



IMPACTS OF COVID-19 ON DIGITAL WORLD

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ABSTRACT

This article illustrates however the pandemic accelerated the adoption of digital technologies in some areas wherever uptake had been stalled or was solely slowly progressing, like information assortment techniques, e-health on-line appointments and therapies, on-line operating, learning, and social connection. New challenges were created, requiring the scaling of production, fast-tracking of digital provides, construction of on-line platforms and video-conferencing product. These transformations failed to return while not a cost: the pandemic exacerbated existing challenges, exacting government interventions to stop hurt associated social exclusion related to employment and social networking on an unprecedented scale. Even before the pandemic, social scientists recognised that technological development and economic process failed to essentially end in social progress. This shows however the innovative digital solutions embraced throughout the pandemic to prevent the unfold of the virus and avoid economic meltdown can also are wont to justify restrictions on personal freedom and styles of police investigation that risk being tough to reverse.

KEYWORDS: covid-19, digital world, Economy

INTRODUCTION

When the COVID-19 pandemic poor out earlier this year, a lot of of the globe captive on-line, fast a digital transformation that has been current for many years. kids with at-home web access began attending category remotely; several workers started performing from home; and diverse companies adopted digital business models to keep up operations and preserve some revenue flows. Meanwhile, mobile applications were developed to assist “track and trace” the event of the pandemic; and researchers used AI (AI) to find out additional concerning the virus and accelerate the explore for a immunizing agent. web traffic in some countries accrued by up to hr shortly once the eruption, underscoring the digital acceleration that the pandemic sparked.

While these activities demonstrate the tremendous potential of the digital transformation, the pandemic has additionally accentuated the gaps that stay. though some digital divides have narrowed quick in recent years, others haven't followed an equivalent pace, going some behind within the COVID-induced digital acceleration. Moreover, the accrued reliance on digital solutions has supplemental new urgency to issues around privacy and digital security.

This presents countries with a significant challenge. it's unlikely that economies and societies can come to “pre-COVID” patterns; the crisis has vividly incontestible the potential of digital technologies and a few changes could currently be too deep to reverse. faced with a future wherever jobs, education, health, government services and even social interactions is also additional addicted to digital technologies than ever before, failing to confirm widespread and trustworthy digital access and effective use risks deepening inequalities, and will hinder countries' efforts to emerge stronger from the pandemic.

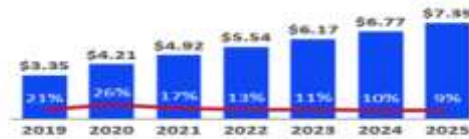
CHANGES IN DIGITAL WORLD

1. E-commerce

The global e-commerce market is expected to reach \$4.92 Trillion in sales by the end of 2021, representing 17% year-on-year growth. This growth is, however, down from the stellar 26% increase experienced by the market in 2020. Sustained double-digit growth is forecast for the coming three years, representing a tremendous opportunity for businesses that have not yet provided their customers with an online sales channel.

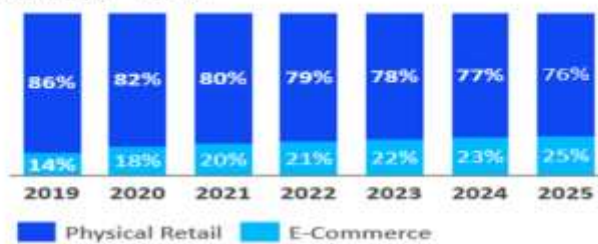


Global Retail E-commerce Sales (USD Trillions, % Change YOY)



Businesses that had not however invested with in establishing an internet presence were those most suffering from the pandemic. per knowledge from Yelp, 163,735 businesses had closed because of the pandemic as of August 2020, with hr of those closures being permanent (97,966). Businesses that rapt on-line, on the opposite hand, have mostly been ready to survive or perhaps thrive. The pandemic has conjointly considerably wedged the expansion of sure product classes. Hardware-based merchandise, for example, like laptops, TVs, phones & game consoles have seen a 134% increase so as volume since the beginning of the pandemic.

