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A DIGITAL TRANSFORMATION : IMPACT OF TECHNOLOGY IN BANKING AND FINANCIAL SERVICES INDUSTRY

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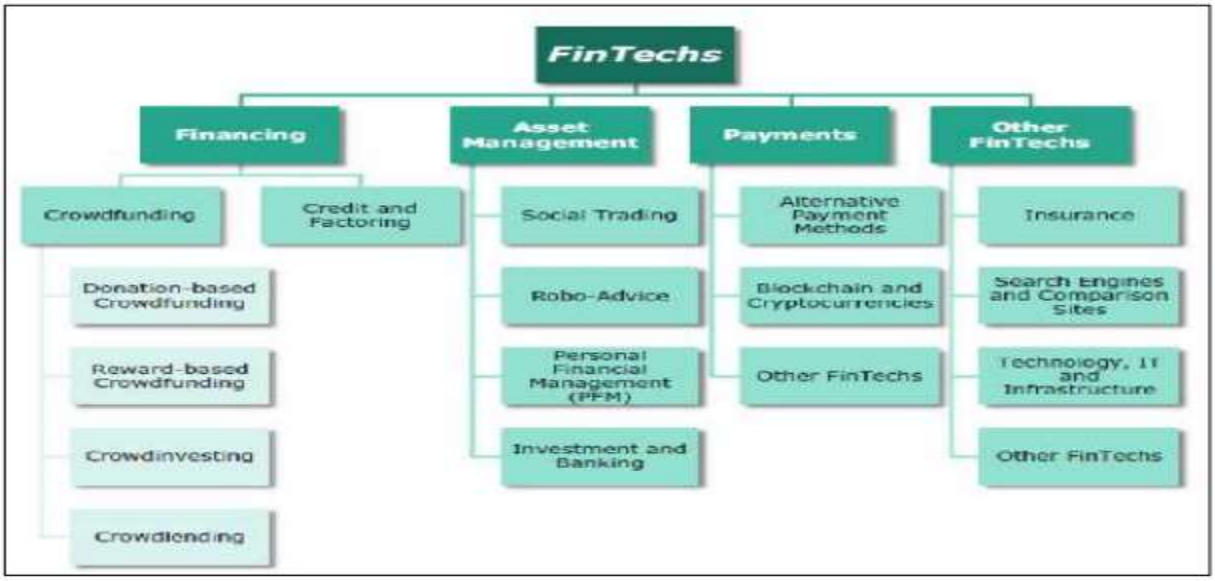
Abstract: This paper examines the impact of technology in the financial sector, with a specific focus on innovative technologies, current trends in the FinTech industry, and the effects of technology on different sectors within the Indian financial industry. The research aims to contribute to the understanding of how technology is shaping the financial sector and provide insights into the opportunities and challenges brought about by technological advancements. The findings will shed light on the transformative influence of technology in the financial sector and provide valuable insights for policymakers, practitioners, and researchers.

Keywords: Financial, technology, customer, industry

I. INTRODUCTION

Significant progress has been made in recent decades towards the incorporation of technology into financial services. Technology emerged in the 20th century and has since spread rapidly, becoming ingrained in many of the ancillary services that make modern living possible. These days, it‟s rare to conduct a financial transaction without using some kind of digital technology. There has been a global explosion of new financial technology (FinTech). FinTech, short for “financial technology,” is a business that uses cutting-edge innovations in computer science to help its customers with their financial matters by means of electronic transfers and purchases. (Kavuri et al., 2023)

