

**COVID - 19: A CRISIS WITH OPPORTUNITIES - SPECIAL FOCUS ON INFORMATION  
AND COMMUNICATION SECTORS**

**Lakshmy Priya M G** Assistant Professor, Naipunnya Institute of Management and Information  
Technology, Koratty, Thrissur, Kerala

**Abstract**

A crisis is defined as a significant threat to operations that can have negative consequences if it's not handled properly. Crises are negative changes in the human or environmental affairs, especially when they occur abruptly, with little or no warning. India faces multiple major challenges on the COVID-19 front. Year 2020 has been a challenging year for businesses in a variety of industries. Smaller, independent companies were hit especially hard, with the COVID-19 pandemic causing in statewide shutdowns across the country. Information and Communications Technology (ICT) has emerged as one of the key players in fighting the COVID-19 situation in India. The unprecedented crisis due to COVID-19 has accelerated the process of digitalization of many services and businesses including healthcare services, education, online delivery of goods and services, online payments, and work from home. The secondary data were collected and used for the study. The data collected from various websites, reports and related published articles are used to know the various crisis and opportunities of the information and communication sectors during covid 19 and to know the level of growth rate of video conferencing services during covid 19 pandemic. During the pandemic crisis the ICT industry might be one of the few still standing and, in many aspects, stronger than before. covid pandemic was an opportunity for the companies to popularize the video conferencing apps. The market players are offering their services for free or at minimal cost to the enterprises, educational institutions and government organizations.

**Keywords:** Covid -19, Crisis, opportunities, ICT, Trends and Growth, Video conferencing services

**Introduction**

A crisis is any event or period that will lead, or may lead, to an unstable and dangerous situation affecting an individual, group, or all of society. **A crisis is defined as a significant threat** to operations that can have negative consequences if it's not handled properly. Crises are negative changes in the human or environmental affairs, especially when they occur abruptly, with little or no warning. India faces multiple major challenges on the COVID-19 front. The COVID-19-induced 21-day lockdown has put more strain on an economy that was already experiencing declining growth and increased joblessness. The coronavirus COVID-19 pandemic is the defining global health crisis. During covid 19 pandemic the glob witnessed various tragic crisis such as health crisis, economic crisis, financial crisis, communication crisis, technology crisis, lively hood crisis etc. The effects of COVID-19 are having a significant impact on the technology sector, affecting raw materials supply, disrupting the electronics value chain, and causing an inflationary risk on products. More positively, the disruption has caused an acceleration of remote working, and a rapid focus on evaluating and de-risking the end-to-end value chain including - Hardware/software, IT services, Semiconductors Network equipment etc. The development of communication and information technology helps the glob to survive from different crisis due to covid pandemic. Technology will not be able to avoid the onset of a pandemic; nevertheless, it can assist in managing a crisis more effectively. COVID-19 has impacted our lives badly, both personal and professional. During this time of sheer uncertainty and constant fear, peoples' willingness to adopt technology has been became the lifeline.

**Statement of the problem**

Year 2020 has been a challenging year for businesses in a variety of industries. Smaller, independent companies were hit especially hard, with the COVID-19 pandemic causing in statewide shutdowns across the country. As businesses began to reopen slowly, many still struggled to adapt to the required changes to daily operations that would help ensure employee and customer safety. However, some types of business have actually been quite successful during these unprecedented times. The development of communication and information technology helps the glob to survive

from different crisis due to covid pandemic. Technology will not be able to avoid the onset of a pandemic; nevertheless, it can assist in managing a crisis more effectively. COVID-19 has impacted our lives badly, both personal and professional. During this time of sheer uncertainty and constant fear, peoples' willingness to adopt technology has been became the lifeline. Information and Communications Technology (ICT) has emerged as one of the key players in fighting the COVID-19 situation in India. The unprecedented crisis due to COVID-19 has accelerated the process of digitalization of many services and businesses including healthcare services, education, online delivery of goods and services, online payments, and work from home. Digital technologies are playing a key role in keeping our societies functional in this time of lockdowns and quarantines. The COVID-19 pandemic has compelled everyone to take a digital approach to being an employee, friend, or family member. The present study is aims to know the various crisis and opportunities of the information and communication sectors during covid 19 and to know the level of growth rate of video conferencing services during covid 19. So conducting a study based on this context deserves much significance.