Global Retail Sales (%) (2019 – 2025) *



Frequency of buying products online per month from e-commerce has increased due to the COVID-19 pandemic in India

From the analysis, it are often seen that the quantity of on-line purchases per month enhanced hugely throughout internment in Republic of India thanks to COVID-19. From Figure five, it are often seen that customers with low purchase frequency (0-2 times, 3-4 times) has been reduced by 0.5 whereas customers with higher purchase frequencies (3-4 times, quite seven times) have enhanced by thrice. this means that there has been a big increase in client shopping for frequency from e-commerce throughout internment in Republic of India thanks to COVID-19pandemic

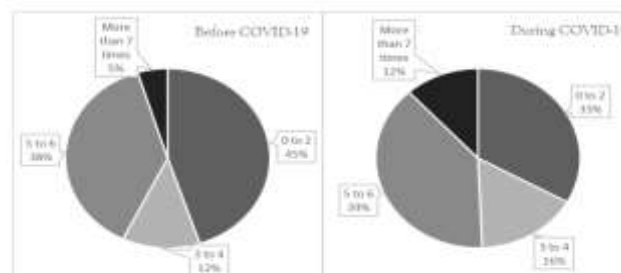
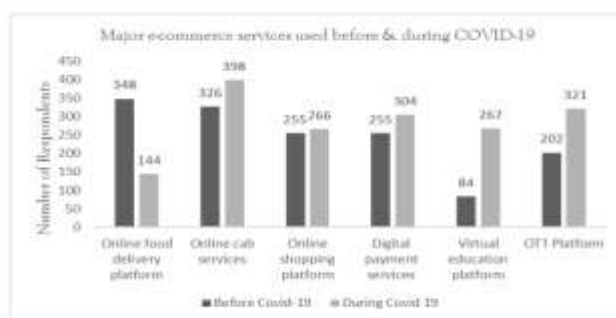
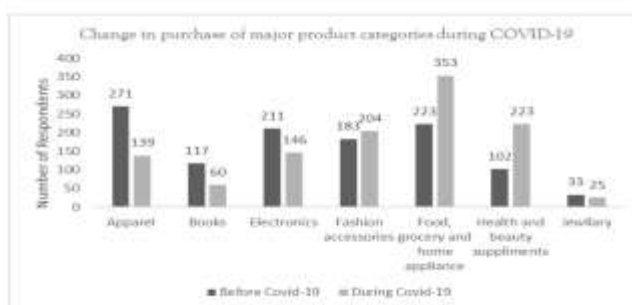


Figure 5: Frequency of purchase before and during COVID-19

We verified this with a paired sample t-test and located that the p-value is zero.00, confirming that the net shopping for frequency has so multiplied because of the COVID-19 pandemic. From the survey, it are often seen that there area unit a couple of changes within the style of e-commerce platform and services used before and through COVID-19. Dependence on digital payment systems has conjointly multiplied indicating measures to scale back contact with people and follow social distancing. The food delivery and cab services platforms are arduous hit because of the pandemic. It are often seen that the acquisition of attire, books, and physical science has shriveled staggeringly, whereas the acquisition of the essential product, health and sweetness supplements have multiplied throughout the internment amount.



Major e-commerce services used before & during COVID-19.



Change in purchase of major product categories during COVID-19

The survey additionally indicates just about seventy two of the purchasers became acquainted victimization varied ecommerce platforms throughout the pandemic. The survey additionally indicates that eighty one.8% of the purchasers would continue searching on-line even when the pandemic is over. therefore it is finished that the dependence on a number of the e-commerce platforms has accrued throughout the pandemic and therefore the searching on alternative e-commerce platforms can increase once the pandemic state of affairs is over since heaps of individuals became a lot of and more leisurely and acquainted victimization the e-commerce platform throughout the pandemic.

DEMAND SIDE E-COMMERCE

The COVID-19 pandemic has brought about a plethora of changes in consumer shopping behaviour. Some of these have proved positive for e-commerce retailers, while others have forced sellers to make substantial changes.

