts, from biological to ecological impacts (use of space, reproduction, communication, abundance, etc.). It encompasses in situ studies as well as ex situ studies (aquariums, laboratories, cages, etc.). The components of the systematic map are detailed in Table

## 7) RESULTS

During the screening process, reviewers did not screen articles that they had authored themselves, except the protocol of this systematic map and it was excluded during the title-screening stage

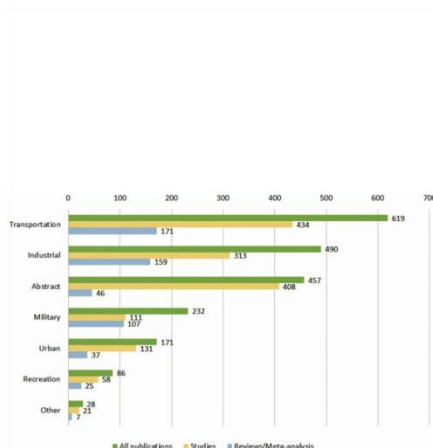


Among the 29,027 articles initially collected, 9482 were deleted because they were duplicates, 14,503 were excluded on titles, 947 on abstracts and 1262 on full-texts. A total of 1887 articles were definitively selected after the three screening stages. Among them, 1746 were included in the map to be coded (with 48 more articles manually added or coming from specialist websites) and 141 were grouped in a separate additional file because they were published in 2019–2020 (Additional file 8). The systematic-map database contains 1794 relevant articles on the impacts of anthropogenic noises on species and ecosystems (Additional file 9), of which 19 are written in French and 1775 in English

## 8) SOURCE OF NOISE

For 69 articles (4%), we could not precisely code the source of noise in any exposure class. Indeed, these articles use imprecise expressions such as

“anthropogenic noise”. Among the others, 619 articles (35% of the map, see Fig. 7) deal with transportation noise, followed by industrial noise (27%) and abstract noises (25%). Few articles deal with recreational noise (5% of the map).



Focusing on the 1340 studies, transportation noise

(32%), abstract noise (30%) and industrial noise (23%) are also the three sources of noise most considered, but the ranking was different from that found for all articles. Regarding the reviews/meta-analyses, transportation (43%) and industry (40%) are the two first sources of noise most considered and military noise (27%) comes in as the third source instead of abstract noises.

## 9) CONCLUSION

The systematic map reveals that the impacts of anthropogenic noises on species and ecosystems have been researched for many years. In particular, some taxonomic groups (mammals, birds, fishes), types of noise (transportation, industrial, abstract) and outcomes (behavioural, biophysiological, communication) have been studied more than others. Conversely, less knowledge is available on certain species (amphibians, reptiles, invertebrates), noises (recreational, military, urban) and impacts (space use, reproduction, ecosystems). The map does not assess the impacts of anthropogenic noise, but it can be the starting point for more thorough synthesis of evidence. After a critical appraisal, the included reviews and meta-analyses could be exploited, if reliable, to transfer the already synthesized knowledge into operational decisions to reduce noise pollution and protect biodiversity.

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**Topic:- Digital Marketing**

### Abstract

Digital marketing is the marketing of products or services using digital technologies, mainly on the Internet, but also including mobile phones, display advertising, and any other digital medium. Digital marketing's development since the 1990s and 2000s has changed the way brands and businesses use technology for marketing. As digital platforms are increasingly incorporated into marketing plans and everyday life, and as people use digital devices instead of visiting physical shops, digital marketing campaigns are becoming more prevalent and efficient. This paper mainly focuses on conceptual understanding of digital marketing, how digital marketing helps today's business and some cases in the form of example.

### Introduction

Digital marketing encompasses all marketing efforts that use an electronic device or internet. Businesses leverage digital channels such as search engines, social media, email and their websites to connect with current and prospective customers. This can also be referred to as 'online marketing', 'internet marketing' or 'web marketing'. Digital marketing is defined by use of numerous digital tactics and channels to connect with customers where they spend much of their time: online. From website to business's online branding assets – digital advertising, email marketing, online brochures, and beyond – there's a spectrum of tactics falling under the umbrella of "digital marketing."

### OBJECTIVES OF THE STUDY

- To explore the unethical means used by online stores for effective digital marketing.
- To explore the problems faced by consumer in this unethical process.
- To suggest safeguards to the consumer out of inferences drawn from study.

### The evolution of digital marketing

Three decades ago, marketers were just starting to add the term "digital marketing" to their vocabularies and game plans. It's a practice that took off with the rise of the internet and picked up speed through the growth of social media and smartphone technology.

Today, digital marketing is a dynamic industry that has become one of the most important tools in a marketer's strategy. From email marketing to user-generated content to organic and paid SEO, businesses are continuously searching for new and better ways to reach people on the web and through their connected devices.

Let's take a look at the evolution of online marketing over the last 30 years to see how we got here.

### Brief History of Digital Marketing

Digital marketing is the process of communicating product or service value through electronic channels. Before the 1990s, businesses devoted the majority of their marketing resources to traditional media, such as print publications, TV, radio, and billboards. They had no idea that the advent of the World Wide Web, social media, and email would stretch their marketing strategy and budget to include new methods of promoting their brand and products through these new channels.

### What are the 5 Ds of Digital Marketing?

- ❖ Digital Devices – laptops, desktops, smartphones, tablets, smart TVs, wearable devices, gaming devices.
- ❖ Digital Platforms – social media, search engines, websites.
- ❖ Digital Media – online ads, social media marketing, SMS, email marketing
- ❖ Digital Data – apps, contact forms, surveys
- ❖ Digital Technology – artificial intelligence, virtual reality, augmented reality

### Types of Digital Marketing

There are several types of digital marketing, with categories and sub-categories. However, it can be broadly classified into the following:

- Search Engine Optimization or SEO
- Pay Per Click ads or PPC
- Social Media Marketing or SMM
- Content Marketing
- Email Marketing
- Mobile Marketing
- Marketing Analytics

## Marketing methods

Just like any business, a food co-op needs to market the right product, to the right person, at the right price, in the right place and at the right time.

There are many different marketing strategies you might want to consider: creating posters & leaflets, engaging media, organizing events, encouraging word of mouth, and using special offers and discounts. But first, think about your potential customers – who will shop at your co-op?

Do you think most will be older people, families with young children? Are they likely to be of a particular ethnic background? With a bit of cash to spare, or living on low incomes? What time are they likely to shop? You will likely find it hard to appeal to everyone at the same time – it is unlikely that you will have the range of a large supermarket and you might choose to stick to a fairly narrow range of produce.

Once you've identified your target customers, have a think about the '4 Ps' of marketing:

- Product

The type of products you choose to sell will affect who you appeal to:

- ❖ Are you going to focus on organic or locally grown food, or is this not particularly important for you or your customers?
- ❖ Are you going to sell fruit and vegetables? Exotic produce? Hard-to-find ingredients that your customers are struggling to buy elsewhere?
- ❖ Are you going to sell your products by weight, so that customers can buy as much or as little as they want?

- Price

A product is only worth what a customer is prepared to pay for it. You don't necessarily have to sell the cheapest food in the area, but the price does need to be competitive. In most cases food co-ops are set up to try to provide food at a more affordable price than other local outlets, so many set their prices by making sure they are lower than the local supermarket. However, it is also very important to make sure you are covering all your costs. Work out your prices carefully by calculating your costs first (for example rent, bags, petrol, and buying food). Some food co-ops add little or no mark-up to the cost price to make their products as cheap as possible.

- Place

To reach as many customers as possible the premises where you sell your goods must be appropriate and convenient for your target group. For example, if you are trying to appeal to older people it may be easier to deliver bags or run a stall at a sheltered housing scheme, whereas if you are trying to target families it may be more convenient to have a stall or drop-off point at a school or children's center (see the Premises section for more information).

- Promotion

You can promote your food co-op in lots of different ways. You could produce leaflets and posters, send out press releases, set up a website, have a big launch event, or run a special introductory offer.

It is a good idea to use a combination of promotional methods to reach as many people as possible, but do bear in mind that promotion can be both time-consuming and costly. Before you go ahead and print thousands of leaflets, think about what will be the most effective use of your time and money. Try to think of ways to get free publicity, for example:

Write a short news item or feature and send it to the editor of the local newspaper or community newsletter – make sure you highlight what makes your co-op special

Post about your food co-op on local message boards and forums

Pubs, cafes and supermarkets often have a board where local services can be advertised

Social media, like Twitter, Instagram and Facebook, can be incredibly useful tools

### Finding

1. Meet your customer where they are: organization should try to use digital platform for maintaining the social distancing and safety. For developing the digital infrastructure, it is difficult task for the organizations to arrange the fund and difficult task to train the employees immediately.
2. Build agile capabilities for fluid times: Use digital platform for approaching the customer and try to build new capabilities so Organization sustain in business world.
3. Save time and money and try to reach maximum no of people for satisfying their needs.

## RESEARCH METHODOLOGY:

The nature of the study is qualitative and exploratory. The study attempts to explain the impact of digitization on the development of rural marketing. The journals, websites and other public sources are main bases of several data and information included in this research paper. This is exploratory type research and based on secondary data and information only.

## Conclusion

It can't be rejected that the world is quickly moving from simple to the digital world. Individuals are investing more in online content and companies that find it hard to digest this fact in their advertising strategy need to adjust quickly. The more time individuals spend on the internet every year, the more digital platform they use play an ever-developing function in their lives. The main aim of Digital India is to promote digital medium. Because people can use digital platform any time anywhere from the world companies need to change their marketing strategy from traditional to digital. On the off chance that the companies don't utilize the digital platform to advertise their product and services then they cannot compete with competitors and will eventually shutdown. When customers want to buy any product online, they can easily get product information and can compare with other products without visiting any retail store or shopping mall. It shows that consumers are more inclined towards online buying rather than visiting a retail store. As consumer's buying behavior is changing companies also need to change their advertising strategy and embrace digital platforms for marketing.



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**Topic :- Farmer and farm worker illnesses and deaths from COVID-19 and impacts on agricultural output**

1) ABSTRACT

Farmers and farm workers are critical to the secure supply of food, yet this population is potentially at high risk to acquire COVID-19. This study estimates the prevalence of COVID-19 among farmers and farmworkers in the United States by coupling county-level data on the number of farm workers relative to the general population with data on confirmed COVID-19 cases and deaths. In the month period since the start of the pandemic (from March to March the estimate cumulative number of COVID-19 cases (deaths) was 329,031 (6,166) among agricultural producers, (among hired agricultural workers, among unpaid agricultural workers, and among migrant agricultural workers. The cases amount to and of all U.S. agricultural producers, hired workers, unpaid workers, and migrant workers, respectively. The COVID-19 incidence rate is significantly higher in counties with more agricultural workers; a 1% increase in the number of hired agricultural workers in a county is associated with a 0.04% increase in the number of COVID-19 cases per person and 0.07% increase in deaths per person. Although estimated new cases among farm workers exhibit similar trends to that of the general population, the correlation between the two is sometimes negative, highlighting the need to monitor this particular population that tends to live in more rural areas. Reduction in labour availability from COVID-19 is estimated to reduce U.S. agricultural output by about million.

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Data Availability: All data used in the analysis, along with the code to replicate results, are available on Harvard Dataverse

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**Competing interests:** RV is employed by Microsoft, a commercial entity. Microsoft has provided a gift to Purdue University to support JL’s research program. This does not alter our adherence to PLOS ONE policies on sharing data and materials.

## 2) INTRODUCTION

COVID-19 brought about significant disruptions to the food supply chain [1]. The spike in demand at retail grocery following shutdown orders in March 2020 led to stockouts and empty shelves [2]. The food industry worked to re-allocate output designed and packaged for food service to retail grocery. While some farmers had to plow under crops or dump milk when demand from food service evaporated, others experienced heightened demand, and there was added stress and work at all levels of the food supply chain [3, 4]. While many employees have been able to work remotely during the pandemic, those working in farm, food manufacturing, and grocery were deemed essential [5].

Food and farm workers were declared essential to ensure the public was fed, but this population, which includes many migrant, minority, and low-income individuals, was potentially at high risk for contracting COVID-19. Some of the most notable food system disruptions occurred in the beef and pork packing sectors, which in late April and May 2020, were operating at output levels 40% below the prior year because of plant shutdowns and slowdowns related to the spread of COVID-19 among their workforce [6]. It has been estimated that there were at least 17,000 cases and 91 deaths among U.S. meat and poultry processing workers due to COVID-19 in April and May 2020 [7]. At the farm level, there have been media reports of sizable outbreaks among workers on fruit and vegetable farms [8–10]. These and other events have led some to argue that federal policies have been insufficient to protect worker safety in light of the risks posed by COVID-19 in general [11] and among migrant farm workers in particular [12].

The COVID-19 related risks to the food system have been greatest where labour is most involved. Concerns about food availability and stability are particularly acute in developing countries where labour intensive traditional value chains exist; however, as the experience with meat packing suggests, there are also agricultural labour concerns in developing countries, particularly for fruits and vegetables that rely on hand planting, weeding, or harvesting [13]. It has been estimated that a mere 40 U.S. counties are responsible for 75% of total fruit and vegetable land farmed [14], indicating the geographic location of COVID-19 cases is particularly important for understanding vulnerability to the food supply. Moreover, given the seasonal nature of agriculture, in which labour is more intensely utilized during planting and harvesting seasons, it is important to understand and characterize the temporal impacts of COVID-19 in those locations where production occurs.

In addition to the direct effect of COVID-19 on agricultural workers, policy and overall economic conditions have affected the supply of migrant agricultural workers. Unemployment rates, which spiked in the wake of COVID-19, affect the demand for migrant labour; the number of H-2A visas issued, which are utilized by migrant agricultural workers, was 4.4% lower April through July 2020 relative to the same time in 2019 [15]. The reductions in migrant labour and other agricultural labour have the potential to adversely affect food supply. Assuming the incidence rate among agricultural workers is the same as that of the general U.S. population, it has been estimated that

### 3) METHOD

Data on daily number of confirmed COVID-19 cases and deaths in each U.S. county are obtained from John Hopkins University [17]. Cases and deaths not directly attributable to a county are omitted from this analysis. The exception to this is in Utah, where cases and deaths are reported by region for sparsely populated counties; the Utah cases and deaths not directly attributable to a county were allocated to counties based on each county's share of the population without direct case counts. Data on population for each U.S. country are obtained from the U.S.

Census Bureau [18]. Population estimates for the year 2017 are utilized to match with agricultural labour data



There are a number of potential data sources on agricultural labour, each with distinct advantages and disadvantages [18]. Given the desire to obtain county-level estimates, and to account for different types of agricultural workers, data from the latest Census of Agriculture in 2017 are utilized [19]. The Census of Agriculture measures four non-mutually exclusive categories of agricultural workers. The first category utilized is that of agricultural producer—a category that is often interpreted as a “farmer.” The number of agricultural producers is elicited with the question, “In 2017, how many men and women were involved in decisions for this operation (include family members and hired managers)? Exclude hired workers unless they were a hired manager or family member.” This measure excludes minors but includes men and women who make day-to-day decisions for the operation. In addition, the Census asks about the number of hired farm or ranch workers (which could include paid family members and migrant workers who are not paid on contract) in addition to the number of unpaid farm or ranch workers (which could include family members). Finally, the Census measures the number of agricultural migrant workers (both hired and contract labour), where such worker is defined as one whose employment requires travel that prevents the worker from returning to his/her permanent place of residence the same day. There is likely overlap between the number of producers and the number of unpaid workers: the bivariate, cross-county correlation between these two measures is 0.96. Likewise, there is likely overlap between the number of hired workers and the number of migrant workers; the bivariate, cross-county correlation between these two measures is 0.86. By contrast, the correlation between the number of producers and the number of hired workers is only 0.43. Because of the potential for over-lap between these categories, these measures are not summed in this paper; however, summing the number of producers and hired workers would likely involve minimal double-counting.

Some counties are missing data for particular types of agricultural workers, in which case it is assumed the county has zero of the particular worker type. The Census of Agriculture also reports that some counties have hired, unpaid, or migrant workers, but it does not disclose the exact amount to preserve confidentiality of respondents (confidentiality restrictions do not prevent reporting of number of producers in any county). However, the state-level totals of each labour type are known. Thus, it is possible to determine the number of workers of each type in each state unassigned to a county due to confidentiality. In general, the share of labor unassigned to a county is small. For example, for hired workers, the state with the highest share of workers unassigned to a county was Nebraska, and even in this state, only 1.5% of hired labour was unassigned to a county. The median state had no hired workers

#### 4) RESULTS

Reports the estimated number of COVID-19 cases and deaths among four types of agricultural workers, along with estimated incidence rates for each worker type. As of March 31, 2021, the estimated cumulative number of

COVID-19 cases is 329,031 among agricultural producers, 170,137 among hired workers, 202,902 among unpaid workers, and 27,223 among migrant workers. When expressed

relative to the total number of each worker type, producers are estimated to have the highest case incidence rate at 9.55% followed by unpaid workers at 9.39%. Table 1 also reports estimated deaths among each type of worker. Death incidence rates vary from 0.179% for producers to

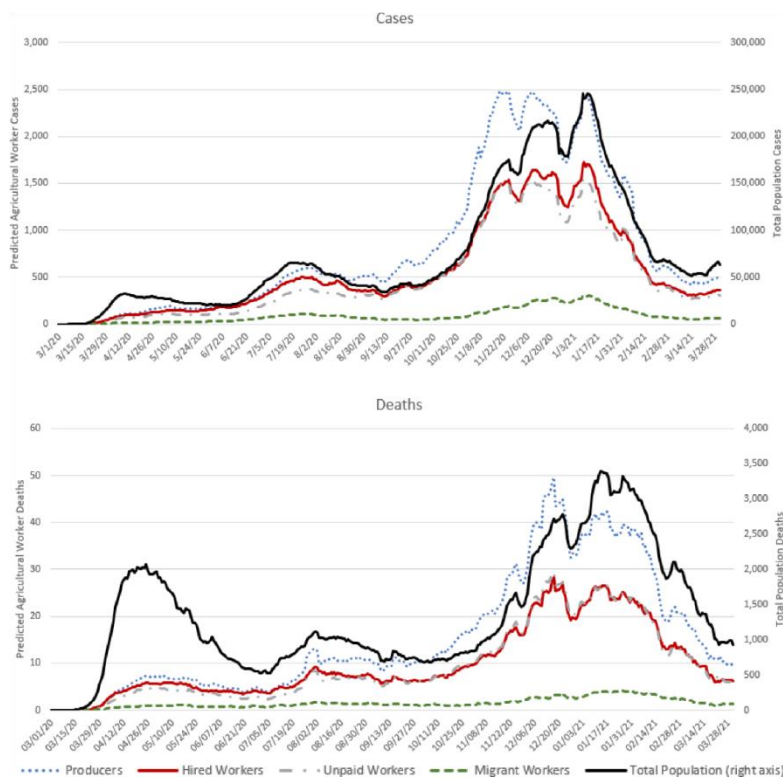
0.152% for migrant workers.

Type	Cases	Case Incidence Rate	Deaths	Death Incidence Rate
Producers	329,031	9.55%	6,166	0.179%
Hired Workers	170,137	9.31%	2,969	0.160%
Unpaid Workers	202,902	9.39%	3,812	0.176%
Migrant Workers	27,223	9.01%	459	0.152%

<https://doi.org/10.1371/journal.pone.0250621.t001>

Estimated number of cumulative cases and deaths from COVID-19 among types of agricultural workers as of March 31, 2021. doi:10.1371/journal.pone.0250621.t001

Shows the 7-day rolling average of the daily trends in estimated new COVID-19 cases and deaths for each type of agricultural worker alongside trends in case and deaths in the general population attributable to a U.S. county. Throughout the entire period, trends in agricultural worker cases track closely with those in the general population. However, this is not always the case, as shown in Fig 2. Through April and May, the correlations between new cases in the general population and agricultural workers was negative. While the number of new daily cases among the general population was falling through most of April and May, the number of new cases among agricultural workers was increasing. For example, the correlations during this time period between the total population and producers was -0.36 and the correlation between total population and hired workers was -0.51. The rise in number of farm worker cases during this period coincides, perhaps coincidentally, with the illnesses and shutdowns that occurred in the beef and pork processing sector.



Estimated new daily COVID-19 cases and deaths in United States counties.

(the 7-day rolling averages are reported; in the figure reporting total population deaths, outliers on May 18, 2020 (resulting from a few urban New York counties), June 25, 2020 (resulting from a few urban New Jersey counties), and March 12, 2021 were omitted to smooth the trend lines).

## 5) DISCUSSION

The emergency of COVID-19 has highlighted the vulnerability of the food supply resulting from losses in farm and agricultural labour. Attempts to ensure a secure supply of food have resulted in policies to declare agricultural workers as essential, which has the potential to put these very workers at heightened risk. Despite these concerns, at present there is scant systematic evidence on the extent to which agricultural workers have been more or less likely to contract COVID-19 than the general population. This research estimates the number of agricultural workers with COVID-19 by relating the number of COVID-19 cases and deaths in each U.S. county with the share of each county's population comprised of agricultural workers. Results suggest counties that employ more agricultural workers, particularly hired and migrant workers, are at greater risk for COVID-19, findings which suggest these groups

are at heightened risk from COVID-19. In addition to the disease risks, hired and migrant agricultural workers represent populations that tend to have toward lower incomes, greater job insecurity, and more perilous immigration and legal status than the general population, which suggest additional relative financial risks resulting from the burden of medical costs or lost time away from work. Beyond the immediate impact on agricultural workers, this research also shows that reductions in agricultural labour have the potential to adversely affect food supply. Over the 13 month period from March 1, 2020 to March 31, 2021, COVID-19 has resulted in an estimated 0.0685% reduction in farm labour input, resulting in an estimated loss of \$309 million.

