

## Sustainable Evolution of Business during Covid-19 Pandemic—Innovation a New Normal

Mark Cherukuri<sup>1</sup>, Praneet Amul Akash Cherukuri<sup>2</sup>

<sup>1</sup>University College of Law, Osmania University, Hyderabad, India.

<sup>1</sup>Dept. Of Computer Science, CMR Institute of Technology, Hyderabad, India.

<sup>1</sup>markson.c9@gmail.com, <sup>2</sup>chamul91@gmail.com

**Abstract**—The timing of COVID 19 and the effects due to the pandemic were never expected by any economic researchers nor were any organization ready to face such a depressing situation. Nevertheless, during these adverse effects, many businesses were able to manage their organizations, keep up with their products, and still make profits. Also, the pandemic became a platform for many long-existing technologies and new technology inventions that were backstage for many years to come into the limelight. While the pandemic showed great losses to organizations and businesses worldwide, the technology, Healthcare, and medical devices sectors turned out to be one of the most profit-making companies. In this paper, we tried to understand the business, managerial and technological decisions that played a key role in bringing these technologies into the limelight during these adverse situations and outline some of the most popular businesses amongst them.

**Index Terms**—Business, Technology, Decision Making, COVID19, Managerial Decisions, Policy Making, Sustainable Development

### I. INTRODUCTION

AS COVID-19 hit the world during December 2019 and it has been declared as Pandemic by the WHO alerting all the Nations to take preventive steps to stop the spread of the deadly virus and to eliminate it by implementing social distancing and high-end surveillance. The covid-19 pandemic has caused a shock to society and economies across the world were experiencing a great amount of distress. As an immediate step to control Covid-19, Lockdowns were recommended and implemented by all nations. Although the occurrence of a pandemic caused by a new SARS virus is not new to the researchers, the only effective option to control was social distancing as the spread of COVID-19 has a deep impact on the economy of all the nations. [1]

However, the COVID-19 pandemic has put a great amount of burden on the health infrastructure across the globe, and the rapidly spreading virus has caused an economic imbalance by making economic activity completely disrupted. Therefore the present “Sustainable Evolution of Business during Pandemic – Innovation a new Normal” paper ensures that it touches upon the new changes that have caused severe damage and it seeks to point the attention to unique measures that have greatly impacted the businesses and their growth: innovative startups businesses. The policy activities taken to secure economies during the COVID-19

appear to target set up companies, existing industry areas, and economies in that capacity, and in doing so those measures expect to ensure business and the continuation of essential financial movement. As the lockdown measure as a quick reaction to the rapidly spreading COVID-19 with an unimaginable threat to the existence of inventive new companies and organizations across the globe. There was a gigantic amount of difficulties that were brought in by the pandemic which came into existence inhibiting the normal conduct of business and people. We have featured a portion of the significant changes that occurred in the manners organizations worked and the adjustment in the utilization of buyers, we attempted to know how business visionaries are managing the progressions and acclimating to impacts of Covid-19, the new typical conditions, and what they are doing viably to secure their organizations. Importantly we have conceived a portion of the approach changes that got the business people to battle the pandemic and come out decisively, we have referenced a portion of the measures that could be actualized over the globe by policymakers to help the business visionaries who endure because of the pandemic. We have addressed a portion of the developments that changed the essence of the world and to more readily acclimate to the new typical conditions and a make hover of immense business.

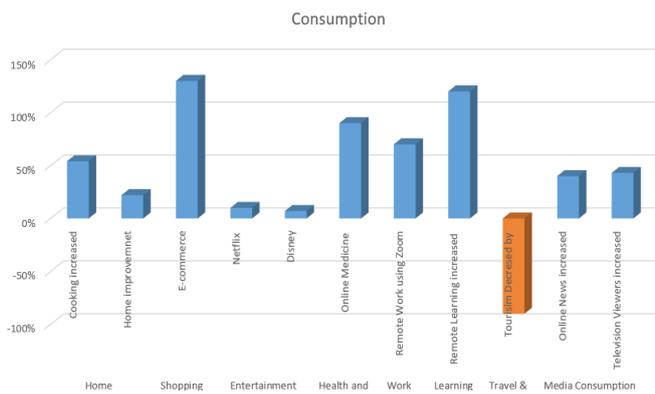
### II. CHANGES THAT IMPACTED THE BUSINESSES ACROSS THE GLOBE DUE TO COVID-19 LOCKDOWNS

#### A. The research on the changes that impacted the businesses due to COVID-19

The businesses have been completely shut for about a month all over the globe and the changes this has brought in was a severe economic crisis there were several areas this has impacted and some of them are shown in Fig. 1.[2]

The food and Beverages Industry: Has suffered huge losses as the more number of people started consuming home cook food and increase home cooking by about 54%.