### **Objectives of the study**

- To know the various crisis faced by the information and communication sectors during covid 19.
- To understand the opportunities acquired by the information and communication sectors during covid 19.
- To know the trends and level of growth rate of video conferencing services during covid 19.

### **Review of Literature**

**Luna Janseen (2020)** School doors around the world have been closed for several months to contain the spread of the COVID-19 pandemic. During this crisis, we have seen an incredible amount of large-scale efforts to use technology in support of remote learning. At the same time, this crisis has exposed the challenges for technology in education, including many inequities starting at the lack of access to computers and the internet.

**Hisham Abdusaada and Abeer Elshater (2020)** in the article “COVID-19 Challenge, Information Technologies, and Smart Cities: Considerations for Well-Being” explains Coronavirus (COVID-19) raises an essential debate about implementing the ideas and insights of smart technology in the fields of urban planning and design. This commentary sheds light on considerations and challenges in the area of knowledge in these fields as consequences of the recent pandemic. The concluded remarks cover issues with a specific focus on accelerating the digital transformation in education and a typomorphological analysis that ends with revisiting the norms and standards of social distancing. Besides, this commentary recommends research directions to follow after the pandemic recedes, tackling the multidisciplinary between fields of specialisation.

**Abhishek Ranjan (2020)** “ICT in schools: A ray of hope in Covid-19 darkness” During the Covid-19 pandemic, when face-to-face interaction and physical classrooms became out of reach, government school teacher Ritika Tomar from Sonbhadra, Uttar Pradesh, came up with a solution in the form of using ICT (Information and Communication Technology) tools for teaching and learning. The syllabus, teacher, as well as the learner remained the same. The only thing that got changed in her approach was the method of teaching and learning. She divided her students in a group of two — those who had access to smartphones and those who had simple cell phones. She made a WhatsApp group and started sending messages, YouTube links, and videos regarding the content of learning materials.

**Zahra Mastaneh and Ali Mouseli (2020).** This study aims to investigate the technologies that have been applied to solve the COVID-19 crisis. Besides, the approaches used by these technologies are surveyed. Methods: In this narrative review, international databases were searched for papers investigating the role of various technologies in the management of COVID-19 from December 2019 to 20 April 2020. Two major categories of technology were found to be applied to combat COVID-19. The first category involves technologies that have the potential to support the diagnostic process and case-finding including non-contact thermometers, artificial intelligence, drones, self-assessment applications, and virus genome sequencing. The second category includes technologies with

therapeutic and logistic applications searching for medicines or vaccines, and provide support services such as pharmaceutical tech, robots, telemedicine, Geographic Information System (GIS), Internet of Things, and big data and blockchain. Conclusion: It can be concluded that technologies with the ability to reduce human contacts through teleservices as well as those that quickly enable decision-making via in-depth analysis received more attention among the health authorities and organizations.

### **Research Methodology**

The present study is both descriptive and explanatory in nature and secondary were collected and used for the study. The data collected from various websites, reports and related published articles are used to know the various crisis and opportunities of the information and communication sectors during covid 19 and to know the level of growth rate of video conferencing services during covid 19 pandemic.

### **Results and Discussions**

#### **Analysis on Crisis faced by ICT sector during Covid - 19**

The ICT sector has already suffered considerable losses owing to COVID-19 in the first quarter of 2020. However, the industry is determined to make a solid comeback and the average industry growth will be in the range of 7-8% by end of 2020. (Meticulous Research 2020, <https://www.globenewswire.com>). COVID-19 has impacted a large number of countries and is turning out to be even worse than the critical economic, strategic, and political clashes happening around the world. The outbreak has and still is impacting all industries, including the Information & Communication Technology (ICT) sector.

According to International Data Corporation (IDC), growth in global IT spending is expected to reduce by 3-4% by the end of 2020, considering the 'pessimistic scenario,' due to the COVID-19 pandemic. While the major impact is expected to be on hardware business, including devices, the software, and services businesses are also expected to slow down as the spread of Coronavirus goes beyond the boundaries of Asia. However, the adoption of collaborative applications and cloud service sees a positive impact followed by technologies such as security, big data, AI, IoT, where the impact seems relatively small.