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**TOPIC :- EMERGING TECHNOLOGIES**

Abstract

- The new technology nowadays is based on smart systems, includes smart energy, smart grid, Smart home, smart phone, smart plant irrigation system and smart technology. All are applicable to many medical, engineering, educational, shopping, banking, booking travel or Hotels, commercial systems and devices. These are almost based on control and optimization

Programing algorithms and logic process which lead to time saving, energy saving, friendly use

And cost effective. Most of these technologies are running online and wirelessly by the cellular Phone in monitoring the measurements of the variables and to control the system or appliance by touching button and sending signals

- Now-a-days as a human being we can't cross our day without a gadget, like most commonly Smartphone. In every field like AI,MI, smartphone, virtual reality, etc which are all interconnected, technology is getting developed each day &each second and it has no curb. ... Using AI we develop every device even smarter.

Introduction to Technology

- Technology takes many forms in today's world. The Introduction to Technology course explores the fundamentals of technology Education while broadening awareness about the pervasiveness of technology in our daily lives.
- Technology is constantly advancing. This gives rise to new jobs and industries, such as coding and artificial intelligence. Technology Provides a makers education in AI, IT, design, and many STEM fields. ... All of this is beneficial because it's estimated that AI will Replace 40 percent of jobs in the future.
- More technology and greater efficiency for more humanity
- Emerging technologies, technologies that are perceived as capable of changing the status quo.

... Hypothetical technology, Technology that does not exist yet, but that could exist in the future • Technology can be most broadly defined as the entities, both material and immaterial, created by the application of mental and Physical effort in order to achieve some value. In this usage, technology refers to tools and machines that may be used to solve real world problems.

- If instead of putting more money into moderately efficient healthcare systems, we can increase the efficiency of existing systems while enabling more people to access to modern

healthcare. Of the seven trillion euros spent on healthcare globally, less than one Percent is invested in technologies that can boost the overall efficiency of the healthcare system.

### Objective of the study

- The aim behind this research paper is
- To understand the future of Technology
- To analyse the challenges / changes in technology during COVID –19
- To examine the development of technology during covid-19
- To analyse the development in agriculture field

### Review

- To analyse the use of technology in covid-19
- Current knowledge about various technologies used during COVID-19 a total Of 260 articles examining the varieties of digital technologies that have been used during the COVID-19 pandemic. Based on the types of technologies, this Section categorizes the technologies into hardware and software. There are Approximately 15 types of hardware technologies and over 50 types of software Technologies which have been used to combat COVID-19. Fortunately, the Hardware and software technology used during the pandemic has greatly improved the health system's ability to detect, track, and contain people with suspected infection. Not only the use of hardware technology such as Computerized tomography machine in the medical field, but also in the fields of Education, work, and daily life, the technology represented by computers, Smartphones, and video-based communication platforms brings an Unprecedented change to our lives.

### To analyse Technology

- Technology shapes the future and it can help to make it compatible with nature. It can help us to develop clean energy, transport possibilities with less emissions and low-energy houses to save resources.
- To understand future technology:-Technology that shapes the future and it can help to Make it compatible with nature it can help us to develop clean energy transport possibilities Wide Emission and low energy house to save resources.
- The main goal of technology:-the primary goal of Technology is to make a certain job more Easier to do for example technology in agriculture such as irrigation machinery etc. allows Planting to be easier
- The objective of technology: - provide a variety of technological information and ideas Encourage curiosity, ingenuity, resourcefulness and discrimination stimulate self- confidence through the knowledge and application of technology develop Practical skills through the certain of products/solution. Some findings about Emerging Technology.

- Emerging technologies include a variety of Technologies such as educational Technology, information technology, Nanotechnology, biotechnology, cognitive Science, robotics, and artificial intelligence.
- 7 Emerging Technologies:-Virtual Reality/Augmented Reality. Like the other Items on this list, VR is becoming more Popular as the costs associated with the Hardware and software continue to drop. ...
- Drones
- Solar Panels
- Wearable Tech
- The Internet-of-Things
- AI/Automation
- 3D Printing
- Top 9 new technology trends in 2021
- Artificial Intelligence and Machine Learning
- Robotic Process Automation (RPA)
- Edge Computing
- Quantum Computing
- Virtual Reality and Augmented Reality
- Block chain
- Internet of Things (IOT)
- 5G
- Cyber Security

## Hypothesis

->A hypothesis is an assumption, an idea that is proposed for the sake of argument so that it can be tested to see if it might be true. ... In non-scientific use, however, hypothesis and theory are often used interchangeably to mean simply an idea, speculation, or hunch, with theory being the more common choice.

->The most common forms of hypotheses are: Simple Hypothesis. Complex Hypothesis. Null Hypothesis.

->In the year 2050, technology will dominate the workplace with artificial intelligence and smart Assistants being commonplace, while the use of augmented and virtual reality continues to Increase. Everything will be 'smart' – connected and data-driven.

->A common question will always rise in our mind ...Why technology is our future. It says that (Pocket-lint) Technology has the power to do many things, and changing the world is one of them. We're privileged to be living in a time where science and technology can assist us, make our lives easier and rethink the ways we go about our daily lives.

To analyse Data Collection The growing use of smart phones and connected devices in the past two decades has dramatically changed the way we receive information. While often overlooked by users, this rise in technology has made it incredibly easy for corporations as well as private interest groups to collect, store, and use our personal information. With Tech evolving at such a rapid pace, public policy regarding the use of private information has struggled to keep up and hold tech giants accountable for the exploitation of private data. This ongoing dilemma requires marketers to try to anticipate what the future of data collection and marketing regulation will bring, and what legal and ethical standards will be imposed on businesses in order to protect consumers. The future of data collection will be dominated by the use of artificial intelligence (AI). This will manifest itself through the increase of Internet connected devices we Use and encounter every day using technology to collect data mobile data collection is the use of digital devices such as mobile phones, tablets, or laptops for data Collection. Crowdsourcing and crowd seeding are real-time data collection methods that involve Different technologies

- The specific ICT approach that has been used is Digital Data Gathering. This refers to gathering data using electronic handheld devices, such as a smartphone or data pen. These devices are used to Record data in the field and transfer information back to a server.
- Digital data collection relies on digital forms which are electronic versions of the paper-based forms that can be filled out on electronic devices like smartphones and tablets.
- Data may be grouped into four main types based on methods for collection: observational, Experimental, simulation, and derived. The type of research data you collect may affect the way you Manage that data
- Under the main three basic groups of research methods (quantitative, qualitative and mixed), there Are different tools that can be used to collect data. Interviews can be done either face-to-face or Over the phone. Surveys/questionnaires can be paper or web based
- Future data is data associated with a future time stamp. PI Data Archive 2015 allows storage and Retrieval of data with time stamps beyond current time, allowing you to store data within a time range Of January, 1970 through January, 2038.

## Analysis Data

Data analytics is expected to radically Change the way we live and do business in The future. Already today we use the analytics in our technology devices, for many decisions in our lives. ... Expectations are that data Analytics will make the impossible possible, but we are still in the early stages of the data era.

## Augmented Analytics

This form of analytics is going to play a huge role in analysing data in 2020. Augmented Analytics is going to be the future of data analytics because it can scrub raw data for Valuable parts for analysis, automating certain parts of the process and making the data Preparation process easier.

Data analytics (DA) is the process of examining data sets in order to find trends and draw Conclusions about the information they contain. ... Data analytics technologies and Techniques are widely used in commercial industries to enable organizations to make more informed business decisions. The reports by the U.S. Bureau of Labour Statistics indicates that the Data Analysts are Projected to see faster than average growth of 19% from 2014-2024, thanks to the continuous growth of data generation and the need to refine and extract relevant insights from the same. Data analytics is the future of everything because it is everywhere. Every organization can use Data to analysis and predict almost everything they need to meet the goals they have in mind. Data-driven decisions can lead to higher ROI, create new revenue streams, and even help save the planet

#### Conclusion

□ Researchers are investigating each possible choice for fighting the coronavirus pandemic, And Modern Technology represents to a captivating road. While technology advances have entered into our day by day lives with numerous victories, they have additionally added to helping people in the very intense battle against COVID-19. The papers talk about the troubles while using these algorithms in real world clinical practices. Likewise, there is an interest for a Future work on building up a benchmark framework to assess and look at the current Techniques. The present models acquired extraordinary accuracy in recognizing COVID-19 Symptoms with different kinds of viral pneumonia utilizing radiology pictures but lacks Transparency and interpretability. It can be conclude that there is a wide scope of potential Utilizations of modern technologies covering clinical and cultural difficulties made by the Coronavirus pandemic; but not many of them are right now develop enough to show Operational effect.

This bibliography is annotated to provide a synthesis of recent reports and current Initiatives regarding information Technology development in technology and manufacturing research.

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**TOPIC:- IMPACT OF PANDEMIC ON BUSINESS & PEOPLE**

## **Abstract(summary):**

After the unfortunate outbreak of corona virus in late 2019. The pandemic as well as lockdown impacted every part of our lives. Brands too had to change how they interacted with customers due to social distancing and stay-at-home orders. Almost 2 years into the pandemic, nearly every business in the world was affected by COVID-19 likely caused bankruptcy for many well-known brands in many industries. Every aspect of marketing was challenged, unable to do any sort of commerce. People relied even more heavily on digital and mobile platforms as their smartphones became a lifeline and that gave rise to new virtual behaviors.

## **Introduction:**

COVID-19 pandemic will go down deep in everyone's memories for the years ahead just like Spanish flu did in the 20th century. We never thought something will stop the mobility of everyone's life as we see, did we? But unfortunately it did happen after the outbreak of the SARS-COV-2 virus also known as novel corona virus. Corona virus is an infectious disease that spread from person to person as water particles in the air as they cough, sneeze or even speak and touch an infected person. Its rate of infection is high as it travels through air and can stay on metal surfaces for a long time. It started in late 2019 when the early cases of the disease were found in China and later took over the globe in less than half a year after that. Situations around the world was gruesome as people were getting infected really fast and dying too and as the virus affected a large proportion of the total population, the outbreak was tagged as a global pandemic.

The only option to stop the wide spread of the killer disease was to restrict people from coming out of their homes and activate a total lockdown. People weren't allowed to step out of their houses unless there was an emergency or they needed basic necessities. Kids till age 10 and senior citizens from age 50 were totally restricted from coming out of houses because they were more vulnerable to the virus. The pandemic as well as lockdown impacted every part of our lives from places we went to the way we used to spend our time, from the priorities we had to the way we spent our money. As the virus swept the globe, brands too had to change how they interacted with customers due to social distancing and stay-at-home orders. Consumer buying patterns also shifted, skyrocketing unemployment and supply chain issues. As many people lost their jobs and those still earning a paycheck worried about future layoffs, impulse purchasing became infrequent. Messages that resonated with consumers a few weeks ago, suddenly fell flat and even seemed insensitive.

## **Review of Literature:**

Ibrahim Sirkeci May 2020 said nobody would have thought of a disruption in such a scale. According to Sirkeci and Yucesahin, 2020 COVID outbreak sent shock waves around the world and quickly brought life to a halt in many countries. Not only the anxiety and fear of a deadly virus spreading around but also the measures taken against it perhaps



changed our lives as consumers, marketers, and researchers. The new norm is in progress as the old is troubled.

Journal of Business Venturing Insights volume 14 (November 2020) stated - Novel value offering was the most common form of consumer-facing experimentation, most often taking the form of new products and services. Many ventures entered completely new product categories, in addition to more incremental changes such as bundling products together or rebranding. Collaborative experiments in new products and services tended to be incremental, joining forces for product bundles or producing collaborative variations of previously tested within-venture offerings. In addition to physical food and beverage products, many entrepreneurs tried out new online services, such as supplements to their offering.

### **Objective of Study:**

The overall objective of this study is to analyze the Impact of COVID-19 on People of India as well as how it affected the Businesses and Markets:

- i. How COVID-19 affected the businesses through lockdown.
- ii. How did people and brands coped up with the new normal in times of COVID.
- iii. How needs of people changed after COVID.

### **Research Methodology:**

Primary data presented in the study is collected by distributing questionnaire to 75 respondents. The data was collected by people of age group between 17-19 in the society.

The secondary data is collected from various articles, reports published by National agencies, various authentic websites were also used while cumulating the data.

### **Effects of Pandemic on Businesses:**

Almost a year into the pandemic, nearly every business in the world was affected by COVID-19, but performances varied widely, even within countries and industries. The COVID-19

outbreak likely caused bankruptcy for many well-known brands in many industries as consumers stayed at home and economies were shut down (Tucker, 2020). In the US, famous companies such as Sears, JCPenney, Neiman Marcus, Hertz, and J. Crew were under enormous financial pressure. The travel industry was deeply affected; 80% of hotel rooms were empty (Asmelash& Cooper, 2020), airlines had to cut their workforce by 90%, and tourism destinations likely saw no profits in 2020. Furthermore, expos, conferences, sporting events, and other large gatherings as well as cultural establishments such as galleries and museums had been abruptly called off. Consulting in general and personal services, like hairdressers, gyms, and taxis, had also come to a standstill due to lockdowns. Finally, important industries like the car, truck, and electronics industries had abruptly closed (although they started to open up two months after their closure).

COVID-19 affected nearly every aspect of marketing because crises of that scale challenged the core of business basics. Some companies were left unable to do any sort of commerce, while others struggled with too much demand. The video chat platform Zoom saw a staggering 418% growth in adoption rate in two just months. In response to these new behaviors, brands proactively showed customers how they fit into new routines and expectations. Pizza Hut rolled out tamper-proof seals, making it apparent if anyone has opened a pizza box before it gets to the intended destination. Beauty brand MAC created a tool to let customers virtually try on lipstick and eye shadow since they could no longer sample colors at a makeup counter or MAC store. Data collected through the World Bank firm surveys offer some glimpses into why, and how this may be relevant for policy.



# How COVID-19 is Affecting Companies Around the World

(in the period between October 2020 and January 2021, from pre-pandemic levels)



One-fourth of companies saw their sales fall **50%**  
On average, sales dropped **27%**

## DESPITE THE SHOCK, FIRMS HELD ONTO THEIR WORKERS



About **65%** percent of businesses adjusted payroll by reducing hours, wages or granting leave  
Because of these adjustments, only **11%** of companies laid off workers

## NOT ENOUGH FIRMS ARE ADOPTING DIGITAL SOLUTIONS, ESPECIALLY IN POORER COUNTRIES AND AMONG SMALLER FIRMS



**34%** of firms have increased the use of the internet, social media and digital platforms  
**17%** of firms have invested in new equipment, software or digital solutions

## POLICY SUPPORT IS WEAK WHERE IT IS NEEDED MOST: IN POORER COUNTRIES AND FOR SMALLER FIRMS



**1 in 10** companies in low-income countries received any type of public support  
More than **70%** of firms in low-income countries report lack of awareness as the main obstacle to accessing support  
**1/5** of firms that did not experience any shock due to COVID-19 received public support—suggesting fiscal resources could be targeted more efficiently



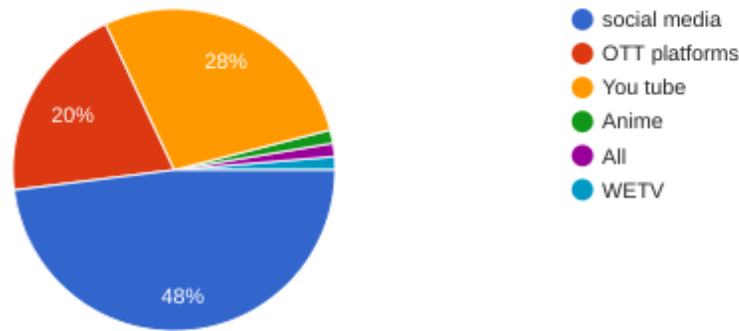
THE WORLD BANK  
IBRD • IDA

**Effects of Pandemic on people:**

As stay-at-home and social distancing orders took hold in the spring, people relied even more heavily on digital and mobile platforms as their smartphones became a lifeline to the outside world.

People spent most of their time on phones especially on social media ,which is also justified by the pie cumulated below with responses from 75 respondents.

On what platform did you spend most of your time in pandemic?75 responses



New virtual behaviors emerged and expanded as people completed their daily tasks digitally, such as curbside pickup, telehealth appointments, online workouts and contact-free delivery. And as many people worked from home, went to school online, and connected with family and friends virtually. Social distancing norms and isolation of people increased at-home digital consumption, creating a surge in the demand for subscription-based streaming services. The Broadcast Audience Research Council (BARC) reported a growth of 38% in TV consumption over the pre-COVID period. Paid subscriptions on OTT video platforms grew to 29 million by July, a jump of 31% in just four months, shows the latest estimate available with India Brand Equity Foundation.

The increase was 5 million in April alone, the biggest for a single month.

**Paid subscriptions for video-on-demand leapt in April, and have been rising since then**

Month	Paid subscription (in million)		
Jan-20	21.4		
Feb-20	22		
Mar-	22.2		

20			
Apr-20	27.2		
May-20	27.7		
Jun-20	28		
Jul-20	29		

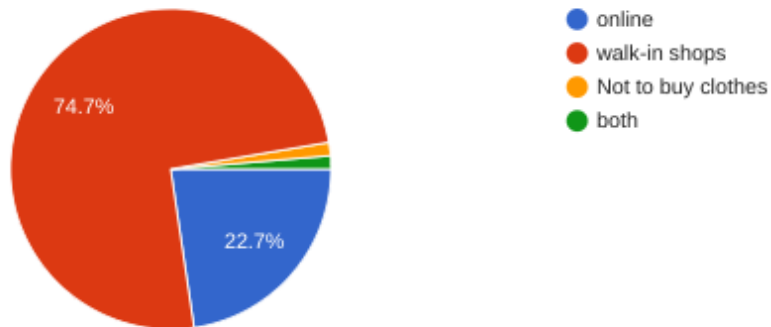
In addition to this people's preferences for shopping of essentials changed,

Forms response chart.

Question title:

**What did you preferred more for clothes,essentials and pantry shopping before pandemic?**

Number of responses: 75 responses.

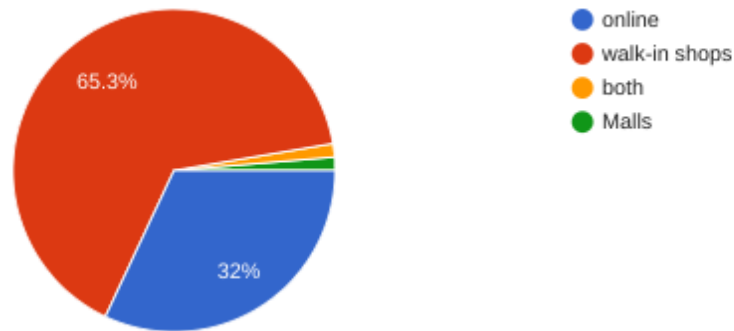


Forms response chart.

Question title:

**What do you prefer now for clothes,essentials and pantry shopping after Pandemic?**

Number of responses: 75 responses.



As we can see almost 11% people shifted or started online shopping more than they did pre-COVID.

COVID-19 has affected the platforms we use, the content we create, the designed offers and campaigns to support those offers.

needs changed as a result of the pandemic. The way people used to interact with brands and how they viewed themselves as consumers then vs now is fundamentally different than it was pre-quarantine. the major shifts in people's habits are:

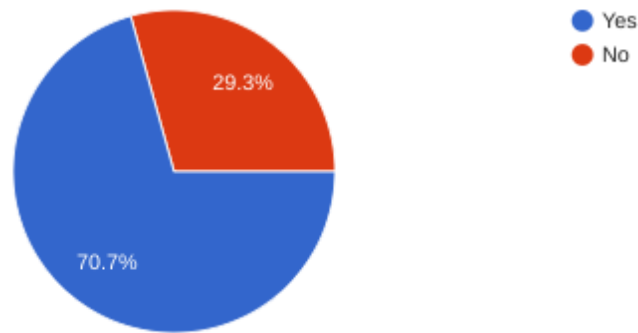
1. Home habits and practices changed.
2. Nostalgia of happy times emerged.
3. Being alone and staying at home made people self-reliant

1. Home: People were spending more time in their homes, which had both practical and emotional effects. Not only do appliances needed to work, but people had other considerations as well, such as: Is my washing machine quiet enough to have a Zoom call in the next room? Does the vacuum clean deep enough to remove germs? Where are appliance materials sourced from?

Forms response chart.

Question title: **Did you felt anxieties or disturbed while attending a lecture or a meeting in noises of home like appliances and other considerations?**

Number of responses: 75 responses.

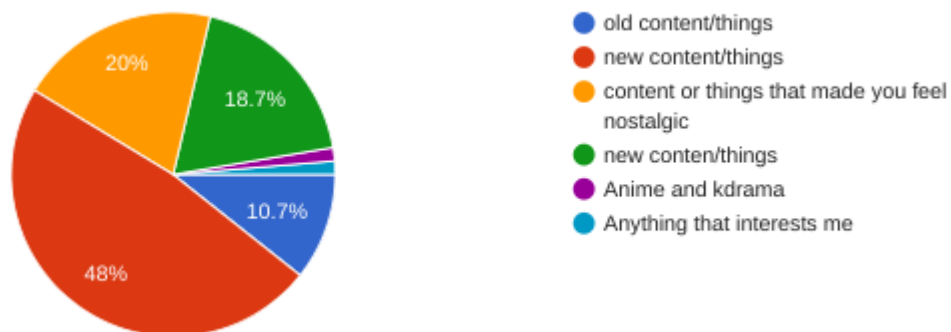


2. Nostalgia: Change in lifestyle gave rise to anxiety, and anxiety triggered nostalgia for happier times. people started looking for a bit of nostalgia in the shows and content they consumed, the food products they bought, that comfort and nostalgia became a new essential. With a shift to more shelf-stable products, people revisited brands that hadn't been in their pantries or freezers for quite some time.

