Technology Enabled Progress of Digital India—COVID-19 and Beyond!!!!

Ruchi Goyal and Tanya Garg

Abstract The program of digitization essentially lies on the core of having a digital network by which services will be delivered to all in an efficient, transparent, and timely manner. Countries around the world have to face crisis due to Covid-19 also finding difficulty in coping with social isolation, physical-distancing measures, and financial growth. Despite the enormous economic and social issues, the governments are left with little choice now.

Keywords Digital technology · Progress · Covid-19 · Government

1 Introduction

An initiative naming “Digital India” welcomed by government of India to take the benefits of public services available to citizens of the country electronically by enabling digital empowerment in the field of technology [1]. This was aimed to achieve a better infrastructure online as well as increasing Internet connectivity both in urban and rural area. This technology enabled digitization, and ordination will take India to a path of progress. COVID-19 has severely damaged the economic prospects of India. The country is now following the “Atmanirbhar Bharat Campaign.” Digitization has played a very important role during COVID-19. Thus, even after COVID-19, a combination of Atmanirbhar Bharat supported by digital technology can help India in finding it way on the path of economic development and modernization.

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2 Amidst Corona Virus Pandamic Technology Paved the Way for Digital India progress

Lockdown was imposed on March 24, 2020, in India so that the spread of corona virus could be stopped, and as a result, it gave boom to technology use in India.

Within 48 days, there was a hike in the use of artificial intelligence (AI) and social media and transformed society into formidable users of technology.

According to the reports, there was an increase of 12% in mobile consumption from 23 h per week to 27 h. Social media platforms such as Watsapp, facebook, twitter, etc. gained spike of 87% of usage. As well as gaming platforms also witnessed 26% rise in their users.

Many video conferencing apps like ZOOM, Weebex, Google Meet, Google classroom, etc., were the major winners. Usage of virtual meeting spaces increased due to “work from home” policy introduced by many companies. ZOOM, is the app which came out as a surprise hit among the working sector for doing day-to-day work.

During first week of lockdown, there was a spike of 72% in internet browsing. Besides this, streaming platforms and television viewership also increased during this period (Fig. 1).

![India Smartphone Market Outlook 2020 Qualitative Covid-19 impact assessment](https://www.gizbot.com/mobile/news/coronavirus-lockdown-could-cripble-smartphone-industry-067071.html)
2.1 Review Literature

The program of digitization essentially lies on the core of having a digital network by which services will be delivered to all in an efficient, transparent, and timely manner (Fig. 2).

Government of India’s Digital India program is like a big umbrella and for its effective implementation under it has several projects are running under it, aiming to bring good internet speeds to India’s rural areas. Some important policies and projects are as follows:

- In order to minimize the use of physical papers or documents, a new system of digital locker came up, which helps people to share e-documents and assure them of authenticity of online available documents [2].
- ESign is a technology which helps a person to put digital signature on the document available online, only by providing his/her Aadhaar card, hence making it more authentic.
- For carrying out mission of cleaning India, a new app is launched for smart phone’s which is named after ‘Swachh Bharat Mission’.

![Impact of Digital India](https://www.slideshare.net/TRIPLESPORTFOLIO/digital-india-presentation-77952002)

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**Fig. 2** Impact of digital India. Source [https://www.slideshare.net/TRIPLESPORTFOLIO/digital-india-presentation-77952002](https://www.slideshare.net/TRIPLESPORTFOLIO/digital-india-presentation-77952002)
A new gift to Indian citizens is provided in the form of hospital application under the digital week campaign, which provides online facilities like online diagnostic report, online payment, online registration, online enquiry, etc [3].

A promising platform for the people is provided by the Indian government for increasing engagement of people in the governance system, i.e., MyGov.

Talking about educational areas, a portal for various scholarships has been launched (National Scholarship Portal); it will increase scholarships in the country.

With the motive of achieving rural India modernization, Barat Net introduced for enhancing connectivity through a broadband technology.

