

Digital Divide as the Entrepreneurial Growth Engine in the Covid Era: A Review

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ABSTRACT

It has been customary for human beings to somehow attribute to nature an opportunity or a challenge that forced organizations and people to mend ways and processes to keep the business running or accelerating beyond the threshold. COVID is no exception. It threw up both challenges and opportunities to the business world and served as a strict teacher who leaves no stone unturned in implementing values and ethics across personal and organizational domains.

India has always been a hotbed of activities, traditionally, in colonial times and late when the Digital wave happens to sweep one and all, irrespective of demographics and businesses. Undoubtedly, the Silicon Valley in the US hitherto was the understood leader in terms of technology utilization and innovating through various platforms to widen the already massive reach of the world over integrating the marketing and other functional strategies to rule the business world. However, then the 'developing' nations of Asia have started posing a stiff challenge to them – especially countries like China, India, Korea, and a few of South East Asia. West has always portrayed East with zone lag in terms of 'materialistic' development that portrays modern economy definitions; however, COVID made us understand the inside-out story on various fronts, including the digital landscape!

The pandemic has forced economies the world over to redefine their priorities both economically and socially. Undoubtedly, we are a vast nation trying to move faster over the past decade in terms of developing and augmenting our 'basics' and penetration of digital technology has made things more accessible in terms of reach and speed. The behavioral dynamics associated with the mantra of 'self-reliance' bring in steep changes and newer paradigms of defining businesses and their successes. The entrepreneurial moods of the prominent young population are on the upswing, disruptions and innovations being the critical drivers catalyzed by what is famous as a 'digital' resource.

This paper tries to highlight through a firsthand gaze-through available and emerging digital dynamics influencing ways of doing businesses and redefining customer satisfaction and how the digital divide, as we call it in India owing to infrastructure and usage variations, would redefine the market segments and serve the customers, mostly young, who are native to the uncertain world of experimentations.

Keywords: Digital, Disruption, Innovation, COVID era, Competitiveness, SME, Digital supply chain

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INTRODUCTION

The beginning of the 21st century has marked enormous changes in the business landscape, and the major contributor has been the 'digital'. However, the onset of digitization itself can be blamed for the 'digital divide' between the developed and developing countries, capitalist and non-capitalist economies, ethical and non-ethical economies, the educated and uneducated, and high-end computing environment and low-end ones etc.

'Digital divide' refers to the gap that exists between demographics and regions that have access to modern

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ICT (information and communications technology like telephone, TV, computing tools, and the Internet) and those that are devoid of the same wholly or partially.

The Digital Economic Report 2019, presented by UNCTAD (United Nations Conference on Trade and Development), speaks that three-fourths of the Digital Wealth is concentrated around two countries – the US and China, the new foes in the CoViD era. Sincere efforts are needed to reap its benefits for the world; otherwise, the ever-growing chasm will further degrade the world in terms of opportunities thereby paving the way for more corruption and arrest of trickle-down activities for the destitute. Further, these two countries account for over 90 percent of the market capitalization of the digital platform providing organizations! In the words of UNCTAD Secretary-General *Mukhisa Kituyi*, “We need to respond to the desire of people in developing countries to take part in the new digital world, not just as users and consumers, but also as producers, exporters, and innovators, for creating and capturing more value on their path towards inclusive prosperity.” This statement perhaps lays the foundation of the entrepreneurial growth engine that is being thought of amidst the ongoing crisis of COVID. Shifts of mindsets are needed to develop policies that may be a minor step in the value creation towards bridging the gap in the digital divide through building capacities and enabling the environment towards the discussed cause. That would mean a more meaningful address to the impending issues related to competition, taxation, cross-border data flows, intellectual property, trade, and employment policies that could bring the harbingers of the digital economy more realistically closer.