Forms response chart.

Question title: **what content or things did you like watching or doing?**

Number of responses: 75 responses.

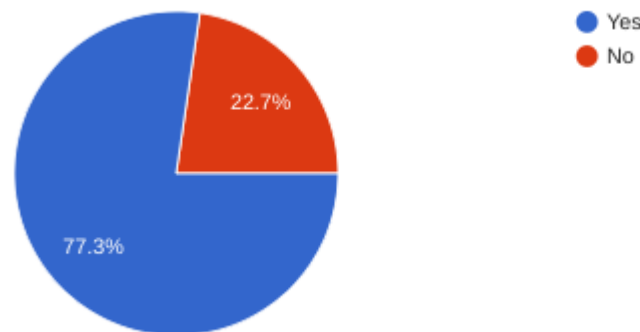


3. Self-reliance: People started taking on more responsibility for tasks they would normally hire someone to do for them or outsource. People started being more creative with meals, as trips to the grocery store and restaurants became risky. Many men are started cutting their hair at home.

Forms response chart.

Question title: **Do you feel you became more self-sufficient after pandemic?**

Number of responses: 75 responses.



### **How can Businesses and Brands capitalize these new opportunities:**

Physically, people are now on devices and networks that weren't previously commingled—such as work computers on home IP addresses. Additionally, more individuals in the house are on those Wi-Fi networks across devices, making unique identification complicated. More existentially, people are craving relationships and connection. They're likely not expecting brands to fill that need, but any brand that does will be rewarded for its efforts.

Essentially, businesses have the opportunity to start from scratch and build those touchpoints, hopefully investing heavily in artificial intelligence and machine learning across the journey. crises bring out creativity as both companies and consumers meet new needs. To support this point we don't need to see much back in history but just a decade ago, during the Great Recession of 2007–09, for instance, with many people out of work, money was tight. This gave rise to more direct-to-consumer brands, which cut out middlemen to make products easier to get and cheaper to buy. Now as the number of brands have increased, the stakes are also much higher: The gap between hit and miss has gotten wider in this time of increased sensitivity and anxiety. Because COVID-19 impacts consumers differently across states and geographic areas, brand marketers should carefully think through how a range of consumers will react. How will their campaign play in big cities and in smaller towns in rural areas? And how to shift their messaging based on location? Concern over health and safety, especially personal contact and large groups, will likely remain with us for months and possibly years.

### **Conclusion:**



As times changed marketing industry and brands evolved their strategies like using social media Brand endorsement in place of outdoor marketing. Pandemic really changed every aspect of our lives, including our behavior towards brands and products. People now want things that make them feel safe and happy as well, the restlessness that got up in the minds of us being detached from the world has now transformed in to social awkwardness as people weren't in touch to each other. It's like a new start for people similarly it's a new start for brands and their marketing should be appealing to people in such way that it doesn't make them remember their times home and wish to make them feel happy and attached again to the world.

While making the research paper I remembered my time in in Bangalore. Just like everyone being home got me bored and made me restless as well so my parents suggested me to go to my sister's place in Bangalore before monsoon to have a change in air. Bangalore is often known as silicon-valley of India. But it's also known as start-up Hub of India as well, with most of the India's franchises having their roots in Bangalore, it attracts people across the country to come here to start up their business. I was fortunate enough to meet Mr. ArunSvarna, the co-founder of frozen bottle, a premium milkshake brand and franchise. I met him through my sister while at a lunch where he was talking to a few people about the ideas of new startups come to him for funding and how he is funding a local enterprise which wants to target the health conscious of people through its range of organic products. His talks amazed me and I interacted with him during which he asked my opinion on his how do I think should brand connect with people now after their time in pandemic. I politely answered that, "It's a really good chance for brands to test new ventures as seeing the time where people need change while also sticking to its core values and strong areas." I supported my answer with example that people tried making Dalgona coffee while at home but they won't stop having chocolates or milkshake even after the pandemic. Being impressed by my answer he treated me for a chocolate milkshake after lunch.

With this said, I conclude my research with this last statement, "While some Pre-COVID-19 behaviors will return at some point, many of the changes that occurred during the pandemic are likely to become permanent, especially new habits like video chats with family, telehealth visits with doctors and virtual workouts at home.

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**TOPIC :-** ENTERTAIN

## MENT INDUSTRIES IN THE AGE OF PANDEMIC

### **Abstract**

In this research paper we study the impact of the coronavirus pandemic on the media and entertainment industry of India. The media and entertainment industry of India is very large and gives employment to millions of people. It includes internet, TV, radio, newspaper, magazine, photography, cinema, publishing, etc.

### **Introduction**



Covid-19 pandemic which started in Wuhan, China was affecting the entire world. Numbers of the case were increasing day by day. Lockdowns were imposed, the economy was going down and no. of deaths had increased. Educational institutes, offices, etc. were closed. All major industries were impacted and the effect of covid-19 on the media and entertainment industry was devastating. Thousand of people were unemployed. Theatres were closed. The shooting of movies was suspended. The release of blockbuster movies was postponed indefinitely. However some movies were released on digital platforms. Similarly, the shooting of TV serials was also suspended. Repeated telecasts were aired on TV. Ramayana was aired which created a world record of most

watched shows with a 77 million views. To combat the problems due to covid-19 majority of people were working digitally from home. People are adopting this new normal, some are in favor while others are not. But we all have to compromise and accept the change.

## **Review of literature**

The Motion Picture Association (MPA) recently released their annual THEME report covering 2020. The report tracks the theatrical and in-home entertainment industry both globally and domestically as well as other video industries. For the THEME report, the MPA relied on various data sources.

In 2020, the global pandemic impacted the theatrical and home/mobile entertainment, as movie theaters and production studios temporarily closed. As millions quarantined, viewers were forced to stay home for their video entertainment. Coinciding with the pandemic, was the emergence of new streaming video services from such prominent studios as Disney DIS -1%, Universal and Warner Bros. joining (and competing) with Netflix NFLX +0.7%, Hulu and Amazon AMZN +2.5%. Hence, stay-at-home viewers were able to watch premium TV and movies across various screens and providers. While industry analysts had commented this trend was already beginning, many agree the pandemic had sped up the pace of adoption.

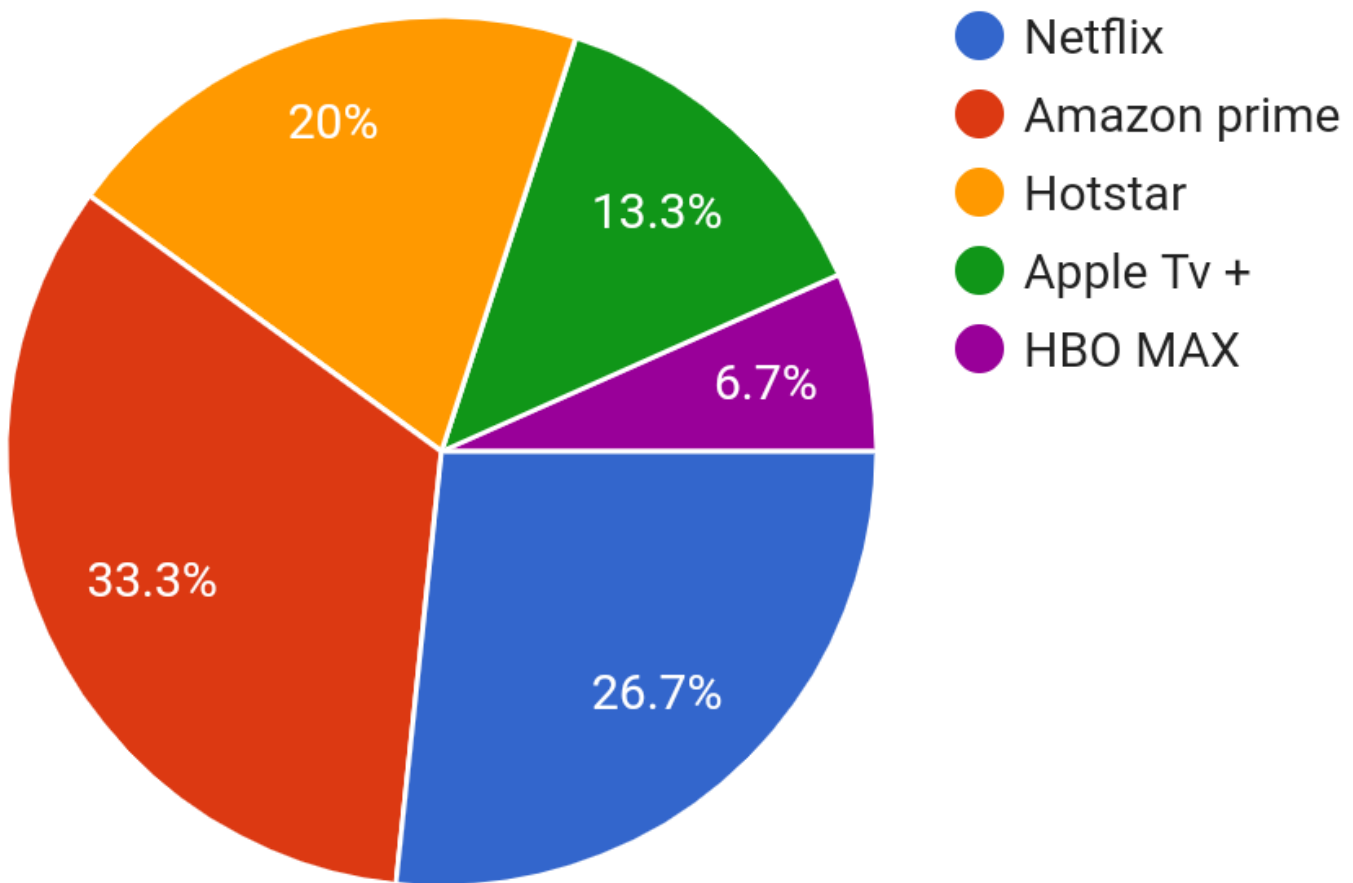
## **Objective of study**

1. To study the loss of entertainment industry.
2. To study the unemployment caused due to covid-19.
3. How everything from offline went to online platform.

## **Data Analysis**

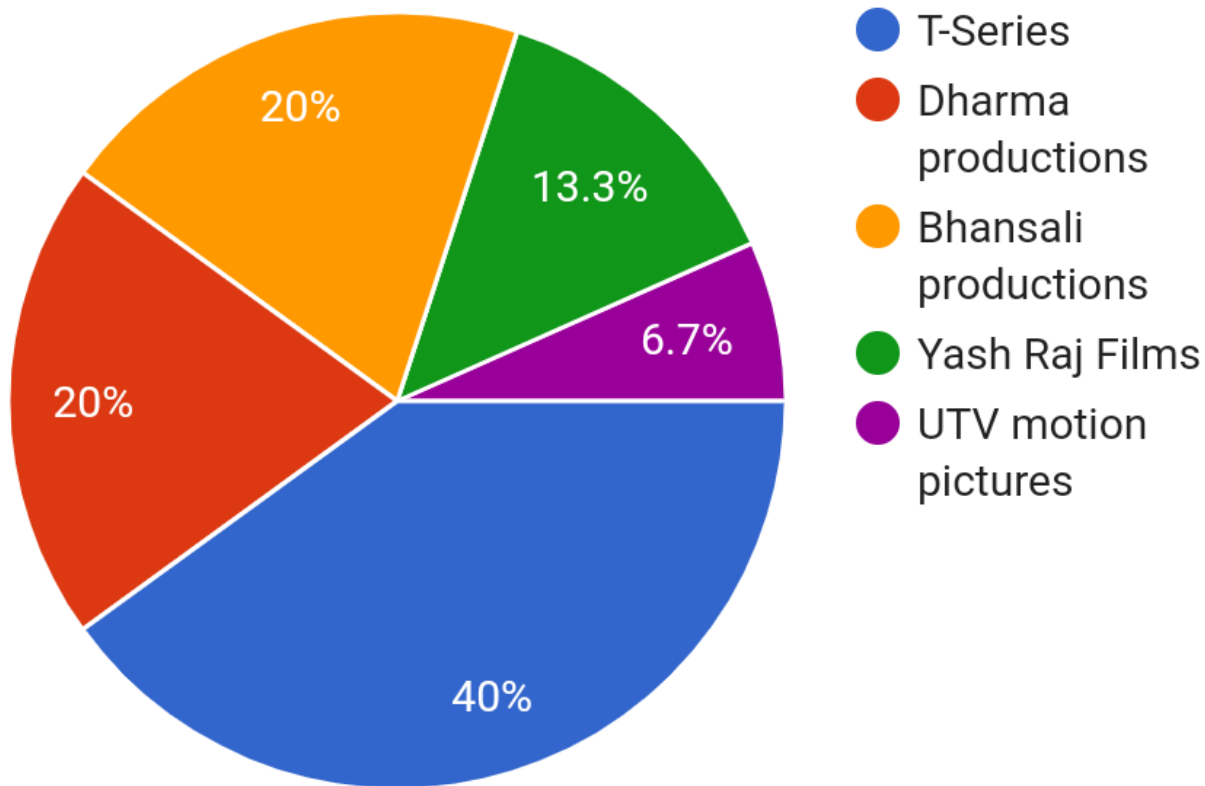
The data is collected from Google form which has 5 question as following:

1. which streaming services was help you most to watch movies during pandemic ?  
15 responses



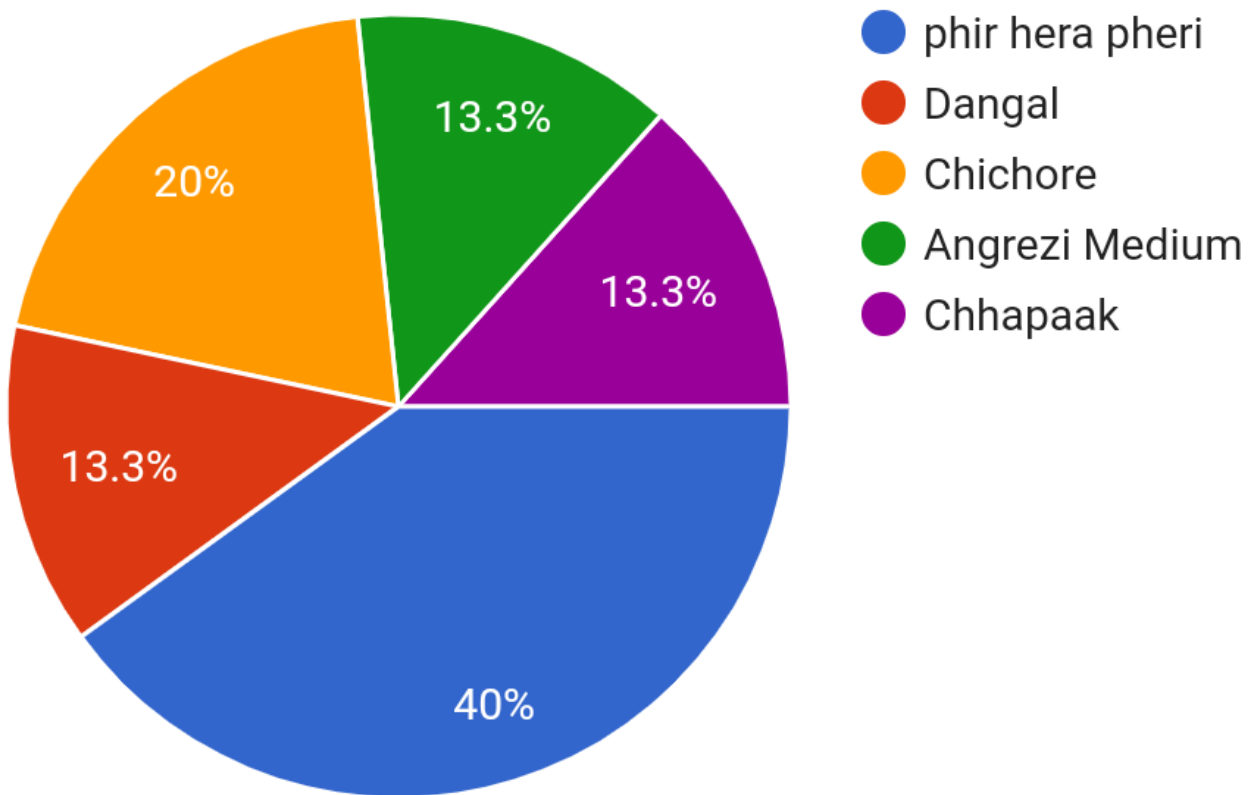
2. which movie production company was entertains you most during pandemic?

15 responses



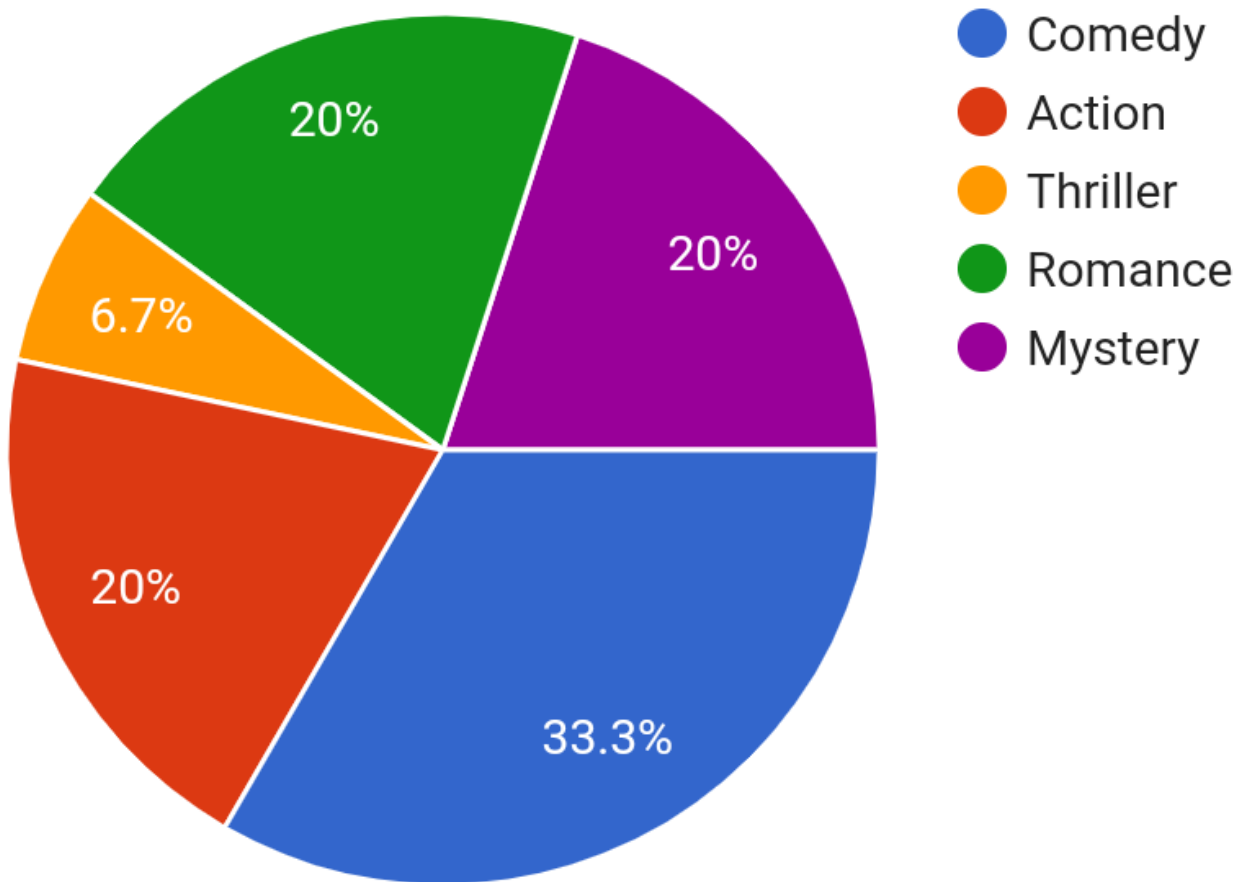
### 3. which movie was entertained you during pandemic ?