Home furnishing and improvement: Has seen a great increase as people started working from and spent more time at home allowing them to concentrate on Home improvement, which rose by almost 22%.



**Fig.3.** Bar Chart Representation of Increase & Decrease in revenue by various sectors during COVID-19

**E-commerce business:** There has been a see-through change in the number of transactions taking place as people perceived that Corona was even spreading through currency notes and another spending was mostly done online this change has seen a growth of almost 130%.

**Netflix, Disney & Entertainment industry:** There has been a high impact on the entertainment industry as this has suffered a lot as people were not moving out to malls and movies theatres across cities causing huge revenue loss, on the contrary, the online OTT applications like Netflix and Disney have increased their subscriber base by 10 million and 3 million respectively in just 3 Months period. [3]

**Health and Wellbeing Industry:** The pharmacy industry as such was one of the biggest game-changer in this tough times as the researchers were struggling hard to find medicine and vaccine for COVID -19 and supplements for the immunity against the disease, the health industry has seen a growth in online medicine sales by about 80%.

**Working employees:** Most of the employees were given the work from due to lockdown and this has become the new normal, employees were using the remote applications which allowed them to join the video conferences with team members and clients, there has been a 190mn users of Zoom application in just 3 months. [4]

**Learning:** As the schools and colleges were completely shut down this has severely impacted the learning requirements of the students and the examinations were either removed or postponed to a later date and this situation has given rise to online learning and classes for schools and colleges across the globe and this has increased by about 120%.

**Travel and mobility:** As traveling people have spread the COVID -19 among nations there has been a complete shut-down of airlines internationally and domestic services were stopped and this has completely disrupted and destroyed the travel tourism industry with about 90% decrease. [5]

**Media consumption:** The news was not given through paper as the spread was rampant and there was a great need to

know what was happening across the globe as most of the people remind indoors there has been a great increase in on-line News by about 40% and television news by about 43%.

There is a great impact on the global economy is estimated at over 82 trillion dollars over 5 years and COVID-19 will hit hard the developing countries. 2 out of every 5 Jobs lost may not come back, there will a reduced Liquidity in the market.

### III. THE POLICY REFORMS INTRODUCED TO TACKLE THE PANDEMIC AND LOCKDOWNS

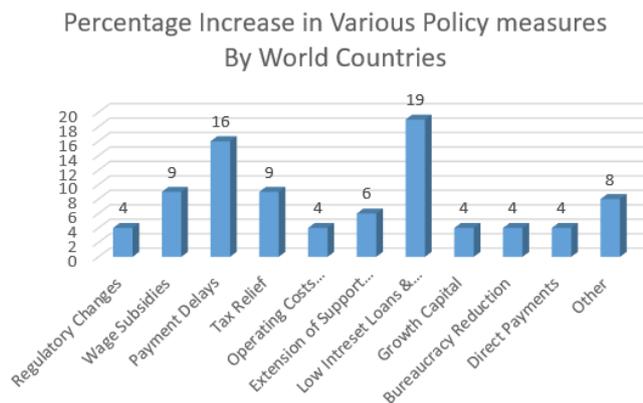
#### A. Economic Policy Reforms—Under Atmanirbhar Bharat During Covid 19

The Finance Ministry under foreign trade policy has been extended by one year. Under corporate Affairs companies' Fresh Start scheme delayed filings under the Companies Act, 2013, also there were many relaxations provided to companies under LLP. The environmental clearances were extended further till June 20 for the companies. The RBI has played a great role by easing the financial burden on the banks and other financial institutions, MSMEs. The Pharma area was upheld by the legislature by giving the natural clearances speedily for the mass medication producers and advanced the mass medication parks. Likewise with the help of the administration of more than 280 units in SEZs, producing fundamental things like drugs and medical clinic gadgets has come into activity. The import of ventilators, covers, PPEs, test packs, were excluded from essential traditions obligation and wellbeing cess (till September 2020). [14]

#### B. International Policy Responses To The Covid-19 Pandemic

The spread approach measures being called for to be set up or executed to help SMEs and new companies in 40 nations. The coded measures were those measures called for by partners, for example, business visionaries, researchers, or lobbyists were about 40.98% of all coded measures and strategy estimates reported by government or national banks were about 59.02%. There was an immense reaction from all the countries over the globe with prompt reaction to the pandemic the most famous strategy measure reported or actualized by governments overall is to upgrade an association's money related capital by decreasing credit financing costs or improving advance accessibility [6]. The nations about 87% around the world have started a reaction to the worldwide pandemic. The US supposition pioneers advocate not dismissing reasonable improvement objectives of UNO's (The 17 point Sustainable Development Goals) and therefore propose money-related government help be appended to adherence to measures so that there are no deviations to the drawn-out objectives of atmosphere changes.