The Digital Economy is worth *three trillion US dollars* today, around a third of the S&P 500, six times the US annual trade deficit or more than the UK’s GDP. It possesses an assortment of components; prominent ones include government, the policies, the regulations, the world wide web (WWW) and support infrastructure, telecom industry, digital service providers, e-business enablers and e-commerce platform providers, systems encompassing the knowledge management systems the IPRs (Intellectual Property Rights), research and development and technologies yet to unfold. Digital Economy is the single most important driver of innovation, competitiveness, and growth, and it holds enormous potential for entrepreneurs and small and medium-sized enterprises (SMEs). Modern digital trends such as cloud computing, IoT, mobile web services, smart grids, and social media are drastically altering the business setting, reshaping the nature of work, the limits of enterprises, and business leaders’ responsibilities. These trends enable more than just technological innovation. They incite innovation in business models,

business networking, and the transport of knowledge and admittance to worldwide markets.

INDIA-FACT CHECK

According to the Telecom Regulatory Authority of India (TRAI) report (June 2020), India had over 1160 million wireless subscribers (February 2020), which is a rise of 150 million subscribers in five years (or 30 million per year on average). The growth has been evenly distributed in urban and rural areas, with the number of urban subscribers increasing by 74 million (from 579 million to 643 million) and rural subscribers by 86 million (from 431 million to 517 million). However, this growth only indicates the rise in basic telecom facilities. According to the NSSO (National Sample Survey Office), just 4.4 percent of rural households possess a computer, against 14.4 percent in an urban area (2017-18). Only 14.9 percent of rural households have access to the internet against 42 percent of urban areas.

Similarly, only 13 percent of people over five years of age in rural areas can use the internet against 37 percent in urban areas. Himachal Pradesh leads the country in access to the internet in both rural and urban areas. Uttarakhand has the most computers in urban areas, while Kerala has the most computers in rural areas. Kerala has the distinction of being a state where the difference between rural and urban areas is minimum. Further, a meager 21 percent of females in India are mobile internet users against 42 percent of males.

E-commerce has transformed Indian businesses to some extent. The Indian E-commerce market is expected to develop to US\$ 200 billion (by 2026), up from US\$ 38.5 billion (as of 2017). Much of the growth is attributed to internet and smartphone penetration across demographic segments in the country. The ongoing digital revolution in the country is expected to increase country’s total internet user base to 829 million (by 2021), up from 636.73 million (in FY19). India’s internet economy is expected to double to US\$ 250 billion by the end of 2020 from US\$ 125 billion (April 2017), propelled principally by E-commerce. India’s E-commerce revenue is expected to jump to US\$ 120 billion later this year from US\$ 39 billion (in 2017), growing at an annual rate of 51%, the highest in the world. Smartphone shipments increased 8 percent year-on-year to reach 152.5 million units in 2019, thereby makes it the fastest among the top 20 smartphone markets in the world. Internet penetration in India is up from around 4% (2007) to more than 52% (2019). The number of internet users in India is

expected to increase to 829 million by next year from around 688 million (2019).

Some of the significant happenings of the year 2020 in the Indian e-commerce segment stand as below:

- Reliance Industries (RIL) acquired a 60% stake in Netmeds, an online pharmacy, for ₹620 crores (US\$ 84.61 million), thus helping Reliance Retail entering into a vertical e-commerce space (August).
- Divine Solitaires launched its E-commerce platform (January).
- Flipkart set up a 'Furniture Experience Center' in Kolkata, its first offline presence in eastern India (February).
- Reliance Industries (RIL) started home delivery of essentials in partnership with 'local kirana shops' in Navi Mumbai, Thane, and Kalyan - Maharashtra (April).
- Swiggy received an additional US\$ 43 million funding (April).
- PepsiCo India teamed up with Dunzo for its snack food brands Lay's, Kurkure, Doritos, and Quaker (May).
- Hershey India partnered with Swiggy and Dunzo to launch their flagship online store (May).

Earlier last year, Amazon acquired a 49% stake in a unit of Future Group, PhonePe launched super-app platform 'Switch' to provide a one-stop solution for customers integrating several other merchants apps, Nykaa opened its 55th offline store making presence in second and third-tier cities. Further, Reliance is investing around 3 billion US\$ in the telecom sector to augment its services through the upcoming 5G network that would act as an enabler for its E-Commerce presence.