15 responses



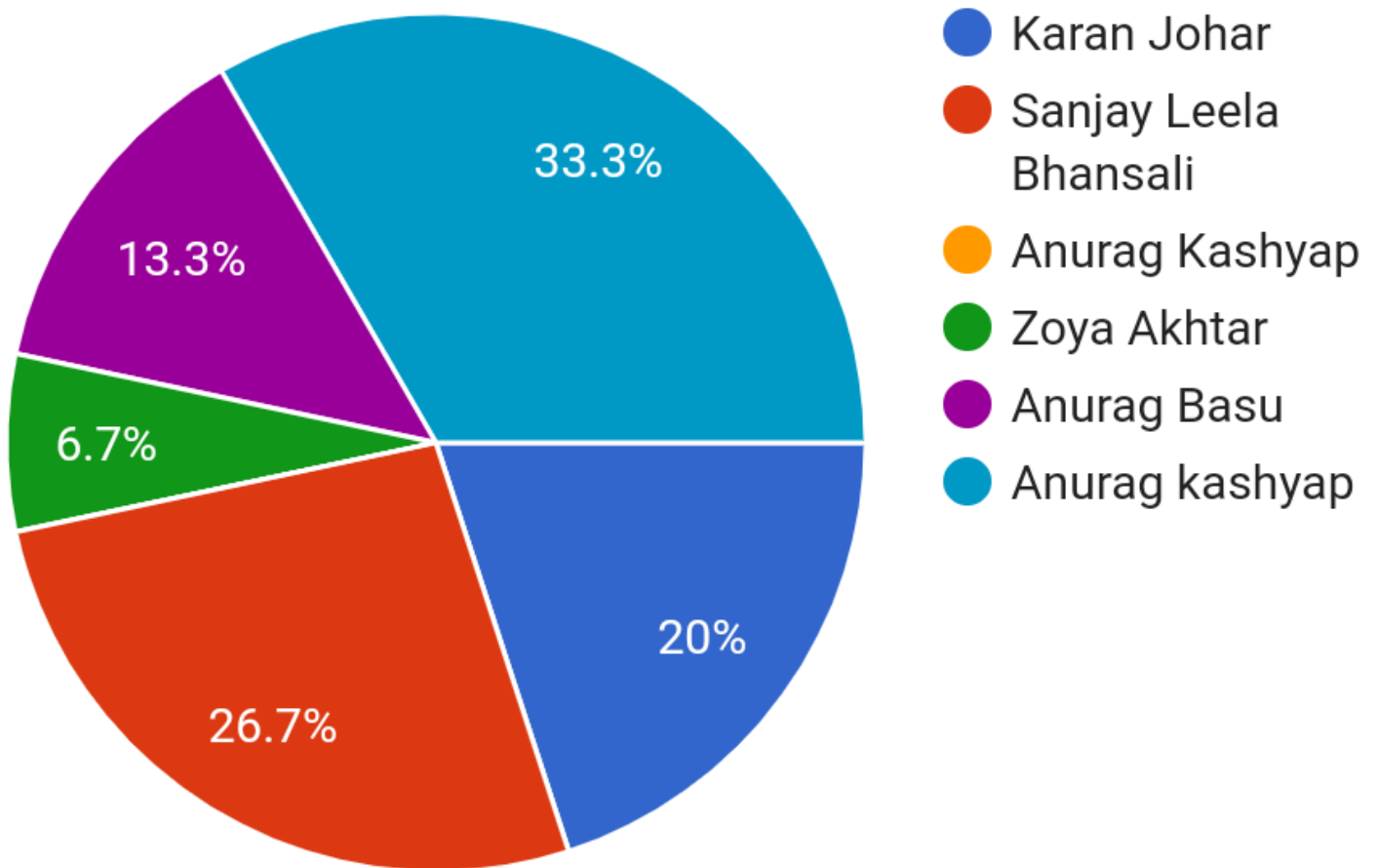
4. which type of movie genre was you enjoy during pandemic ?

15 responses



# 5. which director was gave you best movies during pandemic ?

15 responses





## **Conclusion**

Covid-19 Pandemic has caused a major transformation Media and Entertainment Industry; such that the Media segments which involved public gatherings like Films, Events, etc. has a hard hit however in other home-based entertainments like OTT Platforms like Amazon, Netflix, Televisions channels, Online Gaming' etc. noticed major spike in consumption pattern. In this Primary study, we found that People tends to use more of Online Platforms for entertainment rather than TV as it telecasted Old or repeated episodes during the Lockdown period. Our study also shows that OTT platform

subscription has increased during COVID19 Lockdown as people enjoy it more. We found that the Income pattern had no relation to the M&E consumption pattern. Average (15k - 25k) Income participants also used all the channels of Entertainment similar as Medium (25-50K) and High Income (>50K) participants. There is no direct relation between the Income levels and the consumption pattern of Entertainment/ Media during the Lockdown.

## **Reference**

- 1. Motion picture association articles**
- 2. We collected data by a Google form**

[https://docs.google.com/forms/d/e/1FAIpQLSceIMVkHzR4uv9wiljJSy0dypjKeRHld3b7\\_PvN8p02wXMBng/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSceIMVkHzR4uv9wiljJSy0dypjKeRHld3b7_PvN8p02wXMBng/viewform?usp=sf_link)

- 3. Photo from Google**
- 4. Hindustan times newspaper**

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**TOPIC :- IMPACT OF COVID ON EDUCATION**

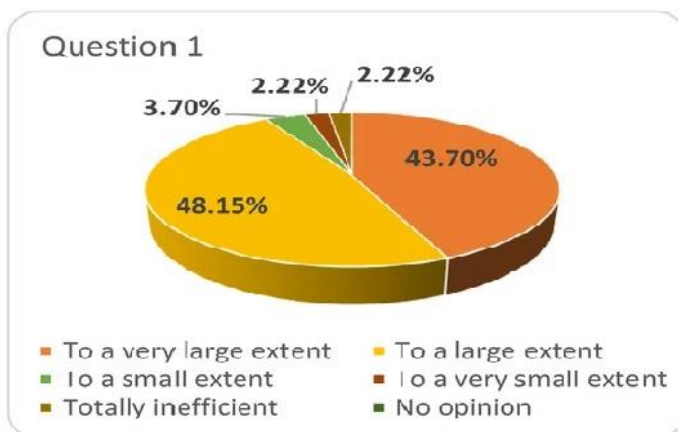
### Abstract

Coronavirus affects the education system in the world. Schools, colleges, and universities are closed to control the spread of the coronavirus. School closure brings difficulties for students, teachers, and parents. So, distance learning is a solution to continue the education system. However, the lack of network infrastructures, computers, and internet access is challenging distance learning in developing countries. This paper aims to review the impact of the COVID-19 pandemic on the education system in developing countries. Hence, countries design a strategy to use educational technology, zero-fee internet educational resources, free online learning resources, and broadcast teaching. During closures, educational institutions design curriculum, prepare teaching-learning strategies for post-coronavirus. The educational institutions design strategies to recover lost learning, and return students to school when schools reopen. Coronavirus has been impacting the face-to-face education system of developing countries. Therefore, developing countries should enhance broadcast teaching, online teaching, and virtual class infrastructures.

### Keywords

Coronavirus, Developing Country, Distance Learning, Education System, Impacts of COVID-19

COVID-19 pandemic: lockdown period: quality of educational process: online platforms: student survey



## 1. Introduction

The coronavirus (COVID-19) is a pandemic disease that affects the education system of different income level country. The United Nations Education, Scientific, and Cultural Organization (UNESCO) has been recognized that the coronavirus pandemic outbreak has impacted the education system in the world (UNESCO, 2020). A lot of pandemics have occurred in human history, and affected human life, education system, and economic development in the world (Editors, 2020). The World Health Organization (WHO) (WHO, 2020) on March 11, 2020, has officially announced that coronavirus (COVID-19) is a pandemic after it covers 114 countries in 3 months and infects more than 118,000 people in the world. The first COVID-19 case has reported by Wuhan Municipal Health Commission on December 31, 2019, in the Hubei Province, China (WHO, 2020). The coronavirus pandemic is quickly spreading and affecting 213 territories and countries throughout the world. In the world about 30,086,319 of total cases, 21,833,645 of total recovered and 945,962 of total deaths were recorded until September 17, 2020 (Worldometer, 2020). According to (Medical News Today, 2020), the researchers believe that coronavirus is spreading exponentially and many countries are locked in their education system, and enforcing their people strict quarantine to control the spread of this highly contagious disease. The governments focus on fulfilling equipment, organizing medical institutions, and laboratory centres, identification of the virus, training health workers, and creating awareness for their people (Haleem et al., 2020). Education has been the pillar of development of every country, so education is principal to the development and growth of all countries. The education system has been affected by several challenges ranging from changes in the education curriculum to closing down the education system due to widespread pandemic diseases (Owusu-Fordjour et al., 2015).

As UNESCO (UNESCO, 2020b) reports that 87% of the world's student population is affected by COVID-19 school closures. UNESCO is launching distance learning practices and reaching students who are most at risk. According to the UNESCO, over 1.5 billion students in 195 countries are affected by COVID-19 pandemic school closures. In (Niranjan, 2020) studied that COVID-19 impacted not only the overall economy and our day to day life, but also emotional, mental, and physical health, also, losses in national and international business, poor cash flow in the market, locked national and international traveling; moreover, disruption of the celebration of cultural, and festive events, stress among the population, the closures of hotels, restaurants, religious, and entertainment places (Evans, 2020). In

many developing countries the economic shock has come first, as governments have locked down their economies to reduce the speed of infection. As a result, developing countries are suffering their greatest economic decline and closures of their education and transportation system (Haleem et al., 2020). Distance learning solutions are containing platforms, educational applications, and resources that aimed to help parents, students, and teachers. Digital learning management systems, massive open online course platforms, and self-directed learning content (UNESCO, 2020a). However, due to lack of internet connectivity, information technology, educational materials, and digital technology skill distance learning is difficult for teachers, students, and families in developing countries (Mustafa, 2020). Some developing countries deliver classes through radio, television, and online platforms. However, the poorest families and students have not radio, television, and other devices to access the resources and to learn at their home. So, some developing countries provide resources such as textbooks, radios, equipment, and study guides to the poorest students (Mustafa, 2020).

In this study, the impact of coronavirus on the education system, impacts of COVID-19 on children, students, teachers, and parents, there commended solutions about the continuity of education system during COVID-19, online learning challenges, and opportunities, and education system after coronavirus related articles have been reviewed and discussed.

### ➤ Objectivity of Study

#### Objective of testing in schools

The following objectives could be considered relevant for testing in school settings.

- To ensure early identification of cases among students and staff in order to conduct contact tracing and initiate prevention and control measures, thereby reducing further transmission.
- To identify infection in students and staff at high risk of developing severe disease due to underlying conditions.
- To support investigations and studies concerning the role of children in the transmission of

## Review of literature

The coronavirus disease 2019 (COVID-19) pandemic is a rapidly evolving global emergency that continues to strain healthcare systems. Emerging research describes a plethora of patient factors—including demographic, clinical, immunologic, hematological, biochemical, and radiographic findings—that may be of utility to clinicians to predict COVID-19 severity and mortality. We present a synthesis of the current literature pertaining to factors predictive of COVID-19 clinical course and outcomes. Findings associated with increased disease severity and/or mortality include age > 55 years, multiple pre-existing comorbidities, hypoxia, specific computed tomography findings indicative of extensive lung involvement, diverse laboratory test abnormalities, and biomarkers of end-organ dysfunction.

Hypothesis-driven research is critical to identify the key evidence-based prognostic factors that will inform the design of intervention studies to improve the outcomes of patients with COVID-19 and to appropriately allocate scarce resources.

### Data Analysis



Cases and deaths continue to rise dramatically in India, with about 1 million new cases every three days. Yesterday's data compiled by [Covid-19 India](#) shows 324,390 new cases and 2,585 deaths. The recent surge has overloaded both the [nation's healthcare system and crematoriums](#). It has also led to variants that appear to evade the AstraZeneca vaccine, which the country stopped exporting in late March, due to shortages.

In a [livestream](#) organized by the U.S. Chamber of Commerce Foundation on Tuesday, Professor Ali Mokdad cast doubt on the ability for some vaccines to help combat these variants.

“We don't think AstraZeneca, unfortunately, is going to help India that much simply

because of the variants that are circulating,” said Mokdad, who holds a doctorate in Quantitative Epidemiology. He said the efficacy rate to prevent infection against two strains circulating in India, P.1 and B.1.351, is 10%, based on clinical trials in South Africa.

Mokdad, a professor of health metrics sciences at the Institute for Health Metrics and Evaluation and chief strategy officer for population health at the University of Washington, also predicted 1 million deaths in India by August 1.

The U.S. government announced on Monday that it would be shipping 60 million AstraZeneca Covid-19 doses globally. India expects to receive the “biggest share” of those doses, according to Reuters.

Direct Relief has [committed \\$5 million](#) to respond to the Covid-19 crisis in India, and will be shipping oxygen concentrators and other requested supplies to partners working in India.

On the Chamber of Commerce livestream, which also featured representatives from the White House, USAID, US-India Business Council, and non-profits, the most pressing needs included building more makeshift hospitals and expanding bed capacity, especially in smaller cities. More oxygen tanks and a strengthening of the supply chain, as well as ventilators were also noted as critical needs. The most requested medications include Dexamethazone, Remdesivir, and Tocilizuma

## 2. Impact of COVID-19 on EducationSystem

In the world, most countries have temporarily closed child-cares, nursery, primary and secondary schools, colleges, and universities to control the spread of the COVID-19 pandemic. COVID-19 impacts not only students but also it affects teachers and parents across the world. UNESCO reported that over 1.5 billion students in 195 countries are out of school in the world due to the school closures. As COVID-19 affects all over the education system, examinations, and evaluation, starting of new semester or term and it may extend the school year.

### 2.1 Teachers, Students, and Parents

The pandemic of COVID-19 pandemic is affecting schools, students, teachers, and parents. The

COVID-19 crisis increases social inequality in schools. Students from more advantaged parents attend schools with better digital infrastructure and teachers might have higher levels of digital technology skill. Some schools can be well equipped in digital technology and educational resources.

Disadvantaged students are attending schools with lower ICT infrastructure and educational resources

(Di Pietro et al., 2020). Following COVID-19 more advantaged students are attending schools to adopt online learning. Schools in disadvantaged, rural areas lack the appropriate digital infrastructure required to deliver teaching at the remote. Also, there is a significant difference between private and public schools in technology and educational resources. In most countries, private schools are more effective than public schools. Students have not equal access to digital technology and educational materials.

## **2.2 Unequal Access to Educational Resources and Technology**

The school's closure due to COVID-19 may not affect students equally. Students from less advantaged backgrounds highly suffered during COVID-19 than advantaged students. To control the coronavirus spread, most countries have been working to encourage parents and schools to help students continue to learn through distance learning. The governments advised students to learn from radio and television lessons that can be accessed at home. The radio and television lessons may work for some children and students in urban areas, but most parents in rural areas have not accessed to radios and television lessons. For example, in Ethiopia, more than 80% of the population lives in rural areas with limited or no access to electric power, so that it is challenging for students in rural areas to learn from radio and television lessons. The schools in urban areas are teaching their students from a distance by uploading assignments, books, and reading materials through Google Classroom, e-mail, social media, and other applications. In some urban areas, even if distance learning is provided due to a lack of monitoring strategies some students may not use it properly. Private schools sending learning materials directly to parents through social media platforms. There is a difference between rural and urban schools and the public and private schools to keep their students learning from home. Also, public school teachers and students have limited or no access to the internet.

## **2.3 Assessment and Evaluation**

Distance learning is a good opportunity for teachers, students, and families. In developed countries such as introduced online learning platforms, use Blackboard, Zoom, TronClass, Classin, and Wechat group platforms, and conducted online training, and collected information about all courses. Online teaching and learning are not a new mode of delivery for developed countries and some developing countries. However, shifting from face-to-face class to online learning is challenging for teachers, students, families, and the countries government due to lack of finance, skill, ICT infrastructure, internet access, and educational resources. Furthermore, computers and other IT equipment, at home are difficult for most parents, children, and students in developing countries. Additionally, some courses are difficult or impossible to teach and learn through online learning methods such as sport, nursing, laboratories, music, and art courses.

## **2.4 Mental and Physical Health**

The closures schools and higher education negatively affect the mental and physical health of children, students, parents, and teachers in the world, especially in developing countries. Since during school



closures, both boy and girl students in most rural areas may be forced to fully support their families in cattle herding and farming. Girl students from low-income families and rural areas can be at a high risk of sexual abuse, and forced labor, and early marriage. The infected cases rapid increase has created a sense of anxiety and uncertainty about what will happen. The lockdown due to coronavirus may make people feel stress, fear, and anxiety, such as a fright of dying, a fear of their relatives dying. This stress may affect the students' mental and physical health. The pandemic may have a serious influence on their careers or may prevent them from graduating this year's higher education undergraduate students. All students may not have good interaction with online learning applications and platforms, because some of the students are reactive and some may take a long time to familiarize themselves with the system.

### **3. Continuity Education System during COVID-19**

The COVID-19 pandemic has not clear investigation when the virus will be controlled, but there is an indication it will last for two years and the virus will occur again and challenge the world. So, the countries should plan different strategies to continue the education system through distance learning. Regarding this, the country designs a strategy to scale educational technology during pandemics, establish zero-rated educational resources on the internet, universal service funds and connecting schools to the internet, prepare online teaching and learning resources, utilizing free online learning resources, practice mobile learning, practice radio and television teaching and grow up ICT infrastructures. Then identify each distance learning challenges and opportunities for children, students, teachers, and families. This helps to determine and control the bottleneck of online teaching and learning challenges.

### **Education in Developed and Developing Countries during COVID-19**

The governments of different income level countries are using different distance learning methods to continue education during school closures. About 90% of high-income countries are delivered online learning and 20% are using a combination of broadcast and online learning. The upper-middle-income countries, over 70% provides a combination of broadcast and online learning. Also, about 66% of the lower-middle-income countries provide broadcast and/or online learning. Low-income countries, less than 25% are delivering education using television and radio education to their students. For instance, Europe, Central Asia, East Asia, the Pacific, the Caribbean, and Latin America most countries are providing distance learning via online learning fully and the combination of broadcast and online learning to teach rural area students. In the North and Middle East Africa, about 28% of countries are providing only radio and television teaching, less than 40% provide only online learning, and 22% are providing a combination of broadcast and online learning. In South Asia, 40% of countries are providing broadcast education, and 50% are providing a combination of broadcast and online learning. In Sub-Saharan Africa, 11% of countries are providing only online learning, and 23% of countries are providing a combination of broadcast and online learning. However, low-income and middle-income countries offering broadcast and online learning are not reach most students.



#### 4. Education System Post-COVID-19

There is inequality among urban and rural students; students from low-income or high-income and literate or illiterate parents. So that the education system should design and implement some evidence-based actions that aim to facilitate the recovery of the lost portion when schools are reopened. Because of the lack of required support during the school closures, it could take a very long time for children from illiterate and low-income parents to recover their missed portion when they return to school. Some students from low-income parents may decide to work as daily laborers to support their families financially and may never return to school when schools reopen. Parents from rural areas may be unwilling to send their children back to school because they may prefer their children to continue to support them in cattle herding and farming.

#### 5. Conclusion

The COVID-19 is a pandemic disease caused by a virus that affects the education system of both developing and developed countries. Education is the pillar of every country's development. In the world, most schools, colleges, and universities are closed to control the spread of the COVID-19. The school closure brings difficulties for students, families, and teachers. So, distance learning is a solution to continue the education system. However, distance learning is challenging in developing countries because many parents have not themselves been to school, lack of ICT infrastructures, computers, radio, and television.

#### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper

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Marketing is the process of intentionally stimulating demand for and purchases of goods and services; potentially including selection of a target audience; selection of certain attributes or themes to emphasize in advertising; operation of advertising campaigns; attendance at trade shows and public events; design of products and packaging to be more attractive to buyers; selection of the terms of sale, such as price, discounts, warranty, and return policy; product placement in media or with people believed to influence the buying habits of others; agreements with retailers, wholesale distributors, or resellers; and attempts to create awareness of, loyalty to, and positive feelings about a brand. Marketing is typically conducted by the seller, typically a retailer or manufacturer. Sometimes tasks are contracted to a dedicated marketing firm or advertising agency. More rarely, a trade association or government agency (such as the Agricultural Marketing Service) advertises on behalf of an entire industry or locality, often a specific type of food (e.g. Got Milk?), food from a specific area, or a city or region as a tourism destination.

It is one of the primary components of business management and commerce. Marketers can direct their product to other businesses (B2B marketing) or directly to consumers (B2C marketing). Regardless of who is being marketed to, several factors apply, including the perspective the marketers will use. Known as market orientations, they determine how marketers will approach the planning stage of marketing.

The marketing mix, which outlines the specifics of the product and how it will be sold. Is affected by the environment surrounding the product, the results of marketing research and market research, and the characteristics of the product's target market. Once these factors are determined, marketers must then decide what methods will be used to promote the product. Including use of coupons and other price inducements.

The term marketing, what is commonly known as attracting customers, incorporates knowledge gained by studying the management of exchange relationships and is the business process of identifying, anticipating and satisfying customers' needs and wants.

### **Review of literature:**

A literature review is a search and evaluation of the available literature in your given subject or chosen topic area. It documents the state of the art with respect to the subject or topic you are writing about. A literature review has four main objectives: It surveys the literature in your chosen area of study.

A literature review is an overview of the previously published works on a specific topic. The term can refer to a full scholarly paper or a section of a scholarly work such as a book, or an article. Either way, a literature review is supposed to provide the researcher/author and the audiences with a general image of the existing knowledge on the topic under question. A good literature review can ensure that a proper research question has been asked and a proper theoretical framework and/or research methodology have been chosen. To be precise, a literature review serves to situate the current study within the body of the relevant literature and to provide context for the reader. In such case, the review usually precedes the methodology and results sections of the work.

Producing a literature review is often a part of graduate and post-graduate student work, including in the preparation of a thesis, dissertation, or a journal article. Literature reviews are also common in a research proposal or prospectus (the document that is approved before a student formally begins a dissertation or thesis).

A literature review can be a type of review article. In this sense, a literature review is a scholarly paper that presents the current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic. Literature reviews are secondary sources and do

not report new or original experimental work. Most often associated with academic oriented literature, such reviews are found in academic journals and are not to be confused with book reviews, which may also appear in the same publication. Literature reviews are a basis for research in nearly every academic field.