IP-based technology. This will help manage data, multimedia, voice, video, and other services. Additionally, BSNL has started deployment of Wi-Fi hotspots on a very large scale.

In the next 5 years, it will cultivate a skilled workforce for BPO and IT departments.

### 2.2 Use of Digital Technology During COVID-19 Period

“People who never expected—nor ever wanted—to use digital technology to communicate or work now must, and so they are learning how,” explained by Sean Michael Morris, director of the Digital Pedagogy Lab at the University of Colorado Denver. “We could look at this integration of technologies into family life in a positive light, in that, the use of these technologies at home necessitates a new level of digital literacy for everyone, but there is an equally important downside to the movement of work-related technologies into home life, too. Technology is useful, but it is not a substitute for the classroom.”

CLSA stated that “digital payments in India are surging in the ongoing Covid-19-led lockdowns. Already these had jumped three-fold over the last two years to 3 billion transactions a month. Within digital, mobile accounts for 50–75% of transactions in volume and value. However, India’s mobile data penetration is still only 57% even as mobile penetration is 87%. Growing digital payments will accelerate mobile data/4G penetration and build an ecosystem of service,” the report said.

Phil Harding wrote an article titled ‘Pandemics, Plagues and Panic’ (2009) in British Journalism Review which highlighted “how the spread of an illness and the resultant human behavior can be influenced significantly by the flow and vectors of information.”

Reviews of Abhay Kadam and Sachin Atre (2020) in Journal of Travel Medicine points out that “social media reach has risen three times during the lockdown period in India, with Covid-19-related search spiking significantly. The inherent insecurity and lack of daily structure during the lockdown makes us feel inadequate without the constant feed of health-related information. It is indeed challenging to find a fine balance between the toxic overuse of technology and healthy and systematic harnessing of healthcare data.”

Dating apps like Tinder reported “highest number of swipes, crossing more than 3 million. Online shopping apps like Amazon offered the delivery of essential items,
ensuring that people use this feature and stay at home. Moreover, the access to medical checkups and therapy sessions provided online, helped many dealing with physical or mental illnesses.” “While the system of food distribution and retailing in rich nations is organized and automated, systems in developing countries are ‘labor intensive,’ making these supply chains much more vulnerable to COVID-19 and social distancing regulations,” mentioned by Johan Swinnen, Director General of the International Food Policy Research Institute (IFPRI) in the New York Times article “‘Instead of Corona virus, the Hunger Will Kill Us.’ A Global Food Crisis Looms.”

2.3 Objectives of Study

- This study aims at accessing the Digital India program of the government with its execution during Covid-19.
- It aims to study the role of technology during COVID-19 and beyond.
- Problems and challenges faced due to COVID-19 for technology enabled development in India.
- Also, it will suggest a roadmap for technology enabled progress in India.

2.4 Research Methodology

For the purpose of this study, secondary data was collected from various newspapers, Websites, and Journals. It was then analyzed foreseeing and drawing the final conclusion.

2.5 Findings

2.5.1 Assessment of Digital India Program

Expected Impact pre COVID
The following are the various impact of Digital India campaign on economy of India. Figure below discusses the Economic, Social, and Environmental Impact of Digital India.

Digital India by numbers
Initiatives Statistics Digital Identity (AADHAR)
- 1.2 billion users of internet
- 450 million users of mobile phone
1. 1.18 billion users of smartphone
2. 468 million connections social media users
3. 250 million ration cards
4. 100% digitized government market place 263,731 products by 105,889 sellers listed, with 22,598 buyer [4].

Source—digitalindia.gov.in (Ministry of Electronics & Information Technology, Government of India) (Fig. 3).

The numbers show that considerable effort has already been put by the government of India but still a lot needs to be done. As per the impact on various sectors says that the execution needs to be better planned for effective implementation and visible impact on the economy.