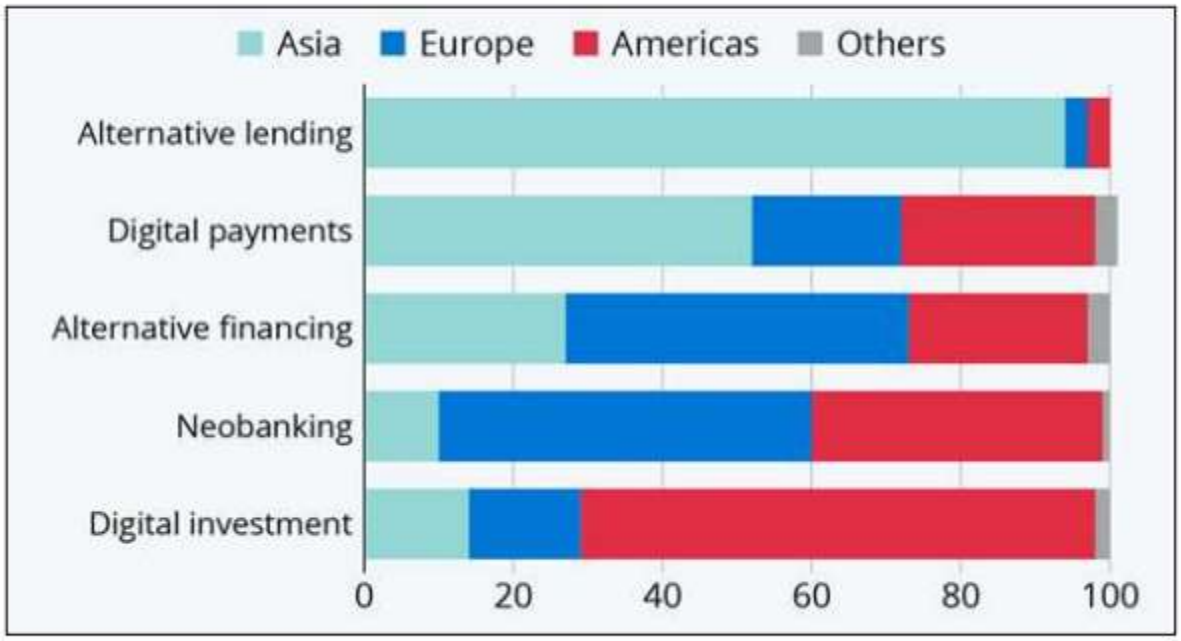
Fig 1: FinTech Structure



Source: Ajlouni and Hakim (2018)

Over the last several years, a plethora of new fintech startups have emerged in India. The sector has expanded greatly and gained international recognition as a result of recent startup activity. According to newest findings, these are the 20 Indian fintech businesses that have been named among the 250 worldwide promising startup companies (Wilson, R., 2020). When it comes to the FinTech industry, India is one of the world‟s hottest spots right now. Along with China, India has the fastest rate of adoption of financial technologies worldwide. There will be a 20% CAGR from 2019–2023 in the value of digital payments, which will ultimately reach $65 billion.

Fig 2: Regional Difference of Fintech Adoption



Source: Statista, 2022.

2. Review of Literature

Ajlouni and Hakim‟s (2018) theoretical study, which made use of a contentanalysis strategy, aimed to contribute to the literature by accomplishing three objectives. They advocated for the Containment Strategy as the optimal response for conventional financial institutions to the FinTech threat, and believed that such institutions will successfully contain the threat in the long run. Many businesses in Indonesia used the Financial Technology assessment approach developed by Tan et al. (2018). The expansion of the country‟s financial institutions depends on their financial soundness. This study addressed the technology‟s emphasis on digitalization. This study lasted for seven months and surveyed millennials from the cities of Jakarta, Depok, and Tangerang about their experiences with FinTech transactions. The information gathered via this study was analysed using quantitative methods. The results showed that minor participants in several fast-expanding developing markets and frontier economies have embraced FinTech.

In their research, Ozer et al. (2019) examined the impact of fintech‟s evolution on the banking industry‟s structure, efficiency, strategic goals of players, and market stability. The research found statistically significant positive correlations between per capita GDP and the prevalence of financial transactions and payment processing performed using new technologies and cell phones. They also showed a favourable correlation between GDP per capita and both utility bill payment and salary deposit through mobile phone. Both external and internal determinants of financial technology development were recognised and characterised by Sheludko and

Shmuratko (2019). Changes in the structure of the financial services sector, lower obstacles to entry, and wider geographic reach are shown as the primary factors determining the influence of FinTech on banking. While the growth of FinTech has many positive effects such as wider access to banking services, it also poses significant financial and technical dangers for financial institutions.

The effects of FinTech firms were contrasted to those of conventional financial institutions by Karsh and Abufara (2020). The study showed that an environment rich in digital technology and mobile phone adoption will foster the rapid expansion of FinTech companies. When conventional banks in a nation use their own financial technology, as well as when there are FinTech businesses active in that country, the results revealed that profitability does shift. Statistical investigation showed that the influence of financial technology on the profitability of the banking business is negligible. The banking business model was analysed and described by Broby (2021). The study concluded that trust will continue to be fundamental to the banking industry even as it becomes more digitised. Nonetheless, liquidity change will still be crucial. However, banking and financial services as we know them will undergo profound transformations.