Even though businesses are grappling with current losses, in the long run, the ICT industry might be one of the few still standing and, in many aspects, stronger than before. But it will not be plain sailing for all businesses in the market. The strain on infrastructure networks, contractions in consumer spending, disruptions to supply chain, reduced availability of components, and the all-around financial impact of the Coronavirus are taking its toll in the short-term.

#### **Impact on different ICT areas: Growth engines and challenges**

- **Revenue and Business Continuity Planning:** Some of the massive shift to remote work due to the pandemic might be temporary. However, much of it will persist as more businesses provision for long-term, flexible working arrangements and on-demand staffing models will become more common.
- **Network and operational analytics:** AI/ML-based analytics can provide automated anomaly detection at scale. As traffic increases and network chokes-up, understanding spikes and breakdowns in a scaled, automated manner will be critical. AI and analytics help track these anomalies much more efficiently and accurately than manually looking at the system issues.
- **Digitalization and Automation:** For many technology firms, data-driven automation will be a strategic focus beyond Robotic Process Automation (RPA). Businesses will need to leverage automation across multiple areas, including customers, employees, and network. Marrying AI and analytics to digital agenda will be vital to building resilience. AI can be an enabler of digital transformation covering multiple use-cases such as digital relationship management, adoption of digital channels, digital identity verification, digital onboarding, and digital fraud prevention. With more traffic being directed to digital channels, AI-based automated solutions can help quickly detect

friction points and its root causes in customer journeys and hence, timely intervention/ resolution to drive more sales and better customer experience.

**Some of the major areas of impact on the ICT industries include:**

- **Slow Growth**  
The juggernaut growth of the ICT sector witnessed a sudden shock in Q1 2020, as majority of ICT projects are losing their momentum owing to the delays or even cancellations in some conditions. Major segment of the ICT sector, including hardware and IT services experienced a nearly 4% dip in revenues in the first quarter of 2020, and are not expected to recover over the next two to three quarters. Companies are forced to meet their existing deadlines with limited workforce, and hence are hardly concentrating on setting new targets and projects. This, in turn, has slowed down the growth of the sector and stunted the previously predicted optimistic industry growth.
- **Cancellation of ICT events**  
With the onset of Coronavirus disease (COVID-19) crisis in January 2020, majority of international ICT events, gatherings, conferences were canceled. Major international events for the ICT industry, such as Mobile World Conference 2020, Game Developers Conference 2020, MTN GlobalConnect and other prominent ICT gatherings & conferences faced the fate of cancellation. Also, tech leaders including Google, Microsoft, Adobe, Facebook, NVidia, Cisco, and Salesforce among others were also forced to call off their yearly events. Such events & gatherings offer vital business opportunities to ICT companies to showcase their products & solutions. Cancellation of such events has certainly affected the forthcoming opportunities for market players, making revival of the industry more difficult.
- **Disruption of Supply Chains**  
With a jaw-dropping decline in China's manufacturing capacity, the global supply chain for ICT sector is disrupted to a much greater extent. Being a manufacturing hub, China was a key manufacturing location of some of the global ICT leaders including IBM, Intel, Apple, and Qualcomm among others. Although China is striving hard to regain its manufacturing capacity, it is difficult to predict the time it will take for complete revival of the operations. This has certainly obstructed the supply chains of the ICT industry, temporarily. Companies like Apple, who have China as the key manufacturing hubs and also one of the major markets for their products, are severely hit from both sides, indicating severe revenue implications for the companies throughout 2020.