Supporting the Digital Economy (COVID and Beyond)
For many companies, technology is a key tool to cope with the new demands brought about by the COVID crisis. For other companies, it is also crucial to adjust their processes and continue operations [5]. Policy decisions in this area will directly affect how easy it is for companies to adapt to new realities, whether it is in supporting companies to move forward or removing obstacles to new business models. Technology-driven economies also provide various opportunities for economic decision makers so that they can be awareness regarding to obtain real-time situations.

Business Continuity and Digitisation—Changing trends Nowadays, businesses modified their operations from old traditional to online or revamp themselves altogether to deliver timely and appropriate services during the tough times of COVID [6]:

Fig. 3 Lessons At Startup. Source https://www.lessonsatstartup.com/2020/01/24/how-digitalization-has-changed-the-face-of-indian-economy/
The crisis due to corona viruses has toppled the powerful inertia of many traditional systems and prompted the acceptance of digital (online) services, which have found new tools and adapted them to their backgrounds. In the long run, this may make the economy better able to increase productivity, growth, and adaptable.

For businesses, the fulcrum of online exchange includes everything from restaurant-based delivery to fitness classes via video link. Not all content can be moved online, but the wide availability of tools that support the Internet age means that the businesses that manage them are far more likely to have them than they might have before.

Marketing and advertising need to be sustainable for the basic growth of businesses. In order to continue for long run, digital marketing is required. For helping the start-ups, Indian government is providing financial support for advertising.

Patreon, for example, is a paid membership platform for online creators, with an average user growth rate of about a third higher than in February, while the video conferencing platform Zoom grew from 10 million to 200 million. Behind the scenes, insurance start-ups are also adjusting their policies to achieve more on-demand and flexible services as the nature of their activities changes, while digital identity providers are stepping up efforts to facilitate remote on boarding, right-of-work checks, and electronic signatures.

Since the current transition is based on market-based accessible and affordable tools, government support should focus on raising awareness, convening, and sharing lessons learned. The most effective interventions may be based on amplification and convening (e.g., through online resources or digital networking plans) to accelerate the growth and impact of these steps.

Challenges for India

1. **Rural Background**: Almost 70% of India still resides in rural areas, where the people are traditional. They are still following the customs of the society and are not ready to accept the change. It is very difficult to change the mindset of the people living in rural areas; thus, the new technology may not appeal to them [7].

2. **Low internet speed and connectivity**: The internet connectivity in India is also very poor. We urgently need to upgrade it for promotion of the policy of digital India.

3. **Need of huge public expenditure**: Such policies can only be implemented and be successful if the government is ready to incur huge expenditure required for the implementation of the new technology. But the present economic condition of India may not permit us to spend such a huge amount of money [8].

4. **Literacy**: In India literacy rate is still very low. In spite of various government, illiteracy policy initiatives to make India literate the percentage of the literate people is still low. In such a case, it is very difficult for a person who cannot read and write to use the digital platforms.

5. **Poverty**: Still a lot many people are living below poverty line in India. Thus, it is very difficult for the us to make them digital as they are still not able to
fulfill their basic necessities. The digital technology is costly and needs to learn before reaping its benefits.

6. **Ignorance of the people**: This new initiatives require a lot of awareness, focusing on the various aspects of the plan. People are still unaware about the initiatives and the benefits they will be having from the policy. Because any change to be implemented must be bagged by the acceptability of the people at first place.

7. **Unsecure**: The digital technology must be updated to be more secure and should be friendlier to the people. The possibility fraud in this system cannot be underrated.

8. **Infrastructural facilities required** the mode of digital communications that are still lacking in India. This requires a lot more investment after doing the cost benefit analysis to make it more viable for the people. We require a high speed network, greater connectivity, many more towers to be installed, easy availability of devices supporting digital technology.

9. **Not easily accepted by the traditional society**: Any new technology is not accepted easily by the traditional society. As they still very strongly believe that there older modes of communication are good and easy for them. They are comfortable and are use to using new technology. They are not ready to change for the better as they are unable analyze the benefits of the new technology.

