WILL ACCELERATED TECHNOLOGY IMPREGNATION BECOME NEW NORMAL BEHAVIOR OF INDUSTRY DURING AND POST-PANDEMIC – A CRITICAL COMMENTARY

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ABSTRACT

World is sailing through the waves of Covid-19 now, crests and troughs becoming matter of political and social debates only, inconsequential though for business. "Business as usual" has been reincarnated through the pandemic into a "New Normal" where virus, humans and the economics co-exists, almost seamlessly. Perhaps, the biggest disruption created by "New Normal" is the Work-from-Home (WFH) becoming mainstream for almost all industry sectors and Gig-work trending in the developing economies as well. The pandemic and complete lockdowns for several months, flight of migrant workers, and restricted mobility, did precipitate the use of technology, making it the primary mode of contactless & faceless business conduct. Whilst one may see Zoom, TEAMS, etc. being the mainline communication forum & the most visible ambassadors of the technology usage, what ambushed in the background was the acceleration and push for technological solutions, for human resource management, production planning, digital manufacturing, supply chain management, warehousing, delivery & logistics, customer service, etc. The key enablers were Internet, I-o-T, cloud computing, data science, artificial intelligence, machine learning, big data, etc. each to varying degree. The most visible infestation could be seen at the lowest levels of economic activity, where even the vegetable vendor used technological interference to service their customers using WhatsApp and Wallet payments, something unimaginable till recently. By some extrapolation, If the technology impregnation can be accelerated at "ignorant" level of business conduct, the mighty Corporations have surely put their pre-pandemic strategies into tailspin, to be technologically up-stepped fast and adopt new behaviors for "New Normal".

Keywords: New Normal, Technology, Pandemic, Covid-19, Digital Transformation.

INTRODUCTION

Covid-19 Pandemic

In the chronicled and statistically recorded history of mankind, humanity has probably never seen a black swan event of the magnitude, what 2020 has witnessed. Covid-19 or Coronavirus has been a dreadful illness which engulfed the world at the beginning of 2020. The sweep of the virus has been pan-continents, affecting the countries rich or poor, developed or developing, east or west, hot or cold, alike. It's a shame that humanity, which boasted of the significant developments in the field of science, medicine, technology, diagnostics; was

completely helpless and lost in front of the virus. In no less than 3 months, Covid-19 took shape of global pandemic, with countries shutting down for weeks together, officially declared by WHO on 11th March,2020. Medical facilities were overwhelmed in the most developed economies of the world. And businesses came to complete stand-still, as human-to-human contact became a big No.

Everyone started doubting their friend, neighbors, relatives, even their own family, as potential carrier and mankind went into voluntary confinements, just to stop the spread of virus. After 10 months and still counting, there is no known cure of the virus or any deterrent or a vaccine, though there are rays-of-hope everywhere.

Normal vs. New-Normal

Life in 2020 transformed dramatically from how humanity lived until end of 2019. Normal until the pandemic was free-wheeling human to human contact, social gatherings meant fun, parting and eating-out was a norm, offices were a place where hundreds of people converged on a common place, meetings meant a huddle of multiple people in a closed room, vacation and travelling were liberating, customer service excelled more under personalized touch and close contacts.

Pandemic has defined *"New Normal"* for our lives. Masks are no longer a surgical protective gear but a part of clothing, perhaps newer accessory which will create newer fashion statements. It's a must wear. Social distancing is the new norm, with 6 ft distance being more pleasing than a mere elbowing space. Office more and more means a corner in the living room or bedroom, with connectivity to colleagues through organizational intranet. WFH is the new buss word. Meetings refer to audiovisual calls using communication devices and networking applications. Eating-out means take-away parcel or food delivery apps whilst venturing out of home is now an adventure for many. Contactless and touch less service is the new expectation.

"New Normal" has in fact started redefining the business world as well, with organizations already seeing office space as avoidable overhead, traveling allowances as unnecessary; to be potentially replaced by connectivity allowances; and business travel as risk to organization resources, better to be avoided. The vulnerability of the human resources has evoked a *"New Normal",* where the technology seems to be jumping its position from back-up mode to the frontline mode.

