



INTERNATIONAL RESEARCH JOURNAL OF HUMANITIES AND INTERDISCIPLINARY STUDIES

(Peer-reviewed, Refereed, Indexed & Open Access Journal)

DOI : 03.2021-11278686

ISSN : 2582-8568

IMPACT FACTOR : 5.828 (SJIF 2022)

Industry 4.0 and Its Impact on Banking & Finance

Dr. Anil S. Patil

Arts, Commerce and Science College,
Palus, Dist. Sangli (Maharashtra, India)

E-mail: aspatil68@gmail.com

DOI No. **03.2021-11278686** DOI Link :: <https://doi-ds.org/doi/10.2022-53661177/IRJHISIC2203058>

ABSTRACT:

Banking and finance sector play very important roles in the economic development of nation. Economic development is a dynamic and continuous process which is highly dependent upon the mobilization of resources and innovation. The word "Industry 4.0" refers to the Fourth Industrial Revolution. It is the age where "smart devices" will assume major control over manufacturing and distribution machinery. India did not perform well during the first two industrial revolutions. However, the country benefitted to some extent during the Third Industrial Revolution due to access to technology, rise in connectivity, and spread of computer power. Therefore, it is essential that India equips itself to avail the benefits of the ongoing Fourth Industrial Revolution. India has made some progress towards inducting new technologies in various sectors. The fourth industrial revolution has unfurled its wings over all industries to impact them positively. The banking & financial services sector is also one of the sectors that have leveraged the power of industry 4.0 extensively. Banking, insurance, mortgage, forex, stocks, and many other financial sectors are thriving due to the positive thrust of digital innovation and financial process automation in all countries of the world. The impact of industry 4.0 precisely referred to as I-4 is very prevalent from online payments, digital loans, plastic money, crypto currency, online forex trading, and many other financial activities in the financial services.

KEYWORDS: Industry-4, Industrial revolution, Make in India, internet, Banking & finance.

1. INTRODUCTION:

Industry 4.0 and its impact on the Banking, Financial Services, manufacturing and other sectors of global industries significantly. The impact of industry 4.0 precisely referred to as I-4 is very prevalent from online payments, digital loans, plastic money, crypto currency, online forex trading, and many other financial activities in the financial services. All this became possible due to the information technology revolution powered by the internet, software consulting service, and software development. The credit for this digital revolution goes to the global software_team of qualified professionals.

2. OBJECTIVES:

1. To study concepts of the industrial revolution- 4.0.
2. To express their views of banking & finance.
3. To study the impact on banking & finance sector.
4. To understand the broad outline of financial sector.

3. HYPOTHESIS:

As with all industrial revolutions, the fourth industrial revolution is set to change *everything*: from the way we live and work to the way we communicate and relate to each other.

4. RESEARCH METHODOLOGY:

The content of is paper is totally dependent upon secondary sources of data, which have been obtained from various books, published article in journals, web articles (internet sources), past studies and news paper articles etc.

5. ANALYSIS AND INTERPRETATION:

a) What is the fourth industrial revolution & where did it come from?

Officially christened the "fourth industrial revolution" back in 2016 by Klaus Schwab (founder of the World Economic Forum), Industry 4.0 (as it's also known) is characterized by technological innovation. Powered by the internet, software consulting services, and software development, the fourth industrial revolution enables us to do things like order taxis, book hotels, buy clothes, listen to music, and turn lights on and off with either a voice command or a click of a button.

The fourth industrial revolution is becoming known as "*the transition from a time when people worked **with** computers to a time when computers work **without** humans*" and is digitally transforming industries through the power of digital automation.

b) Industry 4.0 Evolution:

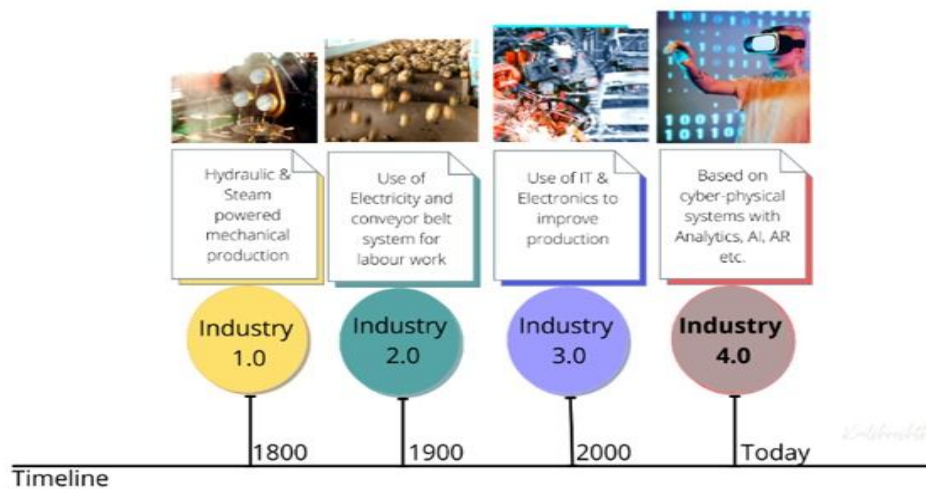
The first industrial revolution (popularly called Industry 1.0) commenced in the 18th century with the use of steam generated power and mechanization of production. This was an important transition from manual labour based industry to the use of steam powered engines to increase human productivity.