10. Correct execution and implementation for growth: Any new policy or any change to be implemented on a large scale requires correct implementation and execution, as per the situation prevailing in the country. Thus, it has to be modified to suit in Indian context.

3 **India Goes Online**

**Corona Kavach**
It is a location-based app introduced by MeitY (Ministry of Electronics and Information Technology). In order to track the user, it traces location of smart phone for checking if they are coming in contact with positive case of covid-19 (Fig. 4) [9].

**Google SOS alert in search in India**
This feature shows a detailed dashboard where people can search for corona related news. This dashboard is customized according to the countries from where people are using it. Indian users can easily seek information along with the link of Ministry of Health and Family Welfare [10].

**Flipkart, Zomato and others are operating in India**
Many e-commerce platforms like Amazon, Grofers, Flipkart, Zomato, Swiggy, etc. were operating during corona outbreak for delivering essential items.
Reliance Jio, Airtel and BSNL change caller tunes to make people aware
Many telecommunication companies changes their caller tune to an alerting message about the preventing measures for corona outbreak.

Arogya Setu
It is an app which is launched by Indian government for connecting health services with the people of India to fight against corona virus. This app provides information to the users regarding risk and advisories of covid-19.

3.1 Suggestions for Policymakers

Technology has a pivotal role to play in find solution to various the economic and social issues arising due to Covid-19. Following are certain suggestions for policymakers:

1. For digital transformation of the businesses (small and start-ups), some physical support like digital marketing, logistics, etc., could be provided.
2. Government can encourage new technological innovation which helps customers and businesses to cope up with the detachment and separation [11].
3. For the vulnerable sections of the society, a technical market place to provide grocery delivery can be used.
4. Government transactions now can be replaced with the digital alternatives to reduce physical transactions, which have more risk to lives.
5. To start or extend digital authentication, to make it easier for people, to get support, and allow government teams to quickly build services. A wider range of digital ids will also help in the economic revival.
6. Encourage enterprises and technology to develop real-time, data-driven observatories of economic revival. Responding to crises can get data as quickly as possible, and technology can sort out new insights from novel sources.

7. During tough situation, services like telemedicine or online consultations with the doctors, is the right substitute for several cases and will also make it easier for some patients.

8. E-learning system will reduce hardship of teachers and help in progress of learners. It can be used as a foundation for future.

9. Prioritize new online legislation and require social media platforms to strengthen its protection from vulnerable users; the digital platform is now a vital social infrastructure, and the crisis has added huge responsibility to the people who manage the Internet. Ensuring proper management will protect users and the company itself [12].

10. The platform needs to reduce and eliminate harmful content available while adding and maintaining the important content to enhance the role of Internet.

11. Support for those who use the Internet more or for the first time as a result of the covid. This should include clear guidelines to help people to identify, avoid and report fraud, and cybercrime [13].

12. Purchase and distribution of good quality equipments at less cost and subsidized software packages for increasing its use.

4 Conclusion

The theoretical framework of the Digital India project is a state-of-the-art network. The extent to which the strategy can achieve its intended objectives depends to a great extent on various factors outside the digital technology area and its management.

The success of this system is depends on commitment of the government, and it also support of the people in order to reduce the constraints of historical and cultural identity and the constraints of wisdom threatened by adapting change, which will free them from difficulties in the present times.
There are many obstacles to successfully implementing the “Digital India Plan,” but in the current scenario, there is no second idea. Thus, we highly hope to accelerate the launch of the Digital India program. In addition to providing opportunities for education, health care and financial services, India can also improve the social and economic conditions of its people by carrying out non-agricultural economic activities.

However, it must be pointed out that ICT alone cannot directly lead to the country’s overall development. Inclusive growth and development will be achieved by supporting and enhancing factors such as knowledge, improved economic conditions, infrastructure, and overall business environment.

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