The Digital dynamics in our country portrays the following facts:

- Internet subscriber base crossed 700 million by the end of 2019.
- E-tailers in India achieved US\$ 3 billion of Gross Merchandise Value (GMV) sales in September-October 2019.
- Unified Payments Interface (UPI) recorded 1.25 billion transactions (March 2020), valued at `2.06 lakh crore (US\$ 29.22 billion).
- 'Internet Saathi' project benefitted over 26 million women in India across 2.6 lakh villages in 20 Indian states.
- The government of India has launched various digital initiatives like Udaan, a B2B online trade platform that connects small and medium-size

manufacturers and wholesalers with online retailers and provides them with logistics, payments, and technology support. It has sellers in over 80 Indian cities and delivers to over 500 cities. The Bharat Interface for Money (BHIM), a simple mobile-based platform for digital payments, is also running successfully.

The MSME Sector in the country has had a high impact on E-commerce in terms of means of financing, technology, and training, which has created a cascading effect on other industries. The Indian E-commerce industry has been on an upswing to surpass the US to become the second-largest E-commerce market in the world within the next decade. Technology-enabled innovations like digital payments and analytics-driven customer engagement, and digital promotions are likely to stimulate growth. This will also boost employment, increase revenues from export, augment tax collection by ex-chequers, and provide better products and services to customers in the long-term. The rise in smartphone usage is expected to reach 859 million by 2022. The E-retail market is expected to continue its strong growth - it registered a CAGR of over 35% to reach `1.8 trillion (US\$ 25.75 billion) in the current financial year, which might be possible CoViD could have enhanced it.

While Indian e-commerce is growing at an astral rate and is the fastest growing online business industry globally, initiatives such as *Digital India*, *Skill India*, *Startup India*, and *Make in India* are also contributing to the growth of the online trade. The industry has witnessed an annual growth rate of 51%, which is the highest globally, and from \$24 billion in 2018, the industry is expected to touch \$200 billion by 2026; over eightfold growth in eight years, according to ASSOCHAM-Forrester study paper as well Retail Association of India. Indian e-commerce is also booming on the back of ever-increasing internet penetration, advancements in payments and computing on mobility platforms, new blips in consumer mindset, changing shopping patterns, and the availability of products priced at lower prices on e-commerce platforms (even to the extent of 80% in some cases). In India, the share of electronics and accessories sales (around 40%) is the highest on e-commerce platforms, lifestyle and apparel is yet another big category with over 25% sales, Home & living account for 5%, food and grocery for 2-3% and other category sales are about 20-30%.





INDIA-EMERGING TRENDS IN DIGITAL DIVIDE

Conversational or Voice Commerce: In the words of the CPTO, Flipkart, voice will be a significant player in bringing the clarity, comfort, and confidence (the new 3Cs in Digital Marketing) needed by the next 200 million probable online shoppers. **Voice shopping** is catching up very fast in India. Amazon, with its smart assistant *Alexa* is upbeat about the same, seeing potential 300 million Indian shoppers. And why only English e-commerce giants are already working on several Artificial Intelligence (AI) platforms to incorporate all major Indian languages and dialects to tap the upcoming potential. India is on the verge of an integrated platform involving Blockchain, Machine learning, AI, NLP, and other cloud-based services that would have easy access and operability and marshal the consumers into the digital space, willingly or unwillingly! In fact, searches and then the decision about whether to keep the product in a cart for a series of evaluations (like comparison with similar ones, brand preferences, special sales offers, or looking for better ones or quick delivery propositions or other value-for-money options) before purchase or instant purchase. These all are marked by few interesting consumer behavior patterns resulting from lifestyle demands, disposable money, demography (age/ gender/ education/ family size/ profession), proximity to digital space, etc. The 3Vs guiding this 'novel e-shopping' in India are voice, vernacular and video which will rule the e-commerce functioning in the days to come. Nevertheless, all these must be attributed to the pandemic that has swept the world by and large since a year now!

