

## **An Empirical study on digital technologies with reference to digital transformation in finance**

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**Abstract:**

*The different aspects of digital transformation is much growing field in various sectors, as we taken role of finance in digital transformation has predominant role which aspired more technological developments and innovations are invented over a period of time, regarding digital inventions during covid-19 pandemic where digital technologies create disruptions triggering strategic responses from organizations that seek to alter their value creation paths while managing the structural changes and organizational barriers that affect the positive and negative outcomes of this process. We more concentrated on how the adaption of new technology will affect on the finance sector and the consequences of adopting can leads to drastic change in the global economy, Digital transformation is vital for public and private organizations of all sizes, especially for businesses that are at risk of being wiped out without digital transformation. In that point of view we just more focused on various industries and sectors, where they adopting these technologies such as advanced data analytics, robotics, block chain and Artificial Intelligence (AI) are creating new opportunities and driving finance transformation now a days and in our research we studied more about what would be the contemporary in changing practices of different technologies due to covid-19. The achievements achieved, the urgency of the digital transformation before the impact of the Covid-19 pandemic and challenges and limitations in the initiative of the contingent of civil servants and leaders in the digital transformation process. The discoveries in the research will contribute to building the theoretical basis and direction in making some suggestions for leaders. In practical terms, research has shown that digital transformation can be a challenge, but perceive and prepare for leadership thinking innovation that drives successful digital transformation across countries, especially emerging countries is essential.*

**KEYWORDS:-***Digital transformation, covid-19 pandemic, technological innovations, finance, disruptions*

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### **I. INTRODUCTION:-**

This study aims to interpret the interlinked relationships between the policy changes associated with the promotion of block chain-enabled technology and the development of digital finance through the comparison and analysis of the cases in the fintech industry, in this we attempts to examine how and whether digital transformation and other innovative technologies can drive new business models and create valuable experiences for consumers and this will also helps the readers better capture the future dynamics of India's digital finance development and understand the interrelated reactions of various stakeholders in the industry. On the other hand technological developments that have changed the way the world works, the financial sector has also had to adapt to today's digital age. Transactions that were once only possible with visits to financial institutions can now be completed in minutes with a mobile phone. Developments involving the improvement of financial transactions and services with the help of technology and their transfer to the digital environment the scope of fintech, that is, financial technologies, continue to expand day by day. The demand for financial technologies has increased tremendously in 2020, especially with the impact of the covid-19 pandemic. The importance of fintech solutions in businesses has become even more important in 2021. Before the pandemic, many firms seem to distrust the technology capabilities and expertise of their workforces. However, amid this pandemic, those fears proved largely unjustified. Executives have become more confident in the capabilities of technology and are moving forward with the digital transformation. They plan to invest in technologies like AI, blockchain, and cloud to recover from COVID-19. To ensure long-term success, businesses must ensure that their workforce is also efficient, robust, and adaptive like their technologies and also regards to UPI payments has now playing predominant role in Indian market that is before the pandemic, many firms seem to distrust the technology capabilities and expertise of their workforces. However, amid this pandemic, those fears proved

largely unjustified. Executives have become more confident in the capabilities of technology and are moving forward with the digital transformation. They plan to invest in technologies like AI, IoT, blockchain, and cloud to recover from COVID-19. To ensure long-term success, businesses must ensure that their workforce UPI recorded 461 Cr transactions in January 2022, which is less than 1% higher than the 456 Cr transactions recorded in December 2021. The transaction volume also increased by 1% from INR 8.26 Lakh Cr to INR 8.31 lakh Cr (\$111.3 Bn) is also efficient, robust, and adaptive like their technologies.

## **II. OBJECTIVES:-**

The research presented in this article had two main objectives

- The technological developments and innovations are invented over period of time, was that will leads to affect either in positive or negative manner or could be both, that was one main agenda in our research.
- How the adaption of new technology will affect on the finance sector can leads to consequences regarding the adoption this can affect drastic change in the global economy, where Digital transformation is also playing vital role for public and private organizations of all sizes, especially for businesses that are at risk of being wiped out without digital transformation.