Post-Pandemic Transition from “Need Buying” to Indulgence disbursal

Throughout the pandemic, shoppers were restricted on wherever and once they might pay their cash. fifty one folks shoppers rumored a want to splurge and like “revenge spending” once the pandemic subsides. client behaviour hunter, shows that forty seventh of shoppers surveyed rumored delaying giant purchases in 2020. This figure born to thirty seventh in June 2021, indicating that customers ar starting to pay a lot of as they move removed from necessity-based shopping for.

Ethical searching and moral Brands

During the pandemic interest in moral searching and moral brands rose by forty fifth consistent with Google, whereas a survey done by Accenture disclosed that forty fifth of shoppers ar creating a lot of property decisions once searching and report that they'll possible still do therefore. Brand Loyalty Disruption
 According to a McKinsey study, 75% of consumers tried new shopping behaviours during the pandemic while 39%, mainly millennials and Gen Z, deserted trusted brands for new ones.

Permanent Consumer shopping Behaviour Change

Just under 49% of people who tried shopping online during the outbreak said they would do it more frequently once the pandemic subsides. This varies by geographical location, however; while 60% of Italians shopped online during the pandemic, less than 10% reported being satisfied with the experience. In contrast, 73% of Finnish consumers who shopped online during the COVID-19 pandemic said they would continue doing so after the crisis.



Supply Side E-Commerce

Increasing consumer tech adoption, alongside changes imposed by the outbreak of COVID-19, has brought about significant changes that might well alter the e-commerce space permanently.

Click & Collect

Also known as curb side pickup, click & collect services have seen growing popularity during the pandemic due to consumers' safety concerns. Orders placed online or by phone are packaged and then either put in the trunk of customers' cars or set outside for pick up. Among stores ranked in the Digital Commerce 360 Top 500, just under 44% of the 245 retailers surveyed offered Click & Collect in 2020, a sharp increase from the 6.9% figure registered at the end of 2019.

Direct to shopper

Direct to shopper brands area unit increasing in quality and also the COVID-19 pandemic has given these brands an additional boost. trade goods firms saw seventieth growth coming back from DTC sales on-line, and in step with eMarketer, net traffic on DTC retailers has doubled within the last 2 years.

Omni channel Strategy

Omnichannel selling ways became one amongst the foremost dominant trends within the e-commerce area. in step with Google, omnichannel ways drive AN eightieth higher rate of progressive store visits, whereas another study done on EU shoppers found that sixty seven of shoppers use multiple channels to conduct one dealing.

Buy currently Pay Later

The BNPL model permits shoppers to create AN direct payment toward a procurement, then pay the rest off during a planned variety of instalments. E-commerce retailers get the total worth paid, creating this dealing one between the BNPL service supplier – like PayPal and Klarna – and also the client. BNPL market share worldwide is predicted to double from a pair of.1% in 2020 to four.2% by 2024.

2. Digital Payments

The COVID-19 pandemic has spurred monetary inclusion – driving an outsized increase in digital payments amid the worldwide growth of formal monetary services. This growth created new economic opportunities, narrowing the gender gap in account possession, and building resilience at the unit level to raised manage monetary shocks, in line with the worldwide Findex 2021 info. As of 2021, seventy six of adults globally currently have associate degree account at a bank, different financial organization, or with a mobile cash supplier, up from sixty eight in 2017 and fifty one in 2011. significantly, growth in account possession was equally distributed across more countries. whereas in previous Findex surveys over the last decade a lot of of the expansion was focused in Asian nation and China, this year's survey found that the share of account possession enlarged by double digits in thirty four countries since 2017. The pandemic has conjointly crystal rectifier to associate degree enlarged use of digital payments. In low and middle-income economies (excluding China), over four-hundredth of adults World Health Organization created businessperson in-store or on-line payments employing a card, phone, or the web did therefore for the primary time since the beginning of the pandemic. constant was true for quite a 3rd of adults all told low- and middle-income economies World Health Organization paid a utility bill directly from a proper account. In India, quite eighty million adults created their initial digital businessperson payment when the beginning of the pandemic, whereas in China over one hundred million adults did. common fraction of adults worldwide currently create or receive a digital payment, with the share in developing economies grew from thirty fifth in 2014 to fifty seven in 2021. In developing economies, seventy one have associate degree account at a bank, different financial organization, or with a mobile cash supplier, up from sixty three in 2017 and forty second in 2011.