In this manner, if the countries and their governments prevail with regards to giving prompt help to business visionaries under tension, will consistently keep up the drawn-



**Fig 2.** The number of countries where the identified policy measure was announced by the government.

out destinations of advancing wellbeing, value, natural assurance, and Sustainable Development.

#### IV. THE INNOVATIONS THAT CHANGED THE METRICS OF THE GLOBAL FIGHT AGAINST THE PANDEMIC

As comprehend that Human life is without a doubt the most important angle than the economy, and the flow research will consistently be alluded to as a mirror to this announcement and ought to never be misconstrued. The examination in India has made a change in perspective regarding the statures that is accomplished and the top among the Innovations that truly upheld the battle against the pandemic worldwide. [7]

##### A. Automatic Mask Machines

As there was an extreme deficiency of N-95 veils in India and to wipe out the import of unique programmed machines and their parts from China the designers from NIT and IIM Calicut, and a beginning up the firm from Bengaluru have strived and have begun producing these machines. "The expense is required to be 40% less expensive than the ones as of now there. A comparative activity has been taken up by a Rajkot based industry that built up a one-of-its-sort, completely programmed machine that produces N-95 veils in mass to fulfill the need flexibly as opposed to depending on imports. [8]

##### B. Ruhdaar: The Low-Cost Frugal Innovator

The Engineers at Design Innovation Center (DIC) of the Islamic University of Science and Technology, alongside a group of designing understudies from IIT Bombay, have made a model of an ease ventilator and named it 'Ruhdaar'. Clinical specialists at SKIMS are attempting to assess it, which is at present working effectively in the research center and will cost around Rs 15000 in particular. The Innovators at REVA University in Bengaluru have imagined a broiler measured, ease, and compact ventilator that can perform well. The chancellor of REVA University dispatched 'Jeeva Setu' ventilators with the occupant staff to help the clinical foundation of the nation. "It is relied upon to convey

500-600 ml of air for each breath and 15-18 breaths in a moment according to the COVID patients' necessities. [9]

##### C. Low-Cost Ppes: The Navy's Innovation

As one of the authorities in the Indian Navy has developed a simplicity PPE that helped the Indian Navy increase a patent in relationship with the National Research Development Corporation (NRDC), an endeavor under the Ministry of Science and Technology. It is made of an unprecedented surface with high 'breathability', which is sensible for ranking and moist conditions regular in India and suitable for the atmospheric conditions. The development has been affirmed by ICMR too. The huge scope assembling of this PPE is in progress.[10]

##### D. COVI-SAFE: Transporting Patients

The authorities in Nagpur created COVI-SAFE to ensure the secured vehicle of Covid-19 patients. The case fits well on clinical beds and is impervious. Emergency workplaces like oxygen and ventilators can be successfully presented on the carton. Even more fundamentally, when the COVID calm breathes in, the air that rises out of the holder is isolated. The idea is to help keep masters and clinical consideration staff from getting polluted and further spread of the infection.[11]

##### E. Anti-Epidemic Robots

Along with Rwanda's Ministry of ICT and Innovation, UNDP Accelerator Lab sent five anti-epidemic robots to help bleeding-edge laborers battle the pandemic. The robots will uphold the location of COVID-19 cases including among returning residents, test patients, and offer different types of assistance in the emergency clinics. [12]

##### F. SystemOne

IiH pioneer, SystemOne, has such a stage, which has been tried by past flare-ups of TB, HIV, and Ebola. Established in Massachusetts in 2012, SystemOne has workplaces in Northampton, MA, and Johannesburg, South Africa. The organization centers around creating answers for infection reconnaissance and reaction. The organization's product, Aspect®, has been adjusted to investigate various irresistible infections including Zika, Ebola, HIV, Malaria, Hepatitis C, and more on a large group of demonstrative gadgets. The association has now adjusted the stage to test and track COVID-19 cases, giving ongoing dashboards to advise readiness, reaction, and following of results. Services of wellbeing would now be able to utilize the stage to screen the spread of the illness in their nations. [13]. India as well as the world is experiencing a lack of PPE, clinical gear, and medications to help battle this worldwide pandemic.

#### V. CONCLUSION

This exploration feature's that while new companies and private ventures are effectively utilizing the accessible assets from the legislatures as a quick measure to handle the pandemic, their development, and new advancements are

enormously affected. Thus, the officials and strategy changes ought to promptly take into account the significance and need of organizing free income to new companies and organizations by facilitating the guidelines that affect and cause obliges to the capital, however, have a dream for the drawn-out arrangements and measures fused and upheld by a more extensive enterprising environment to guarantee quickly and ideal recuperation with development focuses set up.