**Covid 19 – An opportunity for popularizing online apps**

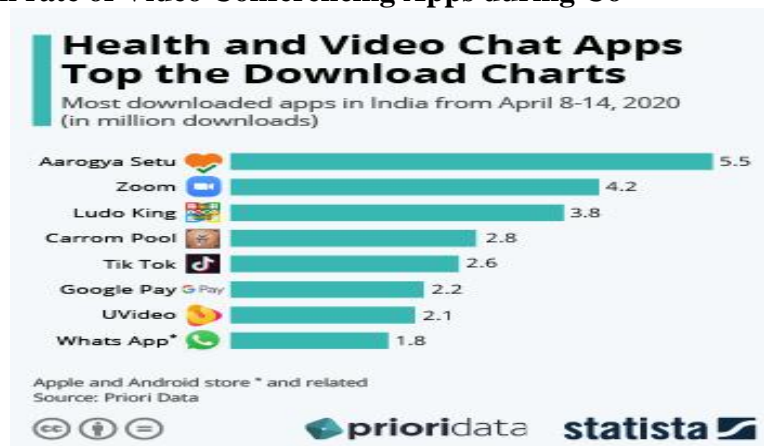
There are several factors that have been driving the market growth since the last decade, such as the increasing focus of companies towards the expansion of their businesses in the global market and in the management of the workforce in various subsidiaries. However, the outbreak of the coronavirus has impacted the video conferencing market positively. The ban on travel during lock down which in turn, has increased the adoption of video conferencing software. All the institutions are adopting innovative video conference Apps widely. The government, on the other hand, is using video conferencing software to connect with doctors and administrative people of their region and also of other countries." Active companies in the markets this week include Vuzix® Corporation (NASDAQ: VUZI), Zoom Video Communications, Inc. (NASDAQ: ZM), Cisco Systems, Inc. (NASDAQ: CSCO), Twilio Inc. (NYSE: TWLO), salesforce.com, Inc. (NYSE: CRM).

- **Hike Sticker Chat**  
Hike Sticker Chat has also seen an increase in user engagement during this lockdown period. It in a release has stated that users are now spending an additional 33 percent of time on the app daily. This amounts to an average time spent of over 44 minutes per user. The company has said that this is because, "hanging out online has emerged as a way for users to continue connecting with their close ones [while performing social distancing]."The company's virtual assistant inside of the app, called 'Natasha', has also increase of 22 percent in usage.
- **Zoom**

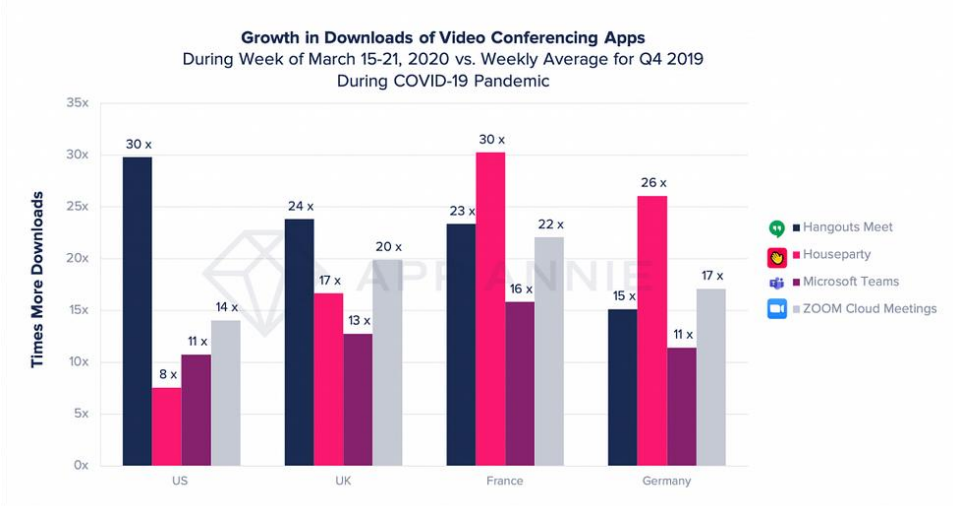
One of the biggest names to benefit from the coronavirus pandemic is Zoom. Zoom has gone from 10 million daily meetings and sessions in December 2019 to 200 million daily meetings in March, which is a massive increase in the usage. Zoom is also the top video conferencing app in India right now on the Google Play Store, which shows just how popular the app and service has become during the lockdown period. According to Apologia, during the initial stages of the lockdown Zoom's monthly active users were up by 186 per cent and its downloads by 300 per cent.