Robotics: It is fast gaining ground in Warehousing, rather a very pertinent section in the entire inward and outward supply chains of a variety of organizations. Automation has been the key to efficiency over the years, be it conveyors or quality testing or sorting or even final product delivery through drones (not in India hitherto). More than 50,000 warehouses worldwide



are expected to include commercial robotics by 2025. According to market research firm ABI Research, that would be a dramatic jump from around 4,000 in 2018. In the United States alone, there are expected to be roughly 23,000 robot-powered warehouses in operation by 2025. Such robots can pick up entire shelves of products and deliver them to packing stations in different warehouse areas. Sensors prevent collisions, and an algorithm determines the most popular items and the closest supply. Unlike the human workforce, robots do not need vacation breaks or sick days or paid leave etc. Since retailers are looking for new ways to reduce both operations and logistics costs and delivery time, robots offer an attractive, cost-saving alternative to the traditional human workforce.

With *Amazon Robotics* leading the way, numerous fresh entrants in the AMR (or Autonomous Mobile Robotics) segment show off enhancements in the management, control, and automation of warehouse operations. While some proffer the benefits of entirely automated pick-and-package systems, others specialize in high-volume logistics support. Few warehouses are experimenting with unique robots for speed-sorting, where parcels are sorted and packaged based on their physical dimensions.

Industry complements like self-driving transport vehicles (for automation of materials' delivery in warehouses) assist in performing jobs like receiving, unloading, inventory (raw or semi-finished, finished goods, Work-In-Progress, shipping, loading, etc.). A variant of these automated vehicles can be programmed for trackless navigation. Some of the most popular and expensive warehouse automatons are the 'multi-robot fulfillment systems' that work in tandem with humans to transport tote containers containing scanned items

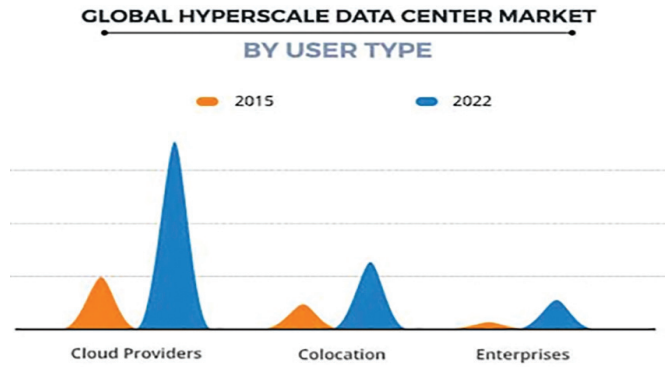
to the warehouse. These robots travel in a fleet and can navigate independently under the supervision of a server. Few also pick up complete mobile racks and transport them to workstations staffed by humans. Automation may hold the key to gaining a 'competitive advantage' in the marketplace, which is why many big E-Commerce retailers are switching to keep up with emerging global trends. The emergence of 'smart' robots will reduce the time and effort required to scan and update inventory, pack parcels, arrange items on shelves, and complete other inter-related tasks.

Indian Transformation Through Hyperscale: Modern world is bound to run on new-age technologies, and the functioning of organizations will mostly be data-driven. Infrastructure for such a change needs to be scaled up. Hyperscale is the answer. Scalable signifies it can adapt to changing performance requirements. Hyper means excessive, while scale refers to size or volume. A 'hyperscaler' is the operator of a data center that offers **scalable cloud computing services**. These are those huge companies like Google, Facebook, and Amazon that are making efforts to rule the public cloud and cloud services industries and expand their business into numerous connected verticals.

The first company to enter this market was Amazon in 2006, with **Amazon Web Services (AWS)**. AWS is a subsidiary of Amazon that helps to optimize the use of Amazon's data centers around the world. AWS also offers an extensive range of specific services. It holds a market share of around 40%. The other two big players in this market are **Microsoft**, its **Azure** service (2010), and the **Google Cloud Platform** (2010). **IBM** is also a major provider of hyperscale computing solutions. These companies also work with approved partners to offer their technical services via local data centers in specific countries. Competition is going to be very tough due to the presence of tech giants in this field.

It is learned that merely twenty-odd organizations exist worldwide that match the definition of hyperscale. These account for two-thirds of the cloud services market. Hyperscale vision requires a considerable investment in infrastructure. Microsoft has invested nearly \$20 billion for the same to support its Azure cloud. Industrial sectors like banking, energy, healthcare & pharma, both in private and public sectors, would adopt more effective and nippy data collection strategies in the time to come.