## **SCOPE FOR FURTHER RESEARCH:**

Risks that Blockchain and Financial Institutions Face-

- Weighing against the promise blockchain holds for financial institutions is one major risk affecting the bottom line: Traditional financial institutions make money on transaction fees that could be lowered or eliminated with blockchain technology.
- But adoption of blockchain could bypass third parties such as banks, which would eliminate fees and other costs associated with these services. As a result, banks may face challenges in volume and transaction-based revenue.
- Blockchain makes the infrastructure that's proprietary to financial institutions less important because it serves as a verification mechanism that's not concentrated in the power of one institution.
- "Existing regulation does present a significant obstacle for blockchain adoption since regulators will prioritize existing incumbents over disruptors,"

## **III. RESEARCH METHODOLOGY:**

This study evaluates the current situation and something which has happened post covid-19 by taking various aspects regarding latest technologies to understand how the technologies work in finance field /sector which are found in this research.

## **IV. REVIEW OF LITERATURE ON DIGITAL TRANSFORMATION:-**

Review of Literature is one of the key elements for research to draw the problem hypothesis and outcomes and the article intends to serve two major goals. First, it will be useful to researchers who are interested in understanding what kinds of questions have been addressed in the area of the technological developments and innovations towards digital transformation. As of that how did Covid-19 Accelerated Digital Transformation in India and second one is that how the adoption of new technology will affect in the finance sector will be understand through this research. Digital Transformation Paves the Way for the Finance Industry with the outbreak of COVID-19, Digital Transformation has created an overwhelming buzz across the business world including the BFSI sector. Digital players in the finance industry have resolved the customer's struggle to get access to the funds. Technological innovations have paved the way for new services disrupting the traditional ones. Not only this we compare to post and pre covid-19 Transforming the traditional banking processes, fintech has emerged to be the most effective lending channel. Easing the common person's struggle to get access to funds, fintech has unlocked various opportunities to trap the huge volumes of substantial customer databases leading to a strong digital foundation. The COVID-19 induced lockdown pushed the business world to embrace Digitalization to compete in the Digital World. FinTech's have enabled transparency of financial requirements and services catering to convenient access eliminating the need to visit bank branches.

## **VARIABLES OF THE STUDY:-**

### **How AI is transforming the world of finance?**

From barter to paper currency to plastic money to contactless cards, the world of payments has come a long way. AI promises to usher in a new world of frictionless and seamless payments. AI and fintech, AI promises to completely transform everything some things more than others. The BFSI space has already seen the sheer efficiency of AI to process massive data logs and deliver masterful insights through pattern recognition. AI has made a huge difference in the world of payments and financial services which are plagued with incidences of identity fraud and imposter scams. With the need to deliver better experiences and customer

conveniences, AI enables better and faster fraud detection in a hyper-digitised world where PII (Personally Identifiable Information) is available for a few hundred dollars on the dark web. Advanced risk monitoring and fraud detection enables prediction and detection in real-time and not post factum. From barter to paper currency to plastic money to contactless cards, the world of payments has come a long way. AI promises to usher in a new world of frictionless and seamless payments where the ubiquitous modern POS of today will look archaic. Amazon's experiments to do away with the retail checkout queue are a good example. AI and investing AI-powered robo-advisors are the 'in' thing what with their ability to go beyond mere algorithm power to considering far more complex parameters including a range of factors from tax-loss harvesting to financial planning. The applications of AI include predicting consumer behaviour and enabling effective buying of hyper-relevant and personalised products, to offer tremendous opportunities to marketers of financial services. Digitisation and decentralisation are at the core of powering the fintech revolution, enabled by AI. Besides AI, there is blockchain, robotic process automation, and data analytics which constitute other prominent technologies impacting fintech. The structuring, delivery, and consumption of financial services have all been disrupted, courtesy AI, while the new technologies lend an umbrella branding to the fintech transformation. To capitalise on the opportunities being unleashed, it is imperative develop an enterprise-wide strategy and apply AI to revenue and customer engagement opportunities.