Research Objectives

The research has the following objectives:

1. To identify innovative technologies used in the financial sector.

2. To study the current trends in the Indian FinTech industry.

3. To study the impact of technology on different sectors within the Indian financial industry.

3. Research Methodology

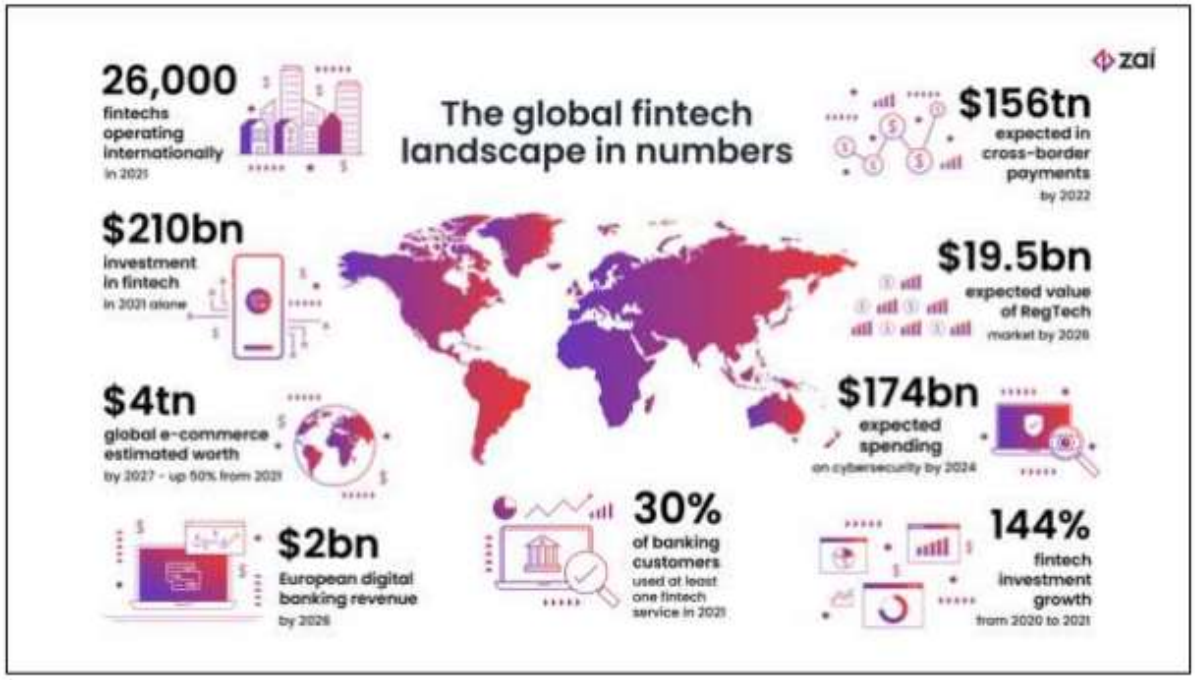
In order to better understand the effects of technology in the financial sector, this study will first conduct a literature review to establish a theoretical framework for the investigation, then analyse the identified problems and trends, and finally present and discuss the study‟s findings.

4. Analysis and Discussion

The financial services industry in India is being revolutionised by the rise of FinTech companies. Government programmes like Jan Dhan Yojana, Aadhaar, and the development of the Unified Payments Interface (UPI) have laid a solid groundwork for expanding access to banking services and increasing financial inclusion in India. The percentage of men and females who have used FinTech apps was 88% and 84%, respectively, and the percentage of persons between the ages of 25 and 44 who have adopted FinTech applications is approximately 94%, while the percentage of people internationally in the same age range who have adopted FinTech applications is around 73%. When it comes to the FinTech industry, India is one of the world‟s hottest spots right now.