### **Objective of Study:**

The main objective of marketing research is to identify the needs, wants and demands of the target customer, so that the firm can introduce changes in the product according to the important requirements. It is this quality of product that helps to create brand loyalty of the customer toward the firm's product

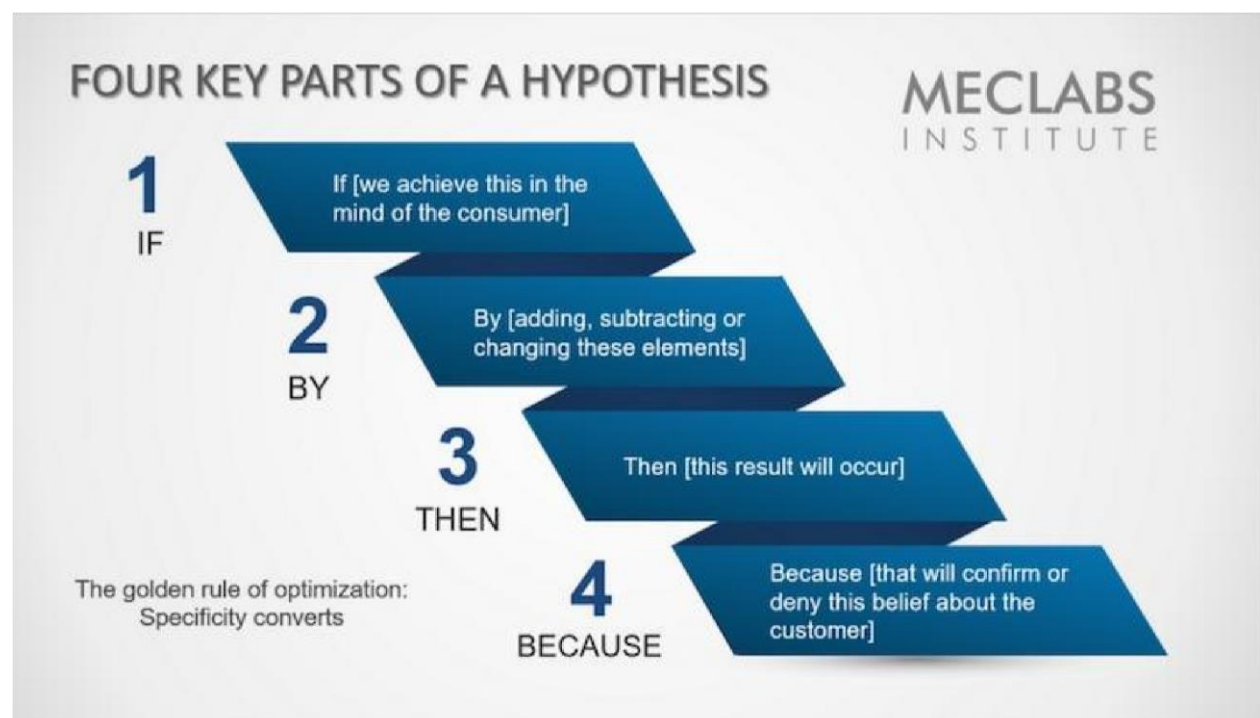
The most important objective of marketing research is to discover the new market for the product. These can be discovered by advertising, market survey, effective salesmanship, ETC. Marketing research analyses tastes and preferences of customers. Helps in analysing the likings and disliking of the consumers. The marketing department should make an analysis of the demand and preference of product from **time to time**

### **Hypotheses:**

Hypothesizing simply helps ensure the results from your tests are quantifiable, and is necessary if you want to understand how the results reflect the change made in your test.

A strong marketing hypothesis allows testers to use a structured approach in order to discover what works, why it works, how it works, where it works, and who it works on.

The change in retail concepts and sales structures is unstoppable. Traditional shoppers and with them the traditional retailers are threatened with extinction. Shoppers specifically prefer to shop online, in order to save time, to get a comprehensive overview of the wide range of products and to compare the prices of different suppliers, as well as to get inspiration. They respond to the situation and are open to new methods or products.



Drones, chat bots, digital assistants and mobile phones ensure that shopping behaviour will continue to revolutionise. A study by Bazaar voice shows that shoppers today are often on the move. Over 50 percent of page views come from mobile devices. Concepts such as a digital navigation system in the supermarket are high on the wish list of shoppers – as well as exploiting the opportunities offered by Artificial Intelligence and the associated automation. For retail it is expected that 5G will further advance the mobile use of AR and VR. New shopping concepts are required. For retailers, it comes down to reacting to the new customer requirements quickly and innovatively, with the aid of a lot of other innovative technologies, by offering customer-oriented services. Examples include the use of modern apps as well as establishing and personalising the ordering system for the user. Consumer-generated content, such as product ratings and social content, is becoming increasingly significant for online retail.

### **Data collection:**

To say that the current market reality has pushed us all into uncharted territory would be an understatement. With online retailers being at the forefront of the market shift, it's no surprise that the entire sector has been forced to adapt to new volumes of purchasing and demand, not to mention new consumer demographics.

Many e- marketplace organizations needing to readjust their plans for the near future are finding themselves working alongside market conditions predicted for 10 years from now.

Recent data shows that by the end of 2020, global ecommerce sales will reach \$4.2 trillion and make up 16% of total retail sales. And these numbers are only predicted to go up as we continue into the '20s.

This new market reality has driven plenty of e- marketplace organizations to look for immediate data sources to better anticipate consumers' growing demands. They must also address them with greater effectiveness as well as improve the overall customer experience.

One particular data source that has been successfully and continuously illustrating a truthful and accurate market reality is online data.

Whether it is by listening to consumer sentiments via social media public channels or following inventory needs, product reviews and surging demand trends across the world, online data has been providing a global snapshot, helping businesses to better anticipate and spot the right kind of opportunities to seize.

Now that literally every dollar counts, defining market opportunities early is the difference between winning or losing consumers and their loyalty.

### **Data Analysis:**

Data analysis the process of extracting and processing metrics. It is particularly beneficial in the realm of online consumer behaviour.

The information helps E-Commerce companies stay competitive in their niche markets. With these important insights, businesses can identify bottlenecks in their selling processes which provides an opportunity to refine strategies.





There are four types of data analysis

1) Descriptive Analysis-is the foundation of data analysis. It serves as the backbone of dashboards and business intelligence tools. It answers the question, “What exactly happened?” It also takes a close look at how many times it happened, when it happened and where it happened 2) Diagnostic Analysis provides a deeper understanding of business processes and answers the question, “Why did it happen?” This type of analytics helps companies create clear connections between data and behaviour patterns.

3) Predictive Analysis-looks at cause-effect relationships, interdependencies and trends. This step answers the question, “What is likely to happen?” The data tells the story of your customer’s experience. With this information, logical predictions can be made.

4) Prescriptive Analysis-is when artificial intelligence and big data join forces to help predict outcomes in complicated circumstances. This method requires special software. It considers,

“What is the best action in this case?” It may also ask, “Will we have a more positive outcome if we try something this way?” This type of analysis suggests which decision to make given the circumstances.

### **Conclusion :**

Finally, our results also point out to persistent quality-adjusted international price differences for offline products even when e-commerce is introduced. This means that the adoption of e-market place does not induce international price convergence of offline products. One reason could be that price dispersion in online prices is also high, although the pattern is different from offline.

If e- marketplace expands the market, as our results show, then any barrier to e-marketplace would have substantial negative effects in terms of revenue for producers and welfare for consumers. There is then a clear role for policy to design appropriate measures to help e-market place thrive which should help to generate jobs and boost economic growth.

### **Reference:**

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Matthew L. Nelson; Michael J. Shaw; Troy J. Strader, eds. (2009). Value Creation in E Business Management: 15<sup>th</sup> Americas Conference on Information Systems, AMCIS 2009, SIG e BIZ track, San Francisco, CA, USA, August 6-9, 2009, Selected Papers. Springer Science & Business Media. Pp. 156–157. ISBN 9783642031328.

“Leveraging offshore IT outsourcing by SMEs through online marketplaces”. U.L. Radkevitch, E. Van Heck, O. Koppius, University Rotterdam, Journal of Information Technology Case and

Application, Vol. 8, No. 3, Date posted: August 23, 2006 : Last revised: November 24, 2013







+++++ONE DAY Inter-Collegiate Conference on  
“NISHCHITAM: POSITIVE IMPACT OF PANDEMIC  
ON EVERY ASPECT OF OUR LIVES”  
(CONFERENCE PROCEEDINGS)

**Chairman, Governing Council**  
Lion Dr. Sharad S. Ruia



**Hon. Secretary, Governing Council**  
Lion Kanahaiyalal G. Saraf



**Chief Editor**  
Principal I/C – Dr. Kiran Mane



**Convenor & Vice Principal**  
Prof. Subhashini Naikar (Self Financed Courses)

**Vice Principal**  
Prof. Madhavi Nighoskar (Degree College)



**IQAC Co-ordinator**  
Prof. Emelia Noronha



**Teacher Co-ordinator**  
Prof. Bhavana Singh - B.A.(M.M.C) Coordinator  
C. A. Durgesh Kenkre - B.B.I Coordinator



**Teacher Incharge**  
Prof. Minu Paul  
Prof. Priyanka Radhakrishnan  
Prof. Mohini Nadkarni  
Prof. Kritika Rao



**Student Co-ordinator**  
Aayush Soni  
Sagarika Mendon

ORGANISED BY:-  
**PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE AND ECONOMICS**  
**B.A.M.M.C and B.B.I in association with IQAC**  
Sunder Nagar, S.V. Road, Malad West, Mumbai, Maharashtra 400064

DATE:- 02<sup>nd</sup> December 2021

# Chairman's Message

'To go and catch a falling star!'

In three words I can sum up everything I've learned about life. IT GOES ON."- Robert Frost

All of us across all walks of life are witnessing an unprecedented event in our lifetime, Academic institutions are no different; all of us have been overhauled alike. Adapting to the current times and overcoming them is the need of the hour. However, it is re-assuring for decision makers like me that like a real leader at the time of Crisis, our institution, Prahladrai Dalmia Lions College of Commerce & Economics and its entire workforce has stood tall, and ensured that the academic delivery, exams and other curricular activities were conducted unhindered.

Yes, I admit that the sudden change of methods, technology infusion, remote online classroom sessions have been of great discomfiture to the teachers, students and the support staff alike. But the steadfast turnaround displayed by our team under the able leadership of Dr. Kiran Mane, I/C Principal and the teams led by Vice Principals Prof. Madhavi Nighoskar (Degree Aided), Prof. Subhashini Naikar (Degree-Unaided) and Ms. Kiran Mishra and Mr. Anil Bagade (Incharges Junior College) have us, members of Governing Council wanting for words of gratitude.

To match the undeterred service provided by the College Team, we decided to utilize this challenging time for the betterment of the college infrastructure. I am happy to announce that Governing Council was unanimous in releasing requisite funds and resources to renovate and transform existing infrastructure. The General Auditorium, Conference Room, student's washrooms, Principal's cabin, Non-teaching Dry Cafeteria is upgraded to a state-of-art 3 star facility. We have also upgraded 2 class rooms to technology laced – 'Smart Classrooms' and installed the much awaited Rain Water Harvesting Technology- improving our sustainability quotient. With a new coat of paints, and other amenities, we are sure that the new batch of students would find an entire new college building ready to welcome them dearly. I am duty bound to mention the valuable service of our senior member Lion Kamal Ruia, Vice Chairman Governing Council for his rigorous follow up and supervision of the above said projects, and the youngest leader Lion Atit Ruia for his visionary inputs. Their support along with our other members of the Governing Council, despite the Covid scare gives us the confidence to drive forward.

There are yet many achievements to be mentioned, but are being withheld as the Covid19 protocols limit the capacity of University offices to approve new proposals. However, we are happy that LIC Team has visited the college for scrutiny of proposed Research Centre of Commerce & Economics and have submitted a positive report.

The pandemic effect has had a serious impact on the academic cycle, as many things remained ambiguous. This in turn affected the admissions and increased drop out percentages amongst

student of many institutions around Mumbai. But again, our stellar team of teaching and non-teaching staff, have upheld the quality admissions, even in the increase of intake capacity.

I personally thank those Samaritans with benevolent heart who have sponsored the academic fees of some of our students. The Governing Council is pleased to announce a special provision of 2.5 lakhs towards financial aid to deserving candidates. Kudos to all the achievers and supporters!

The road ahead is tough, but I am sure that we could work as a team and Triumph over the pandemic from our life. I urge everyone to follow Covid19 Protocols and assist the administration for effectively controlling the spread and treatments. If anyone can support financially or through social ventures in the trying times, it would be great!

Prahladrai Dalmia Lions College of Commerce & Economics is entering into its Golden Jubilee year and this year is important. Let us look ahead, and with the same resolve we shall strive for a better future for all of us, for all humanity.

In the words of Og Mandino, “I will love the light for it shows me the way, yet I will endure the darkness for it shows me the stars.”

**LION DR. SHARAD S. RUIA**  
Chairman, Governing Council

## Secretary's Message

Report card of the college is excellent. Due to Covid and lockdown, classes were conducted on virtual platform. We feel sorry for those students who could not enjoy college and canteen life, nor showcase their talents in various fields. During this period of crisis, under able leadership of Incharge Principal Dr. Kiran H. Mane and equally supported by teaching and administrative staff, college has performed very well. In the past, I have seen that we have produced thousands of Corporate Leaders, Public leaders, Chartered Accountants and Media Persons. They have travelled from Classroom to Boardroom of Public Limited Company. We make education a purposeful, meaningful and enjoyable experience.

We give due weightage and importance to the grievances of students and solve the same by not taking it lightly and casually. In spite of the economic meltdown due to Corona lockdown, we are continuously increasing basic amenities and other facilities for students and staff members.

Let us all march ahead for a better tomorrow.

Together we can and always will make a difference.

Be positive in life and wish negative Corona test for all.

We extend our whole hearted support to economically backward students.

Lion Kanahaiyalal. G. Saraf  
**Hon. Secretary, Governing Council**

From the In-charge Principal's Desk

It is every human soul's inherent desire, to realise, to be aware, and to awaken to a brighter light, to a mind. The theme of our Intercollegiate Student Conference "Nishchitam" has been chosen with a view to bring out the positive aspects of the pandemic in all walks of our lives.

With the rise of the new year, there has been a rise of new hope. Under the leadership of our BAMMC internal quality assurance cell, we put into practice the slogan reaching out - i.e. know all those who are affected. In these times of Pandemic, all of us are surrounded by negativity, but we should be focusing on the Silver Lining. As said by Roy T. Bennett, "Your hardest times often lead to the greatest moments of your life. Keep going to the end." Thus, we at Prahladrai Dalmia Lions College wish that amidst the negative chaos, all of your difficult times bless you with strength and toughness.

#### FOREWORD

Life is all about accepting the changes or changing what we can't accept. Your mind is a powerful tool and your life will start to change. This is the main aim of conducting this conference; to fill the young minds with positivity.

PROF SUBHASHINI NAIKAR  
Vice Principal SFC & Convenor







# PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE & ECONOMICS

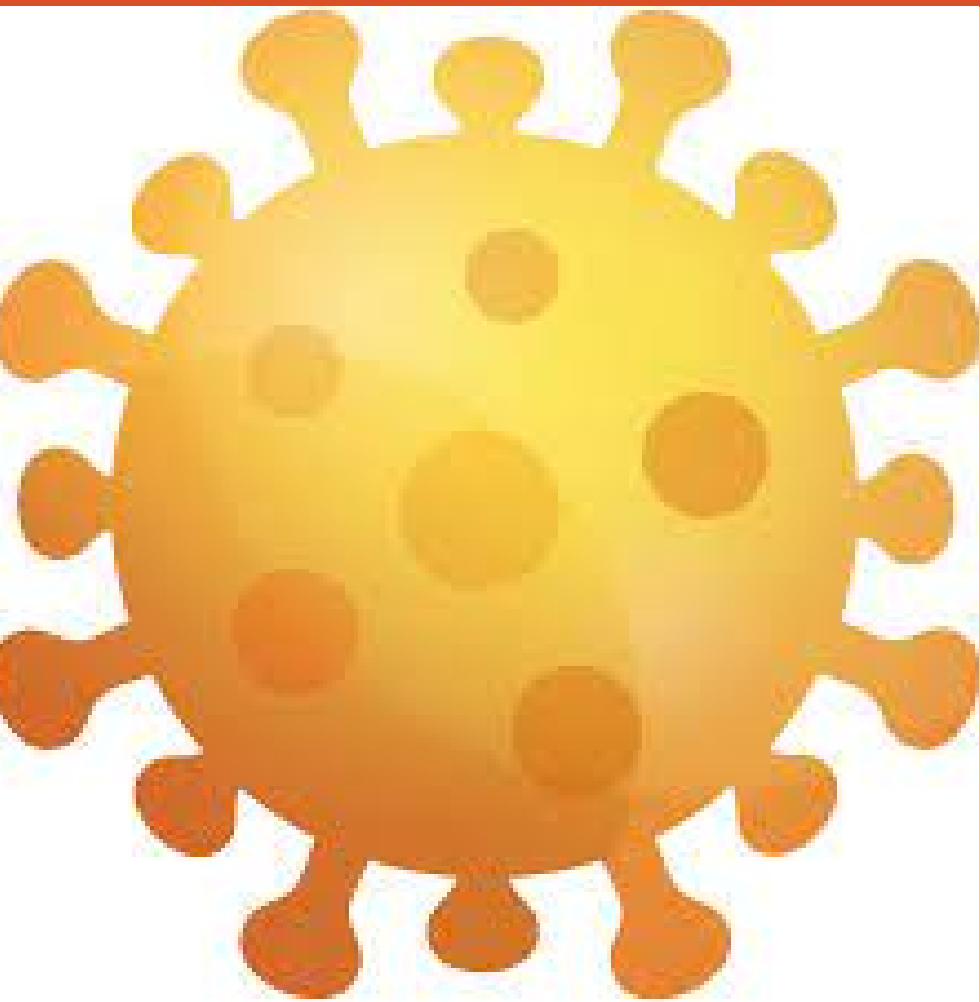
ISO 9001:2015 CERTIFIED

Sunder Nagar, Swami Vivekanand Road,  
Malad (West), Mumbai – 400 064.

Tel.: +9122 28725792

Website: [www.dalmialionscollege.ac.in](http://www.dalmialionscollege.ac.in)

**Bachelors of Arts in  
Multimedia and Mass Communication  
and  
Bachelor of Commerce in  
Banking & Insurance  
in  
Association with  
IQAC  
are  
Jointly Organizing**



**An Intercollegiate Student  
Conference**

**NISHCHITAM:**

**"POSITIVE IMPACT OF PANDEMIC  
ON EVERY ASPECT OF OUR LIVES"**

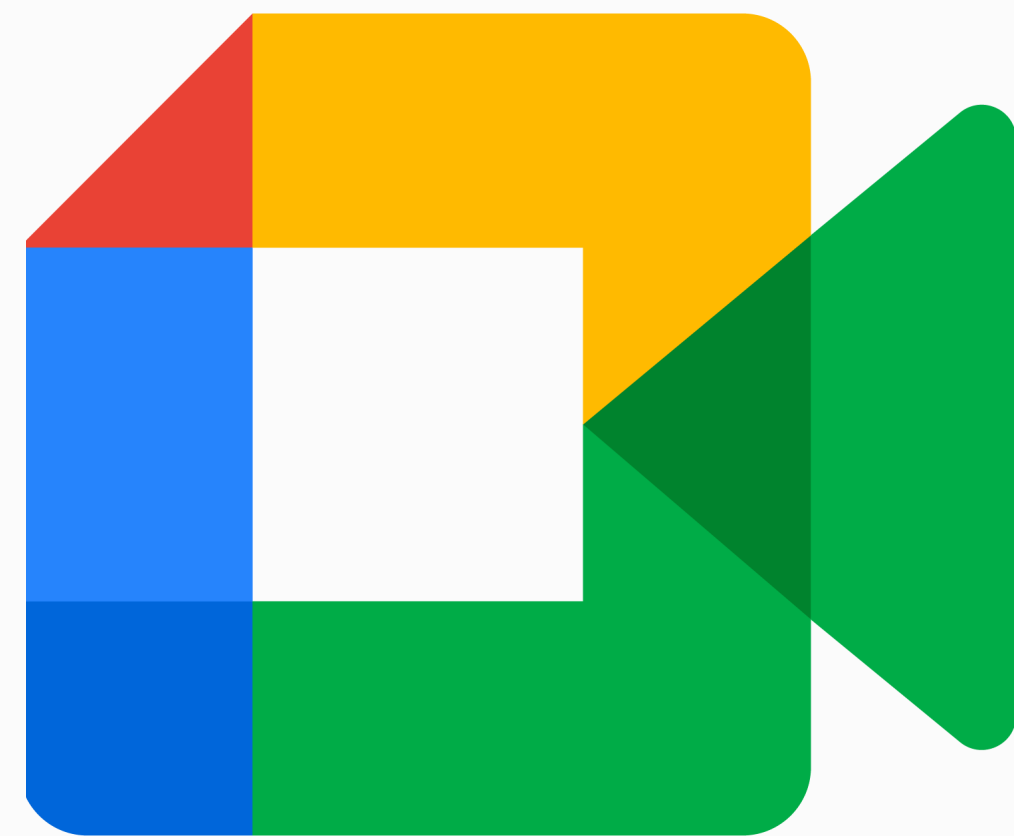
**PLATFORM - GOOGLE MEET**

**Pre-Conference Workshop Date**

**30th October, 2021**

**Conference Date**

**2nd December, 2021**



**So grab your phone and Register now for Free!**

Registration Link: <https://forms.gle/TYFcfjDijv2guwkd9>

Whatsapp Group Link: <https://chat.whatsapp.com/LpFP2IVyNKg718bqIwvSDq>

**Joining the WhatsApp group is mandatory for further communication regarding the conference.**





# About The College:

**Prahladrai Dalmia Lions College Of Commerce & Economics was started in 1972 with 450 students and today it's become one of the premier institutes in the Western suburbs. The College endeavors for academic excellence and promotion of co-curricular and extracurricular activities that promote resilience, creativity and leadership qualities among the students. The college lays great emphasis on inculcating in its students the importance of ethics, hard work and commitment to excellence. The college endeavors to groom its students as icons of tomorrow, potentially contributing to Commerce trade, industry and management.**

**The Theme Of The Conference:**

**Nishchitam: "Positive Impact of Pandemic on every aspect of our lives"**



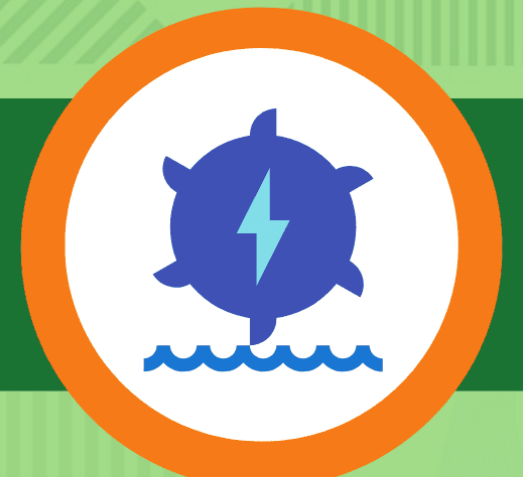
**CARBON  
EMISSIONS**



**WASTE**



**WILDLIFE  
& HABITAT**



**ENERGY**



# NEED OF CONFERENCE

Pandemic has tested the patience and optimism of each and every one of us. But on the flip side, it has changed our lives positively i.e. it has brought Nishchitam to our lives.