Technology Impregnation

Businesses and Industry have been feeding on technological developments since time immemorial. Post Industry 1.0, the pace of this consumption has been faster and insatiable. However, there always has been a lag between the developed and the developing world, as the size of the pocket determines the impregnation levels of the technology. Also, the technology intensification is a balancing act between the human skill, manpower costs and the technology investment. Covid-19 almost shattered this fine balance in one go. Businesses and Corporations have suddenly seen the deep disruption a virus can cause on human capital, whilst the technological investment has remained virtually un-impacted. Indeed, the most prepared organizations with technological readiness, have found resilience and ease to bounce back, as the unlock started to take place. With the new social distancing norms, humans vary of each other's touch, certainly technological impregnation is bound to grow and intensify.

LITERATURE REVIEW

The authors of the paper have made a deep study of the how industry is changing and continue to prioritize its investments in technology, in its endeavor to be adapting and nimble in "*New Normal*" situation thrown by Covid-19 pandemic.

In an editorial piece carried by The Times of India October 9, 2020 titled "*Why We Must 'Uberise' Faster*", Jagannathan (2020) hypothesizes that Covid-19 has been instrumental in bring the fringe trend of gig works in India, into the mainstream, as the technology has started mediating in the world. He further goes on the expand that technology impregnation will create disintermediation, as well as replace the middle skill, middle income work. However, the writer also fancies that changes driven by the technology will result in massive horizontal growth in the dependent entrepreneurship and blue collared services. He views that Covid-19 has been a catalyst in accelerating the trends in matter of months, which otherwise would have taken years - a fact undeinable (Jagannathan, 2020).

Gartner in its 2021 Board of Director Survey conducted online during May-June 2020, found that 67% of the boards expect that whilst the functions like Marketing and HR are going to face the budgetary cuts, the spending in technology will see an increase, as a result of the Covid-19 pandemic. It's almost like investing for the futures, despite the pandemic hitting the overall earnings of the corporations in year 2020 (Gartner Press Release, 2020). The following Figure 1 depicts the changes predicted by the board directors:

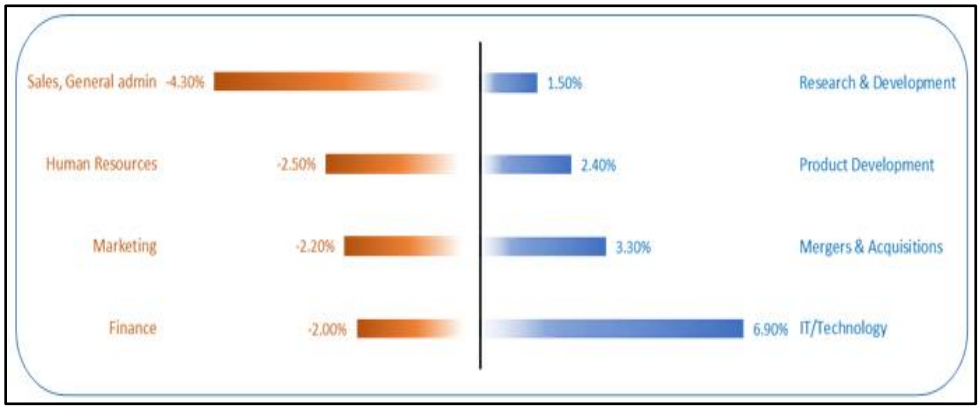

FIGURE 1
AVERAGE BUDGETARY CHANGES IN 2020 AS A RESULT OF COVID-19 IMPACT

In their take of technology intensification during and post pandemic in medical industry, Javaid et al. (2020) in their research paper titled, *"Industry 4.0 technologies and their applications in fighting COVID-19 pandemic"* have opined that even in the medical industry ten different technologies of Industry 4.0 will be effective in not only in controlling and healing the Covid-19 patients by tracking the potential infected patients and assessing their chance of recovery, but also generate a lot of creative solutions and ideas for the future global emergencies and pandemics. Technology will aid the innovation, and both will collaborate successfully. Indeed Industry 4.0 technologies will enable the remote medical aid and treatment on a mass scale, enabling to manage future healthcare challenges.