### **How is blockchain used in finance?**

Blockchain technology is a decentralised, distributed, and public ledger that is used to record transactions across many computers within a network. ... In the finance industry, this underlying technology allows the transfer of currency with confidence that the transaction is secure and reliable. It's been predicted that blockchain technology will experience a boost in popularity among finance professionals, with 66% of banks expecting to have blockchain solutions in production within the next three years. Moreover, the future of blockchain in finance also brings us opportunities to process transactions 24/7 Blockchain can make the financial industry more transparent since users are performing activities on a public ledger. This transparency can expose inefficiencies like fraud, leading to problem-solving that could reduce risk for financial institutions. Adding security. Blockchain technology is one of the leading innovations in the finance industry, holding promise to reduce fraud, ensure quick and secure transactions and trades, and ultimately help manage risk within the interconnected global financial system.

### **What is the impact of technology on financial services?**

- Progressive financial services companies are on the lookout for new technologies to improve efficiency and speed of service, as well as provide better customer experience. Exponential growth in information technology has prompted companies to leverage digitization of banking technology to transform the financial services industry through customer experience management.
- The financial services industry is looking at improving online customer service enabled by competition with consumer brands like Amazon, Facebook, and Google. Importantly, most financial services executives feel improving the customer experience to be the top driver of digitization in banking. The advent of smart analytics allows financial services companies to mine the wealth of consumer data to understand and service customers better. Technology has also helped organizations develop innovative financial services. The development of better payment systems is a key challenge for organizations. There is also the possibility that robo-advisory will be a significant application in the future. Similarly, blockchain-based services will gain in popularity in the coming years.
- Digitization of financial services is an ongoing revolution. Enterprises have the choice of making innovation the focus of a stand-alone organization or they may integrate it throughout their organization. This demand "great engineering." Firms will do well to have a full stack of engineers who can introduce dynamism to deal with innovation while adopting a start-up approach.
- Financial services organizations can tap the potential of the cloud to make processes more transparent and collaboration easier.
- Evolving technologically is at the heart of efforts to serve customers better through customer experience management. Adopting new banking technology is, therefore, critical for financial services organizations to thrive.
- As a science and technology that brings about change, blockchain technology still has some problems to overcome. For a blockchain structure, its security lies in the use of asymmetric encryption technology, many nodes and great difficulty in cracking; Its stability lies in the security technology, which makes the data not easy to be tampered with or damaged. At present, the overall technology and network R & D of blockchain is still in the construction stage. Therefore, the conditions for the combination of blockchain and financial field are not complete. Blockchain financial services have higher security and stability, but these advantages are subject to

technological development. If the technological foundation is weak, its security will be relatively low. With the increase of nodes joining the blockchain for transactions, the computing power required by the database increases accordingly. When the computing

## **V. FINDINGS:**

According to consulting firm Accenture, “automation, minibots, machine learning and adaptive intelligence are becoming part of the finance team at lightning speed.”

As machine learning and artificial intelligence (AI), applications continue to increase and impact accounting and finance responsibilities; the human professionals have an opportunity as well. Not only will they be more productive and proficient, but they will be able to handle more clients and deliver more value because they can determine actionable insight rather than just crunch numbers. Machines will be able to propel innovation in the industry.

### **• Accounting Tasks Machines Can Do**

Not only will machines free up humans to take on other tasks, automating accounting processes will help improve operations and reduce costs. And, since automation will ultimately infiltrate most divisions in a company, financial leaders who embrace the change are gaining expertise that will make them valuable in future business process transformations.

Accounts payable/receivable processing: There are already AI-powered invoice management systems available that can make invoice processing much more streamlined thanks to digital workflows that are implemented. They can learn the accounting codes that are appropriate for each invoice.

Audits: Digitalisation of the audit process will help increase its security by allowing a digital trail of when and by whom each file was accessed. Instead of searching file cabinets for the documentation that is required during an audit, auditors will be able to leverage the digital files. A more digital audit improves the efficiency and accuracy of audits and makes an audit of 100% of a company’s financial transactions possible instead of just a sample.