Along with China, India has the fastest rate of adoption of financial technologies worldwide. From 2019‟s estimated $65 billion in digital payments through 2023, that number is projected to increase at a CAGR of 20%. The FinTech industry, like many others, is highly competitive and diverse. India is a one-ofa-kind market for the financial technology (FinTech) industry as a whole, but particularly for the payments sector. (Adithya, 2019)

Fig 3: Global Financial Technology (Fintech) Industry



Source: hellozai.com

The rise of new FinTech firms and a powerful wave of technology improvements are largely responsible for the acceleration of FinTech evolution in India. There has been a surge of investment in India‟s FinTech industry over the previous five years, with capital expanding at a compound annual growth rate (CAGR) of 98% during that time period. India is now home to over 2,565 active fintech firms, making it the world‟s second largest fintech cluster behind the United States. In 2014, there were just 737 such businesses in operation in the nation. The „payments‟ sector accounts for a disproportionately big percentage of India‟s fintech startup revenue, followed by lending, wealth tech, personal finance, InsurTech, RegTech, and others. These categories define the fintech landscape in India. The installment processing industry accounted for 34%, banking for 32%, and trading, public and private markets for 12%. The government of Andhra Pradesh launched Fintech Valley to promote the interests of this region (Shrivastava, 2020), and now Visakhapatnam is being developed as FinTech valley. There has been a rise in the number of Fintech agreements in the nation. By the end of 2023, India will

account for 2.2% of the global digital payments market, with the value of these transactions expected to reach $12.4 trillion worldwide by 2025. In the first half of 2020, India‟s fintech startups raised nearly $1.7 billion, up from $726.6 million in the same period in 2019. It is important for the government, venture investors, regulators, banks, and startups to work together to create an atmosphere that encourages cooperation and mergers.

The term “financial technology,” or “fintech” for short, has a broad definition that includes the use of technology in financial services by established companies. However, the term is most often used to characterise new company start-ups that provide either cheaper or more creative financial services. Digital or online services, especially those focused on the user interface, are often mentioned. Listed below are examples of prevalent technologies:

1. Cloud computing

2. Big data

3. Artificial Intelligence (AI)

4. Internet of Things (IoT)

5. Distributed ledger technology

There are several ways in which these technologies are changing financial institutions. Following sections of financial sector are seeing a dramatic change in the way they function:

Banking: From marketing and client acquisition through onboarding, product setup, payments, and transactions, banks are embracing technology to reimagine their interactions with consumers at every stage. The emergence of “banking as a service” and “banking as a platform” is also noteworthy, along with demediation and modularity. By partnering with licenced banks, these third parties are able to provide digital banking services, such as the issuance of payment and credit cards, to their customers. This may provide incumbents with a means to maintain a foothold in the market despite the decline of their traditional advantages. Partnerships with non-financial technology companies allow smaller banks who were previously unable to compete with bigger retail banks to do so.

Competition from fintech startups is increasing, which threatens the market share of traditional retail banks. Some payment processing companies and merchant services aggregators are now almost as big as traditional banks, and their profits are growing faster. With effect from 2022, Singapore will allow non-banking organisations to run digital banks. Despite this, many new entrants do not provide fundamentally new services but rather use technology to mimic previous offers at lower costs. The wholesale banking industry and allied fields, including cash management, trade finance, and working capital solutions, have seen a digital transformation that has been hastened by COVID-19. Business users‟ reliance on these services is a key revenue driver. Even though they are still dominant, traditional banks can‟t rest on their laurels if they

don‟t up their game and provide a better experience for their customers. When it comes to modernising their operations and supporting the increased digitalization, banks may collaborate with fintech start-ups, who are both rivals and partners and collaborators. This involves all aspects of their operations, from customer service to accounting. Additionally, some banks take the approach of serving as a platform for fintech startups in order to assist the delivery of a wide range of new services.

Customers now have access to banking‟s basic services throughout the clock, thanks to ATMs. The restricted number of transactions, the absence of tech assistance, and the limits on withdrawing funds from accounts beyond a certain limit are all drawbacks. The benefits of being able to access financial services from anywhere have, however, outweighed the risks and fuelled the industry‟s steady rise over the years.

Neo-banks are defined as financial institutions whose whole operations are conducted online. In order to expand, these financial institutions often form partnerships with more conventional companies. Its online manner of business allows it to provide credit services at a lesser cost to customers than conventional banks. While Neo banks and payment banks have many similarities, regulatory differences define them. The Reserve Bank of India oversees all payment banks in the country. The issuance of debit cards enables payments banks to provide ATM services; other services include internet and mobile banking. They earn money via partnerships with other businesses and the cross-selling of goods and services. Bharti Airtel launched India‟s first payments bank, Airtel Payments Bank. Post Payments Bank, Fino Payments Bank, Jio Payments Bank, Paytm Payments Bank, and NSDL Payments Bank are some of the other active payments banks in India. By catering to lowincome families, migrant labourers, small business organisations, and the unorganised sector with banking and financial services, payment banks seek to advance financial inclusion.