The aim of this conference is to get an insight on the positive alterations of pandemic on various walks of life. We hope that these Positive environmental effects may serve as an example and inspiration for future behavioral changes that would help us to bring positive changes in the environment.



## OBJECTIVES OF THE CONFERENCE

- To analyze the positive impact of Pandemic on all aspects of life.
- Highlighting the Green Lifestyle being adopted by everyone.
- Identifying Green structural changes in Economy, Education, Finance, Media, Marketing and all other fields
- Encouraging the youth to continue with pragmatic sustainable life changes.
- Advocating to look at life in an optimistic way.

**Conference Of The Students, For The Students and By The Students!!!**

# SUB THEMES

## GREEN LIFESTYLE

- Paperless Banking
- Impact of virtual examination on environment - paper less examination
- Work from home leading to lesser pollution
- Lesser traffic leading to Noise Pollution Reduction
- Lockdown leading to improvement in wildlife migration
- Improvement has been observed in the water quality of the water bodies.
- Green Budgeting
- Promotion of E-sporting, leading to
- Improvement in community health due to positive environmental changes

## IMPACT OF COVID ON EDUCATION

- Changing roles of teachers and technologies amid of covid.
- Challenges in front of quality Ed in the times of pandemic.
- Impact of covid-19 on education and children.
- Rise in online learning courses.
- Education from disruption to recovery.
- Information and digital library.
- Skilling, upskilling and reskilling by Students.

## COMMUNITY DISRUPTION THROUGH MEDIA DOMINANCE

- Virtual communities and society.
- Community integration, local media use in democratic processes.
- Media's impact on educational policies and practice.



# SUB THEMES

## MARKETING

- **Marketing Challenges in the New Normal.**
- **Marketing Communications in times of crisis.**
- **Marketing Communication and Social Health Behaviour.**
- **Branding Practices and Brand Architecture in the New Normal.**
- **Public Relation Strategies in the New Normal.**
- **Globalization strategies post pandemic.**
- **Changing dynamics of new Supply Chain models.**
- **Consumer behaviour post pandemic.**
- **Demands of the new e-Marketplaces.**
- **Creativity & Innovation in the digital economy.**

## TECHNOLOGY FOR THE FUTURE

- **Audio-visual storytelling through immersive technologies.**
- **Artificial intelligence, big data & analytics in communication industries.**
- **Immersive storytelling experiences.**
- **Podcasting & vlogging.**
- **Community and Liveable Societies.**
- **New media and citizen engagements.**



# CALL FOR PAPERS

Students are hereby invited to contribute

- Original Research papers for the Intercollegiate Conference relevant to the topic.
- Research papers should be submitted as per the following guidelines:
- The title of the paper should be followed by the personal and institutional details of the author.
- Each team can have minimum 1 and maximum 2 students of the same college.



## SUBMISSION INFORMATION FORMAT OF RESEARCH:

1. Abstract – 100 to 150 words.
2. The paper should be of 1000 to 2000 words inclusive of introduction and conclusion.

Research Methodology expected to be followed:

- Identification of research problem
- Literature review
- Research Methodology
- Data analysis and interpretation
- Findings
- Report
- Conclusion
- Bibliography
- Annexure
  - OBJECTIVE
  - HYPOTHESIS
  - LIMITATIONS
  - SCOPE OF STUDY
  - DATA COLLECTION – PRIMARY AND SECONDARY DATA

# FORMAT OF THE PAPER

1. **Font Type: Times New Roman.**
2. **Font size: 14 for Heading and 12 for the paper.**
3. **Use double spacing.**
4. **1-inch margin on all sides.**
5. **Bibliography should be in APA Style -**  
<https://www.youtube.com/watch?v=yI5PppKloZw>

## IMPORTANT DETAILS :

- **The soft copy of the paper and a PowerPoint presentation (to be presented on the day of the conference) of your sub topic should be emailed to [pdlconference@gmail.com](mailto:pdlconference@gmail.com) on or before 10th November, 2021.**
- **Entries per college: UNLIMITED**
- **No. of participant: 1-2**
- **No. of slots available: 20**
- **No Entry fees**
- **Paper presenters will be given 5 minutes for presentation.**
- **All the presenters will be awarded with a certificate.**
- **Open For All Students.**
- **Brochure and registration forms are also available on the college website.**





# **OUR PATRONS:**

**DR. LION SHARAD S. RUIA**  
**CHAIRMAN**

**LION KANAHAIYALAL G. SARAF**  
**HON. SECRETARY**

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Prof. Kritika Rao

**MEMBER**

Prof. Priyanka Radhakrishnan

**MEMBER**

Prof. Mohini Nadkarni

## **For Further Queries Contact:**

Mr. Ayush Soni (8600429118)

Ms. Sagarika Mendon (7738722413)

## Feedback Analysis for Nishchitam

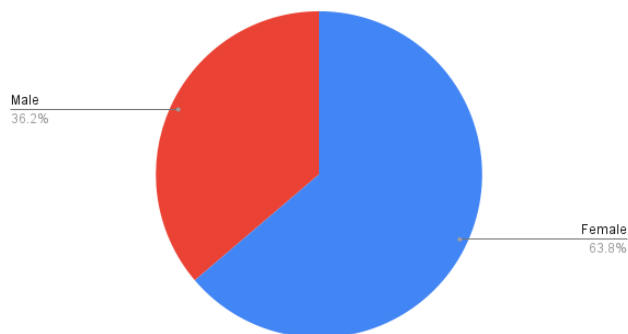
Topic :- “Positive Impact of Pandemic on Every Aspect of Our Lives”.

Date: 2<sup>nd</sup> December 2021

Time: 10.30 AM - 2.00 PM

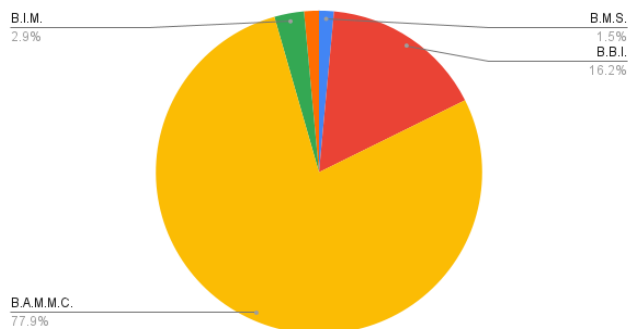
Organised By : B.A.(M.M.C) and BBI department

Count of Gender



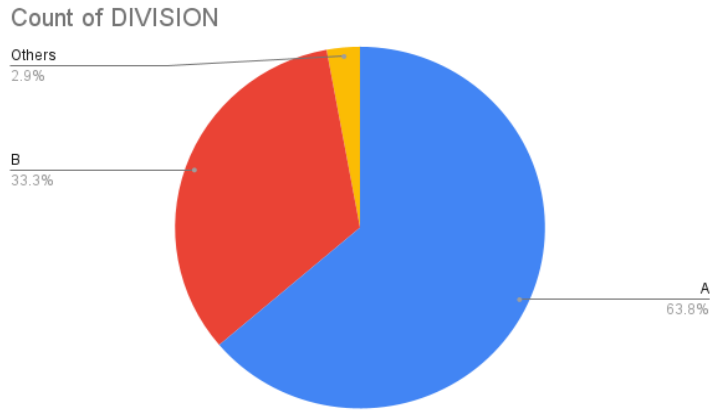
In this conference there were total 69 students out of which 44 were female and 25 were male.

Count of STREAM



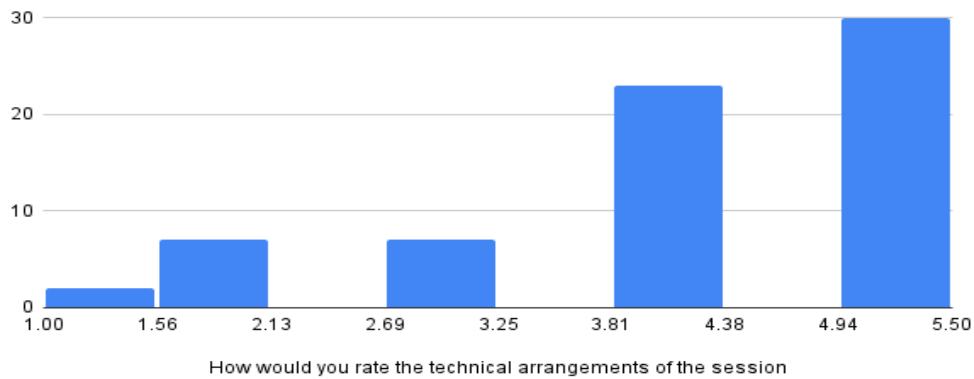
In this conference there were 54 students from BAMMC, 11 students from BBI, 2 students from BIM, 1 student from BMS and 1 student from BSC department





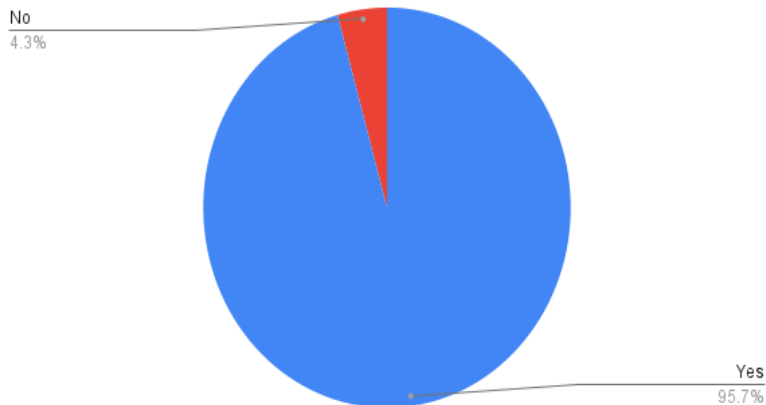
In this conference 23 students from B division and 44 students from A division.

Histogram of How would you rate the technical arrangements of the session



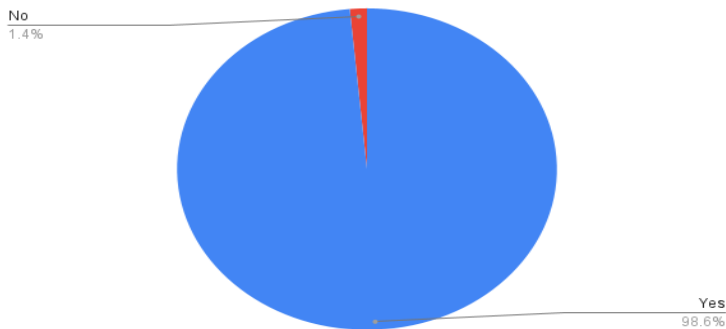
In this event the technical arrangements of this session out of 69 only 30 students said it was excellent. 4 students said it was very good. 3 students said it was good. 2 students said it was average and 1 student said it was overall better.

Count of Do you think every information was covered in the session?



The webinar was excellent according to the most of the students. It was very informative in which 66 students found it was informative. Other 3 students did not find it informative.

Count of Was the session useful?



In this event 68 students voted for yes the session was helpful for them and only 1 student did not find it helpful.

Any suggestions for improvement?

Students have responded that there is no need of improvement it was the successful event according to them.

What was the unique thing that you liked about this session?

The unique thing which they found is the best teamwork and the entire arrangement of event was done perfectly.

**Prahladrai Dalmia Lions College of Commerce & Economics  
Sunder Nagar, Malad (W), Mumbai-400  
ISO 9001:2015 Certified**

**Self-Financed Course**

**The BAMMC and BBI program in association with IQAC  
Conducts an Inter Collegiate Student Conference  
On  
*Nischitam: “Positive Impact of Pandemic on every aspect of our lives”***

**Inauguration: 2<sup>nd</sup> December 2021**

Inviting the dignitaries in the G Meet. (1 min) (10:30 a.m.)

Lighting of the lamp and Saraswati Vandana. (2 min) (10:32 a.m.)

Welcome address by I/C Principal Dr. Kiran Mane. (2 min) (10:34 a.m.)

Introduction of Chief Guest, Dr. Shekhar Vasant Chandratre (2 min) (10:36 a.m.)

Address by the Chief Guest, Dr. Shekhar Vasant Chandratre (10 min) (10:46 a.m.)

Introduction of Guest of Honour, Ms. Jasbir Kaur (2 mins) (10:48a.m.)

Address by the Guest of Honour, Ms. Jasbir Kaur (10 mins) (10:58a.m.)

Theme of the Conference by Vice Principal of Self finance Courses, Prof. Subhashini Naikar (2 min) (11:00 a.m.)

Introduction of Scoop Bulletin by B.A. (M.M.C) Coordinator, Prof. Bhavana Singh (2 min) (11:02 a.m.)

Unveiling of Scoop Bulletin (2 min) (11:04 a.m.)







**PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE AND ECONOMI**

**Sunder Nagar, S.V. Road, Malad (West), Mumbai-64**

**"ISO 9001:2015 CERTIFIED"**

**SELF- FINANCE COURSES B.A.(M.M.C) & B.B.I**

**In association with IQAC**

**AN INTERCOLLEGIATE CONFERENCE -NISHCHITAM:"POSITIVE IMPACT OF PA  
EVERY ASPECT OF OUR LIVES**

**JUDGEMENT SHEET**

**JUDGE NAME- Dr. Natika Poddar**

SR. NO	CODE	MARKS OBTAINED ON THE BASIS				
		Clarity	Presentation	Content	Grammer	Confidence
		Out of 10	Out of 10	Out of 10	Out of 10	Out of 10
1	CODE 1	7	7	6	6	7
2	CODE 2	7	5	5	6	6
3	CODE 3	7	7	5	6	7
4	CODE 4	AB				
5	CODE 5	6	6	5	6	6
6	CODE 6	7	5	8	7	7
7	CODE 7	7	6	7	7	7
8	CODE 8	6	7	6	7	7
9	CODE 9	6	6	5	6	6
10	CODE 10	6	6	5	6	6
11	CODE 11	7	7	7	6	8
12	CODE 12	6	7	6	7	6
13	CODE 13	AB				
14	CODE 14	AB				
15	CODE 15	AB				
16	CODE 16	6	6	5	6	6

**Dr. Natika Poddar**

**CS**

**NDEMIC ON**

<b>TOTAL</b>
<b>Out of 50</b>
33
29
32
0
29
34
34
33
29
29
35
32
0
0
0
29



**PRAHLADRAI DALMIA LIONS COLLEGE OF COMMERCE AND ECONOMI**

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**AN INTERCOLLEGIATE CONFERENCE -NISHCHITAM:"POSITIVE IMPACT OF PA  
EVERY ASPECT OF OUR LIVES**

**JUDGEMENT SHEET**

**JUDGE NAME- Dr. Surekha Mishra**

SR. NO	CODE	MARKS OBTAINED ON THE BASIS				
		Clarity	Presentation	Content	Grammer	Confidence
		Out of 10	Out of 10	Out of 10	Out of 10	Out of 10
1	CODE 1	5	6	5	5	6
2	CODE 2	6	7	5	6	7
3	CODE 3	5	6	7	4	5
4	CODE 4	AB	AB	AB	AB	AB
5	CODE 5	6	6	5	6	7
6	CODE 6	5	6	7	5	4
7	CODE 7	6	6	5	5	6
8	CODE 8	7	6	5	4	6
9	CODE 9	8	6	7	6	5
10	CODE 10	5	6	6	7	5
11	CODE 11	6	7	6	5	6
12	CODE 12	AB	AB	AB	AB	AB
13	CODE 13	AB	AB	AB	AB	AB
14	CODE 14	AB	AB	AB	AB	AB
15	CODE 15	AB	AB	AB	AB	AB
16	CODE 16	6	7	5	6	7

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**Dr. Surekha Mishra**



CS

NDEMIC ON

<b>TOTAL</b>
<b>Out of 50</b>
28
31
27
AB
30
27
28
28
32
29
30
AB
AB
AB
AB
31



## Curricula - Vitae



- **Name :** CMA Dr. Natika Sandeep Poddar
- **Age:** 39 years (24/12/1981)
- **Contact:** 98197 88659
- **Present Address:** 104/A Wing Garden Court, Next to Narayanan school, Bhayander (west).
- **Designation:** Associate Professor (Finance)  
*Employed from 2008, and Presently Associate professor.*
  
- **Previous Employment:**  
*3 Years Work Experience as a Full time lecturer in Area of Accountancy in KES College, M.K.Valia College and Ghanshyamdas Saraf College.*
  
- **Total Work Experience : More than 15 Years.**
  - ✚ **Mumbai University Approved Ph.D Guide.**
  - ✚ **Post Graduate recognized teacher at University of Mumbai in areas of Finance for MMS/MFM/MMM Programme.**
  - ✚ Programme Head for MFM/MMM (University of Mumbai Programme)
  - ✚ Local Inquiry Committee Member and Convener for Continuation of Affiliation at University of Mumbai.
  - ✚ Academic Advisory Committee Member
  - ✚ Internal Examination Coordinator for MFM/MMM Programme
  - ✚ Associate Editorial Board Member at Social Science International Research Network Journal ISSN 2231-4970.
  - ✚ Author and Writer for Financial Express news paper
  - ✚ Appointed as Vice-chancellor Nominee by University of Mumbai as a subject expert for the Appointment of Director's post.

✚ Chief Editor at META Research Journal.

Reviewers In Journal	Indexed
International Journal of Project Management	Abstracted and Indexed in ABDC, A category.
Theoretical Economic newsletters	Indexed and Abstracted in Web of Science.
Indian Journal of Finance	C " Category Journal in ABDC List
International Editorial Board Member in SKIREC Publications	It has 5 Referred Journals Indexed in UGC Care

**ds and Accolades:**

- ✚ Constant performer with respect to teaching feedback in all courses above 4 on 5 point scale from past 10 years.
- ✚ Joint Consultancy Project on the Market Potentiality of "Mechatronics" as a Specialization in Bachelor of Engineering ( B.E) for St. Francis Institute of Technology for 2014-15
- ✚ Consulted Interactive Data solutions for promotions and market Research of their company.
- ✚ Conducted soft skills training sessions for the Institute of Chartered Accountants of India - from 2009-2013.
- ✚ Conducted soft skills training sessions for the Institute of Company Secretary of India - from 2012-2013.
- ✚ 2<sup>nd</sup>Prize winner for Best Research faculty award at St. Francis Institute of Mgmt. and Research for A.Y.2014-15.
- ✚ 2<sup>nd</sup> Prize winner for Best Research faculty award at St. Francis Institute of Mgmt. and Research for A.Y.2015-16.
- ✚ 3<sup>rd</sup> Prize winner for Best Research paper presentation at Sterling institute in association with JJTU in 2015.
- ✚ Winner of "Excellence in Teaching" category award at Indo-American Summit 2016.
- ✚ Winner of Best professor in Finance Management" at Dewang Mehta Awards and 24<sup>th</sup> Business school affaire 25<sup>th</sup> November 2016.
- ✚ Winner of Distinguished Professor Award by CSI and IIT Bombay at Technext 2017-Symposia for Academics and I.T Industry15<sup>th</sup>January 2017.
- ✚ Winner of "Best Professor in Financial Management at 9<sup>th</sup> Innovative Star Group Education Awards-DNA 17<sup>th</sup> Feb 2017.
- ✚ Recipient of Highly Global prestigious Award MTC "Distinguished Management Faculty "September 2017.
- ✚ Certified Internal Auditor for ISO 9001:2015
- ✚ Felicitation from JJTU as Distinguished Alumni May 2017.

- ✚ Awarded for “RESEARCH EXCELLENCE” AT INDUS GLOBAL EDUCATION SUMMIT JULY 2017.
- ✚ Awarded for “Research Excellence” at Faculty Branding Award , Kolkata 23<sup>rd</sup> July 2017.
- ✚ Awarded for “Author of the Year” by MTRES 2017.
- ✚ Awarded for “Young Academician” 2018 by Centre for Education Growth and Research.
- ✚ Won 2<sup>nd</sup> Best Researcher Faculty Award at St.Francis Institute of Management and Research , awarded during Annual day,2019.
- ✚ Won Distinguished Management Faculty-Finance for the event held by AIMS International in Jan. 2019.
- ✚ Was awarded for teaching excellence Award by MTRES in Sept 2018.
- ✚ Minor research project Grant from University of Mumbai “Simulation analysis on housing projects at Navi Mumbai in 2017.