How could traditional communications service providers look after their market share against newer ground-breaking hyper-scalers? With more and more daily social and economic business conducted on



Cloud Providers is projected as one of the most lucrative segments.

desktop and mobile devices, it is easy to spot the cause for concern. As hyperscale computing is still in an age of infancy, companies would be finding ways of cost cutting with better services using the frame of 'disruption'. ESDS Software Solution Pvt Ltd of India and its business footprint in 19 other nations using hyperscale technology is fast emerging as a digital transformation catalyst. Even banks have hosted their CBS on its cloud platform. Autonomous driving and video surveillance at borders will need this scalability by 2025.

Digital Supply Chain (DCS): Depending on the context in which used, a digital supply chain can either be the digital aspects of a physical supply chain or the chain of technology companies involved in delivering digital products.

In the former case, DSC is used in explaining the design, development, and implementation of applicative digital technologies like IoT, blockchain, machine learning, artificial intelligence, predictive analytics, which can drive improvements to traditional and existing supply chains through the usage of sensors. McKinsey's consulting giant places sensors in everything, creates networks everywhere, automates anything, and analyzes everything to notably perk up performance and customer contentment. Here, the team responsible for digital supply chain management is the same as the team responsible for any supply chain functions. These teams are tasked with finding new ways to improve efficiency and increase margins. In other words, "digital supply chain management" is just supply chain management with icing of new digital technologies that include Predictive analytics to optimize inventory allocation and forecast demand, automated inventory replenishment solutions, robotics to accelerate assembling or picking, IoT sensors to gather real-time feedback from manufacturing equipment and vehicles.



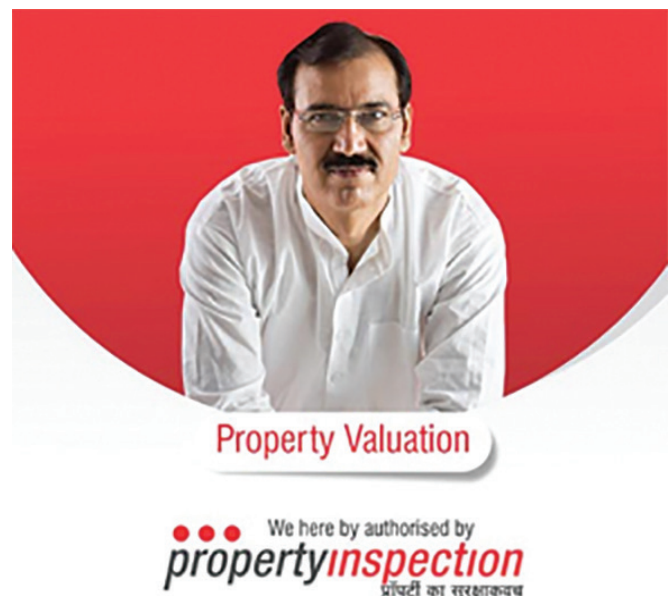
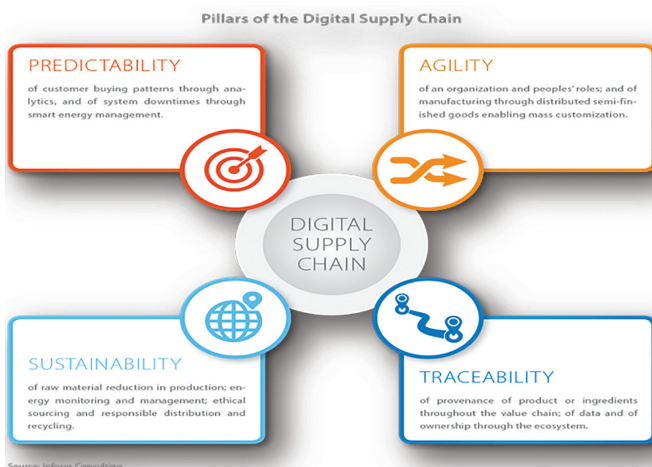
The second definition has expanded to include the supply chains that help deliver any digital product, such as a website or software platform. An E-commerce website DSC includes the website’s developers, administrators, the cloud services company that hosts the website data, the Content provider, and the devices that consumers use to access the website. In addition, every third-party technology provider whose code provides functionality to the website like e-commerce plugins, personalized recommendation engines, advanced analytics services, inventory tracking solutions, custom product builder, chatbots is also a part of the DSC.