In conclusion, As the world is dealing with a deadly pandemic the timely response from the governments and the business to ensure that economy is restored and the timely innovations are brought into the market to face the challenges thrown by the virus and how we can overcome these situations going forward. As the world has been introduced to the new normal conditions, we all together should get ready to fight against any type of unknown enemy and should keep ourselves ready in the future with adequate financial and human resources in the R&D space. The Governments and the Global Organizations such as UNO and WHO should have the guidelines ready for such projects for the rest of the nations to implement and adapt given under any type of grave situation going forward so that the nation as a whole can come out with flying colors.

#### REFERENCES:

- [1] Kuckertz, A., Brändle, L., Gaudig, A., Hinderer, S., Reyes, C. A., Prochotta, A., . . . Berger, E. S. (2020). Startups in times of crisis – A rapid response to the COVID-19 pandemic. *Journal of Business Venturing Insights*, 13. doi:10.1016/j.jbvi.2020.e00169
- [2] Gavin, R., Harrison, L., Plotkin, C., Spillecke, D., & Stanley, J. (2020, May 07). The B2B digital inflection point: How sales have changed during COVID-19. Retrieved October 12, 2020, from <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/the-b2b-digital-inflection-point-how-sales-have-changed-during-covid-19>
- [3] Netflix gets 16 million new sign-ups thanks to lockdown. (2020, April 21). Retrieved October 12, 2020, from <https://www.bbc.com/news/business-52376022>
- [4] Prajanma Das Edex Live, & Live, E. (n.d.). How video conferencing app Zoom went from 10 mn to 300 mn users in one pandemic. Retrieved October 12, 2020, from <https://www.edexlive.com/news/2020/apr/25/how-video-conferencing-app-zoom-went-from-10-mn-to-300-mn-users-in-one-pandemic-11587.html>
- [5] Impact of the COVID-19 pandemic on tourism. (2020, October 08). Retrieved October 12, 2020, from [https://en.wikipedia.org/wiki/Impact\\_of\\_the\\_COVID-19\\_pandemic\\_on\\_tourism](https://en.wikipedia.org/wiki/Impact_of_the_COVID-19_pandemic_on_tourism)
- [6] Boin, Arjen. "The new world of crises and crisis management: Implications for policymaking and research." *Review of Policy research* 26.4 (2009): 367-377.
- [7] Paul Bishop & Daniel Shilcof (2017) The spatial dynamics of new firm births during an economic crisis: the case of Great Britain, 2004–2012, *Entrepreneurship & Regional Development*, 29:3-4, 215-237, DOI: 10.1080/08985626.2016.1257073
- [8] Innovation and technology in the age of Covid-19. (n.d.). Retrieved October 12, 2020, from <https://www.timesnownews.com/technology-science/article/innovation-and-technology-in-the-age-of-covid/592598>
- [9] Sofi. (2020, April 23). Covid-19: IUST Creates RUHDAAR, A Low-Cost Frugal Ventilator. Retrieved October 12, 2020, from <https://kashmirobsrver.net/2020/04/23/covid-19-iust-creates-ruhdaar-a-low-cost-frugal-ventilator/>
- [10] Pti, Here, P., -, R., -, S., & -, B. (2020, May 14). Defence Ministry patents low cost PPE developed by Navy in move toward mass production. Retrieved October 12, 2020, from <https://theprint.in/india/defence-ministry-patents-low-cost-ppe-developed-by-navy-in-move-toward-mass-production/421812/>
- [11] COVI-Safe: Transport system for COVID-19 patients made easy. (2020, April 03). Retrieved October 12, 2020, from <https://news.abplive.com/videos/news/india-covi-safe-transport-system-for-covid-19-patients-made-easy-1188141>
- [12] Raguenez, F. (2020, May 26). Anti-epidemic robots help Rwanda fight against COVID. Retrieved October 13, 2020, from <https://www.covidinnovations.com/home/25052020/anti-epidemic-robots-help-rwanda-fight-against-covid>
- [13] COVID-19. (n.d.). Retrieved October 13, 2020, from <https://www.innovationsinhealthcare.org/covid-19-innovations-in-healthcare-responds/>
- [14] "Companies Fresh Start Scheme [PDF]. (2020). New Delhi: MCA. [http://www.mca.gov.in/Ministry/pdf/Press\\_30032020.pdf](http://www.mca.gov.in/Ministry/pdf/Press_30032020.pdf)