In a Mckinsey article titled *"From surviving to thriving: Reimagining the post-COVID-19 return"*, Sneader & Sternfels (2020) observed that to thrive in the '*New Normal*', business

leaders will have to evolve five key qualities: Return, Resolve, Re-imagination, Reform and Resilience; though not necessarily in the same order, as industry segment would influence what should come first. The business might have to tweaked to evolve and the key strategic focus areas recommended are: Revenue recovery, Operational rebuild, Organizational rethink and Accelerated adoption of Digital technologies. Authors opine that technology will be key player in the customer service in the post pandemic world and investing in digitally enabled ecosystems will be critical for accelerating growth and adapting to the *"New Normal"*. They also opine that post pandemic will witness the decommissioning of legacy infrastructure, to be replaced with accelerated automation, AI and cloud technologies. They sum it up with a quote of a retail CEO, *"Every business is now a technology business, and what matters most is a deep understanding of the customer, which is enabled by technology,"* Sneader & Sternfels (2020).

In another take on the subject of *"New Normal"* in the post Covid-19 industry with specific reference to Airlines industry, Serrano & Kazda (2020) in their research paper titled *"The future of airports post COVID-19",* have critically analyzed how technology will play a key role in the financial viability of airport infrastructure. Travel, in general, and aviation industry, in particular, has been severely impacted by Covid-19 virus. It will take very long before mankind gets back to its old trends of traveling and vacations. Digital tools are enabling the contactless business, dealing additional blow to the air travel. Authors believe that future of airport readiness will have to be driven by technologies which minimize virus spread, improve customer experience through contactless services and enable reduction of the operational costs. Authors do recommend the use of various technological initiatives to maintain the financial viability of the huge infrastructure including cargo digitization, building information modeling and smart maintenance & operations management technologies. 12

Accenture, in its tech-vision 2020 report have published an analytical view of the driving value and values during Covid-19. In the report titled *"COVID-19: Post-Coronavirus technology trends",* its states that whilst pandemic has changed the human lives, impacted businesses across the spectrum and significantly altered the growth path of corporations, what has remained unimpacted is the pace of innovation, in fact it has been accelerated due to pandemic. Covid-19 has in several ways been a catalyst for innovation and disruptive corrections. Some of the key areas for the organizations to evolve technologically, as cited in the report, are a) technology driven agile customer engagement strategies, improving digital experiences in the new contactless compulsion of the mankind, b) investment in explainable AI technologies, exploring newer possibilities of true AI-human partnership to create flexible and responsive organizations, c) extrapolating the success of robot use-cases as frontline warriors during covid-19 crisis, into increased and accelerated automation investment. d) employing the smart technologies and IoT in the newer features of the products, enabling the safe-distancing and virus-safe engagements, e) covid-19 has accelerated the DARQ technologies beyond imagination and innovation timelines are speeding up as a resultant. Report also emphasizes that Covid-19 has surfaced a lot of technological trends, which were not urgent or relevant earlier. Indeed, several technological initiatives which required years to mature on the business roadmaps are now in consideration by organization for the quick integration (Accenture, 2020).

RESEARCH METHODOLOGY

This commentary is based on an Explanatory Research as this situation of "*New Normal*" is continuing to evolve. Our research is an endeavor to analyze and explain the subject in detailed manner. We have picked a general idea and are using this research to surface the

subjects which could trigger the further research in near future. The impact of Covid-19 is in continuum and exploding. The nature of technology impregnation remains in transient with digital transformations accelerated in industry during the onset of the pandemic itself. This subject matter has not been studied in-depth still. As the new normal is settling in, the industry is itself in analytical zone, depending on the sector and impact in the region.

The methodology for the data used in this research is Historical method. We have attempted to study, understand, interpret and analyze the events of the recent past, as the Covid-19 exploded on the humanity. We have interpreted this and analyzed the response the industry has shown towards the technological adaptation. The critical commentary of these studies has taken the shape of this paper. The data sources have been scholarly articles, research papers, editorials, reports, commentaries and new releases – online as well as printed, combined with the personal experiences, peer interviews, learning's and keen observations of the authors.

Scope of the Research

The commentary of this research paper has wider scope, which can be capitalized, analyzed and further researched by the industry in general, as well as researchers and academicians. The commentary encompasses study across the sectors of industry, geographies, enterprise size, technological status and impact of the pandemic. This commentary evokes and triggers the fence-sitters and tentative business leaders, to review their strategies towards the *"New Normal".* The authors aim to instigate the convergence across the business world, to approach the *"New Normal"* with an aggressive maneuvering to neutralize the impact of the pandemic and be prepared for the future endemics or pandemics.