The digitization of the supply chain enables companies to address the customers’ new requirements, the challenges on the supply side, and the remaining expectations in efficiency improvement. The next key to the digitalization of the supply chain is a comprehensive understanding of available technologies and applying them effectively throughout the value chain. We understand **Robotic Process Automation** can enable and power better flexibility. **AI and Analytics** can aid in predictability and energy efficiency efforts. **Blockchain** can power traceability through the supply chain. These are helping some early-adopter companies to reduce costs, power faster transactions, and lower risk levels, and improve collaboration efforts across their partner ecosystem. Blockchain is gaining significant attention across the logistics space, a key component of any organization’s DSC. In the end, however, the human element of trust is as much part of this new economy as technology. Understanding the ever-evolving technology landscape and applying the right combination of people, processes, and data will allow an organization to answer the much larger

challenge of driving financial return and achieving lasting competitive advantage.

Digital Property Management: What could have been better than bringing the value chain related to ‘property’ together - property management companies, landlords, homeowners, tenants, and other types of service providers! It is easier for everyone to be kept in the loop and notified of the status of service requests, quotes, or sharing images of issues with the property. This platform allows everyone to communicate through chat and image sharing. With one click of a button, everything is available. A new area being developed now is the Digital Property check. It helps examine all accessible areas of property using digital technology and tools (thermal cameras, moisture meters, infrared detectors in connection with sale or renting the property. Such world-class inspection services point out at a feasible career option through an entrepreneurial route and create confidence in the client about property robustness check with numerous parameters and end up in high satisfaction besides meeting regulatory obligations across different regions and markets. As shown for illustrative purposes, propertyinspection. in offers an automated digital services platform which suggests whether to buy any property or not.

Niche Content: Niche content is created to resonate powerfully with a specific audience to bring in strong results. Niche content can be an excellent tool for building better connections with customers, clients, or readers. It can help qualify leads, improve SEO efforts, and it can also help to become a face in the crowd. The type of content that makes sense for the





target audience needs to be planned, and how it shall be created and distributed or flashed amongst that particular audience to maximize impact is to be strategized. Some of the most popular niche content categories comprise motivational and spiritual talks (most conducive during the pandemic times for healing and positive vibes), self-help, magic tricks, yoga and gymnastics for healthy living, performing arts, cooking restaurant-style, kitchen gardening, pets upkeep, astrology and palmistry, personal finance and investments, mental health and earning at home. 'Digital careers' is yet another emerging segment that has come up during lockdown days, in 2020 as well as in 2021. There is immense potential for the growth of this emerging segment both in terms of monetary value and nurturing social capital.

CONCLUSION

Crisis puts resources under scanner but opportunities galore. We could witness this in the past year, and a half during CoViD waves witnessed in India and worldwide. Digital arsenals, mostly developed by the West and used in a limited manner, hitherto sprang up as savior to so many activities. Education happened to be one such segment where Digital interventions (irrespective of being timely or with a lag) made the system walk, if not run. Similarly, on the work engagement front within the Corporate sector and the connected stakeholder,

did find a Digital mechanism to remain afloat amidst all sorts of crisis in the business value chain. Entrepreneurial DNA from within such entities started to crop up in this do-or-die situation, and many novel business ideas started working in India. Major MNCs existing in India are already integrated with Digital technologies to a large extent involving Artificial Intelligence or Robotics or Blockchain, and the like. However, the rosy side of it beamed up, incorporating small start-ups or ventures growing bigger and bigger with 'that' digital push which we have been witnessing over the past decade. Enormous activities like the ones covered in this article have provided a sound mechanism for human survival digitally, be it the genre of expertise or an ingrained mindset to excel financially, we have come along a long way! We have no dearth of talent, and the missing is the management (or existing is the mismanagement) of mind as a frontline resource. Time is apt to resonate with the opportunities presented through crisis route, and we all are hopeful of rewriting the digital age Indian economy with our young generation who still harps on hope, not hype!

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