A century later, the Second Industrial Revolution (Industry 2.0) began with advent of electricity and the assembly line production using the conveyor belts.

Further, Industry 3.0 was marked with innovation in the electronics world, when the memory-programmable controls and computers came into existence in the later part of 20th Century. The digital process automation enabled working of machines in a production process without human intervention.

The fourth industrial revolution, Industry 4.0 was triggered by the hi-tech innovations which

brought the cyber physical systems together i.e. smart machines capable of exchanging real time information over the industrial internet of things (IIOT) for decision making process.



c) Industry 4.0 Technology:

Today, communication is human-machine interactions. The visualization and simulation techniques have seen a leap with increase of processing power of the chips. Various complexes, customizable and modular products can be designed and directly communicated to the machines to follow. Thus, the embedded systems, factories and workers connect over the IoT to work together in a cyber- physical environment. As part of Industry 4.0, the robots when backed with AI and IoT are more flexible, and can make decisions in a factory environment.

In the Industry 4.0 scheme, various cyber-physical systems operate together and make corrective decisions on their own so as to enhance productivity. A timely alert for human intervention is generated informing the predicted cause and likely maintenance required so as to ensure uninterrupted machine availability. The smart sensor information emanating from the cyber-physical systems is processed on the cloud servers. The implementation of Industry 4.0 requires not only a horizontal factory-to-factory integration but a vertical Integration to connect the hierarchies of a production line. Overall, the intelligence of the smart factory is achieved with the convergence of technologies of information processing as part of a digital ecosystem.

d) Industry 4.0 is Impacting the Banking & Financial Sector:

The fourth industrial revolution has unfurled its wings over all industries to impact them positively. The banking & financial services sector is also one of the sectors that have leveraged the power of industry 4.0 extensively. Banking, insurance, mortgage, forex, stocks, and many other financial sectors are thriving due to the positive thrust of digital innovation and financial process automation in all countries of the world.

The new crypto banking system based on blockchain technology is going to drastically

transform the financial sector very soon. The impact of industry 4.0 on Banking and financial services like the fastest financial transactions globally, the cheapest financial service charges, huge decrease in operational cost of financial institutes, the easiest access to financial services round the clock. An increased volume of liquidity, effective use of available assets and money, efficient trading of stocks and forex, reduced number of frauds and burglary, increased customer satisfaction, smart contracts powered by block chain technology and easier accountability and responsibility fixing.

1. **Fastest financial transactions-** Due to use of new technology such as mobile banking, internet banking the financial transaction are made very fast and easy to use the platform like UPI, IMPS make transactions fastest also using platform like SWIFT we can do internet transactions also.
2. **Service Charges-** Charges for online transaction are very cheaper compare to old technology. Some platform like net banking & UPI are totally free of cost also for other service like NEFT & RTGS charges are very nominal.
3. **Operational Costs-** There is a decrease in operational cost due to new technology or requirement of humans are very less machines work faster & with great accuracy so there is less chances of error hence manpower requirement decreases that leads to decrease in operation cost.
4. **Easy Access-** Due to new technology now everything is in your hand. You can access all services only through your Smartphone there are number of application available in play store by using that you can do all financial activity just sitting at home.
5. **Removal of middleman-** To access any information of new product you don't need to depend on any middleman as all information are now available on internet & institutes websites. Also for contact there are chat boxes are available hence it is easy to access information.
6. **Requirement of human tech-** As everything is now digital there is less requirement human tech talent, one machine can perform multitasking with grate accuracy & faster way with human can do.
7. **Use of robotics –AI-** Almost all financial institutions using robotics and artificial intelligence due to this technologies it behaves & think like a human that increase productivity and accuracy through AI technology you can chat with bots for accessing any kind of information.
8. Due to digital transition there is increasing transferring in all financial activities.
9. Due to increasing use of automatic machines their less chances of error as compare to human activities.
10. Due to availability of internet in remote areas and village area. (Rural area) more people are connected with digital technology Example- UPI, Mobile banking, Internet banking, E-commerce etc.