- **Media Coverage:**

- ✚ “Indo summit 2016 media by “ TV9” was Interviewed for Receiving “Teaching Excellence award”
- ✚ Programme head message coverage for Brochure MFM/MM Programme.
- ✚ ICWAI news Bulletin October 2016.
- ✚ **Writer for Personal finance page for Financial express newspaper**

- **Academic and Professional qualification:**

Year	Examination	Board/University	Class
1997	SSC Examination	Maharashtra state board	2 <sup>nd</sup> class-59%
1999	HSC Examination	Maharashtra Board	1 <sup>st</sup> class 68%
2002	TYB.COM Examination- Specialization in Accounts and Taxation	Mumbai University	Distinction-78%
2004	M.Com	Mumbai University	1 <sup>st</sup> Class - 65%(Aggregate)
2009	M.Phil	Madurai Kamraj university	2 <sup>nd</sup> Class - 59%

2010	Dip.in Tax mgmt.	Welinkgar Institute	1 <sup>st</sup> Class - 65%
2011	MBA	ICFAI (UGC Approved)	2 <sup>nd</sup> Class - 59%
2011	Certificate Programme in Capital Markets	BSE India Ltd in association with JBIMS and Mumbai university	Pass
2012	PGDFM	Mumbai University	1 <sup>st</sup> Class-70%(Aggregate)
2013	1 <sup>st</sup> Ph.D(Commerce-Banking and Finance area)	JJTUniversity	Qualified
Professional Degree	ICWAI-Cost Accounting	ICAI-CMA	Qualified
2019	MAH-SET	June 2019	Qualified
2019	UGC-NET	December 2019	Qualified
2019	NSDC	December 2019	Certified Retail- NSDC Trainer
2020	2 <sup>nd</sup> Ph.D(Commerce and Management -Commerce - Finance Topic )	Nagpur University	Qualified

- **Courses Taught and Feed back in Each course:**

Course	Subject	Feedback
TYBAF	FM,FA, Corporate Finance	Good
TYBMS	FM, Special studies in Finance, Investment analysis and Portfolio Management	Good
MMS	Security analysis and Portfolio Management, Banking and Insurance, Advanced Financial	Excellent and Consistent till date

	mgmt. (University Assessment) F.A.,FM, Strategic Cost mgmt., Corporate Valuation	
MFM	Merger and Acquisition,Security Analysis and portfolio management ,FM(University Assessment),Cost and Management Accounting	Excellent and Consistent till date
MMM	Financial Aspects of Marketing, Marketing Finance	Excellent and Consistent till date
PGDM	Treasury and Risk Management	Good and Improving for Excellency
PGDFM	FM, Management accounting (PCP Programme at University of Mumbai)	Good and Improving for Excellency
M.COM	Auditing, Advanced Financial Management	Good and Improving for Excellency
ICWAI(Institute of Cost Accountant of India)	FM, Cost Accounting	Good and Improving for Excellency

- **Innovative Pedagogy:**

- ✚ Excel based Teaching methodology
- ✚ Tally teaching methodology in case of Financial accounting subject for strong conceptual base understanding
- ✚ Case study
- ✚ Quiz
- ✚ Multiple Choice based quiz to understand conceptual ideas
- ✚ Short videos on concept understanding
- ✚ Role play during Finance presentation
- ✚ Virtual Lab
- ✚ Blended Teaching- Learning through MOOC
- ✚ Concept based Viva methodology

✚ GD through article reading

- **Professional Membership:**

- ✚ Membership with Centre for Education Growth and Excellence

- ✚ Associated with ICWAI(Institute of Cost accountant of India)

- ✚ Membership with MTC Global.

- **List of publications and Paper Published:**

**Published in Proceeding of Conference and Seminar:**

Sr. No.	Particulars	Publisher	ISSN/ISBN	Year / Month
1.	Analytical approach towards cash flow v/s capital cash flow Vol –II issue 1, 2011, pg no.185 – 195 (155-165)	IJOC&MS	2229-5674	Jan, 2011
2.	A study on equity research of few selected MIDCAP infrastructure stock Vol.1 Issue	SSIJBMR	2231-4970	July 2011
3.	Merger and Acquisitions market : A remedy towards	IJBIM	81-87912-08-01	25 <sup>th</sup> , June, 2011
4.	Innovative teaching tools and techniques for Distance	Tolani College of commerce	978-93-81801-50-5	20th & 21st January, 2012
5	Future of Management education in India pg. no. 122	Omkaranda Institute of Management	978-93-5051-611-9	11th & 12th Feb, 2011
6	Management of services Quality pg.no.313-324	Sinhgad business school	978-93-5051-611-9	9th, 10th & 11th Feb, 2012
7	Challenges before management with reference	Awadhesh pratapsingh	978-93-82062-09-7	24 <sup>th</sup> & 25 <sup>th</sup> , March, 2012



8	Consumer finance leading in India	Vishwakarma Institute of	978-81-920768-3-6	17th & 19th Feb, 2012
9	CSR – A primary objective of the sustainable Development	Tolani College of commerce	978-81-88818-58-7	11 & 12 Feb, 2011
10	Corporate social responsibility – A need of a hour Pg. No. 86-98	Babasaheb Gawde Institute of Management	978-81-8424-681-0	26/3/2011
11	Balancing Outsourcing : Boon or Bane ? Pg 539	Vivekanand Education Society's college	987-81-923044-2-7	12th August, 2014
12	Operational and credit risk management with special reference to Indian banking	B.L. amlani college of commerce &	978-81-926401-0-5	21th Sept., 2013

**Published in Journal:**

Sr.No	Research Topic	Publication	Month / Year
13	Impact of employee stock options on the market capitalization of the company  <b>Indexed in Scopus</b>	Published on Indian journal of finance, vol.4, no.9, sept 2010, issn:0973-8711	Sep-10
14	Research Paper on “Consumer Buying Behaviour at retail Outlet/ Shopping Mall.	APOTHESIS journal, Tirpudes National Journal of Business Research, ISSN 2249-1589, Vol.2, Issue.1	2010
15	Research Paper on “Retail Banking Hotter than Vindaloo.”	Asia Pacific Journal of research in business management, Vol.1, issue 2, ISSN - 2229-4104,	November 2010
16	Research Paper on “Mergers and Acquisitions-A change paradigm in	International Journal of Commerce and Business Management, Vol.4, Issue.1,	April 2011

	performance on Indian Companies.”	ISSN:0974-2646,	
17	Impact of Culture on Mergers and Acquisitions	Satya Shiv Infrastructure International Journal of Business and Management Research	May 2011
18	Research Paper on “Application of Disinvestment on PSEs.”	Kegees Journal of Social Science, Vol.4, ISSN 0975-3621	January 2012
19	Research Paper on “A Study on Risk Management Strategies.”	JJTU Journal, “Spark”-ISSN 2277-4866, VOL -1, ISSUE-1	January 2012
20	Research Paper on “The use of Films as Innovative way to enhance Learning Process.”	Tolani College of commerce, National Conference, ISBN-978-93-81801-50-5	January 2012
21	Operational and Credit Risk Management in Indian Banking Sector With Special Reference To Basel Norms	SS INTERNATIONAL JOURNAL OF BUSINESS AND MANAGEMENT RESEARCH- UGC LISTED JOURNAL	July 2014
22	Microfinance- A tool for women empowerment	International Journal in Management & Social Science	Dec 2014
23	Enterprise risk Management in improving sustainability of Banking Business in India(Co-Author)	TRANS Asian Research journals	April 2015
24	A Study on Role of Leverage on Firm's Investment- An Indian Companies Perspective	EXCEL International Journal of Multidisciplinary Management Studies, ISSN 2249- 8834, EIJMMS, Vol.5 (12), pp. 26-33, Online available at <a href="http://zenithresearch.org.in">zenithresearch.org.in</a> . UGC LISTED JOURNAL	Dec 2015

25	NPAs in Indian Banks-An Overview	International journal of multidisciplinary research in area of management, I.T., Engineering.	June 2016
26	A study on Impact of Earnings Announcement on stock Returns	International Journal of Research in Finance and Marketing. UGC LISTED JOURNAL	Dec 2016
27	A study on Taxation Awareness Amongst MBA student's v/s other Core Professional courses students.	International Journal of Research in Finance and Marketing (IJRFM) UGC LISTED JOURNAL	May 2017
28	GST-An Implications to An Indian Economy	International Journal of Management Studies ISSN(Print) 2249-0302 ISSN (Online)2231-2528,UGC APPROVED JOURNAL-44925	July 2018
29	A Perspective Study on Opportunities and Challenges in Adoption of IND AS	SS INTERNATIONAL JOURNAL OF ECONOMICS AND MANAGEMENT ISSN 2231-4962,UGC APPROVED JOURNAL-46558	July 2018
30	A comparative study of application effectiveness between Digital Marketing and Social media marketing for Sustainability of Start Up's	ITM International Conference	Feb 2019
31	A Study on MSME Contribution towards employment Growth and GDP of India	IBS International Conference, ISBN NO: 978-81-933908-2-5,ELK ASIA PACIFIC JOURNALS	April 2019

32	A Study on Mergers and Acquisition in India and Its Impact on Operating Efficiency of Indian Acquiring Company	Theoretical economics News Letter, ABDC Journal-B Category , ISSN Online: 2162-2086 ISSN Print: 2162-2078	April 2019
33	A study on the Convergence of Digital Marketing Strategy and Social media marketing Strategy , Innovations with reference to a Start Up	VIVA International Conference, ISSN-2394 7780,UGC APPROVED JOURNAL-63571	April 2019
34	GREEN FINANCE-A GREEN INVESTMENTS PERSPECTIVE A QUALITATIVE STUDY OF GLOBAL AND INDIAN COMPANIES	IJRAR, UGC APPROVED JOURNAL-43602 , E-ISSN-2348-1269,P-ISSN-2349-5138	Sept 2018
35	EFFECTIVENESS OF THE USE OF FLIPPED CLASSROOM TEACHING AS A PEDAGOGICAL TOOL AS COMPARED TO TRADITIONAL METHODS OF TEACHING	Journal of Management Research and Analysis (JMRA), ISSN: 2394-2770,UGC Listed Journal no:63796	Sept 2018
36	A study on Mergers and Acquisition in India and its Impact on operating efficiency of Indian Acquiring company	Theoretical economics Letter-1040-1052	ABDC Journal “ B category”
37	Non- Performing Assets in Indian Banks - An overview	International Journal of Management, IT and Engineering.	2016
38	Equity Valuation using Valuation Models and Strategies – Analysis of Automobile sector	Indian Journal of Ecology (2020) 47 Special Issue (9): 000-000	Scopus Listed. Jan 2020

- **Paper's presented at National and International Level:**

<b>Sr. No.</b>	<b>Title of the Paper presented</b>	<b>Title of Conference/ Seminar</b>	<b>Organized by</b>	<b>Whether international/national/state/regional college or university level</b>	<b>Year / Month</b>
1.	Impact of Globalization on financial services in India	Impact of Globalization on various sectors in present and Future scenario	K. B. College of arts commerce and science	National Seminar	27 Jan, 2011
2.	Problem, opportunities and prospects for SMEs in India	Contemporary issues in small & medium enterprises	Matoshri pratishtan group of Institutions	National Seminar	24th & 25th March, 2011
3.	IS CSR and sustainable development a Dual process	Sustainable Development	SIES college of commerce and economics	National Conference	25 Feb, 2011
4.	Attaining global growth through acquisition –post recession	Transforming Indian Industries into Global Economic Scenario	Godavari Institute of management & research	National Conference	8th March, 2011
5.	Crisis Management - a need of the hour	Crisis Management	Chetana Institute of management and studies	National Conference	18th Feb, 2011
6.	Recent trends in credit management – post recession	Post Recession management trends	Noval Institute of management studies	National Conference	24th, 25th & 26th Feb, 2011

7.	Application of human resource management in project management	National Doctoral conference	Vishwakarma Institute of management	National conference	04 & 06 March, 2011
8	Emerging trends in banking industry	Emerging trends in banking industry	Shri Bhausahbvartek arts, commerce & science college	National Conference	3rd & 4th Feb, 2012
9	A study on student support system	Innovation strategies and system for effective higher education	St. Francis Institution of management and research	International Conference	4th Feb, 2012
10	Challenges & road map for banking Industry	Emerging trends for value creation in the era of knowledge economy	Datta Meghe Institute Of Management Studies	International conference	17th & 18th Feb, 2012
11	Change Management - A key for organizational excellence	Innovation – the key to growth	MGM IMSR'S NOESIS	International conference	09th & 10th March, 2012
12.	Brand portfolio strategy- prevention towards brand proliferation	Rise of Indian brand	SRM university	National seminar	08th & 09th Sept, 2011
13	Opportunities and challenges for Indian Banking Sector	Challenges in management of corporate in 21 <sup>st</sup> Century	Novel Institute of Management Studies	National Conference	28th, 29th Feb. and 01st March, 2012

14	Organizational excellence through change management	Innovation for Organizational Excellence	Smt. K.G. mittal institute of management on	International Conference	24th Oct, 2011
15	Attaining global growth through acquisitions- post recession		National conference at Godavari Institute of Management and Research		2011
16	Problems, opportunities and prospects for SME sector in India		Matoshri Pratishthan Group of Institutions		2011
17	Research Paper on "Trends and Challenges in the Research in Accounting".		Changu Kana Thakur, National Conference at New Panvel		28th & 29th January 2012
18	Research paper on "Financial Inclusion for Sustainable Development."		ITM, International Conference at Navi Mumbai		3rd & 4th February 2012
19	Research Paper on "Emerging Trends in Banking Industry."		Shri BhausahebVartak Arts, Commerce College, at Borivili, National Conference		3rd & 4th February 2012
20	Research Paper on "Challenges and Road Map for banking Industry".		ELIXIR 2012, Datta Meghe Institute of Management, International Conference at Nagpur		17th & 18th February 2012
21	Research Paper On "Consumer Financing Lending in India."		Vishwakarma Institute of Management, National Conference at Pune		17th & 19th February 2012
22	Research Paper on "The Learner Centered Approach".		Shree Narayan Guru College of Commerce, National Conference at Mumbai		24th February 2012
23	Research Paper on "Innovative strategies in		St. Joseph College of Commerce,		6th & 7th

	Higher Education”.	Bangalore, National Seminar	September 2012
24	Economic Avenues and challenges in the area of organised retailing in banking sector	Paper presented at Thakur college of Comm and Sci in collaboration with university of Mumbai	24th& 25th sep 2013
25	Emerging trend in Financial performance of General Insurance Industry in India	Paper presented at St.Xavier college, UGC sponsored	27th and 28th sep, 2013
26	Operational & Credit risk management with special reference to Indian banking sector	Paper presented in international seminar B.L.Amlani college of Comm and eco and published isbn:978-81-926401-0-5	21st sep, 2013
27	A study of correlation between Disinvestments and Improvement in Financial Performance of Indian Public Sector Enterprises “	Sterling Institute of mgmt. and Research in Association with JJTU International conference	Jan 2015
28	Branding & Merchandising route-A Sustainable practices making a Trend in Indian FILM Industry for Revenue Generation	Innovation Based Sustainable Practices of Organizations, GNIMS B-School	March 2015
29	Impact of Foreign Portfolio Investment on India’s Economy and Industry	St. Francis Institute of Management and Research, Prakalap 2016, Inter collegiate competition-Project Guide	2016
30	Analysis of Risk and Return of selected stocks in India	IBS business school –International Conference on Finance and Economics.	April 2017
31	Effectiveness of Flipped class room model as a pedagogical tool compared to Traditional tool.	IIM Bangalore- Future of Learning conference at IIM Bangalore	Jan 2018
32	Testing the Beta Stability of Banking sector with respect to Bank Nifty	Flame University, International conference on baking, accounting	Dec 2017



		2017	
33	A comparative study of application effectiveness between Digital Marketing and Social media marketing for Sustainability of Start Up's	ITM International conference	Feb, 2019
34	A Study on MSME Contribution towards employment Growth and GDP of India	IBS International conference	April 2019
35	A study on the Convergence of Digital Marketing Strategy and Social media marketing Strategy , Innovations with reference to a Start Up	VIVA International Conference	April 2019

- **Evidence of High Quality research:**

- Winner of 2<sup>nd</sup> Best Researcher Award at “St.Francis Institute of Management and Research” for A.Y.2014-15
- Winner of 2<sup>nd</sup> Best Researcher Award at “St.Francis Institute of Management and Research” for A.Y.2015-16
- 3<sup>rd</sup> Position at International conference organized by Sterling Institute of mgmt. and Research in Association with JJTU -Topic A study of correlation between Disinvestments and Improvement in Financial Performance of Indian Public Sector Enterprises “.Jan 2015.
- Won 2<sup>nd</sup> Best Researcher Faculty Award at St. Francis Institute of Management and Research , awarded during Annual day,2019.
- Paper was published in ABDC Journal, B Category in April 2019.

- **List of Books Published:**

SR. NO.	Name of the Faculty Member	Title of the Book	Subject	Publication	Year of Publication	ISSN/ISBN No.
1	Dr. Natika Poddar	Management	Service	Shroff	2011	ISBN 13:978-93-

	(Co-Author)	Services	Management	Publications		5023-6
2	Dr. Natika Poddar (Co-Author)	Business Environment	Management (FYBCAF)	Sheth Publishers Pvt. Ltd.	2012	ISBN 978-93- 83105-87-8
3	Dr. Natika Poddar (Co-Author)	Business Environment	Management (FYBMS)	Sheth Publishers Pvt. Ltd.	2012/ Revised in 2015- 2016	ISBN 978-93- 82429-51-7
4	Dr. Natika Poddar (Co-Author)	Advance Auditing	Auditing	Institute of Distance (University of Mumbai)	2012	University of Mumbai(IDOL)
5	Dr. Natika Poddar (Co-Author)	Financial Accounting & Auditing	Auditing	Institute of Distance (University of Mumbai)	2015	University of Mumbai(IDOL)
6	Dr. Natika Poddar (Co-Author)	Analysis of Financial Statement	PGDFM	Institute of Distance (University of Mumbai)	2016	University of Mumbai(IDOL)
7	Dr. Natika Poddar (Co-Author)	FACULTY DEVELOPMENT: Perspective, Emerging challenges & opportunities	MTC GLOBL	MTC GLOBAL	2018	MTC, ISBN-978- 81-922178-6-4

8	Dr.Natika Poddar (Co-Author)	The faculty and Student Mobility	MTC GLOBAL	MTC GLOBAL	2019	MTC ISBN-
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- Workshop/Trainings attended:**

Topic	Date	Duration	Organizing Institute/Agency
Mergers & Acquisitions	10th & 11th Jul, 09	2 days	BSE Training Institute
Managerial Effectiveness	28th & 29th Nov, 2009	2 days	ICFAI University
Iso 9001-2008 Awareness Training Program	16th Apr, 2010	1 day	St. Francis Institute Of Mgt. & Research
Portfolio Risk Analysis	18th Jun, 2010	1 day	BSE Training Institute
Symposium on Research & Dev.	23/24 July 2010	2 days	Shri Jagdishprasad JhabarmalTibrewala University Rajasthan
Case Teaching Workshop	12-13 February, 2012	2 days	ISB Centre for Teaching Learning and Case Development
Faculty Development Program	14th October, 2011	1 days	St. Francis Institute of Management & Research
Faculty Development Program- "Quest for Excellence in Higher Education"	9th July, 2013	1 day	St. Francis Institute of Management & Research
Investment Outlook2015	28th April, 2015	1 day	The Indian Merchants

			Chamber
Contemporary Strategies for Teaching and Evaluation	26th Oct to 31st October, 2015	6 days	UGC, Human Resource Development Centre, University of Mumbai
FDP on Sectoral Learning: Issues & Challenges	27th August, 2015	1 day	Forum of Minority Management Institutions
ISO 9001-2015 Awareness Training Program	Feb 2016	1 day	St. Francis Institute of Management & Research
Basic and Advanced Excel Training	June 2016	4 Days	St. Francis Institute of Management & Research
Blended MOOC	July 2016	1 Day	IIM-Bangalore
Big Data and Data Analytics	May 2016	3 Days	St. Francis Institute of Management & Research
“Understanding Learners Dynamics”	Nov 2016	6 days	UGC HRD under RUSA- University of Mumbai
Research Methodology	Nov-Dec 2016	2 days	FDP at St. Francis Institute of Management & Research
Academia Symposium – Industry and Academia	Jan 2017	2 days	CSI Technext India
Crafting and Conducting Higher Quality Research	Nov 2017	2 days	IIM-A in association with K.J.Somaiya College of Arts, Science and Commerce.
Strategies for Decision Making	July 2017	1 Day	Symbiosis International University-Pune
SHORT TERM TRAINING PROGRAMME	DEC 2017	2 Weeks	Analytics Essential and Tools in Applied Research- organized by

			SFIT and AICTE.
Short Term Programme on Academic Administration	Nov 2017	2 days	UGC HRD under RUSA-University of Mumbai
Skill development and Leadership programme	Nov 2018, Feb 2019, June 2019	4, 4, 3 days respectively	AICTE-UKIER Programme
DShort Term Programme on MOOCs, OER	March 2019	6 days	UGC HRD under RUSA-University of Mumbai
FDP on qualitative Research	July 2018	3 Days	Vivekananda Education society Institute of Management
FDP ON BSFI(Refresher Course)	May 2019	10 Days	MHRD, Sydenham college under PMMMMNMTT
FDP on Competency mapping and strategies	July 2019	1 Day	ITM Business school

- **List of other Assignments:**

- ✚ Visiting faculty at Chankaya Institute of Management for the subject Advanced Financial mgmt. and Corporate valuation.(University assessment)
- ✚ Visiting faculty at Ghanshaymdas Saraf college of Commerce for M.com students Advanced Financial mgmt.(University assessment)
- ✚ Conducted viva-voce as an External panel Member for M.com students for Advanced Financial mgmt. for 2 consecutive years.2014-15.2015-16
- ✚ Guest lecture conducted at Balbharati College on the topic “Fundamental Analysis, a tool in the hands of Investors”.
- ✚ Guest Lecture conducted at Reena Mehta college on the topic “Careers in Finance stream “for the year 2016-17
- ✚ Guest lecture conducted at Prahaladarai Dalmia college on the topic “Investment Awareness for the Year 2016-17

- ✚ Paper setter for TYBMM course (University of Mumbai) for F.M. sub for 2014-15.
- ✚ Paper setter for PGDFM course (University of Mumbai ) for F.M. sub for continuous 2 consecutive years 2014-15,2015-16.
- ✚ Visiting faculty associated with ICWAI for Finance subjects from past 5 years.
- ✚ External Moderator for Finance subjects at VIVA Institute of Management for 2016-17.
- ✚ External Referee for VIVA-VOCE for 2016-17 for M.com part II for Finance subject at Thakur college and Prahaladarai Dalmia college
- ✚ Resource Person at Rohildas Patil Institute of Management for Mergers, Acquisition and Corp. Valuation subject.
- ✚ Resource person an Prahaladarai Dalmia college for Research project.
- ✚ Paper setter at Mumbai University for various finance subject 2017.
- ✚ Special Invitee/Chief Guest for Valedictory function at National conference , Vivekandha Institution Coimbatore for “Digital India” on 10<sup>th</sup> Aug 2017.
- ✚ External Moderator for Finance subject was appointed for VIVA Institute of Management.
- ✚ Was Appointed as a paper setter for Project finance subject MFM sem VI(May 2019).
- ✚ Chairperson for National conference at Thakur college
- ✚ Chairperson at Bedekar Institute of Management for International conference.
- ✚ Chairperson at IBS for International conference.
- ✚ Was invited as a Resource at Rohildaspatil Institute for Mergers, Acquisition and Corp Valuation subject.
- ✚ Was invited as a Guest Faculty at N L DALMIA Institute for Project finance subject.
- ✚ Was invited as a Guest Faculty at Thakur Institute for Project finance subject.
- ✚ Chairperson as paper setter for PGDFM course Analysis of financial statement subject and Financial Markets , University of Mumbai.
- ✚ Mcom Project VIVA-VOCE at R.A.Poddar college of Commerce.
- ✚ Mcom Project VIVA-VOCE at Prahaldrai Dalmia college of Commerce
- ✚ TYBAF Project VIVA-VOCE at Prahaldrai Dalmia college of Commerce
- ✚ Was Appointed for Syllabus drafting committee member for Financial Management subject for Thakur Engineering College.
- ✚ Was invited as a external panelist to conduct MFM Viva at Guru nanak Institute of Management.