Significance

The *"New Normal"* will lead to *"Next Normal"* and it has already triggered businesses to think about the re-imagining the workspace, workforce and the work itself, a fundamental change which was off-the-radar until pandemic struck us. In the new work order in industry, the dominant themes will focus around the redesigning of the workspace, including the assembly line; data security and data management as the work from home will get amalgamated faster; and remote management of both factories and offices (Jain, 2020). The resilience will have to build in the organization with the heady mix of digital transformation well assisted by integrated modern technology tools shaping to be the new armor of growth. Technology has been the cornerstone of all the innovation and its speed will only be accelerated by Covid-19. It's the opportunity whose time has come now, and it will remain a front-runner for next 3-5 years (Dirani et al., 2020; Naidoo & Fisher, 2020; Shih, 2020; Ting et al., 2020).

DISCUSSION AND COMMENTARY

"The world hates change, yet it is the only thing that has brought progress", goes the famous quote by Charles Kettering. Covid-19, regretfully will be one such change agent, which will bring progress to humankind, in its own way. A study by International Data Corporation suggests that over the next 3 years, digital transformation will attract a direct investment of US$ 7.4 Trillion (Binde, 2020). This coupled with the transformational impact of the sunrise technologies viz. IoT and Big Data, Virtual and Augmented reality, 3D Printing, Cloud computing, Machine Learning and Artificial Intelligence; is going to take the industry by storm.

Not that these initiatives were not on radar or on the strategic roadmaps of boardrooms. Covid-19 has just pushed them ahead in the queue and set an alarm for prioritizing the technology investment over the human capital. World Economic Forum (2020) study suggests that the division of labor between machines and humans will cost the business world almost 75 million jobs. However, there will also be a creation of 133 million new jobs, due to the technological investments. This means a net surplus of 58 million, an absolute growth (Sneader & Sternfels, 2020). The challenges will be surely on the re-skilling and up skilling of the workforce to adapt to the new structure.

In the endeavor to reconfigure the office spaces and the production lines, disruption of the old structure will be the norm and technology will be the key enabler for the future proofing of strategy. The selection of the technology will be driven by the holistic review of the entire value chain, process flows, work design and customer service changes. Covid-19 crisis of course will deepen the integration of robotics and automation to bring supply chain and production resilience, a limitation of the human talent (Beane & Brynjolfsson, 2020). On the other extreme, the pursuance of overall productivity, could catapult the industry into achieving fully automated and hyper-automated Holy Grail of manufacturing capabilities (Ramaswamy, 2020). The expectation of the speed and power will be catalyst of re-imagination of the practices and the platforms of industrial delivery. Of course, technologies like productivity tracking for remote management will throw open the debates linked to human privacy and security.

CONCLUSION

The writing on the wall is clear and echoed by the industry champions, the pandemic has changed things irreversibly the pursuance of technology impregnation, in a bid to build resilient organizations, immune to factors of human limitation, flight of migrants, geographical closures and perennially active supply chains (Figure 2).

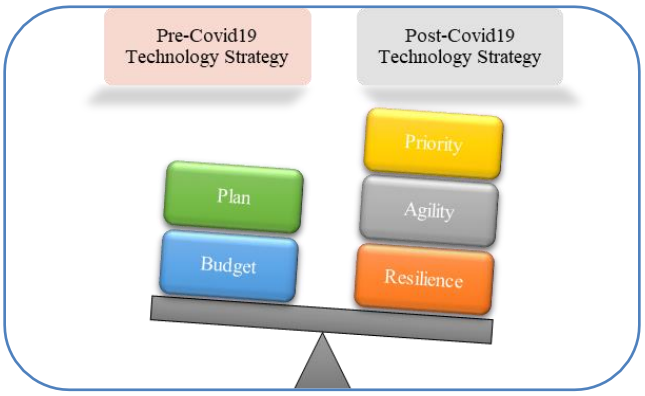

FIGURE 2
TECHNOLOGY STRATEGY PRE AND POST COVID-19

The *"New Normal"* is here to stay, even after a vaccine is developed and entire humanity inoculated. During the lockdown, unlocking and the in-between period, the business and industry has tasted blood of working in a way which was non-traditional and scorned-off in past. Now that technological and digital transformation has taken a lead position, it will remain a priority for several years, with innovation and resilience being the drivers. The industry *"New Normal"* will be the technological impregnation, in a bid to be ready for the next endemic/pandemic.

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