Expense management: Reviewing and approving expenses to ensure they are compliant with your organisation’s policies is time-consuming for your accounting team. Machines can read receipts, audit expenses and alert humans when a possible infraction has occurred.

### **Digital Transformation Statistics from Modus Create’s Survey**

- ❖ 69% of American organizations consider digital initiatives critical for their organization.
- ❖ 38% of large enterprises plan to spend over \$1 million on digital initiatives in 2022.
- ❖ 82% of larger enterprises, 74% of mid-level firms, and 57% of smaller American businesses consider digital initiatives critical to their business.
- ❖ Improving cybersecurity posture is the most popular digital initiative for 2022.
- ❖ Only 11% of American organizations plan to create an innovation lab in 2022.
- ❖ 49% of executives don’t have a clear plan or goal for their digital initiatives.
- ❖ 56% of executives feel that they are currently equipped with the resources, team, and budget to implement digital initiatives,
- ❖ 66% of executives feel confident that their company can successfully complete digital initiatives.
- ❖ 39% of executives in large enterprises aren’t aware of their total planned digital spending for 2022.
- ❖ 31% of companies in the finance industry plan to spend over \$1 million on digital initiatives in 2022.
- ❖ 41% of large enterprises will invest in IT modernization in 2022.
- ❖ Media/Entertainment (66%), Finance/Accounting (59%), and Research/Engineering (54%) have a high percentage of executives who believe digital initiatives are either extremely or very critical to their organization’s overall health.
- ❖ 57% of large organizations have adopted an Agile framework for implementing digital initiatives.

## **VI. SUGGESTIONS:**

It can provide a new development path for the financial industry and bring many innovative developments. In this financial sector in digital transformation, transparent and transaction data will become more secure while giving full play to the advantages of blockchain technology, the risks of blockchain technology cannot be ignored.

Since the development of blockchain technology, it has also experienced several important breakthroughs. Today's world is in the explosive period of blockchain application. China and many international countries are formulating policies and plans to promote and reasonably control the rational development of blockchain technology. Internationally, a common agreement and general standard are being negotiated and formulated; In terms of domestic regulators, opportunities and risks go hand in hand, and blockchain pays more attention to its compliance in the process of development. In the future, blockchain will be applied in many industries, and new business models will continue to emerge. In order to better carry out its supervision, the following are some development suggestions.

Promote the Systematization and Integrity of Blockchain Financial Supervision China's supervision and treatment of blockchain is still partial and temporary, and it is urgent to form an overall and systematic supervision system. In terms of standard setting, we should further promote international exchanges and cooperation on the basis of our own standards, learn advanced experience and lessons, and strengthen the fight against international illegal transactions in the process of integration; Under the current pattern of separate supervision, we should integrate the traditional blind areas of supervision and promote the effective implementation of rights and responsibilities; In terms of legal legislation and research, we will promote innovative attempts in the regulatory system, strengthen research and governance for new situations, new situations and new technologies, and effectively manage blind spots.

## **VII. CONCLUSION:**

COVID-19 has disrupted operations for financial institutions and highlighted gaps in Service offerings and capabilities. As multiple generations consider where they want to have their accounts, it's imperative that financial institutions act promptly to enhance their digital services offerings and meet the varying needs of all customers. Failure to do so can negatively impact customer retention and acquisition, so the Rate of change must accelerate across the industry. Deliberately executing on digital strategies now will allow organizations to avoid Potential setbacks, as customer experience improvements, workforce transformation and key digital enablers pave the way to continued success for the long term. The Path forward will reflect the ability of companies to capitalize on the opportunities in Disruption and pursue agility and resilience alongside digital expansion. To benchmark your digital maturity and transformation readiness There are many financial uses provided by blockchain, not limited to keeping track of transactions and trades. As our global financial system becomes more connected in our age of digital transformation, investors would be well advised to learn about how blockchain is changing the system and how to gain and regulate exposure to this development.

Digital transformation in financial sector has become the most convenient and speedy transformation mode by using these all latest technologies such as AI , Robotics and other.

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