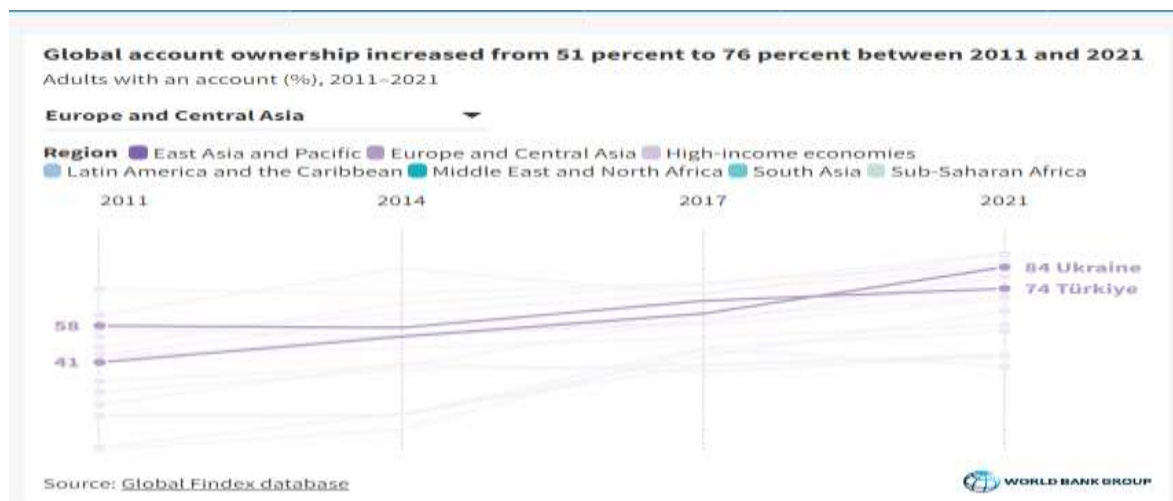
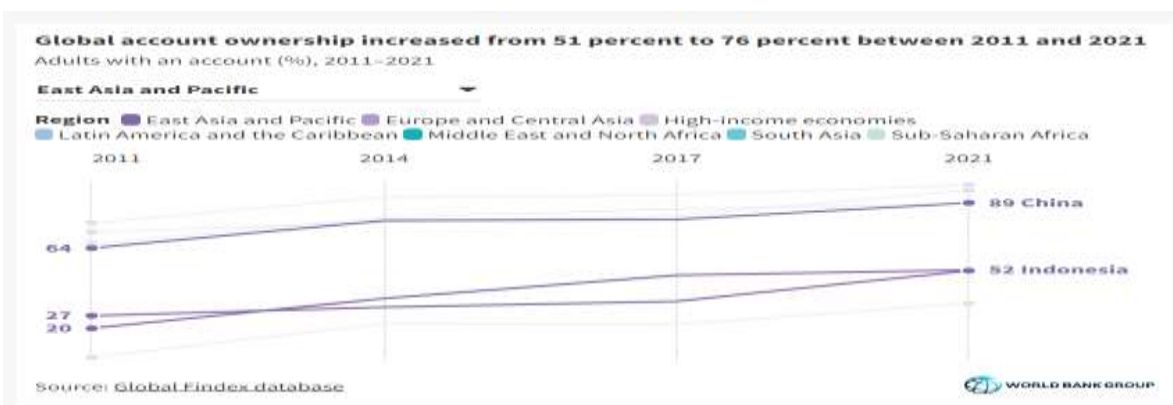
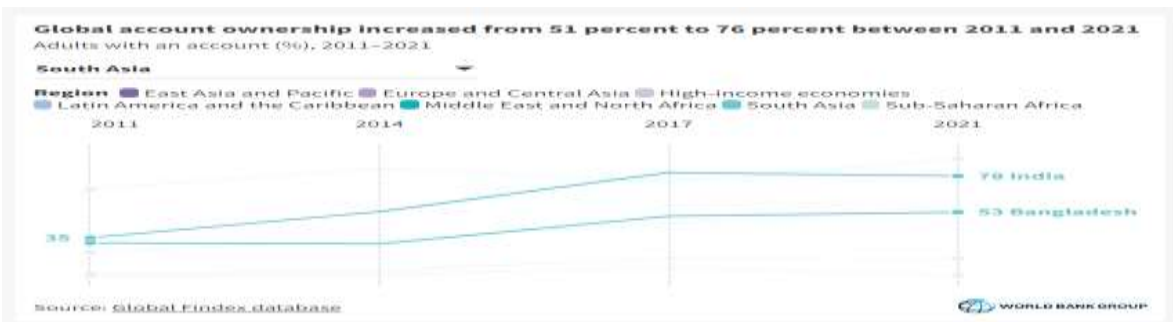