- **List of Management Development Programmes and External Assignment designed and conducted:**

- ✚ Designed and Organized MDP on “Chankaya in you” for Corporates, Management Students, and Faculty members 2014-2015
- ✚ Designed and Organized MDP on “Entrepreneur in you” for Corporates, Management Students, and Faculty members 2015-2016.
- ✚ Designed and Organized MDP on “Business Analytics” for Corporates, Management Students, and Faculty members 2016-17.
- ✚ Guest of Honour at Prahaladarai Dalmia College for Conference on “Demonetization” 2016-17.
- ✚ Chief Guest at Vivekhandha College of Arts, Science and commerce for National conference on “Digital India” August 2017.
- ✚ Resource person at Rohildaspatil Institute of Management for Mergers, Acquisition and Corp.Valuation subject.
- ✚ Panel Member and Designed syllabus for Financial Management subject for Thakur Engineering college, 2019

- **Major consultancy Projects:**


- ✚ Certified Internal Auditor for ISO 9001:2015
- ✚ Joint Consultancy Project on the Market Potentiality of "Mechatronics" as a Specialization in Bachelor of Engineering ( B.E) for St. Francis Institute of Technology for 2014-15
- ✚ Consulted Interactive Data solutions for promotions and market Research of their company.
- ✚ Conducted soft skills training sessions for the Institute of Chartered Accountants of India - from 2009-2013.
- ✚ Conducted soft skills training sessions for the Institute of Company Secretary of India - from 2012-2013.
- ✚ Resource person for SFIT-“Faculty development Programme” for Art of Listening in month of Aug 2019.

- **Contribution to Institution Building:**

- ✚ Programme Head for MFM/MMM Programme affiliated to Mumbai University for Working professional. Gave a new shape in form of Events, Competition, Project competition, Extra-curricular activities for Holistic development for a Good leader, Future manager.

- ✚ Organized and conducted MFM/MMM programme workshop as HOD for Financial Mgmt. Subject (University Paper) among 14 other institutes who have similar course. Workshop was chaired by Board of Studies- Finance, University of Mumbai .12 Institutes running similar courses represented their Institute for the workshop in A.Y.2015-16.
- ✚ Organised and conducted as HOD for MMM programme workshop for Strategic Marketing Management and Integrated Marketing Communication and digital marketing Subjects (University Paper) among 14 other institutes who have similar course. Workshop was chaired by Board of Studies- Marketing, University of Mumbai .12 Institutes running similar courses represented their Institute for the workshop in A.Y. 2016-17.
- ✚ Visited reputed companies like Insyn Analytics, Dolat capital, JBCN School for counseling, Brand building and Promoting MFM/MMM programme of Institute.
- ✚ Represented MFM/MMM Department as HOD during NAAC and ISO certification visit.
- ✚ Mentoring MMS Students for their career and placement related activities.
- ✚ Events successfully organized at Intra and Inter level- Pathh-International paper. presentation, Prkalpa-Project Presentation Competition, NAAC Committee Team member,Industrial Visits,Synergy and many more.
- ✚ Organised MOCK STOCK for Finance specialization students.
- ✚ Arranged Training on various NISM certification Programme in association with NISM.
- ✚ Guided over more than 200 students for their Industry Projects.
- ✚ Lead Co-ordinator for MDP Programmes conducted at the Institute level.
- ✚ Appointed as a senior supervisor at St. Francis Institute (as one of the center designated)to conduct Mumbai University Examination for May 2016.
- ✚ Contribution in syllabus revision for Finance Specialization at University of Mumbai for Corporate valuation and Mergers and Acquisition Subject October 2016.
- ✚ Examiner, Moderator, for Finance subjects of MFM/MMM Programme at University of Mumbai.



 Represented Institute for Promotional activities continuously with respect to Part time Programme like Marathon as GSC, Kiosk at Sahara Plaza, Promotion at Clinical Research centre etc.

CMA Dr. Natika Sandeep Poddar

# SCOOP BULLETIN

THURSDAY 2nd DECEMBER 2021



## The Visionary

*Lion Dr. Sharad Ruia  
(Chairman Governing  
Council)*

**“We cannot always build the future for our youth, but we can build our youth for the future.”**

These words by Franklin D. Roosevelt

Perfectly described our aim at Prahladrαι Dalmia Lions College of Commerce and Economics. Beyond providing a sound education, we wish to provide our students a holistic learning experience for life. Our aim is to teach students to LEARN, not just STUDY. Hence, we strive to travel beyond the boundaries of mere books. We have realized that the future is abstract and unknown but the youth in our hands are real and can be moulded. Scoop Bulletin allows students to showcase their talents and knowledge in a very vivid manner. This is an opportunity for students to indulge in interpersonal communication which allows them to get inquisitive. Dear students, “You are the nation-builders You are the movers of technology. You are the agents of change.” It is our fervent hope that the years that you spend in Prahladrαι Dalmia Lions College of Commerce and Economics would enable you to equip yourself with leadership and managerial skills. The knowledge that you will gain, the fine qualities that you will imbibe and the technical skills that you will learn to apply will be your major contribution to your parents, to society, and to the nation.



## The Architect

*Lion Kanahaiyalal G Saraf  
(Hon. Secretary Governing  
Council)*

The major challenge for today’s educational institutions is to accommodate the ever varying aspirations of the younger generation

because of increasingly changing demand and development in media industries. We constantly put efforts to accommodate these aspirations by fine tuning the academics of college with innovative and practical oriented teaching - learning practices along with other developmental activities.

Our goal is to change the world through education. It may sound idealistic, but this is precisely our long term goal. It is what motivates the work of everyone at Prahladrαι Dalmia Lions College of Commerce and Economics — from faculty and staff, to students and alumni. It inspires our teaching and research. It is this goal which fuels the faculty to excel We believe in continuous development and strive to carry on the best efforts and endeavours towards the benefit of the students.

Our College results and placement speaks about our excellence with many of our students bringing laurels to the college by getting highest ranking in university exams and huge number of students are placed in national & multinational companies, moreover our students’ creativity and determination is evident by this continuous success in various fields.



## The Torchbearer

*Dr. Kiran Mane  
(I/C Principal)*

This academic year has been an extraordinary challenge on account of COVID-19. However, the pandemic gave an

opportunity world-wide to education. Times of crisis ought to inspire creativity, critical reflection, transformation, and renewal. In the new normal, the challenge is to adapt, regenerate, and position the college for Rethink and reassess the strategies for high strong and sustainable future. Our earnest

attempt is towards upholding academic integrity, accountability, sustaining open and transparent systems, and being sensitive to social responsibilities. Specifically, BAMMC program works on keeping students really updated with changing trends and requirements. Media enables students to explore and learn more. Let us all invoke the blessings of the Lord as we march ahead and gear up to myriad managerial, economic, societal, and environmental. **“We want that education by which character is formed, strength of mind is increased, the intellect is expanded, and by which one can stand on one’s own feet” – Swami Vivekananda**

# SCOOP BULLETIN

THURSDAY 2nd DECEMBER 2021

## Importance of Deadline

“I am a person who works well under pressure. I work so well under pressure that at times, will procrastinate to create this pressure. “Why the deadline is given?”

Deadline is given to achieve a goal in proper time. Deadline is given to set boundaries it is on us if we have to see or have to take it negatively or positively. If we take it, positively we may succeed shortly but if we take it negatively, it will not give any benefits for us in any way. It also forces the work to be completed and the given task at a given time. Also helps us in time management Deadlines are important because they keep you punctual. Every person or any big organization should know about the importance of deadlines.

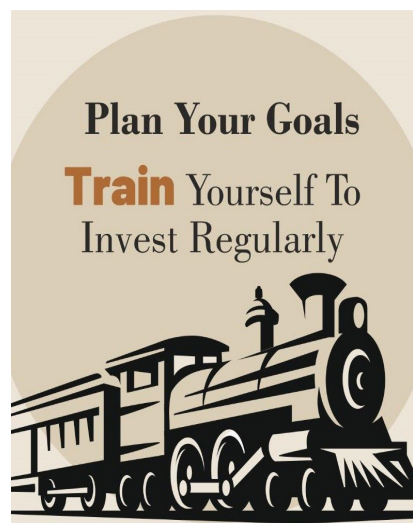
Deadline is one type of discipline to do all work at a given time. If Deadlines are given to us, we will not delay our work and complete it on the given time. Every organization keeps a deadline to achieve big and small goals. However, you will not instantly find success in the world of business by just setting deadlines for all of

your projects. You need to set the deadlines accordingly so that it will help to make your future instead of setting deadlines randomly just to complete the work. It inspires us about the importance of work and time. Time is the

most important thing in Organization. Goals are dreams with deadlines. To achieve any target in life we should keep certain deadlines to complete our goals on time. Deadlines are stressful at times but it also helps in time many works will remain



## Your summer internship experience.



To try something new and for the experience, I had joined an internship. I was with the marketing team they guided us. Also showed different ways to grab attention of the audience. How to use social media for marketing purpose.

I Started trying and interacted with many people. The company was selling different courses like Editing, Singing course, Course for learning Japanese and many more languages .Also they had bundles of option for the people who were interested in learning different skills. I was not there for a long time as I had some family problems. Hence, I had to leave it in the middle. But that was my first internship and I had learned many new things. It was tough no doubt but was an amazing experience, things I learned were value of time, Valuing the customer or buyer and respecting ones work.

ANKIT KUMAR JHA  
SYBAMMC

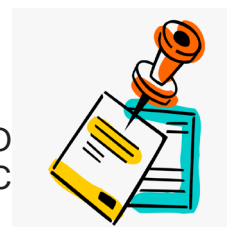


incomplete and we will keep delaying them repeatedly so that line is important.

Remember, a deadline can be painful but it is an effective tool for getting things done. Use utilization properly. Deadlines are not bad they are just projected in such a way that they sound bad and stressful. They also help you to organize your time. They help you to set priorities.

Without deadlines, it to clarify purpose, motivate people and create positive change.

SHARON CARVALHO  
SYBAMMC





# SCOOP BULLETIN

THURSDAY 2nd DECEMBER 2021

## How to train yourself to be focused?

How to be focused? Almost every individual asks this question himself or herself daily. Nowadays people face many distractions be it their laziness or social media. Firstly, I would like to tell you that focus is not something one can gain overnight. It is built brick by brick. You need to start working from today onward. Read books, meditate, have healthy food, exercise. To be focused you first need to clear your mind, which can be done with the help of meditation. Meditation is the best way to have a clear mind. As per my experience as I am an artist I easily got demotivated by comparing myself to others,



Thinking that I am not capable of improving and underrating myself. Then one day I came across an IGTV video on Instagram about not comparing yourself, belief in yourself. I learned that we all grow at our own pace. Knowing this I was able to remove all the distractions and focus on creating what I love ART. I started writing on stick notes my daily tasks and completing them eventually. By doing this simple

task, I was able to grow and was able to be a person who can focus. You too can achieve This and be focused by starting simple. You can start your day by listing things you need to complete today. Now focus on one work at a time by doing this you will not have to worry about all your work at once and you can be focused on one thing at a time. Even if you have, lots of work do not panic or stress have patience and work accordingly. After all, patience is the key to success. Lastly, I would like to add, "What you believe, you can achieve". Believe that you can do it and you will.

MANSI DAKSHA  
SYBAMMC

## Easy swaps to make life plastic free



And oceans. It is estimated that 1.1 to 8.8 million tonnes of plastic waste enters the ocean from coastal communities each year.

Living organism, particularly marine animals, can be harmed either by mechanical effects, such as entanglement in plastic objects, are harmful for the problems related to nature and now there is so much pollution create by or through exposure plastic. The plastic is one to chemicals with In of the Thing that never plastics that interfere with disposal The plastic bag their physiology. Effects is going to in the three on humans include for long time of period disruption of various the plastic never dispose hormonal mechanisms. Plastic pollution can afflict land, waterways

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PRIYANKASAWANT  
TYBAMMC

## Time and Tide wait for no man

"Time and Tide wait for no man" ~ Geoffrey Chaucer. Time, when we say this word we all have a different perspective related to that but Only a few people realize the real value of time. It does not matter you had a good day or a bad Day but the only thing that matters is how did you spend your time the whole day. If a person knows the value of time then they can achieve their goals easily. Just imagine you are credited with 84,000 Rest every single day but at the end of the day, it will vanish how will you spend That whole amount? Time is even more important than money just as if you spend money very wisely just like that you need to spend your Time like that. However, when it comes to managing time one should always do the following things. Think on paper. Always write down what you intend to do. Avoid distractions: The better plan you have, the better it is for you to get started and complete the Things you have listed. "The Biggest mistake is that we think We have time" ~Buddha

SURAJ VISHWAKARMA  
TYBAMMC



# SCOOP BULLETIN

THURSDAY 2nd DECEMBER 2021

## The Awe-Inspiring Prof. Subhashini Naikar (Vice Principal Self- Financed Courses)



Mary Ward's compelling vision "that women in time to come will do much". She believed passionately in the capacity of women, through education, To make a profound difference for good in the world. Her rich legacy inspires and challenges all involved in education today to be the "seekers of truth and doers of justice" (Mary Ward). We at PDLC offer education which empowers, motivates and liberates the students to use their individual gifts with confidence, creativity and generosity in loving and responsible service. We also provide an atmosphere to our students for multifaceted development, where students are encouraged to Channelize their potential in pursuit of

of excellence. Environment, where learning is characterized by nurturing the growth of the whole child – mind, body and spirit. The talents, skills and abilities of each student need to be identified, nurtured and encouraged so that she is able to reach greater heights. The college is also striving to make the best possible efforts to inculcate the values of love, freedom, sincerity and justice. We encourage students to take responsibility for their own learning in an environment of support, nurture and partnership between teachers and parents. We believe each student is different, unique and talented and we work together and strive to give that confidence.

## The Maestro Prof. Bhavana Singh (BAMMC Co-ordinator)



The journey of a thousand miles begins with just a single step, the graph that plunges forth showing rapid development begins-with just a single dot and the huge banyan that stands tall begins with just a seed so does a dream manifest itself into laudable action.

Media has perhaps played the most powerful role in History, Politics, Economics & Society. It is not limited to being a tool of communication anymore. In our present day world, media-broadcast and print media in particular, are considered mainly to be entities that reflect the face of the society as it exists today. With just a single dot and the huge banyan that stands tall begins with just a seed so does a dream manifest itself into laudable action.

Media has perhaps played the most powerful role in History, Politics, Economics & Society. It is not limited to being a tool of communication anymore. In our present day world, media-broadcast and print media in particular, are considered mainly to be Entities that reflect

the face of the society as it exists today.

We at BAMMC Program aspire to promote originality, creativity, commitment, dedication & passion in our media students by giving them ample opportunities to learn and excel in their area of choice. Our aim is to train students to understand the significance of making every voice heard, every image seen & every opinion counted. I am proud to be the coordinator of BAMMC and wish my students good luck for their lives. My students are like innocent clay pots, they simply need me to shape them!

## Scoop Bulletin Core Team



Rashmi Vishwakarma  
- SYBMM Editor



Shray Ved - TYBMM  
Asst. Editor

## The Mainstay of BAMMC



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**Blog:** <https://pdlcbmmbloggerspoint.wordpress.com> | **Instagram:** @pdlcbammc

Good morning everyone. I welcome all the dignitaries Our Chief Guest - Dr. Shekhar Chandratre, Our Guest Of Honour - Ms. Jasbir Kaur And Our Chairpersons For Technical Session –Dr. Natika Poddar & Dr. Surekha Mishra, our Vice Principal Of Degree College, Dr. Madhavi Nighoskar, Our Convenor And Vice Principal Of Self-Financed Courses, Prof. Subhashini Naikar, The Iqac Coordinator, Prof. Emelia Noronha, Bammc Coordinator, Prof. Bhavana Singh, Bbi Coordinator, C.A. Durgesh Kenkre and all my mentors and dear students.

The theme of our Intercollegiate Student Conference “Nishchitam” has been chosen with a view to having “Creation amidst Chaos” i.e. to bring out the positive aspects of the pandemic in all walks of our lives.

With the rise of the New Year, there has been a rise of new hope. Under the leadership of our BAMMC and BBI programs in association with the internal quality assurance cell, we put into practice the slogan reaching out - i.e. know all those who required help in COVID 19 period. During these times of Pandemic, all of us are surrounded by negativity, but we should be focusing on the Silver lining of this black cloud.

We at Prahladrai Dalmia Lions College wish that amidst the negative chaos, all of you radiate your positive vibes. May these difficult times bless you with strength and toughness.

We at PDLC are determined to provide holistic development of the learners and also want them to become a responsible human being in future. The **BA in Multimedia and Mass Communication** is a budding course, which provides 360 degrees perspective on the various aspects of Media and allied industries. Apart from regular classes and practical assignments, learners are provided various opportunities to hone their skills.

**Scoop Bulletin** is the brain child of the department which has being crafted after a lot of thoughts, efforts and care. We have an ambitious and talented student team of editors, mentoring staff writers, bloggers and photographers from the department. While providing our team with publishing and journalistic growth opportunities, we're able to provide our readers with genuine advice to help them make the most of their college experience. Our goal is to inspire and guide students to achieve balanced success in both their academic career and social life.

Written by students for students, by a team of upcoming journalist we're on the pulse of the college experience. We started out as a print publication in 2014 with one tabloid per year. Today we have transitioned in publishing two online tabloids per year successfully.



Name	Department	class
Kinjal Tiwari	Anchor	TYBMM
Harshita Suthar	Anchor	SYBAMMC
Melissa Mendes	Anchor	TYBBI
Alok Bairagi	Scoop Bulletin	FYBAMMC
Rashmi Vishwakarma	Scoop Bulletin	SYBAMMC
Shray Ved	Scoop Bulletin	TYBAMMC
Divya Dubey	BPO	SYBAMMC
kuldeep Yadav	BPO	TYBBI
Tuba kazi	BPO	TYBBI
Bhagyashree Patekar	BPO	SYBAMMC
Harshkumar Prabhakar Puthran	social media	SYBAMMC
Vedant Pawar	Social Media	SYBAMMC
Pradeep Ravikant Gupta	Social Media	SYBAMMC
Nishi jain	Marketing	FYBAMMC
Nandesh Shirsat	Marketing	TYBBI
Jayesh Verma	Marketing	TYBBI
Sanjana Vishwakarma	Marketing	FYBAMMC
Saniya Rangrez	Marketing	FYBAMMC
Monika Maurya	Marketing	FYBAMMC
Manish Kamti	Marketing	FYBAMMC
Ankita kumar jha	Marketing	FYBAMMC
Shrishti Malo	Marketing	FYBAMMC
Mansi daksha	Creative	SYBAMMC
Bharat Kamble	Creative	SYBAMMC
Ritika Sumesara	Creative	FYBAMMC
Nidhi Shetty	Creative	FYBAMMC
Himani Sav	Creative	FYBAMMC
Nikhil Rajpurohit	Creative	FYBAMMC
Mansi Yadav	Creative	FYBAMMC
Jagruti Koli	Creative	FYBAMMC
Sayam Sinha	technical	SYBAMMC
Ayush Soni	student co ordinator	SYBAMMC
sagarika Mendon	student co ordinator	TYBBI

*BAMme*