Insurance: Insurers are one of the least technologically developed businesses, despite the attention paid to them. Over the last decade, growth has been restricted except in Asia Pacific, but now the industry is starting to embrace technology to increase productivity and the consumer experience. The insurance sector has always been heavily dependent on data, but today more than ever before, companies have access to a wealth of information at their fingertips. New technologies (such as algorithms and AI tools) make it possible to interrogate and analyse (deep learn) “big data” for more precise product development and improved fraud detection. The challenge for insurers is to use digital technology to get a deeper understanding of client demands, and then to utilise those insights to create more individualised touchpoints that highlight a product‟s value and differentiate itself in a variety of ways.

When it comes to India‟s economy, the insurance industry is crucial. It creates a big pool of assets from which people may save and secure their futures. The private sector was allowed to enter the market after the turn of the millennium. As insurance markets became more competitive, providers began to better personalise their offerings to individual clients. The

introduction of fintech in the insurance business in recent years has led to a shift in how the processes of purchasing and claiming insurance are seen. There is less hassle involved with confirmation, transactions, and payments. Acko and policy bazaar are two of the most prominent insuretech companies; they have achieved great success in popularising their products by educating their customers. The streamlined loan application procedure, reduced burden of paperwork, and streamlined availability of these options are driving their rising popularity. Customers should be wary of the many unchecked internet loan companies. RBI is now working on solutions to the problem.

Financial sponsors, including asset managers: Businesses are being compelled to change their strategies or cut costs by a number of factors, including more cost disclosure and the growth of passive investment in the asset management industry. Portfolio management, customer outreach, investment opportunity identification (for active strategies), client reporting, and meeting the legal need of better monitoring staff behaviour hazards are all areas where AI is being used to increase efficiency. The use of artificial intelligence in environmental, social, and governance investing allows for the rapid and efficient processing of massive volumes of data. Robo-advice is a fintech disruptor in a sector where wealth advisers are integral partners of asset managers. The market‟s adoption of Robo-advisors has been underwhelming despite their obvious benefits, such as cheaper costs to customers, faster, and less conflicts of interest. There is scepticism about the efficacy of present roboadvice technologies in a sector where public trust is low. Nonetheless, it was predicted that by 2022, worldwide assets handled by robo-advisors will total USD 1.8 trillion, growing at a rate of around 17% annually. INDMoney and Speeny are two other examples of apps that use AI and machine learning to help its users better manage their personal finances. LXME is one such software that seeks to address social concerns by empowering women with financial literacy. Zerodha, Upstox, and Groww are just a few of the stock brokerage businesses providing consumers with in-depth data analysis and theoretical frameworks. MoneyView is one example of an app that can analyse a user‟s financial behaviour by scanning their text conversations. Software like Money Manager makes it possible to create and monitor a budget.

5. Research Findings

Technology is revolutionizing how banks interact with customers at every stage, from marketing and customer acquisition to payments and transactions. The rise of “banking as a service” and “banking as a platform” allows third parties to incorporate digital banking services into their own offerings. Smaller banks can also form partnerships with non-financial tech businesses to compete more effectively with larger retail banks. The COVID-19 pandemic has accelerated the digital transformation in wholesale business banking, emphasizing the importance of providing digital services to businesses. The insurance industry is embracing technology to enhance efficiency and customer experience. InsurTech has expanded data availability and improved data analysis, including social media and third-party data. This enables insurers to design more targeted products, detect fraud more effectively, and engage with customers in a personalized

manner. In India, the introduction of fintech in the insurance industry has transformed the perception of buying and claiming insurance products. Financial Sponsors, including Asset Managers are facing pressures to evolve their business models due to increased transparency and the rise of passive investing. Artificial Intelligence (AI) is being utilized in portfolio management, client outreach, and investment opportunity identification.

6. Conclusion

The research findings highlight the impact of technology in the financial sector, including changes in banking. Other areas affected include the growth of ATMs, the transformation of the insurance industry through InsurTech, and the adoption of technology in asset management, including the rise of Roboadvisers. Overall, technology has improved customer experiences, increased efficiency, and led to the emergence of new players in the financial sector.

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