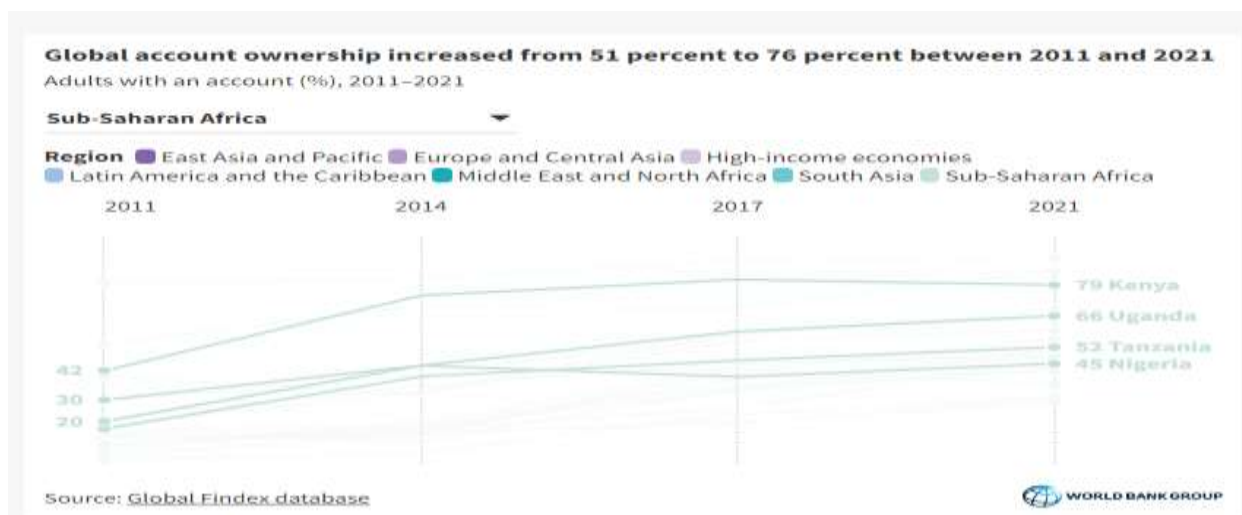
WORLD BANK (Global Findex)

The Reserve Bank had announced construction of a composite Reserve Bank of India – Digital Payments Index (RBI-DPI) with March 2018 as base to capture the extent of digitisation of payments across the country. The index for September 2021 stands at 304.06 as against 270.59 for March 2021.

The RBI-DPI Index continues to demonstrate significant growth in adoption and deepening of digital payments across the country. The index series since inception is as under:

Period	RBI - DPI Index
March 2018 (Base)	100
March 2019	153.47
September 2019	173.49
March 2020	207.84
September 2020	217.74
March 2021	270.59
September 2021	304.06





World Bank (Global Findex)

Here are some of the key factors responsible for the rising adoption of digital payments in India:

Increased awareness- Consumer acceptance of digital modes of payments has shot up in recent times, especially after demonetization in November 2016. Millennials and Gen Z consumers are comfortable with digital payments and use them more than often. By not accepting digital payments, merchants are going to lose out on a sizeable chunk of business.