11. After the 4.0 industrial revolution any are can plan regarding investment of their asset and money in systematic way for example –SIP (Systematic Investment Plan)- MF & FD etc.
12. Due to advance technology there are number of application available on smart phone by using that you can easily trade in stock & bonds.
13. New digital technology is easy to use and user frendly that leads to increase the customer satisfaction.
14. In new technology you can easily finds any error in the operations because of that it is easy to find accountability of employee (staff) and determation of responsibility.

e) Three major challenges the fourth industrial revolution is bringing to banking & finance:

From online payments and digital loans to crypto currency and online forex trading, the fourth industrial revolution promises to revolutionise the way the banking and finance sector operates. But, with that comes several challenges...

1: Security risks and cyber-crime- *“Cyber risk refers to the threat of financial losses, disruption and/or reputational damage from a malicious breach of an entity’s information systems.”* If concerns over cyber-crime is a red-hot topic in most (if not every) industry, it’s a white-hot burning one in banking and finance. Cyber-threats are getting more and more sophisticated, with terrifying tales of ransomware, phishing, information leaks and data breaches in the news *every day*.

For instance, 34% of financial businesses are affected by insider threats every year and phishing attacks account for 14% of all data breaches. A cyber-attack is not only financially crippling for an organisation, with the average cost of a cyber-attack approximately \$18.3m (£12.9m), it can also cause irreparable damage to its reputation. As soon as the news broke, the share values of the company dropped by 14%.

2: Building trust & rapport- Trust in banking is imperative: 95% of customers say that trusting a company increases their loyalty to it. But trust is hard-earned. It takes time, effort and a human touch to build rapport, earn trust and build strong, long-lasting relationships.

“Businesses have historically won trust by signalling strength and reliability with their physical presence.” Computers and connected technology can’t offer customers much emotion, creativity, imagination, empathy or intuition. Banks will have to find new and innovative ways to bring a human element and a personal touch into their online offering. Chatbots based on artificial intelligence could be the new normal.

3: Increased competition-*“Banks are at risk of loss which can be almost a third of their profit. The next, even more, rigorous phase of digital transformation will further reduce the banks’ profit in the upcoming years, which will be a consequence of even greater competition and the*

continuation of the decline in banks' margins." The fourth industrial revolution and the accelerated progress in digital technologies have inevitably led to an increase in competition in the finance sector. Customers are expecting better experiences, seamless transactions, on-demand assistance and completely connected digital offerings from their banks and financial services. And, if they *can* get more, they *will*.

CONCLUSION:

With its predecessors, the fourth industrial revolution is improving industry practices and processes with Research and Development and innovation. The banking and finance sector *especially* is thriving with new digital innovations and technologies which are improving customer experiences, increasing security and allowing them to become more agile. But, if organizations within the sector want to stay afloat, they must pay attention to and deal with security threats, increased competition and maintaining their customers trust and loyalty. A strong banking sector including other financial institution is vital for growth, creating jobs, generating wealth, eradicating poverty and increasing gross domestic product growth.

Reference:

1. AIMA and KPMG (2018), Industry 4.0: Indian INC. Gearing up for Change, All India Manufacturing Association (AIMA), March, New Delhi.
2. Arthur, Charles (2020), Fourth Industrial Revolution: How Latecomers and Laggards can Catch up, UNID, Vienna, February.
3. Aulbur, W. and H.V. Singh (2014), Next Generation Manufacturing: Industry 4.0: A Look at the Changing Landscapes in Manufacturing, CII and Roland Berger, New Delhi, September.
4. Bagchi, A.K. (1976), "De-Industrialisation in India in the Nineteenth Century: Some Theoretical Implications," Journal of Development Studies, Vol. 12, No. 2, Pp. 135–164, October.
5. Bajpai, N. and J. Biberman (2019), "The Future Work in India: Adopting to the Fourth Industrial Revolution," ICT Working Paper No. 11, June.
6. CMA Suraj Kumar Pradhan (2019), "Industry 4.0- A New Manufacturing Paradigm" Journal of The Management Accountant, Vol. 54No. 06, Page 48-52, Jun.
7. Industry 4.0, will Make India a Leading Manufacturing Economy, The Hindu Business Line August 2018.
8. Amanda Greenwood, The Fourth Industrial Revolution & its impact on Banking & Finance.
9. Internet articles
10. News Paper -Sakal and Pudari articles.