- **Microsoft Teams**  
With coronavirus pandemic and work from home becoming a norm in many parts of the world's Microsoft Teams is another big beneficiary. The company had recently revealed that Teams now has over 44 million active users. Teams is geared towards enterprises and is Microsoft's competitor to Slack.
- **HouseParty**  
HouseParty was a relatively unknown app before this coronavirus pandemic. After the lockdown it has seen a surge in popularity as well. According to Apptopia, the app saw a huge rise from 24,795 downloads per day on 15 February to 651,694 downloads on 25 March. However, HouseParty also faced some privacy issues with reports of the app being hacked. The company denied the charges.
- **Google Meet**  
As families and educators continue to face the new realities of juggling work, school, and play at home, Google is offering premium Meet video conferencing features free for schools through September 30. Google Meet has crossed 50 million downloads on Play Store, a massive 900 per cent increase in user base in a span of few weeks as people work from home in the Covid-19 pandemic. Meet is currently hosting 3 billion minutes of video meetings and adding roughly 3 million new users every day.  
To help provide kids access to online learning and educational tools, Google said that its 'G Suite for Education' tools can be used from any device and help more than 120 million teachers and students around the world work and learn together. The tech giant has also launched a new 'Teach from Home' hub for teachers with information and resources so that they can keep teaching, even as many schools closed due to Covid-19.

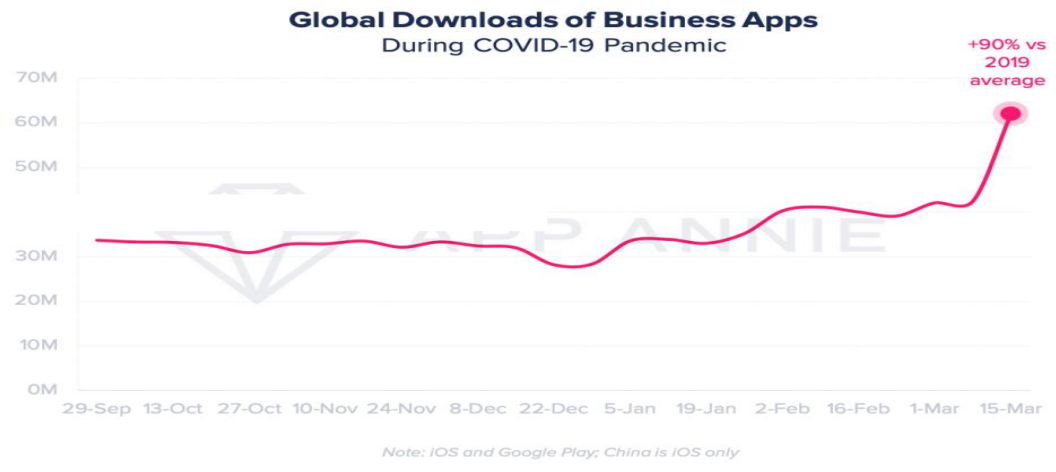
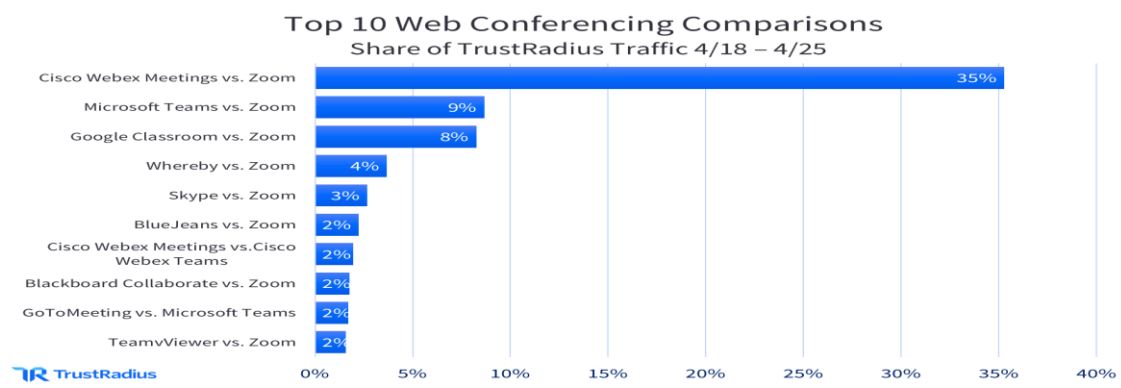
### Trends and Growth rate of Video Conferencing Apps during Co