Government policies- The incumbent government's specialize in achieving a cashless economy in Asian country has diode to the introduction of many policies favouring merchants UN agency area unit desegregation digital payments.

Example: In her maiden budget speech, India's government minister Nirmala Sitharaman had planned that institutions with annual turnover of quite fifty large integer shall provide affordable digital modes of payment, like BHIM UPI, Aadhaar Pay, UPI-QR Code, debit cards, NEFT and RTGS, to customers and no charges or merchandiser Discount Rate (MDR) shall be obligatory either on customers or merchants. With the passage of the Finance Bill, this proposal is currently a part of the law and can get impact on Allhallows.

Quick onboarding and easy use- Gone area unit the times once complicated technology accustomed act as a hinderance within the adoption of digital payment system in Asian country. At Pine Labs as an example, we tend to use best-in-class technology to style product that area unit simple to use and facilitate merchants grow their business. we tend to even have a fanatical client onboarding team to assist merchants seamlessly embrace digital payment solutions.

Smartphone proliferation and web expansion- Did you recognize that the quantity of smartphone users in {india|India|Republic of Asian country|Bharat|Asian country|Asian nation} area unit expected to double to 859 million by 2022 from the 468 million users in 2017? boost it the actual fact that India (12%) has surpassed the u. s. (8%) and is currently the second largest web user base within the world, as per female parent Meeker's web Trends Report 2019. These facts purpose to the actual fact that digital payments area unit solely aiming to purpose north from here onward.

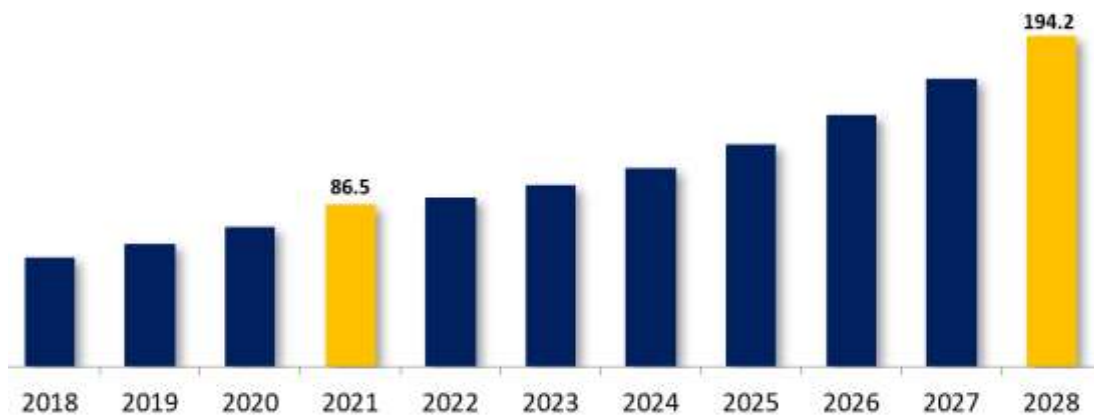
Regulatory support- RBI's could 2019 unharness of a vision document titled, "Payment and Settlement Systems in India: Vision 2019-2021" may be a step within the right direction. The document outlines thirty six specific Action Points for turning Asian country into a Cashless Economy and such efforts on the a part of the banking regulator is that the would like of the hour to more expand the digital payments infrastructure within the country.

Improved technology- The flow of recent and rising technologies can solely strengthen the fintech system in Bharat. Through our own expertise of integration quick, secure, reliable and scalable technology we've got been ready to demonstrate improved ROI for our bourgeois customers PINE LABS. A recent study conducted by the strategic consulting and marketing research firm, Blue Weave Consulting, unconcealed that the world Digital Payment Market was price USD eighty six.5 billion within the year 2021. it's calculable to grow at a CAGR of twelve.1%, earning revenue of around USD 194.2 billion by the tip of a pair of028. The profitable growth of the world Digital Payment Market is attributed to growing advanced technology, and increasing adoption of mobile payment followed by digital wallets and purpose of sale. Also, the increasing shift toward digital payment among the young generation and rising e-Commerce platforms offers profitable growth opportunities within the international Digital Payment Market. moreover, the world Digital Payment Market is one among the foremost rising markets that grow ceaselessly due to the quick integration of recent technologies just like the net of Things



(IoT), computing (AI), cloud computing, and others. However, the rising concern of the chance of stealing and therefore the lack of worldwide standards for cross-border payments square measure the most important restraining factors for the expansion of the world Digital Payment Market.

Global Digital Payment Market, By Value, 2018-2028 (USD Billion)



Source: BlueWeave Consulting

Geographically, the worldwide Digital Payment Market is divided into North America, Europe, Asia-Pacific (APAC), Latin America (LATAM), Middle East & Africa (MEA). The Asia-Pacific phase accounts to carry the most important share within the market as a result of the adoption of mobile payments and digital wallets in APAC that ar probably to be on top of in different regions. Moreover, North America is predicted to dominate the market within the coming years as a result of the delicate and mature digital payments market. Moreover, globally, COVID-19 has obligatory vital limitations on people's lives. This has additionally altered payments created, driven by manner changes. Digital payment soared as word unfold through family, friends, and campaigns worldwide. Therefore, across the spectrum, folks found ways in which to measure, work, interact and find out the uses of on-line transactions. on-line payment has been providing the backbone for folks to access their funds as they have them amidst the pandemic.

The leading market players within the international Digital Payment Market ar PayPal, PayU, Paytm, CCAvenue, Razor pay, Instamojo, money free Payments, EBS, PhonePe, Cred, Zeta, BharatPe, BillDesk, Google Pay, Dhani, BHIM Axis Pay, MobiKwik, Amazon Pay, Yono by SBI, HDFC PayZapp, ICICI Pockets, and different distinguished players. The market is very competitive and fragmented with the presence of assorted international and regional trade participants. the businesses perpetually launch new product with advanced options to realize a competitive edge over the market. international companies additionally invest in increasing their production capacities to fulfill the growing demand and boost their penetration. moreover, the adoption of competitive ways like partnerships, mergers, acquisitions, joint ventures, etc., is additionally distinguished during this market.

3. Digital Platforms

Well, the covid era was brutal on all the industry inclusive of manufacturing, service, consulting etc. Covid 19 gave major blow to automobile industry (as scene in fig 1)

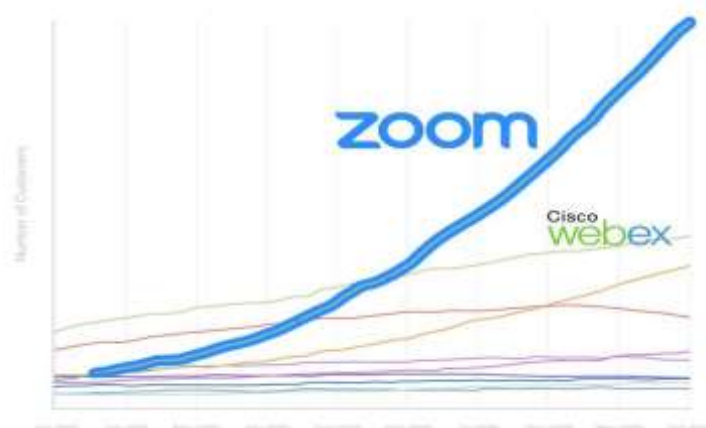


Here we can see that the industry was down by 60 units

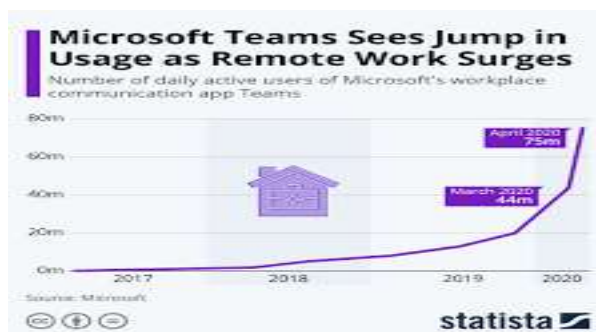
While if we talk about other industries the cloth and fashion industry also took a major hit because of the hinderance in the supply and manufacturing units can see a sharp decrease in the sales of the cloth throughout the covid 19 period. But there was one industry which saw a sharp increase which was the digital service industry. Hence, the industry which provide the services such as online meets, conferences etc.