### Covid 19 pandemic



(Source: Businesswire, 2020, <https://www.businesswire.com>)



The global video conferencing industry is expected to gain traction during the coronavirus outbreak. As the enterprises and government organizations are considering video conferencing as an ultimate solution to connect with remote workers, customers, and employees; and, at the same time, it prevents direct contact with the people. The market players are offering their services for free or at minimal cost to the enterprises and government organizations. For instance, in March 2020, Zoom Video Communications, Inc., a California-based remote conferencing services company, has announced the free access to video conferencing tools for K-12 schools during COVID-19 crisis. Moreover, the company's stock prices have increased with the last few months as the investors are as certain that the virus could possibly boost the demand for Zoom's video conferencing products.(Businesswire, 2020, <https://www.businesswire.com>).

### **Findings**

- The ICT sector has already suffered considerable losses owing to COVID-19 in the first quarter of 2020. However, the industry is determined to make a solid comeback and the average industry growth will be in the range of 7-8% by end of 2020.
- The secondary data shows that though businesses are grappling with current losses, in the long run, the ICT industry might be one of the few still standing and, in many aspects, stronger than before. But it will not be plain sailing for all businesses in the market.
- The outbreak of the coronavirus has impacted the video conferencing market positively. The ban on travel during lock down which in turn, has increased the adoption of video conferencing software.
- The global video conferencing industry is expected to gain traction during the coronavirus outbreak.

### **Conclusion**

Digital technologies are playing a key role in keeping our societies functional in this time of lockdowns and quarantines. The COVID-19 pandemic has compelled everyone to take a digital approach to being an employee, friend, or family member. The ICT sector has already suffered considerable losses owing to COVID-19 in the first quarter of 2020. However, the industry is determined to make a solid comeback and the average industry growth will be in the range of 7-8% by end of 2020. During the pandemic crisis the ICT industry might be one of the few still standing and, in many aspects, stronger than before. Covid – 19 pandemic was an opportunity for the companies to popularize the video conferencing apps and services. The market players are offering their services for free or at minimal cost to the enterprises, educational institutions and government organizations.

### **References**

- Abdusaada, H., & Elshater, A. (2020). COVID-19 Challenge, Information Technologies, and Smart Cities: Considerations for Well-Being. *Springer* , 417-424, <https://link.springer.com>. Retrieved from [springer.com](https://link.springer.com).
- *ECONOMIC IMPACT OF COVID-19 ON DIGITAL INFRASTRUCTURE*. Report of an Economic Experts Roundtable organized by ITU. (2020).
- Francais, & Espanol. (2020, July 1). *Facing challenges in the ICT, electrical and electronics sector*. Retrieved from [industrialunion.org](http://www.industrialunion.org): <http://www.industrialunion.org>
- *How the Pandemic Has Become a Windfall for Video Conferencing Platforms*. <https://www.prnewswire.com>: CISION NEWswire. (2020).
- *ICT and COVID-19*. New York : COVID-19 Research and Projects at CSD. (2020).
- Information and Communication Technology Industry Amid Global COVID-19 Crisis. (2020). Retrieved from [globoenewswire.com](https://www.globenewswire.com): <https://www.globenewswire.com/>
- Janseen, L. (2020). *How COVID-19 exposed challenges for technology in education*. Retrieved from [gstic.org](https://www.gstic.org): <https://www.gstic.org>
- Mastaneh, Z., & Mouseli, A. (2020). Technology and its Solutions in the Era of COVID-19 Crisis: A Review of . *Evidence Based Health Policy, Management & Economics*, ISSN: 2538-5070 , 138-149.
- Oberoi, P., & Singh, N. (2020, July 2020). *COVID-19: Consequences and opportunities for the ICT sector*. Retrieved from [fractal.ai](https://fractal.ai): <https://fractal.ai>
- Ranjan, A. (2020). *ICT in schools: A ray of hope in Covid-19 darkness*. The Daily Guardian.