The major stake holders were zoom, google meet etc.

Most Popular Video Conferencing Apps



There were other online platforms which brought the education sector in online mode



The major one being microsoft teams which brought all the facilities of a school, college to a screen, be it sharing notes, talking, doubt solving etc.

Digital adoption has taken a quantum leap at both the organizational and industry levels

During the pandemic, consumers have moved dramatically toward online channels, and companies and industries have responded in turn. The survey results confirm the rapid shift toward interacting with customers through digital channels. They also show that rates of adoption are years ahead of where they were when previous surveys were conducted—and even more in developed Asia than in other regions.



Respondents are three times likelier now than before the crisis to say that at least 80 percent of their customer interactions are digital in nature

COVID-19: the Digital Revolution

- **Artificial intelligence and research ethics in the Covid-19 context**

Social scientists have long been tuned in to the matter of reconciliation the economical management of data and intellectual freedom – the elemental quandary of ethical agency in Net Net that has given rise to the necessity for regulative policies governing computer science (AI) . United Nations agency (2020) wasn't alone in trying to line international standards for the ethics of AI, supporting the argument that additional policymakers ought to desperately think about laws addressing advances created in AI and artificial intelligence, furthermore as problems with possession, management and management. The Covid-19 epidemic created these considerations additional pressing, as AI came to be seen as a part of the answer to internment.

- **Online risks and opportunities for families living under COVID-19**

Research on children's experiences in an exceedingly digital society has adult chop-chop round the world, responding to the multiple challenges to their well-being expose by socio-technological transformation. Before internment, kids visited college and saw their friends outside the house. whereas oldsters troubled concerning their screen time, the digital future was the things of phantasy.

Under Covid-19, schooling suddenly went on-line, and life became digital by default. Technology became the means that kids routinely interacted with the world: enjoying, seeing family, doing school assignment, connecting with friends. a lot of of the infrastructure of childhood – education, social services, diversion, civic and cultural establishments establishments affected on-line, as well as kid policy. a lot of on-line risks were created for children's safety, as bullies, scammers, groomers, faux news makers and manipulators scaled up their activities on-line.

- **Smart cities and Covid-19**

Smart cities aim to use digital technologies to advance well-being of their voters. a large spectrum exists: at one finish area unit cities victimization digital technologies and data terribly effectively to boost public services; at the opposite area unit cities that area unit simply 'smart washing' and adopting superficial technological solutions that chase the symptoms instead of causes of complicated urban problems. Since cities rely on social connections, the agglomeration effects that drive the productivity advantage of cities became the most supply of risk throughout the Covid-19 pandemic. because the pandemic sweptwing through the planet, cities were at the forefront because of their world connections, social interactions and population density.

Social distancing and alternative internment measures had an on the spot impact on cities as services, transport, welcome and leisure industries took the most important hit within the economic worsening.

- **Viral misinformation: Covid-19 and social media**

Not solely did the increase of social media within the early 21st century revolutionise public communication, however it additionally reworked the potential reach of criminal behaviour, raising considerations regarding its use to unfold hate crime, political theory and misinformation, still as abusive, threatening and offensive content. Before the pandemic smitten, police forces globally were harassed to try and do a lot of management} and control social media.

CONCLUSIONS

The examples provided during this article illustrate however the pandemic accelerated the adoption of digital technologies in some areas wherever uptake had been stalled or was solely slowly progressing, like information assortment techniques, e-health on-line appointments and therapies, on-line operating, learning, and social connection. New challenges were created, requiring the scaling of production, fast-tracking of digital provides, construction of on-line platforms and video-conferencing product. These transformations failed to return while not a cost: the pandemic exacerbated existing challenges, exacting government interventions to stop hurt associated social exclusion related to employment and social networking on an unprecedented scale.

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